INTERNATIONAL PERSPECTIVES ON COMMERCIAL AND FINANCIAL LAW

01

Alternative Investment Funds as Potential Catalysts in the Realization of Systemic Risk in Financial Markets

An Analysis of the Current Regulatory Framework in Europe Focusing on Hedge Funds and Private Equity Funds

BRUCE G. A. POLLOCK

DIKE

Bruce G. A. Pollock

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Facilis descensus Averno:
Noctes atque dies patet atri ianua Ditis;
Sed revocare gradium superasque evadere ad auras,
Hoc opus, hic labor est.

– Virgil, The Aeneid[1]

[1] Virgil, *The Aeneid*, Book 6, lines 126–129. Frank Fletcher, *Virgil: Aeneid VI.* (Clarendon Press 1941) 4.

Table of Contents

Detailed Table of Contents IX
List of Abbreviations XXI
Table of Cases XXV
EU Legislation XXVII
Table of figures and tables XXXV

1 Introduction 1
1.1 Introductory Remarks 2
1.2 Research Questions and Methodology 6
1.3 Scope of the Thesis 7
1.4 Outlook 12

2 Alternative Investments 15
2.1 Introduction 16
2.2 Defining Alternative Investments 16
2.3 Alternative Investments: The Quantitative Dimension 20
2.4 Funds 26
2.5 Private Equity 37
2.6 Hedge Funds 44
2.7 Conclusion: Seeking Alpha 58

3 Systemic Risk 61
3.1 Introduction 62
3.2 Risk 62
3.3 Financial Risk 67
3.4 Risks for Alternative Investment Funds 72
3.5 Systemic Risk 73
3.6 Investment Funds and Systemic Risk 100
3.7 Conclusion 116

4 UCITS ... 117
4.1 Introduction ... 118
4.2 Regulation of Asset Management in Europe ... 118
4.3 The European Fund Management Framework ... 120
4.4 The History of UCITS ... 124
4.5 The Current UCITS IV/V Regulatory Regime ... 135
4.6 Conclusion ... 190
4.7 Appendix Chapter 4 ... 192

5 The Alternative Investment Fund Managers Directive ... 197
5.1 Introduction ... 198
5.2 European Asset Management Regulation ... 198
5.3 The Alternative Investment Fund Managers Directive ... 199
5.4 The AIFMD in Detail ... 210
5.5 The Context of the AIFMD: ELTIF, EuVECA, EuSEF, and the MMFR ... 273
5.6 Systemic Risk and the AIFMD ... 279
5.7 Conclusion ... 284

6 Policy Suggestions ... 287
6.1 Introduction ... 288
6.2 Regulatory Rationale ... 288
6.3 Current Developments of the UCITS and AIFMD Frameworks ... 320
6.4 Policy Suggestions ... 330
6.5 Synthesis: An Effective Solution ... 353
6.6 Conclusion ... 354

Bibliography ... 355

Detailed Table of Contents

Table of Contents VII
List of Abbreviations XXI
Table of Cases XXV
a) United States of America page: XXV
b) Switzerland XXV
c) European Court of Justice (and its Predecessor) XXV
EU Legislation XXVII
a) Treaties XXVII
b) Directives XXVII
c) Regulations XXX
d) Other Legislation, Proposals, and Accompanying Documentation XXXII
Table of figures and tables XXXV
a) Chapter 2: XXXV
b) Chapter 3: XXXV
c) Chapter 4: XXXV
d) Chapter 5: XXXV
e) Chapter 6: XXXVI

1 Introduction 1

1.1 Introductory Remarks 2
1.1.1 Overview 3
1.1.2 Linking Systemic Risk and Asset Management 4
1.2 Research Questions and Methodology 6
1.2.1 Doctrinal Method 6
1.2.2 Economic Analysis of Law 7
1.3 Scope of the Thesis 7
1.3.1 Inclusion 8
1.3.2 Exclusion 9
1.3.3 Related Literature 9
1.4 Outlook 12

2 Alternative Investments 15

2.1 Introduction 16

2.2 Defining Alternative Investments 16
2.2.1 Defining by Exclusion 17
2.2.2 Defining by Inclusion 18
2.2.3 Table 2a: Categories of Alternative Investments 19
2.3 Alternative Investments: The Quantitative Dimension 20
2.3.1 Figure 2b: Alternative vs Traditional Investments 21
2.3.2 Figure 2c: Relative Size of Alternative Investment Categories 22
2.3.3 Figure 2d: Overview of the Alternative Investment Fund Universe 23
2.3.4 Growth of Alternative Investments 23
2.3.5 Figure 2e: Growth and Size of Alternative Investments 25
2.4 Funds 26
2.4.1 Defining Funds 26
2.4.2 Open-Ended vs Closed-Ended Funds 26
2.4.3 Table 2f: Characteristics of Open-Ended and Closed-Ended Funds 28
2.4.4 Collective vs Discretionary Fund Management 29
2.4.4.1 The Two Broad Types of Asset Management 29
2.4.4.2 Figure 2g: Discretionary vs Collective Asset Management 30
2.4.4.3 Active vs Passive Fund Management 31
2.4.4.3.1 Active and Passive Management 31
2.4.4.3.2 Returns of Active and Passive Fund Management after Fees 34
2.5 Private Equity 37
2.5.1 Introduction 37
2.5.2 A (Very) Brief History of Private Equity 37
2.5.3 Defining Private Equity 40
2.5.4 Breaking Down Private Equity into Categories 41
2.5.4.1 Venture Capital 42
2.5.4.2 Buyout Funds 42
2.5.4.3 Mezzanine Financing 43
2.5.4.4 Distressed Debt 43
2.6 Hedge Funds 44
2.6.1 Hedge Funds as Alternative Investments 44
2.6.2 Defining Hedge Fund 44
2.6.2.1 Defining Hedge Fund: The Historical Perspective 45

2.6.2.2 Modern Hedge Funds ... 47
2.6.2.3 Categories of Hedge Fund Strategies ... 50
2.6.2.4 Table 2h: Overview of Hedge Fund Strategies ... 52
2.6.2.5 Hedge Funds: The Quantitative Dimension ... 53
2.6.2.5.1 Global Size of the Hedge Fund Industry ... 53
2.6.2.5.2 Figure 2i: Global Hedge Fund and Funds of Funds AuM ... 54
2.6.2.5.3 Figure 2j: Size of the European Hedge Fund Industry ... 55
2.6.2.5.4 Figure 2k: Types of European Funds by Structure ... 57
2.6.2.6 Harmonized vs Nationally Regulated and Offshore Fund Structures ... 57
2.7 Conclusion: Seeking Alpha ... 58

3 Systemic Risk ... 61
3.1 Introduction ... 62
3.2 Risk ... 62
3.2.1 Distinguishing Between Risk and Uncertainty ... 62
3.2.2 Distinguishing Between Risk and Hazard ... 64
3.2.3 Finding a Formal Definition of Risk ... 65
3.3 Financial Risk ... 67
3.3.1 Market Risk ... 68
3.3.2 Credit Risk ... 68
3.3.3 Settlement and Counterparty Risk ... 69
3.3.4 Liquidity Risk ... 69
3.3.5 Operational Risk ... 70
3.3.6 Table 3a: Overview of Operational Risk Categories ... 71
3.3.7 Concentration Risk ... 72
3.4 Risks for Alternative Investment Funds ... 72
3.5 Systemic Risk ... 73
3.5.1 Defining Systemic Risk ... 74
3.5.2 Common Elements of Systemic Risk Definitions ... 75
3.5.3 The Realization of Systemic Risk ... 77
3.5.4 Systematic Risk vs Systemic Risk ... 78
3.5.5 Examining the Components of Systemic Risk ... 79

3.5.5.1 Examining Initial Shocks and Disruption 79
3.5.5.2 Examining Contagion 80
3.5.5.3 Amplification and Feedback Effects 82
3.5.5.3.1 Interconnectedness and the Phenomenon of Phase-Locking 82
3.5.5.3.2 Amplification Effects 83
3.5.5.3.3 Figure 3b: The Amplification Effect 85
3.5.5.4 Collapse & Second-Round Effects 85
3.5.5.4.1 Collapse 85
3.5.5.4.2 Second-Round Effects 85
3.5.5.4.3 The Impact of Systemic Risk: Externalities and Spillover Effects 85
3.5.6 Measuring Systemic Risk 86
3.5.6.1 Introduction 86
3.5.6.2 An Overview of Techniques to Measure Systemic Risk 89
3.5.6.2.1 General Applications 89
3.5.6.2.1.1 Marginal Expected Shortfall and Systemic Expected Shortfall 89
3.5.6.2.1.2 CoVaR 90
3.5.6.2.1.3 Co-Risk 90
3.5.6.2.1.4 Risk Topography 91
3.5.6.2.1.5 The Leverage Cycle 92
3.5.6.2.1.6 The Default Intensity Model 93
3.5.6.2.1.7 Contingent Claims Analysis 94
3.5.6.2.1.8 Mahalanobis Distance 95
3.5.6.2.2 Macroprudential Measures 95
3.5.6.2.2.1 Costly Asset Boom/Bust Cycles 95
3.5.6.2.2.2 Property-Price, Equity-Price, and Credit Gap Indicators 96
3.5.6.2.2.3 Principle Components Analysis 97
3.5.6.2.2.4 GDP Stress Tests 98
3.5.6.2.2.5 Noise as Information for Illiquidity 98
3.6 Investment Funds and Systemic Risk 100
3.6.1 General Remarks 100
3.6.2 Positive Effects of Investment Funds on Systemic Risk 101
3.6.3 FSB and IOSCO Recommendations 103
3.6.4 Liquidity Risk of Investment Funds 104
3.6.5 Phase-Locking Risk 105
3.6.5.1 Liquidity and Leverage 107

3.6.5.1.1 Leverage ... 107
3.6.5.1.2 Figure 3c: Leverage and Forced Selling ... 109
3.6.5.1.3 Liquidity ... 110
3.6.5.1.4 Figure 3d: The Loss Spiral and the Margin Spiral ... 111
3.6.5.2 Operational Risk ... 111
3.6.5.3 Securities Lending Activities ... 112
3.6.6 Effects on Financial Stability ... 113
3.7 Conclusion ... 116

4 UCITS ... 117

4.1 Introduction ... 118
4.2 Regulation of Asset Management in Europe ... 118
4.2.1 Collective vs Discretionary Fund Management ... 118
4.2.2 Figure 4a: Discretionary vs Collective Asset Management ... 119
4.3 The European Fund Management Framework ... 120
4.3.1 Collective Asset Management and its Regulation in the EU ... 120
4.3.2 Figure 4b: EU Harmonized Investment Funds ... 123
4.4 The History of UCITS ... 124
4.4.1 Table 4c: Overview of the Development of UCITS from its Inception ... 124
4.4.2 The Origins of UCITS ... 125
4.4.3 UCITS I ... 126
4.4.3.1 Establishing a European Market for Open-Ended Fund Structures ... 126
4.4.3.2 Investments under UCITS I ... 127
4.4.4 The Failed UCITS II Draft Directive ... 129
4.4.5 The UCITS III Reforms ... 130
4.4.5.1 UCITS III: Structure and Objectives ... 131
4.4.5.2 A Change of Investment Paradigms: Replicating Hedge Funds under UCITS III ... 131
4.4.6 The UCITS IV Proposal and Implementation ... 132
4.4.7 UCITS V: Aligning UCITS and the AIFMD ... 133
4.5 The Current UCITS IV/V Regulatory Regime ... 135
4.5.1 Scope of Regulation ... 135
4.5.2 The UCITS IV and UCITS V Provisions in Detail ... 136
4.5.2.1 Funds, Management Companies, and Investment Companies ... 136

4.5.2.2 Authorization of UCITS and of Management Companies 136
4.5.2.2.1 Authorized Activities 137
4.5.2.2.2 Initial Capital 138
4.5.2.2.3 Third Countries, Information, and Behavior of Managing Persons 139
4.5.2.2.4 Refusal and Withdrawal of Authorization 140
4.5.2.2.5 Authorization of UCITS Funds................................ 141
4.5.2.3 Operating Conditions.. 142
4.5.2.3.1 Prudential Supervision and Rules of Conduct 142
4.5.2.3.2 Operating Conditions for Management Companies .. 143
4.5.2.3.3 Operating Conditions Concerning Delegation of Activities 144
4.5.2.4 Freedom of Establishment and Freedom to Provide Services 145
4.5.2.4.1 Establishing a Branch 146
4.5.2.4.1.1 Obligations of the Management Company 146
4.5.2.4.1.2 Flow of Information Processes Between Member State Authorities 148
4.5.2.4.2 The Freedom to Provide Services as a Management Company 149
4.5.2.4.3 Cross-Border Collective Portfolio Management 150
4.5.2.4.4 Providing Information to Host Member States.......... 152
4.5.2.5 Depositary Obligations 153
4.5.2.5.1 The Depositary... 153
4.5.2.5.2 Safekeeping of Assets 154
4.5.2.5.3 Monitoring Functions... 155
4.5.2.5.4 Delegation of Depositary Functions 156
4.5.2.5.5 Depositary Liability 157
4.5.2.5.6 Conflict of Interest Issues 157
4.5.2.6 Investment Company Obligations... 158
4.5.2.6.1 Authorization 158
4.5.2.6.2 Operating Conditions 159
4.5.2.7 Mergers Rules under UCITS 160
4.5.2.8 Portfolio Construction under UCITS IV.................................... 164
4.5.2.8.1 Eligible Assets under UCITS IV.............................. 165
4.5.2.8.2 Limits to Individual Investments 168
4.5.2.8.2.1 The General Rules Regarding Investments with a Single Issuer or Counterparty 168
4.5.2.8.2.2 Exceptions to the General Rules 169

4.5.2.8.2.3 Table 4d: Overview of Investment Limits 171
4.5.2.8.3 Investment Limits under Certain Investment Policies 172
4.5.2.8.4 Limits Related to Voting Rights 173
4.5.2.8.5 Exceptions and Remedies in the Case of Limits Exceeded 174
4.5.2.8.6 Risk Management and Operational Requirements 175
4.5.2.9 Master-Feeder Structures 176
4.5.2.9.1 Permissible Structures and Approval by Competent Authorities 176
4.5.2.9.2 Coordination, Liquidation, and Mergers 178
4.5.2.9.3 Depositaries and Auditors 178
4.5.2.9.4 Marketing Communications by the Feeder Fund 179
4.5.2.9.5 Converting Feeder Funds and Changing Master Funds 180
4.5.2.9.6 Monitoring, other Obligations, and the Flow of Information 181
4.5.2.10 Information to Investors 182
4.5.2.10.1 The Prospectus, Annual and Half-Yearly Report 182
4.5.2.10.2 Key Investor Information 184
4.5.2.10.3 Marketing Communications and other Obligations 185
4.5.2.11 Cross-Border Marketing 185
4.5.2.12 Competent Authorities 186
4.5.2.13 Outlook: UCITS VI and KID 186
4.5.3 Conclusion: A Comprehensive Framework for Open-Ended Funds? 187
4.5.4 Systemic Risk and UCITS 188
4.6 Conclusion 190
4.7 Appendix Chapter 4 192
4.7.1 Figure 4e: KIID Template as Published by CESR 192
4.7.2 Table 4f: Investment Possibilities under UCITS III 194

5 The Alternative Investment Fund Managers Directive 197
5.1 Introduction 198
5.2 European Asset Management Regulation 198

5.3 The Alternative Investment Fund Managers Directive 199
5.3.1 Background 199
5.3.1.1 Context: The Regulatory Environment Prior to the AIFMD 199
5.3.1.2 The Emergence of the AIFMD 201
5.3.2 Table 5a: Key Differences Between the AIFMD and the UCITS Directive 204
5.3.3 Scope 205
5.3.3.1 Who is Subject to the AIFMD 205
5.3.3.2 Table 5b: Management and Marketing of AIFs 208
5.3.4 Structure of the AIFMD 209
5.4 The AIFMD in Detail 210
5.4.1 Authorization 210
5.4.1.1 Information Provided by Managers 210
5.4.1.2 Conditions for Granting Authorization 212
5.4.1.2.1 General Conditions 212
5.4.1.2.2 Capital Requirements 213
5.4.1.2.3 Withdrawal of Authorization and Changes in Scope 215
5.4.1.2.4 Timeline 216
5.4.2 Operating Conditions 216
5.4.2.1 General Requirements 217
5.4.2.1.1 General Principles 217
5.4.2.1.2 Conflicts of Interest 218
5.4.2.1.3 Remuneration 218
5.4.2.1.4 Risk Management 220
5.4.2.1.5 Leverage Limits 222
5.4.2.1.6 Liquidity Management 223
5.4.2.1.7 Investment in Securitization Positions 224
5.4.2.2 Organizational Requirements 225
5.4.2.2.1 General Principles 226
5.4.2.2.2 Valuation 227
5.4.2.3 Delegation 229
5.4.2.4 Depositary 230
5.4.2.4.1 Appointment of the Depositary and Eligibility 231
5.4.2.4.2 Eligible Institutions in the EU and in Third Countries 232

5.4.2.4.3 Safe-Keeping of Assets and Monitoring of the Fund by the Depositary ... 232
5.4.2.4.4 Delegation of Depositary Functions ... 234
5.4.3 Transparency Requirements and Disclosure to Investors ... 235
5.4.3.1 Annual Report and Other Periodic Reporting Obligations ... 236
5.4.3.2 Disclosure to Investors ... 237
5.4.3.3 Table 5c: Disclosure to Investors ... 238
5.4.3.4 Reporting Obligations to Competent Authorities ... 241
5.4.4 Leveraged Funds ... 242
5.4.5 Private Equity and Control of Non-Listed Companies ... 244
5.4.5.1 Structural Aspects ... 244
5.4.5.2 Notification Procedures ... 246
5.4.5.3 Annual Report ... 247
5.4.5.4 Asset Stripping ... 247
5.4.6 Marketing and Management in the EU and Third Countries ... 248
5.4.7 Home, Host, and Member States of Reference ... 249
5.4.7.1 Marketing in Home Member States and Cross Border Marketing of EU Funds with EU Management Companies ... 249
5.4.7.2 Managing of Funds Established in Other Member States ... 250
5.4.7.3 Management of Non-EU Funds by EU ManagementCompanies ... 252
5.4.7.3.1 Funds not Marketed in Member States ... 252
5.4.7.3.2 Funds Marketed in Member States ... 252
5.4.7.3.2.1 Marketing in the Management Company's Home Member State ... 252
5.4.7.3.2.2 Marketing in Member States Other Than the Management Company's Home Member State ... 254
5.4.7.4 Management by Non-EU Management Companies: Member States of Reference ... 256
5.4.7.4.1 Determining the Member State of Reference ... 256
5.4.7.4.2 Managing Funds Without Marketing ... 257
5.4.7.4.3 Marketing Funds in One or More Member States ... 257
5.4.7.4.4 Deciding on a Member State of Reference in Cases Where Multiple Possibilities Exist ... 258
5.4.7.4.5 Authorization and Disputes Related to the Member State of Reference ... 258
5.4.7.4.6 ESMA's Peer Review of Authorization and Supervision Process ... 263

5.4.7.5 Marketing of EU Funds by Non-EU Management Companies with a Passport ... 264
5.4.7.6 Marketing of Non-EU Funds by Non-EU Management Companies with a Passport ... 266
5.4.7.7 Management of EU Funds by Non-EU Managers in Member States Other Than the Member State of Reference ... 268
5.4.7.8 Marketing by Non-EU Managers Without a Passport in EU Member States ... 269
5.4.8 Marketing to Retail Investors ... 270
5.4.9 Competent Authorities ... 272
5.4.10 The Role of ESMA ... 273
5.5 The Context of the AIFMD: ELTIF, EuVECA, EuSEF, and the MMFR ... 273
5.5.1 Implementing Regulation ... 274
5.5.2 EuVECA ... 275
5.5.3 ELTIF ... 276
5.5.4 EuSEF ... 276
5.5.5 MMFR ... 277
5.5.6 Conclusion ... 278
5.6 Systemic Risk and the AIFMD ... 279
5.6.1 Reporting Requirements ... 280
5.6.2 Risk Management Procedures ... 281
5.6.3 Depositary Rules ... 282
5.6.4 Liquidity Requirements ... 283
5.7 Conclusion ... 284

6 Policy Suggestions ... 287
6.1 Introduction ... 288
6.2 Regulatory Rationale ... 288
6.2.1 Regulatory Approaches ... 289
6.2.1.1 Precautionary Principle ... 289
6.2.1.2 Behavioral Economics and Investor Protection ... 291
6.2.2 UCITS VI ... 295
6.2.2.1 The UCITS Consultation from 2012 ... 295
6.2.2.2 Table 6a: The Eight Areas of Review in the UCITS VI Consultation ... 296

6.2.3 The AIFMD Review Process 297
6.2.3.1 The Timeline and Content of the AIFMD Review Process 297
6.2.3.2 The Report on the Operation of the AIFMD 298
6.2.3.2.1 Issues Identified by the General Survey 299
6.2.3.2.2 Macroprudential Aspects 299
6.2.3.2.2.1 Reporting Requirements 299
6.2.3.2.2.2 Leverage in Alternative Investment Funds 301
6.2.3.2.2.3 Valuation 302
6.2.3.2.2.4 Remuneration 303
6.2.3.2.3 Microprudential Measures and Investor Protection 304
6.2.3.2.3.1 Functional and Hierarchical Separation of Risk Management Functions 304
6.2.3.2.3.2 Depositary Rules 306
6.2.3.2.3.3 Disclosure to Investors 307
6.2.3.2.3.4 Private Equity Investments 308
6.2.3.2.3.5 Passport Regime and Marketing 310
6.2.3.2.3.6 Market and Commercial Impact 311
6.2.3.2.3.7 Interplay with other Legislation 313
6.2.3.2.4 Study on the Achievement of AIFMD Objectives 315
6.2.3.2.4.1 Effectiveness 317
6.2.3.2.4.2 Efficiency 318
6.2.3.2.4.3 Coherence 319
6.2.3.2.4.4 Relevance 319
6.2.3.2.4.5 EU Added Value 319
6.2.3.2.4.6 Summary 320
6.3 Current Developments of the UCITS and AIFMD Frameworks 320
6.3.1 Cross-Border Fund Distribution Proposal 323
6.3.2 The Single Market for Alternative Investment Funds and Brexit 326
6.3.2.1 The UK as a Third Country: Seeking Equivalence 326
6.3.2.2 A British Alternative to UCITS and the AIFMD 327
6.3.2.3 Conclusion: A Tale of Two Jurisdictions 329
6.4 Policy Suggestions 330
6.4.1 Capital Requirements 332
6.4.1.1 Direct Regulation and Initial Capital 332
6.4.1.2 Indirect Regulation & Capital Requirements for Counterparties 333

6.4.2 Insurance Schemes ... 334
6.4.2.1 Alternative Investment Fund Reserve Fund ... 334
6.4.2.2 Central Bank Emergency Funding for Alternative Investment Funds ... 336
6.4.3 Fund Resolution Plans (the LTCM Model) ... 337
6.4.4 Monitoring through 'Gatekeepers' ... 338
6.4.4.1 A Problem of Incentives ... 338
6.4.4.2 The Fund of Funds Industry as a Private Monitor ... 339
6.4.4.3 The Regulator as a Monitor ... 340
6.4.5 Strategy-Based Regulation ... 342
6.4.5.1 Creating a Tiered System for Funds According to Regulatory Objectives ... 342
6.4.5.2 Figure 6b: Classification Matrix of Investor Protection and Systemic Relevance ... 345
6.4.6 Investor Protection Issues ... 345
6.4.7 Fee Structure and Remuneration ... 347
6.5 Synthesis: An Effective Solution ... 353
6.6 Conclusion ... 354

Bibliography ... 355

List of Abbreviations

AIF	Alternative Investment Fund
AIFM	Alternative Investment Fund Manager
AIFMD	Alternative Investment Fund Managers Directive
ARD	American Research and Development Corporation
AuM	Assets under management
BGE	Bundesgerichtsentscheid (Swiss Supreme Court decision)
BIS	Bank for International Settlements
CCA	Contingent Claims Analysis
CDS	Credit default swap
CEAT	Commission Eligible Assets Directive
CEBS	Committee of European Banking Supervisors
CESR	Commission of European Securities Regulators
CMU	Capital Market Union
CSDR	Central Securities Depositary Regulation
CTA	Commodity Trading Advisor
ECB	European Central Bank
EDHEC	École des hautes études commerciales du Nord (EDHEC Business School)
EEA	European Economic Area
EFSI	European Fund for Strategic Investments
EIB	European Investment Bank
ELTIF	Long-Term Investment Funds
EMIR	European Market Infrastructure Regulation
ESMA	European Securities and Markets Authority
ESRB	European Systemic Risk Board
ETF	Exchange Traded Fund
EU	European Union
EUR	Euro
EuVECA	European Venture Capital Funds
EVCA	European Venture Capital Association (formerly, now Invest Europe)
FSB	Financial Stability Board
G20	Group of Twenty

GBP	Pound Sterling
GDP	Gross Domestic Product
GEV	Generalized Extreme Value
IFRS	International Financial Reporting Standards
IMF	International Monetary Fund
INSEAD	Institut Européen d'Administration des Affaires
IOSCO	International Organization of Securities Commissions
IPO	Initial Public Offering
KID	Key Information Document
KIID	Key Investor Information Document
KKR	Kohlberg Kravis Roberts & Co
LBO	Leveraged buyout
LTCM	Long-Term Capital Management
M&A	Mergers & Acquisitions
MiFID II	Markets in Financial Instruments Directive
MiFIR	Markets in Financial Instruments Regulation
MIT	Massachusetts Institute of Technology
MMF	Money market fund
MMFR	Money Market Fund Regulation
NAV	Net asset value
NBER	National Bureau of Economic Research
NBFI	Non-Bank Financial Institution
NCA	National competent authorities
NPPR	National private placement regime
NYSE Arca	Archipelago Exchange
NYSE	New York Stock Exchange
OECD	Organisation for Economic Co-operation and Development
OTC	Over the counter
PE	Private equity
PRIIPs	Packaged Retail Investment and Insurance-Based Products
QPC	Qualifying portfolio company
S&P	Standard & Poor’s
SES	Systemic Expected Shortfall
SIFI	Systemically Important Financial Institution
SME	Small and medium-sized enterprise
SPV	Special purpose vehicle

STFR	Securities Transactions Financing Regulation
STS	Safe, transparent, standardized (in the context of the Securitisation Regulation)
TFEU	Treaty on the Functioning of the European Union
UCITS	Undertakings for Collective Investment in Transferable Securities
UK	United Kingdom
US	United States
USD	United States Dollar
VAR	Value-at-risk
VC	Venture Capital

Table of Cases

a) United States of America .... page:

Jacobellis v Ohio, 378 US 184 (1964) 74

b) Switzerland

BGE 137 III 352 227

c) European Court of Justice (and its Predecessor)

Belgique v High Authority [1954] ECR 245 Case C8/55 221

EU Legislation[2]

a) Treaties

TEU	Treaty on European Union Consolidated Version of the Treaty on European Union [2012] OJ C326/13.	289
TFEU	Treaty on the Functioning of the European Union Consolidated Version of the Treaty on the Functioning of the European Union [2012] OJ C326/47.	289[3]

b) Directives

AIFMD	Directive 2011/61/EU of the European Parliament and of the Council of 8 June 2011 on Alternative Investment Fund Managers and amending Directives 2003/41/EC and 2009/65/EC and Regulations (EC) No 1060/2009 and (EU) No 1095/2010 [2011] OJ L 174/1.	3
Capital Adequacy Directive	Directive 2006/49/EC of the European Parliament and of the Council of 14 June 2006 on the capital adequacy of investment firms and credit institutions [2006] OJ L177/201.	139
CRD IV Directive	Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, amending Directive 2002/87/EC and repealing Directives 2006/48/EC and 2006/49/EC [2013] OJ L176/338.	139
Directive 2017/1132/EU	Directive (EU) 2017/1132 of the European Parliament and of the Council of 14 June 2017 relating to certain aspects of company law [2017] OJ L169/46.	247

[2] All EU legislation listed here is in force, unless stated otherwise. The full name is given on the first citation in the footnotes. In subsequent citations, the short name, which is listed in the table below, is used, except where the author intends to emphasize the full name or remind the reader of the full name of the legislation in question.

[3] First mention in text (page number).

Directive 2019/1160	Directive (EU) 2019/1160 of the European Parliament and of the Council of 20 June 2019 amending Directives 2009/65/EC and 2011/61/EU with regard to cross-border distribution of collective investment undertakings [2019] OJ L188/106.	191
Investor Compensation Schemes Directive	Directive 97/9/EC of the European Parliament and of the Council of 3 March 1997 on investor-compensation schemes [1997] OJ L84/22.	218
MiFID II	Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU [2014] OJ L173/349.	29
Pension Fund Directive	Directive 2003/41/EC of the European Parliament and of the Council of 3 June 2003 on the activities and supervision of institutions for occupational retirement provision [2003] OJ L235/10.	207
Prospectus Directive (no longer in force)	Directive 2003/71/EC of the European Parliament and of the Council of 4 November 2003 on the prospectus to be published when securities are offered to the public or admitted to trading and amending Directive 2001/34/EC [2003] OJ L345/64.	238
Prospectus Directive	Directive 2010/73/EU of the European Parliament and of the Council of 24 November 2010 amending Directives 2003/71/EC on the prospectus to be published when securities are offered to the public or admitted to trading and 2004/109/EC on the harmonisation of transparency requirements in relation to information about issuers whose securities are admitted to trading on a regulated market [2010] OJ L327/1.	238
Transparency Directive	Directive 2013/50/EU of the European Parliament and of the Council of 22 October 2013 amending Directive 2004/109/EC of the European Parliament and of the Council on the harmonisation of transparency requirements in relation to information about issuers whose securities are admitted to trading on a regulated market, Directive 2003/71/EC of the European Parliament and of the Council on the prospectus to be published when securities are offered to the public or admitted to trading and Commission Directive 2007/14/EC laying down detailed rules for the implementation of certain provisions of Directive 2004/109/EC [2013] OJ L390/38.	236

UCITS I (no longer in force)	Council Directive 85/611/EEC on the coordination of laws, regulations and administrative provisions relating to undertakings for collective investment in transferable securities (UCITS) [1985] OJ L375/3.	126
UCITS III (Management directive) (no longer in force)	Directive 2001/107/EC of the European Parliament and of the Council of 21 January 2002 amending Council Directive 85/611/EEC on the coordination of laws, regulations and administrative provisions relating to undertakings for collective investment in transferable securities (UCITS) with a view to regulating management companies and simplified prospectuses [2002] OJ L41/20.	130
UCITS III (Products directive) (no longer in force)	Directive 2001/108/EC of the European Parliament and of the Council of 21 January 2002 amending Council Directive 85/611/EEC on the coordination of laws, regulations and administrative provisions relating to undertakings for collective investment in transferable securities (UCITS), with regard to investments of UCITS [2002] OJ L41/35.	130
UCITS Implementing Directive	Commission Directive 2010/43/EU of 1 July 2010 implementing Directive 2009/65/EC of the European Parliament and of the Council as regards organisational requirements, conflicts of interest, conduct of business, risk management and content of the agreement between a depositary and a management company [2010] OJ L176/42.	8
UCITS IV	Directive 2009/65/EC of the European Parliament and of the Council of 13 July 2009 on the coordination of laws, regulations and administrative provisions relating to undertakings for collective investment in transferable securities (UCITS) [2009] OJ L302/32.	4
UCITS V	Directive 2014/91/EU of the European Parliament and of the Council of 23 July 2014 amending Directive 2009/65/EC on the coordination of laws, regulations and administrative provisions relating to undertakings for collective investment in transferable securities (UCITS) as regards depositary functions, remuneration policies and sanctions [2014] OJ L257/184.	4

c) Regulations

AIFMD Regulation	Commission Delegated Regulation (EU) 231/2013 of 19 December 2012 supplementing Directive 2011/61/EU of the European Parliament and of the Council with regard to exemptions, general operating conditions, depositaries, leverage, transparency and supervision [2013] OJ L83/1 (Regulation 231/2013).	8
Capital Requirements Regulation (CRR)	Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012 [2013] OJ L176/1.	139
CSDR	Regulation (EU) 909/2014 of the European Parliament and of the Council of 23 July 2014 on improving securities settlement in the European Union and on central securities depositories and amending Directives 98/26/EC and 2014/65/EU and Regulation (EU) No 236/2012 [2014] OJ L257/1.	314
ELTIF	Regulation (EU) 2015/760 of the European Parliament and of the Council of 29 April 2015 on European long-term investment funds [2015] OJ L123/98.	9
EMIR	Regulation (EU) 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories [2012] OJ L201/1.	314
ESMA Regulation	Regulation (EU) 1095/2010 of the European Parliament and of the Council of 24 November 2010 establishing a European Supervisory Authority (European Securities and Markets Authority), amending Decision No 716/2009/EC and repealing Commission Decision 2009/77/EC [2010] OJ L331/84.	259
EuSEF	Regulation (EU) 346/2013 of the European Parliament and of the Council of 17 April 2013on European social entrepreneurship funds [2013] OJ L115/18.	9
EuVECA	Regulation (EU) 345/2013 of the European Parliament and of the Council of 17 April 2013 on European venture capital funds [2013] OJ L115/1.	9

MiFIR	Regulation (EU) 600/2014 of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Regulation (EU) No 648/2012 [2014] OJ L173/84.	29
MMFR	Regulation (EU) 2017/1131 of the European Parliament and of the Council of 14 June 2017 on money market funds [2017] OJ L169/8.	9
PRIIPs	Regulation (EU) 1286/2014 of the European Parliament and of the Council of 26 November 2014 on key information documents for packaged retail and insurance-based investment products (PRIIPs) [2014] OJ L352/1.	125
Prospectus Regulation	Regulation (EU) 2017/1129 of the European Parliament and of the Council of 14 June 2017 on the prospectus to be published when securities are offered to the public or admitted to trading on a regulated market, and repealing Directive 2003/71/EC [2017] OJ L168/12.	307
Regulation 2019/1156	Regulation (EU) 2019/1156 of the European Parliament and of the Council of 20 June 2019 on facilitating cross-border distribution of collective investment undertakings and amending Regulations (EU) No 345/2013, (EU) No 346/2013 and (EU) No 1286/2014 [2019] OJ L188/55.	191
Securitisation Regulation	Regulation (EU) 2017/2402 of the European Parliament and of the Council of 12 December 2017 laying down a general framework for securitisation and creating a specific framework for simple, transparent and standardised securitisation, and amending Directives 2009/65/EC, 2009/138/EC and 2011/61/EU and Regulations (EC) No 1060/2009 and (EU) No 648/2012 [2017] OJ L347/35.	224
SFTR	Regulation (EU) 2015/2365 of the European Parliament and of the Council of 25 November 2015 on transparency of securities financing transactions and of reuse and amending Regulation (EU) No 648/2012 [2015] OJ L337/1.	314

UCITS Depositary Obligation Regulation	Commission Delegated Regulation (EU) 2016/438 of 17 December 2015 supplementing Directive 2009/65/EC of the European Parliament and of the Council with regard to obligations of depositaries [2016] OJ L78/11.	8
UCITS Depositary Safe-keeping Duties Regulation	Commission Delegated Regulation (EU) 2018/1619 of 12 July 2018 amending Delegated Regulation (EU) 2016/438 as regards safe-keeping duties of depositaries [2018] OJ L271/6.	8
UCITS Implementing Regulation	Commission Regulation (EU) 583/2010 of 1 July 2010 implementing Directive 2009/65/EC of the European Parliament and of the Council as regards key investor information and conditions to be met when providing key investor information or the prospectus in a durable medium other than paper or by means of a website [2010] OJ L176/1.	8

d) Other Legislation, Proposals, and Accompanying Documentation

2003/361/EC	Commission Recommendation of 6 May 2003 concerning the definition of micro, small and medium-sized enterprises [2003] OJ L 124/36.	245
AIFMD proposal	Proposal for a Directive of the European Parliament and of the Council on Alternative Investment Fund Managers and amending Directives 2004/39/EC and 2009/…/EC {SEC(2009)576}{SEC(2009)577}' COM (2009) 207 final.	19
ESRB 2017/6	Recommendation of the European Systemic Risk Board of 7 December 2017 on liquidity and leverage risks in investment funds, ESRB/2017/6 [2018] OJ C151/1.	102
ESRB 2020/4	Recommendation of the European Systemic Risk Board of 6 May 2020 on Liquidity Risks in Investment Funds, ESRB/2020/4 [2020] OJ C 200/1.	5
UCITS II amended proposal	Commission, Amended Proposal for a European Parliament and Council Directive amending Directive 85/611/EEC on the Coordination of Laws, Regulations and Administrative Provisions relating to Undertakings for Collective Investment in Transferable Securities (UCITS)' COM (94) 329 final.	130

UCITS II Proposal	Commission, 'Proposal for a European Parliament and Council Directive amending Directive 85/611/EEC on the Coordination of Laws, Regulations and Administrative Provisions relating to Undertakings for Collective Investment in Transferable Securities (UCITS)' COM (93) 37 final.	129
UCITS III Proposal (Management Companies)	Proposal for a European Parliament and Council Directive Amending Directive 85/611/EEC on the Coordination of Laws, Regulations and Administrative Provisions Relating to Undertakings for Collective Investment in Transferable Securities (UCITS) with a view to regulating management companies and simplified prospectuses COM (1998) 451 final.	130
UCITS III Proposal (Products)	Proposal for a European Parliament and Council Directive Amending Directive 85/611/EEC on the Coordination of Laws, Regulations and Administrative Provisions Relating to Undertakings for Collective Investment in Transferable Securities (UCITS) COM (1998) 449 final.	130
UCITS IV Proposal	Proposal for a Directive of the European Parliament and of the Council on the coordination of laws, regulations and administrative provisions relating to undertakings for collective investment in transferable securities (UCITS) {SEC(2008) 2263} {SEC(2008) 2264} COM (2008) 458 final.	132
UCITS V Proposal	Proposal for a Directive of the European Parliament and of the Council amending Directive 2009/65/EC on the coordination of laws, regulations and administrative provisions relating to undertakings for collective investment in transferable securities (UCITS) as regards depositary functions, remuneration policies and sanctions.	133
UCITS V Proposal Impact Assessment	Commission Staff Working Document Impact Assessment Accompanying the document Proposal for Directive of the European Parliament and of the Council amending Directive 2009/65/EC on the coordination of laws, regulations and administrative provisions relating to undertakings for collective investment in transferable securities (UCITS) as regards depositary functions, remuneration policies and sanctions SWD (2012) 185 final.	133

UCITS & AIFMD Cross-border Distribution Proposal	Proposal for a Directive of the European Parliament and of the Council Amending Directive 2009/65/EC of the European Parliament and of the Council and Directive 2011/61/EU of the European Parliament and of the Council with Regard to Cross-Border Distribution of Collective Investment Funds COM (2018) 92 final.	123

Table of figures and tables

a) Chapter 2:

Table 2a:	Categories of Alternative Investments	19
Figure 2b:	Alternative vs Traditional Investments	21
Figure 2c:	Relative size of Alternative Investment Categories	22
Figure 2d:	Overview of the Alternative Investment Fund Universe	23
Figure 2e:	Growth and Size of the Alternative Investment	25
Table 2f:	Characteristics of Open-Ended and Closed-Ended Funds	28
Figure 2g:	Discretionary versus Collective Asset Management	30
Table 2h:	Overview of Hedge Fund Strategies	52
Figure 2i:	Global Hedge Fund and Funds of Funds AuM	54
Figure 2j:	Size of the European Hedge Fund Industry	55
Figure 2k:	Types of European Funds by Structure	57

b) Chapter 3:

Table 3a:	Overview of Operational Risk Categories	71
Figure 3b:	The Amplification Effect	85
Figure 3c:	Leverage and forced selling	109
Figure 3d:	The Loss spiral and the Margin Spiral	111

c) Chapter 4:

Figure 4a:	Discretionary vs Collective Asset Management	119
Figure 4b:	EU Harmonized Investment Funds	123
Table 4c:	Overview of the Development of UCITS from its Inception	124
Table 4d:	Overview of Investment Limits	171
Figure 4e:	KIID Template as Published by CESR	192
Table 4f:	Investment Possibilities under UCITS III	194

d) Chapter 5:

Table 5a:	Key Differences between the AIFMD and the UCITS directive	204
Table 5b:	Management and Marketing of AIFs	208
Table 5c:	Disclosure to Investors	238

e) Chapter 6:

Table 6a:	The Eight Areas of Review in the UCITS VI Consultation	296
Figure 6b:	Classification Matrix of Investor Protection and Systemic Relevance	345

1 Introduction

'Life is a school of probability.' – Walter Bagehot[4]

Table of Contents

1 Introduction 1
1.1 Introductory Remarks 2
1.2 Research Questions and Methodology 6
1.3 Scope of the Thesis 7
1.4 Outlook 12

4 As quoted in Ian Jordaan, *Decisions under Uncertainty: Probabilistic Analysis for Engineering Decisions* (CUP 2005) 1.

1.1 Introductory Remarks

Asset management occupies an unusual place in the world of financial markets, in that it is both extremely large, but not very well known, especially compared to most banking institutions and activities. While the average person not professionally active in or otherwise involved with the financial services industry likely could describe the function of a bank at least in broad strokes, the term ‘asset management’ is far less present in the public’s consciousness. The same could be said for the term ‘hedge fund’ or much more for the term ‘private equity’. If one were to ask average people to name five banks, presumably they would at the very least be able to name one or two of their country’s large local institutions. Naming just three of the ten largest asset managers, let alone one or two hedge or private equity funds, would likely be a much more difficult task for people not familiar with the field. While Credit Suisse, Goldman Sachs, JP Morgan, HSBC, the China Construction Bank and others can be considered household names, the largest asset managers such as BlackRock, Vanguard, State Street, and Fidelity are much less known. The names of the larger hedge fund managers, such as Renaissance Technologies, Bridgewater Associates, and AQR Capital Management, are even less well known. Within the universe of the financial industry, asset management holds a compelling position, in that it is overshadowed by banking as an activity, but is extremely large and profitable. To give an example, the world’s largest asset manager, BlackRock, had assets under management of $6.4 trillion as of Q3 2018,[5] If BlackRock were a bank, its size would undoubtedly render it systemically important, meaning it would be considered to be large enough to be a threat to financial stability were it to fail. In fact, BlackRock’s size would actually rival, if not surpass, the Industrial Bank of China, the world’s largest bank as measured by total assets.[6]

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5 BlackRock, ‘BlackRock Reports Third Quarter 2018 Diluted EPS of $7.54, or $7.52 as Adjusted’ (BlackRock’s Quarterly Result 2018, 3rd quarter) <https://s24.q4cdn.com/856567660/files/doc_news/archive/6d8b1bac-8038-4c6c-89f1-35c1a5095dda.pdf> accessed 31 August 2020.

6 The ICBC reported total assets of 28’198’135’000 RMB, which corresponds roughly to $4.17 trillion in its third quarterly report of 2018. While assets under management of an asset manager and total assets of a bank are not directly comparable, it gives an indication of the scale of the asset management industry versus the banking industry. See Industrial and Commercial Bank of China, ‘Industrial and Commercial Bank of China Limited Third Quarterly Report of 2018’ (ICBC Quarterly Report, 2018) 2

The hedge fund and private equity industries are similarly lucrative, and all but opaque to outsiders. In popular culture, both the term hedge fund and private equity fund arguably have negative connotations and are frequently associated primarily with greed and financial hubris. The term hedge fund might evoke images of freewheeling capitalist buccaneers making risky trades and promising, if not always delivering, eye-watering returns to their investors.[7] Concurrently, the term private equity evokes images of leveraged buyouts, of corporate raiders stripping companies of their assets and firing employees while gorging themselves on profits earned from borrowed capital.[8]

This thesis will attempt to offer a more balanced view of the asset management industry.

1.1.1 Overview

The objective of this thesis is to describe the regulatory environment and current challenges for collective asset management within the European Union. The focus is on alternative investments under the AIFMD,[9] but also extends to collective

<https://v.icbc.com.cn/userfiles/Resources/ICBCLTD/download/2018/ThirdQuarterlyReport20181030.pdf> accessed 31 August 2020.

7 It is no coincidence that the titles of the more popular books written on hedge funds reflect this view. Such books will either describe impending doom or failure of funds, or emphasize the industry's profitability or duplicity. See Roger Lowenstein, *When Genius Failed: The Rise and Fall of Long-Term Capital Management* (Random House Trade Paperbacks 2000); Michael Lewis, *Flash Boys: A Wall Street Revolt* (WW Norton & Company 2014); Sebastian Mallaby, *More Money than God: Hedge Funds and the Making of the New Elite* (A&C Black 2010); Scott Patterson, *The Quants: How a Small Band of Maths Wizards Took over Wall Street and Nearly Destroyed It* (Random House 2010).

8 This arguably is also reflected in many popular books on private equity, which, similar to how hedge funds are treated, tries to present an image of an immensely profitable, but dangerous and perhaps slightly immoral industry. See Bryan Burrough and John Helyar, *Barbarians at the Gate: The Fall of RJR Nabisco* (Random House 2010); Robert Finkel and David Greising, *The Masters of Private Equity and Venture Capital* (McGraw Hill Professional 2009); David Carey and John E Morris, *King of Capital: The Remarkable Rise, Fall, and Rise Again of Steve Schwarzman and Blackstone* (Crown Business 2012); Jason Kelly, *The New Tycoons: Inside the Trillion Dollar Private Equity Industry That Owns Everything* (John Wiley & Sons 2012).

9 Directive 2011/61/EU of the European Parliament and of the Council of 8 June 2011 on Alternative Investment Fund Managers and amending Directives 2003/41/EC and

investment schemes governed by UCITS.[10] The initial portion of the thesis shall deal primarily with the concept of systemic risk itself and to what extent collective investment schemes and alternative investment funds might be catalysts for systemic risk. In addition, since financing activity in Europe is still primarily reliant on banks, and the European asset management industry has enormous potential to enable direct investments by retail and professional investors in financial markets, the thesis will also examine what would need to be done to expand market-based financing within the European Union. Furthermore, the rapidly changing environment for banking in light of technological advances and financial innovation might lead, in the long-term, to the replacement of traditional banks by asset managers and similar financial conduits. The thesis will therefore also attempt to contrast the current state of regulation in the European Union with potential policy recommendations that could lead to a more efficient, systemically stable, and innovation-friendly regulatory framework.

1.1.2 Linking Systemic Risk and Asset Management

The term 'systemic risk' is more commonly be associated with banking regulation, given the size of the banking industry and its influence not only on financial markets, but on economies as a whole. Research on systemic risk deals primarily with the risk of disruptive financial crises and seeks to enable an ever deeper understanding of the phenomena associated with it. Accordingly, while many regulatory efforts are aimed at mitigating systemic risk caused by banks,[11] other industries

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2009/65/EC and Regulations (EC) No 1060/2009 and (EU) No 1095/2010 [2011] OJ L174/1.

[10] Directive 2009/65/EC of the European Parliament and of the Council of 13 July 2009 on the coordination of laws, regulations and administrative provisions relating to undertakings for collective investment in transferable securities (UCITS) [2009] OJ L 302/32; Directive 2014/91/EU of the European Parliament and of the Council of 23 July 2014 amending Directive 2009/65/EC on the coordination of laws, regulations and administrative provisions relating to undertakings for collective investment in transferable securities (UCITS) as regards depositary functions, remuneration policies and sanctions [2014] OJ L257/184.

[11] See, for example, Kathryn Judge, 'Fragmentation Nodes: A Study in Financial Innovation, Complexity, and Systemic Risk' (2012) 64 Stanford Law Review 657, 664 <https://scholarship.law.columbia.edu/cgi/viewcontent.cgi?article=2702&context=faculty_scholarship> accessed 31 August 2020. See also Helmut Elsinger, Alfred Lehar and Martin Summer, 'Systemically Important Banks: An Analysis for the European Banking System' (2006) 3 International Economics and Economic Policy

involved in financial markets and their contributions to systemic risk have also recently become areas of increasing political and academic interest.[12] The size and potential impact of the insurance industry, for example, has led to a number of insurance companies being classified as so-called 'systemically important financial institutions', or SIFIs by the FSB.[13] Similar risks that might be present in the asset management industry have been identified by the FSB, which has pointed out the potential systemic relevance of the asset management industry, but no individual institutions have been identified as systemically relevant so far.[14] Some preliminary soft law in the form of recommendations has been published by the ESRB and IOSCO,[15] examined further in chapter 3,[16] but the potential classification of an individual asset management firm as systemically important has been

73. Lamont Black and others, 'The Systemic Risk of European Banks during the Financial and Sovereign Debt Crises' (2016) 63 Journal of Banking & Finance 107.

[12] Among them the insurance and reinsurance industries, as well as clearing houses. See, for example, Sojung Carol Park and Xiaoying Xie, 'Reinsurance and Systemic Risk: The Impact of Reinsurer Downgrading on Property–Casualty Insurers' (2014) 81 Journal of Risk and Insurance 587; J David Cummins and Mary A Weiss, 'Systemic Risk and the US Insurance Sector' (2014) 81 Journal of Risk and Insurance 489; Daniel Schwarcz and Steven L Schwarcz, 'Regulating Systemic Risk in Insurance' [2014] The University of Chicago Law Review 1569 <www.jstor.org/stable/43151586> accessed 30 November 2016; Charles Boissel and others, 'Systemic Risk in Clearing Houses: Evidence from the European Repo Market' (2017) 125 Journal of Financial Economics 511.

[13] Allianz, AXA, and Prudential are all prominent European insurance companies that are now classified as SIFIs by the Financial Stability Board. See Financial Stability Board, '2016 List of Global Systemically Important Insurers (G-SIIs)' (FSB document, 21 November 2016) <www.fsb.org/wp-content/uploads/2016-list-of-global-systemically-important-insurers-G-SIIs.pdf> accessed 31 August 2020.

[14] Financial Stability Board, 'Policy Recommendations to Address Structural Vulnerabilities from Asset Management Activities' (Financial Stability Board, 12 January 2017) 1–2 <www.fsb.org/wp-content/uploads/FSB-Policy-Recommendations-on-Asset-Management-Structural-Vulnerabilities.pdf> accessed 31 August 2020.

[15] Board of the International Organization of Securities Commissions, 'Recommendations for Liquidity Risk Management for Collective Investment Schemes' (Final Report FR01/2018, IOSCO, 2018) <www.iosco.org/library/pubdocs/pdf/IOSCOPD590.pdf> accessed 31 August 2020. See also European Systemic Risk Board, 'Recommendation of the European Systemic Risk Board of 6 May 2020 on Liquidity Risks in Investment Funds' ESRB/2020/4 OJ C 200/1 <https://www.esma.europa.eu/sites/default/files/library/2015/11/10_1321.pdf> accessed 1 September 2020.

[16] See chapter 3.

postponed by the FSB until after work on the vulnerabilities of asset management has been completed.[17]

1.2 Research Questions and Methodology

The core question this thesis attempts to answer is whether the European regulatory framework governing alternative investment funds is optimally structured to mitigate systemic risk arising as a consequence of the activities of these funds. The secondary objective of this thesis is to propose alternative or complementary regulatory approaches to limit systemic risk created by the alternative investment fund industry.

1.2.1 Doctrinal Method

This thesis primarily utilizes the doctrinal method of examining and interpreting the law. The doctrinal method seeks to comprehend legal issues through an analysis of the law conducted by the author and incorporating miscellaneous surrounding documentation that might further enhance the understanding of the core legal texts.[18] Additionally, although an empirical analysis lies outside the scope of this thesis, it incorporates literature and research from the fields of both finance and economics to support its fundamental arguments and to aid the reader's understanding.[19] The European Union itself has also conducted its own research on the effectiveness of the framework governing alternative investment funds. This report on the framework's efficacy forms an integral part of the policy chapter, as it provides a comprehensive analysis, including industry opinions, of the impact the

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17 See Financial Stability Board (n 14) 1–2. See also Caroline Binham, 'FSB to Dust off Plan for Designating "Systemically Important" Asset Managers' *Financial Times* (London, January 2017).

18 Terry Hutchinson and Nigel Duncan, 'Defining and Describing What We Do: Doctrinal Legal Research' (2012) 17 Deakin Law Review 83.

19 This same approach is described in the following paper: Terry Hutchinson, 'The Doctrinal Method: Incorporating Interdisciplinary Methods in Reforming the Law' (2015) 8 Erasmus Law Review 130 <https://repub.eur.nl/pub/79849/ELR-D-15-00007.pdf> accessed 31 August 2020.

rules on alternative investment funds has had on the European market for such products.[20]

1.2.2 Economic Analysis of Law

The economic analysis of law is a further tool which is particularly useful in the analysis of financial market regulation. This approach measures the efficacy of legal provisions through an economist's lens. More specifically, the economic analysis of law is the 'application of the theories and empirical methods of economics to the legal system across the board'.[21] Analyzing the law with the help of economic tools or utilizing papers that provide statistical analysis from the fields of finance and economics supplies answers to questions related to the potential impact of legal provisions on markets and institutions that fall within the scope of a given provision. This thesis incorporates findings from both fields, as well as from various papers that are situated somewhere in between pure legal and pure economic analysis, in order to offer a more comprehensive assessment of the effects of the regulation examined. In addition, analyzing financial markets law from an economic standpoint also enables the suggestion of adjusted and improved provisions that collectively might form a future version of the regulation of alternative investment funds.

1.3 Scope of the Thesis

This thesis examines the current regulatory framework in the European Union governing alternative investment funds. The focus of the thesis is on aspects of systemic risk, and an analysis of the provisions of the European framework with regards to their effectiveness in mitigating this risk category. The thesis therefore first defines systemic risk and describes the relevant legal framework in the European Union. In a second step, the provisions are then analyzed and positioned into the context of financial stability, where in turn an assessment is made whether these provisions are designed in an effective manner that actually mitigates systemic risk caused by alternative investment funds. Finally, in a third step, the thesis highlights the less effective and deficient areas and suggests more optimal

[20] See chapter 6.

[21] Richard A Posner, *Economic Analysis of Law* (9th edn, Wolters Kluwer Law & Business 2014) 19.

measures and provisions. This final step is contained in the chapter on policy at the end of this thesis.[22]

1.3.1 Inclusion

As described above, the primary focus of this thesis is the coherent definition of systemic risk, the description of the existing regulatory framework in the European Union, and finally a policy chapter which suggests alternative regulation, and possibilities for amending the current framework. The thesis aims to examine in greater detail the two primary directives that govern collective asset management in the EU generally, and alternative investment funds specifically. These provisions include the AIFMD and the UCITS frameworks. Regulations directly related to these two frameworks, namely the implementing directives and regulations,[23]

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[22] See chapter 6.

[23] Commission Delegated Regulation (EU) 231/2013 of 19 December 2012 supplementing Directive 2011/61/EU of the European Parliament and of the Council with regard to exemptions, general operating conditions, depositaries, leverage, transparency and supervision [2013] OJ L83/1 (Regulation 231/2013); Commission Directive 2010/43/EU of 1 July 2010 implementing Directive 2009/65/EC of the European Parliament and of the Council as regards organisational requirements, conflicts of interest, conduct of business, risk management and content of the agreement between a depositary and a management company [2010] OJ L176/42; Commission Regulation (EU) 583/2010 of 1 July 2010 implementing Directive 2009/65/EC of the European Parliament and of the Council as regards key investor information and conditions to be met when providing key investor information or the prospectus in a durable medium other than paper or by means of a website [2010] OJ L176/1; Commission Delegated Regulation (EU) 2016/438 of 17 December 2015 supplementing Directive 2009/65/EC of the European Parliament and of the Council with regard to obligations of depositaries [2016] OJ L78/11; Commission Delegated Regulation (EU) 2018/1619 of 12 July 2018 amending Delegated Regulation (EU) 2016/438 as regards safe-keeping duties of depositaries [2018] OJ L271/6.

the AIFMD's lighter regime regulations,[24] and the MMF regulation[25] all form a part of this examination.

1.3.2 Exclusion

Certain aspects related to the regulation of alternative investment funds must be excluded from this thesis. Primarily, this thesis is focused on the current regime in the European Union and therefore excludes other jurisdictions such as the United States or those of Asian countries. Moreover, as the thesis attempts to provide an overview of the European regime, the thesis does not go beyond regulatory efforts on a supranational level. The implementation of the AIFMD and UCITS frameworks on a national level must therefore remain outside of the scope of this thesis.[26] Furthermore, the distribution channels of alternative investment funds are part of a fascinatingly complex topic which reaches into the realm of product distribution rules and discretionary asset management. This area is likewise not part of the thesis, as any aspects beyond the narrow area of collective asset management must be excluded.

1.3.3 Related Literature

The analysis of alternative investment funds and systemic risks is situated at a compelling literary crossroads. The existing literature related to systemic risk is extensive, albeit with much of it related to the effects of banking on financial systems. The regulation of systemic risk is a central topic both in banking and in

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24 Regulation (EU) 2015/760 of the European Parliament and of the Council of 29 April 2015 on European long-term investment funds [2015] OJ L123/98; Regulation (EU) 346/2013 of the European Parliament and of the Council of 17 April 2013on European social entrepreneurship funds [2013] OJ L115/18; Regulation (EU) 345/2013 of the European Parliament and of the Council of 17 April 2013 on European venture capital funds [2013] OJ L115/1.

25 Regulation (EU) 2017/1131 of the European Parliament and of the Council of 14 June 2017 on money market funds [2017] OJ L169/8.

26 Readers interested in the implementation and the state of national regimes post-AIFMD are encouraged to read Lodewijk Van Setten and Danny Busch, *Alternative Investment Funds in Europe: Law and Practice* (OUP 2014) 123ff. The overview provided there is extensive. The reader is cautioned, however, that some descriptions contained in that book are from 2014, and therefore might already have been overtaken by more recent developments.

financial markets law, and consequently, there exists a large body of academic literature. Similarly, literature in economics and finance related to hedge funds, private equity funds, and alternative investment funds in general is also vast. This is due to the fact that hedge and private equity funds remain a 'hot button' topic in politics and finance. The intersection between the two bodies of literature, namely literature related to both the regulation of alternative investment funds and their creation of systemic risk, is much more limited, however.

While much has been written on the banking sector creating systemic risk, the asset management industry has remained comparably unmentioned. Within the asset management industry, alternative investment funds constitute only a small portion of the total industry.[27]

The third component of this thesis, the question of regulation, has the smallest body of literature to draw from. Alternative investment funds have historically been lightly regulated and have only recently become the target of regulatory efforts.[28] This has a limiting effect on the existing literature related to the regulation of alternative investment funds. The overlap of these three fields represents a very narrow intersection within a vast body of literature indirectly related to the topic at hand given the narrow focus of this thesis. This allows the author to draw on three collections of literature, while integrating the limited writing at the intersection of these collections. This intersection is also where the thesis will ultimately be situated, as a synthesis of the wider topics. The literature review follows a similar pattern. From the three tangentially related fields, only the literature most important to the thesis will be mentioned here. This literature is described in greater detail immediately below.

Literature that provides an overview of the current regulatory framework that governs alternative investment funds and their managers in Europe consists primarily of three main books. Danny Busch's and Lodewijk van Setten's *Alternative Investment Funds in Europe: Law and Practice*[29] provides a comprehensive overview of the framework and describes the implementation of the directive in various national jurisdictions. Dirk Zetzsche's *The Alternative Investment Fund Managers*

[27] See chapter 2 for a quantitative comparison of asset management and the role of alternative investments and funds.

[28] As chapters 4 and 5 recount, in the EU, the introduction of a supranational ruleset regulating alternative investment funds dates back only to 2011 and the introduction of the AIFMD. Prior to this, funds and fund managers were nationally regulated.

[29] Van Setten and Busch (n 26).

Directive[30] comprises an edited collection of chapters dealing with the European framework, as does Eddy Wymeersch's *Alternative Investment Fund Regulation.*[31] Wymeersch's book also provides a more comparative aspect by contrasting various solutions to the challenge of regulating alternative investment funds. While providing an extensive overview of the regulatory framework, three books mentioned above were published before 2015 and thus do not include the most recent developments in the review and reform process of the regulatory environment for alternative investment funds in Europe. This thesis therefore goes beyond these sources by providing an updated overview of the current situation in the European Union.

Relating to systemic risk and banking regulation is Alexander's, Dhumale's, and Eatwell's *Global Governance of Financial Systems: the International Regulation of Systemic Risk.*[32] This book provides both the regulatory rationale and a definition of systemic risk as an externality, which are incorporated into this thesis. A second extensive overview of issues and perspectives related to systemic risk is provided in *Regulating Wall Street,*[33] an edited book with contributions by Steven L Schwarcz, Viral V Acharya, and others. Steven L Schwarcz has written extensively on systemic risk and related issues, from which this thesis draws much of its conceptual descriptions and the core understanding of systemic risk.[34]

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30 Dirk A Zetzsche, *The Alternative Investment Fund Managers Directive* (2nd edn, Wolters Kluwer 2015).

31 Eddy Wymeersch, *Alternative Investment Fund Regulation* (Wolters Kluwer 2012).

32 Kern Alexander, Rahul Dhumale and John Eatwell, *Global Governance of Financial Systems: The International Regulation of Systemic Risk* (OUP 2005).

33 Thomas F Cooley and Matthew P Richardson, *Regulating Wall Street: The New Architecture of Global Finance* (John Wiley & Sons 2010).

34 See primarily Steven L Schwarcz, 'Systemic Risk' (2008) 97 The Georgetown Law Journal 193 <http://heinonline.org/hol-cgi-bin/get_pdf.cgi?handle=hein.journals/glj97§ion=7> accessed 4 January 2017; Iman Anabtawi and Steven L Schwarcz, 'Regulating Ex Post: How Law Can Address the Inevitability of Financial Failure' <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2271587> accessed 30 November 2016; Steven L Schwarcz, 'Perspectives on Regulating Systemic Risk' in Anita Anand (ed), *Systemic Risk, Institutional Design, and the Regulation of Financial Markets* (OUP 2016) <http://papers.ssrn.com/sol3/Papers.cfm?abstract_id=2728434> accessed 30 November 2016; Steven L Schwarcz, 'Ring-Fencing' (2013) 87 Southern California Law Review 69 <http://heinonline.org/hol-cgi-bin/get_pdf.cgi?handle=hein.journals/scal87§ion=5> accessed 8 March 2017.

Another important aspect of systemic risk is how to measure it. As with the conceptual understanding of the topic, the literature is extensive, though most commonly mentioned are four main measurement techniques. These are composed of SES, CoVaR, Co-Risk, and Contingent Claims Analysis. The sections of this thesis describe these four main measurement techniques, but also contain an extensive description of other approaches. The main source used is 'A Survey of Systemic Risk Analytics' by Bisias and others.[35] This paper contains a collection of systemic risk measurement tools and techniques, including references to the original papers and sources. In addition, the paper is tied to an online repository with the necessary code to run these tools in Matlab.[36] With the help of Matlab and the repository, any reader can utilize the methods described in the paper to measure systemic risk, assuming one has access to sufficient data.

1.4 Outlook

This introductory chapter has provided a very brief overview of the topic. The following chapters will expand on each subsection of the introduction, aiming to create a near comprehensive description of the main issues.

Following this chapter, a nontechnical overview of the alternative investment industry should provide the reader with an introduction to the main actors on the stage. Each of its components is defined and described, so the reader gains an understanding of the structure of the industry. Some core issues that are inherent to the alternative investment universe are first described in this chapter, which aids the reader in understanding why certain legal rules have been imposed.

The third chapter deals with systemic risk and how to measure it. In addition, this chapter also argues that alternative investment funds can indeed create and/or transmit systemic risk and cause financial instability. In this chapter, various de-

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[35] Dimitrios Bisias and others, 'A Survey of Systemic Risk Analytics' (2012) 4 Annual Review of Financial Economics 255.

[36] Matlab is a statistical software environment and programming language. It can be used for a myriad of different statistical measurements and can also generate graphics to make statistics more accessible. It can be downloaded at: MathWorks, 'Matlab Products' (*Matlab Website,* 2020) <https://ch.mathworks.com/products/matlab.html> accessed 31 August 2020. See also MathWorks, 'Matlab Trial' (*Matlab Website,* 2020) <https://ch.mathworks.com/campaigns/products/trials.html?prodcode=ML&s_tid=ML_mod_pers_trial&elqCamelqCamp=814> accessed 31 August 2020.

scriptions of systemic risk are presented and examined. The main methods of measuring systemic risk, also mentioned above as part of the section on related literature, are presented in greater detail. Finally, chapter three links systemic risk and alternative investment funds in an overview of how systemic risk could be created or spread by alternative investment funds.

Chapter four is the first of two chapters describing European Union legislation in detail. It principally deals with the UCITS directive and framework, a framework which is intended for retail funds. This chapter is deliberately highly detailed, technical, and descriptive. If the reader does not require a minute understanding of each article, he or she can gain an overview of every rule by reading the first paragraph of each subsection. The reader can also review the exact rules and requirements in greater detail in the paragraphs following the general description. The end of chapter four highlights some of the main issues of the current UCITS framework, which in turn are subjected to a more detailed analysis in subsequent chapters.

Chapter five describes the second framework governing collective asset management in the European Union: the AIFMD, or Alternative Investment Fund Managers Directive, and the various regulations accompanying it. In the same fashion as chapter four, this chapter provides a detailed overview of the directive and its implementing regulation, as well as an overview of regulations associated with the AIFMD. As is the case with chapter four, the reader can either gain a functional understanding of core issues by reading the introductory paragraphs, or subject him- or herself to the rules in detail by reading the entire chapter. In identical fashion to chapter four, this chapter also highlights some core issues that are re-examined in later chapters.

Chapter six constitutes the product of the analytical labor of this thesis. It contains conclusions related to the existing framework, as well as an examination of potential rules and developments that might prove more effective than the current state of the law. This chapter opens with a description of the effectiveness of the European framework governing collective asset management and provides a roadmap of legal developments that might possibly be implemented in the near future. This description is followed by an analysis of whether existing measures to mitigate systemic risk in other sectors, in casu primarily the banking sector, might be tailored to suit the asset management industry as well. Other potential measures and ideas of the author that are directly related to asset management, but do not rely on a blueprint from existing law, are examined as well. Finally, more general pol-

icy suggestions form the conclusion to chapter six, which also include a general and cautious estimation of what the future might bring.

Each of these chapters follows a similar structure, which appears as follows: the beginning of each chapter presents an overview of how the chapter will be structured and which aspects will be examined. Following this, the issues are analyzed, whereupon each analysis is then brought into the context of the wider thesis in light of the elements discussed in other chapters. Finally, each chapter concludes with a summary of the main issues and possible further ideas and concepts to be investigated.

Having hereby come to the end of the formal introductions, let us turn our attention to the wonderful world of alternative investments.

2 Alternative Investments

'Putting a label on a type of financial intermediary does not make them new investment classes. Putting "private" in front of "equity," for instance, does not create an asset class called "private equity." Calling a collection of funds "absolute return strategies" does not make them so. Few investors delve into the underlying factor drivers of their portfolio returns.' – Andrew Ang[37]

Table of Contents

2 Alternative Investments ... 15

2.1 Introduction ... 16

2.2 Defining Alternative Investments ... 16

2.3 Alternative Investments: The Quantitative Dimension ... 20

2.4 Funds ... 26

2.5 Private Equity ... 37

2.6 Hedge Funds ... 44

2.7 Conclusion: Seeking Alpha ... 58

[37] Andrew Ang, *Asset Management: A Systematic Approach to Factor Investing* (OUP 2014) 48.

2.1 Introduction

This chapter serves as a general introduction to the topics analyzed throughout this thesis. It is meant as a nontechnical description of the components relevant for the understanding of the broader research questions. The chapter begins by describing alternative investments as an asset class. As a second step, the term 'fund' is defined and examined. Two important distinctions are then made in this context: the difference between open-ended and closed-ended funds as well as the difference between collective and discretionary asset management. Two categories of alternative investments, hedge funds and private equity funds, are of particular relevance for this thesis and are also described in detail in the course of this chapter. Moving from the general to the specific, first hedge funds and private equity funds are described. Following this description, the categorization of these two asset classes in the context of alternative investments and of asset management more generally is examined. Finally, certain specific aspects relevant to the regulation of alternative investment funds are described. The definition and description of systemic risk are not part of this chapter, but rather are part of chapter three. Chapter three also examines possible ways to measure it, and positions it in the context of alternative investment funds and their potential as catalysts for systemic risk.

2.2 Defining Alternative Investments

Alternative investments can be defined and categorized in two basic ways, either by exclusion or inclusion.[38] Alternative investments can be defined by listing all possible asset categories that collectively constitute alternative investments. Alternatively, alternative investments can be defined by what they are not, namely 'traditional investments'. As we shall see presently, categorizing alternative investments by exclusion is more precise and easier to understand, as the category itself does not have a finite number of elements, but serves as a catch-all term for all investments outside the realm of 'traditional investments'.

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[38] H Kent Baker and Greg Filbeck, 'Alternative Investments: An Overview' in H Kent Baker and Greg Filbeck (eds), *Alternative Investments: Instruments, Performance, Benchmark, Strategies* (Wiley 2013) 3–4. See also Mark JP Anson, Frank J Fabozzi and Frank J Jones, *The Handbook of Traditional and Alternative Investment Vehicles: Investment Characteristics and Strategies* (John Wiley & Sons 2010) 10–11.

2.2.1 Defining by Exclusion

If these investments are defined by exclusion, the term 'alternative investments' encompasses all assets that fall outside of 'traditional investments'. Defining alternative investments by exclusion therefore presupposes that a positive definition of 'traditional investments' exists, as the term 'traditional investments' represents the counterpoint and antithesis to alternative investments.

Traditional investments classically include only three asset classes: publicly traded equities, fixed-income securities, and cash.[39] Anything which is not a long position in any of these traditional asset categories is categorized as an alternative investment.[40] According to this definition, alternative investments hence could include anything from collecting stamps to investing in wine or art. It is evident hereby that this definition of alternative investments is extremely broad. Of all the possible alternative investments, this thesis is therefore focused on institutional-quality investments, which are defined as solely those investments which a financial institution such as an endowment or pension fund might be willing to invest in.[41] As a consequence, any future reference to alternative investments in this thesis is to be understood only to refer to the investment of institutional quality, unless otherwise stated.

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39 Baker and Filbeck (n 38) 3.

40 H Kent Baker and Greg Filbeck, *Hedge Funds: Structure, Strategies, and Performance* (OUP 2017) 3.

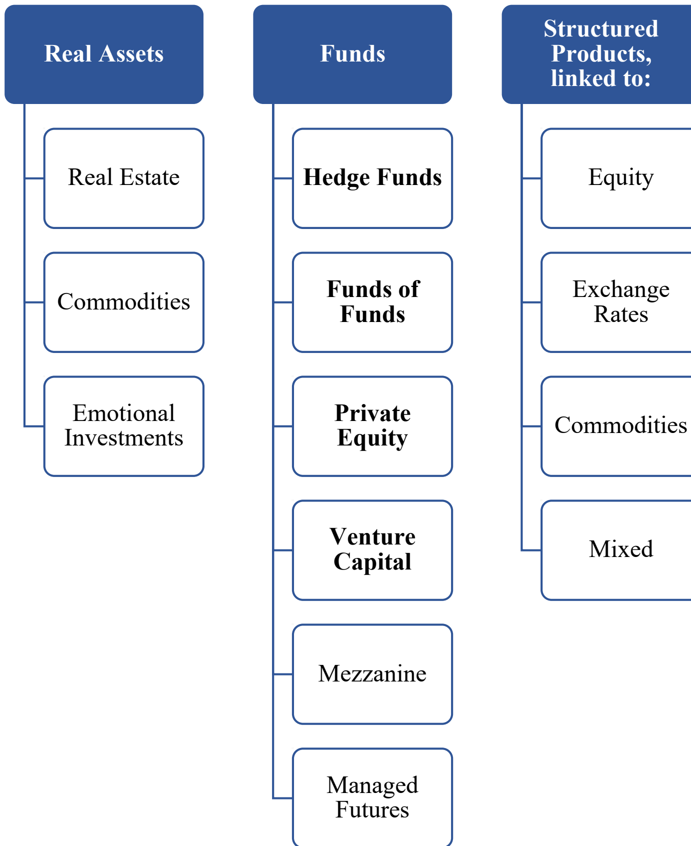
41 Donald R Chambers and others, *Alternative Investments: CAIA Level I* (Wiley 2015) 3–4. Financial institutions will generally be willing to invest where expected returns are balanced with an acceptable level of risk to the institution. A 'long position' more generally refers to an asset that has been bought and now is part of an investor's portfolio. By contrast, a 'short position' refers to a position where an asset has been sold without the investor already owning it and will need to be delivered at a later date. The most obvious way to obtain a long position is to buy an asset. To gain a deeper understanding of long and short positions, it is useful to imagine a forward contract. In a forward contract, one party assumes the long position and agrees to buy an underlying asset at a future date, while the second party agrees to sell an underlying asset at a future date and assumes the short position. See John C Hull, *Options Futures and Other Derivatives* (10th edn, Pearson 2018) 6. See also Daniel Capocci, *The Complete Guide to Hedge Funds and Hedge Fund Strategies* (Springer 2013) 7.

2.2.2 Defining by Inclusion

Creating an inclusive definition of alternative investments entails listing exactly which investments fall under the definition. In this thesis, we divide alternative investments into three subcategories, real assets, funds, and structured products. Real assets include any tangible investments that exist physically in the 'real world'. Real assets can be anything physical, from real estate to pieces of art. The second subcategory, funds, consists of pools of capital that are collectively invested into other assets. The assets do not necessarily need to be alternative investments themselves for the fund to be counted as an alternative investment fund. In the case of alternative investment funds, the investment style itself can also lead to the fund being classified as an alternative investment, despite the (traditional) assets in which it has invested its capital. Finally, structured products, in the third subcategory, include any structured products linked to equities, exchange rates, commodities, or mixed underlying assets.[42] Table 2a below provides an overview of categories and their subdivisions:

[42] Chambers and others (n 41) 4ff; Ewelina Sokołowska, *The Principles of Alternative Investments Management* (Springer 2015) 7–11.

2.2.3 Table 2a: Categories of Alternative Investments[43]



This list is neither complete nor exhaustive, as the definition by exclusion clearly demonstrates, nor is it a definitive categorization. Is does, however, provide a succinct overview of what is typically considered to be an alternative investment.[44]

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43 Sokołowska (n 42) 10. Adapted by the author, incorporating Lars Jaeger and Jeffrey Pease, *Alternative Beta Strategies and Hedge Fund Replication* (Wiley 2012) 12.

44 As an example of what 'typically' might be included in a general understanding of alternative investments, see Commission, 'Proposal for a Directive of the European Parliament and of the Council on Alternative Investment Fund Managers and Amending Directives 2004/39/EC and 2009/…/EC {SEC(2009)576}{SEC(2009)577}' COM (2009) 207 final 3, where the Commission states that '[t]he sector [of alternative

Of the various subcategories of alternative investments, the categories in bold, namely hedge funds, private equity including venture capital, and funds of funds will be in particular focus in this thesis.

2.3 Alternative Investments: The Quantitative Dimension

The various categories of alternative investments differ substantially in their size. Real assets make up approximately a third of alternative investments, while private equity and hedge funds are slightly smaller categories. Structured products, by contrast, are a much smaller niche category than other alternative investments. Not even a thirtieth (ie 3.3%) of all alternative investments consists of structured products. These numbers show that hedge funds and private equity represent a significant asset class within alternative investments. When comparing alternative investments to the entire investment universe, however, alternative investments are still quite a small subgroup. As Figure 2b demonstrates, the total amount of alternative investments is far smaller than all traditional investments combined. Alternative investments are only about an eighth of the size of traditional investments. Nonetheless, the alternative investment industry is growing and could continue to do so as investors seek higher returns or additional diversification beyond traditional investments. Accordingly, investors might very well expand their portfolios to include assets from the alternative investment sphere in the coming years. The recent growth of alternative investments is described in greater detail below.[45]

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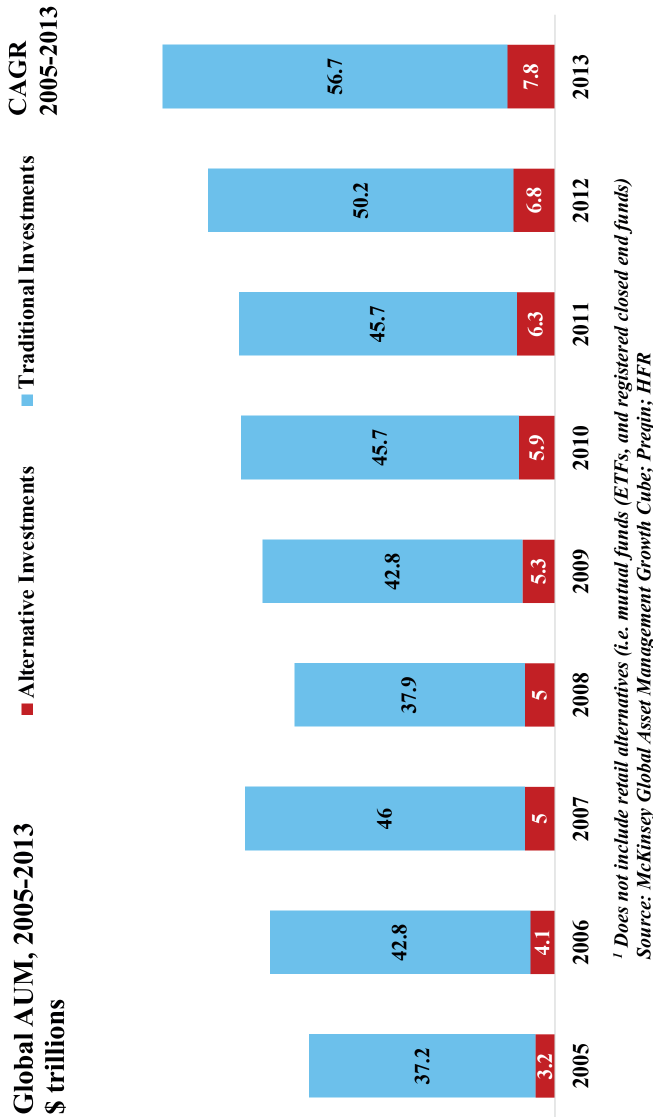
investment funds] includes hedge funds and private equity, as well as real estate funds, commodity funds, infrastructure funds and other types of institutional fund.'
See also Michael Migendt, *Accelerating Green Innovation: Essays on Alternative Investments in Clean Technologies* (Springer Gabler 2017) 1. The author states that '[m]ain categories within alternative investments are typically real estate, infrastructure, hedge funds, commodities, private equity (PE) and venture capital (VC).'

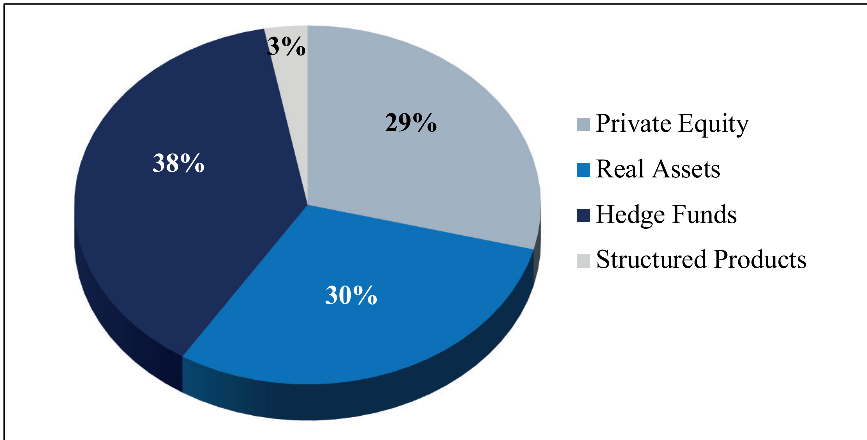
[45] See section 2.3.5.

2.3.1 Figure 2b: Alternative vs Traditional Investments[46]



[46] McKinsey & Company, 'The Trillion-Dollar Convergence: Capturing the Next Wave of Growth in Alternative Investments' (McKinsey Financial Services Practice Report, August 2014) 7 <www.mckinsey.com/industries/financial-services/our-insights/the-trillion-dollar-convergence> accessed 31 August 2020.

2.3.2 Figure 2c: Relative Size of Alternative Investment Categories[47]



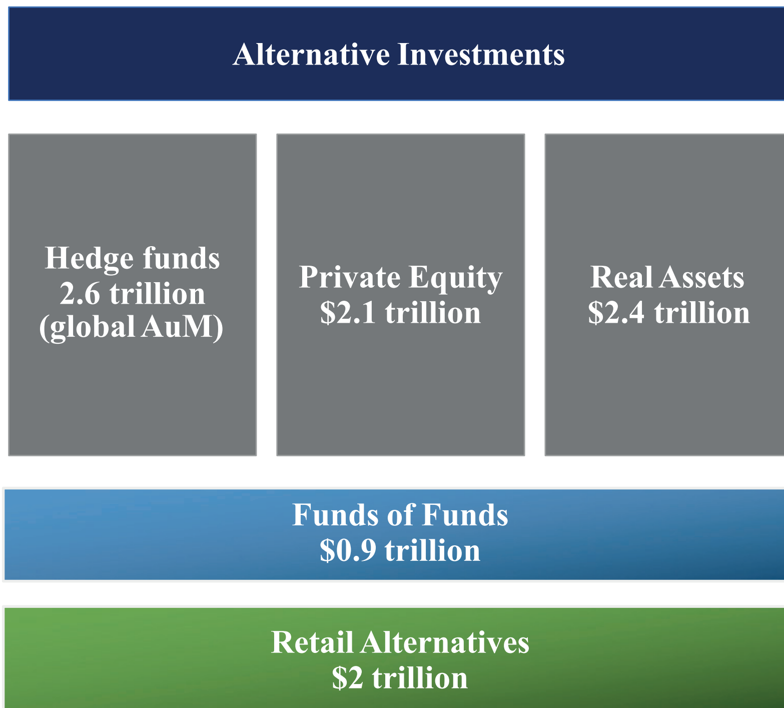
The relative allocation of alternative investments is mainly focused on funds. In the figure above, hedge funds and private equity are listed separately and comprise 38% and 29%, respectively, of all alternative investments. Real assets comprise almost a third with 30%, and structured products represent a niche category with only 3% within alternative investments.[48] It is interesting to note that private equity and hedge funds, when taken together, amount to over two thirds of total asset allocation.[49]

47 Chambers and others (n 41) 5.

48 ibid.

49 The data differs slightly from the diagram on the growth of alternative investments (Figure 2e) below, mainly due to different approaches to categorization and measurement, as well as regarding which assets are to be included in the category of 'real assets'.

2.3.3 Figure 2d: Overview of the Alternative Investment Fund Universe[50]



2.3.4 Growth of Alternative Investments[51]

Investments in alternative investments have been growing in recent years, mainly due to the post-crisis low interest rate environment, which has made the earning of an attractive return in traditional investments more difficult and has caused the shift into alternatives.[52] Hedge funds, and to a lesser extent, private equity funds, have profited immensely from this shift and both industries continue to grow, both

50 McKinsey & Company (n 46) 31.

51 ibid 7.

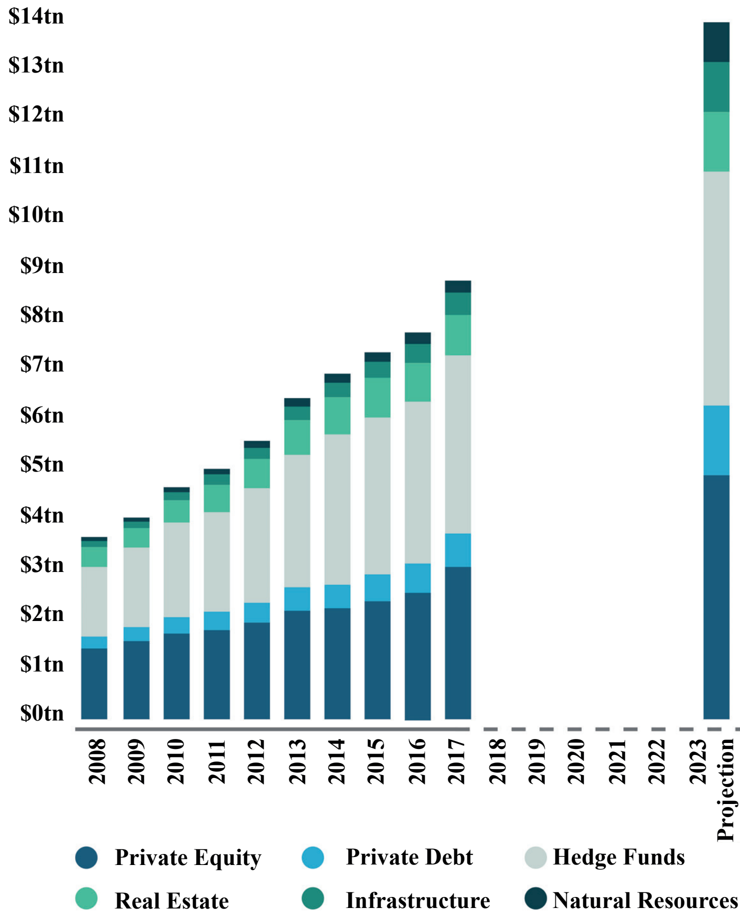
52 See Chris Flood, 'Global Shift into Alternative Assets Gathers Pace' *Financial Times* (London, 17 July 2017) <www.ft.com/content/1167a4b8-6653-11e7-8526-7b38dcaef614> accessed 31 August 2020. See BIS report, December 2019.

globally and within the European Union.[53] This growth has also been consistent for funds under the harmonized asset management regime of the European Union, where the number of funds operating under both the UCITS and AIFMD label has increased together with the total amount of assets under management.[54] Calculations by industry insiders and other experts, as reported by Preqin, predict continued growth of alternative investments. These projections, included below in Figure 2e, estimate that by 2023, alternative investments may grow to a total of almost $14trn.

53 See section 2.3.4.

54 See, for example, Commission, 'Report from the Commission to the European Parliament and the Council assessing the application and the scope of Directive 2011/61/EU of the European Parliament and of the Council on Alternative Investment Fund Managers' COM (2020) 232 final 5 <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020DC0232&from=EN> accessed 26 August 2020 and European Fund and Asset Management Association, 'Asset Management in Europe: An Overview of the Asset Management Industry' (EFAMA asset management report, September 2019) 2 <www.efama.org/Publications/Statistics/Asset Management Report/AssetManagementReport2019.pdf> accessed 20 August 2020.

2.3.5 Figure 2e: Growth and Size of Alternative Investments[55]



Source: Preqin

[55] Source: Mark O'Hare and others, 'The Future of Alternatives' (Preqin Report, 2018) 14 <https://docs.preqin.com/reports/Preqin-Future-of-Alternatives-Report-October-2018.pdf> accessed 10 February 2019.

2.4 Funds

2.4.1 Defining Funds

One specific subcategory of alternative investments, namely funds, can be described as a collectively invested pool of capital. This concept of the fund is described in greater detail below. This thesis is principally focused on the regulation of funds; therefore, the following section is of particular importance.

A fund in the general sense is principally understood to be a pool of assets which is collected from individual investors in order to be invested as a portfolio in various financial assets.[56] Legislators in the European Union use the term 'collective investment undertaking', which roughly corresponds to the term 'fund'. According to EU official publications, collective investment undertakings are defined as 'investment vehicles that pool investors' capital and invest that capital collectively through a portfolio of financial instruments such as stocks, bonds and other securities'.[57] In the context of this thesis, the terms 'collective investment undertakings' and 'fund' will be used interchangeably.

2.4.2 Open-Ended vs Closed-Ended Funds

Funds can be subdivided into two different forms. These two types are essential for the analysis of legal aspects relating to funds.[58] The differentiation factor between the two types of funds is related to the frequency of redemption of investors' funds. Depending on when and how often redemption of invested capital is permitted in a particular fund, it is placed in one of the two categories. In addition to this core differentiation factor, the life-span of a fund might be a further indicator of which category a fund falls into. For open-ended funds, restrictions on redemptions and the frequency of redemption that is permitted at the discretion of the investor will be shorter than in closed-ended funds. In an open-ended fund, the purchase and redemption can be so short as to be almost continuous, while closed-ended fund structures may impose redemption gates of up to several years. In ad-

56 Matthew Hudson, *Funds: Private Equity, Hedge and All Core Structures* (Wiley 2014) 2ff.

57 See European Union, 'European Venture Capital Funds' (*European Union Law Repository,* 2019) <https://eur-lex.europa.eu/legal-content/EN/LSU/?uri=CELEX%3A32013R0345> accessed 31 August 2020.

58 See AIFMD recitals 6 and 34. See also ELTIF art 23(3)(b),

dition, the life-cycle of a closed-ended fund will usually be limited, and the fund will be liquidated and the cash equivalent of its value paid out at the conclusion of a specific predetermined time span. Open-ended funds, on the other hand, might have unlimited lives and even see adjustments in size. Withdrawals by investors in such a fund are financed through realizing some of the fund's assets.[59]

As a general rule, open-ended structures are suitable for funds investing in small, highly liquid assets, while funds investing in illiquid assets with long investment horizons benefit from closed-ended structures. Accordingly, though this rule does not always hold true, closed-ended funds might be associated more directly with opaque and illiquid alternative investments, and open-ended funds with liquid assets in more traditional markets. To provide an example from both ends of the spectrum for the two types of funds, a private equity buyout fund might have redemption rights limited to the end of the fund's life, and therefore offer no redemption rights prior to the final payout. One example at the time of writing would be Blackstone's BAAF fund ('Blackstone Alternative Alpha Fund'), where the prospectus states that 'The Fund is a closed-end investment company, and therefore no Investor will have the right to require the Fund to redeem its Shares'.[60] By contrast, an open-ended ETF[61] may see investors purchase and redeem their shares in the open market. Such a fund's shares would hence be extremely liquid and would permit the entry and exit of an investor almost at will. The investor will generally receive a price at or close to the NAV of the fund.[62] An example of this would be the Vanguard S&P 500 ETF. The summary prospectus of this fund states the following:

> The Fund's ETF Shares are listed for trading on NYSE Arca and are bought and sold on the secondary market at market prices. Although it is expected that the market price of an ETF Share typically will approximate

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59 David P Stowell, *Investment Banks, Hedge Funds, and Private Equity* (3rd edn, Academic Press 2018) 260–261, 321; Ang (n 37) 523–525; Hudson (n 56) 6; Anson, Fabozzi and Jones (n 38) 243–247.

60 See Blackstone, 'Blackstone Alternative Alpha Fund' (Prospectus for BAAF fund, Blackstone, 21 September 2018) 71 <www.blackstone.com/docs/default-source/fund-documents/baam/baaf/baaf-i/baaf-9-4-18-sticker-7-31-18-prospectus2> accessed 26 August 2020.

61 Exchange-traded fund, a fund that has its shares listed on an exchange. See eg David J Abner, *The ETF Handbook: How to Value and Trade Exchange Traded Funds* (2nd edn, Wiley 2016).

62 See Vanguard, 'Vanguard S&P 500 ETF' (Summary Prospectus, Vanguard, 2020) <https://personal.vanguard.com/pub/Pdf/p968.pdf> accessed 22 August 2020.

its net asset value (NAV), there may be times when the market price and the NAV differ significantly.[63]

Table 2f below provides an overview of the characteristics of open-ended and closed-ended fund structures side-by-side to allow a direct comparison between the two.

2.4.3 Table 2f: Characteristics of Open-Ended and Closed-Ended Funds[64]

Type	Investment	Assets
Open-ended	Fund's life is indefinite. The overwhelming majority of assets in the fund can be realized over a relatively short period of time.	Usually large number of small and highly liquid assets. Size of assets usually can be easily adjusted to accommodate withdrawals and investments.
	Shares/units of the fund can be redeemed by investors at any time during the fund's life cycle. Price of fund's units or shares will be determined daily, based on the net asset value (NAV) of the assets held by the fund.	New investments by investors are invested in additional assets, and withdrawals are financed through the realization of the fund's assets. Examples of open-ended funds include: ETFs, UCITS funds, or index funds. Many hedge funds will also be structured as open-ended funds, but might include certain redemption gates or restrictions, which only permit redemptions at certain specific intervals.

[63] ibid 2–3.

[64] Hudson (n 56) 6.

Type	Investment	Assets
Closed-ended	Fund's life generally finite. After the end of the fund's life, the fund is wound up, and its assets are paid out to investors. Limits placed on investment and withdrawal possibilities of investors during the life of the fund. Structure is generally illiquid.	Assets will usually be held for a certain length of time. Frequently, a larger number of larger, less liquid assets will be held. Examples of this would be: venture capital, private equity, or real estate funds.

2.4.4 Collective vs Discretionary Fund Management

2.4.4.1 The Two Broad Types of Asset Management

Asset Management can be divided into two main types: discretionary and collective asset management. Discretionary asset management involves managing a client's portfolio, both professional and retail clients, according to a mandate that the manager and the client have agreed upon. Discretionary asset management, where each portfolio of the individual client is managed, is fundamentally different from collective asset management. In collective asset management, a fund of pooled assets of a number of clients is managed as part of one portfolio and/or following one specific strategy. The management of this pool is conducted according to specified asset-allocation parameters and risk levels.[65] Fund management generally falls into the second category. Discretionary asset management in the EU is part of the investment services regime and is governed by the 2014 Markets in Financial Instruments Directive II (MiFID II)[66] and the Markets in Financial Instruments Regulation (MiFIR)[67] regime.[68] While under certain circumstances collective fund management may be subject to provisions contained in this regime, the main reg-

65 Niamh Moloney, *EU Securities and Financial Markets Regulation* (3rd edn, OUP 2014) 194.

66 See Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU [2014] OJ L173/349, recitals 74, 75.

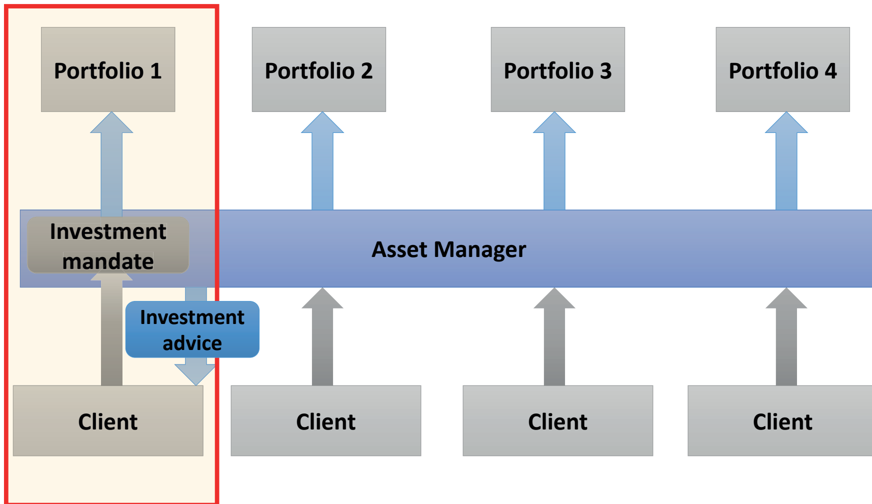
67 Regulation (EU) 600/2014 of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Regulation (EU) No 648/2012 [2014] OJ L173/84.

68 See Moloney (n 65) 195.

ulation relating to collective asset management is contained in other legislation described in the following chapters.[69]

2.4.4.2 Figure 2g: Discretionary vs Collective Asset Management[70]

Discretionary fund management:

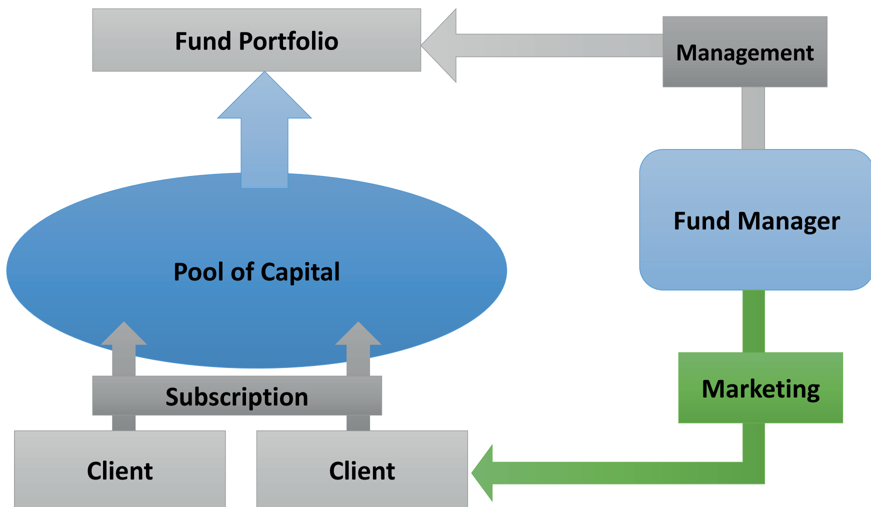


> *In discretionary asset management, the asset manager will have a direct relationship with each individual client, generally in the form of an investment mandate. He or she may provide investment advice and involve the client in investment decisions.*

[69] See chapters 4 and 5.

[70] Author's own.

Collective fund management:



Collective asset management involves a client subscribing, ie paying in to, a pool of capital, which will be invested in total into the components of a portfolio. The management company will market the fund to potential clients and will make investment and management decisions for the entire pool of capital. The client's influence is limited to fund selection prior to investing, and whether and when (subject to redemption conditions) to invest or redeem his or her shares in the pool of capital.

2.4.4.3 Active vs Passive Fund Management

2.4.4.3.1 Active and Passive Management

A further fundamental differentiation in the realm of asset management concerns the activity of managing assets. Put in the simplest of terms, there are two broad approaches on how to manage assets: active and passive.

Passive fund management entails no direct involvement in investment decisions beyond the initial setting up of a fund. A passive fund will typically have its capital invested in assets whose composition mirrors an index. The passive fund generates returns by relying on movements of this index. If the replicated index or benchmark moves up in value, the passive fund will generate returns. The only invest-

ment activity of a passive fund will be the allocation of additional capital to the same composition of assets, and rebalancing activities to keep the fund's performance and investments as close to the chosen index as possible.[71] Fees are typically lower for passive funds than for active funds, as there is no active involvement in investment decisions.[72] The passively managed fund provides an investor with a diversification benefit and exposure to the index it is replicating, usually for a relatively small management fee. The movements of a passive fund, and those of the underlying index, are referred to as 'beta'. Beta returns are the returns that can be gained from broader market movements.[73] A passive fund is therefore a vehicle that enables the investor to tether himself to the fortunes of the market (or index) as a whole and profit from positive movements, or beta returns.

Active management can be thought of as any strategy that is based on algorithmic decision-making in order to generate returns. Historically, using inputs and decisions by humans would have been the approach that differentiated active management from passive management, but this is no longer the case. Any rule-based approach to investing where returns are generated through fund allocation can be

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71 William F Sharpe, 'The Arithmetic of Active Management' (1991) 47 Financial Analysts Journal 7, 8.

72 Eric H Sorensen, Keith L Miller and Vele Samak, 'Allocating between Active and Passive Management' (1998) 54 Financial Analysts Journal 18, 18.

73 The beta of a stock, for example, refers to its market risk or systematic risk. Beta can be defined through its relationship with the excess return of a stock. The excess return of a stock, r_i, corresponds to the difference between the return of said stock and the risk-free rate, as well as the market premium, r_m: $r_i = \alpha_i + \beta_i r_m + \varepsilon_i$ where α_i is Jensen's alpha and ε_i an error term that corresponds to an unexplained return. Jensen's alpha, which will appear again in the section below, represents the ability of a fund manager or analyst to increase returns through successfully predicting the future prices of securities while concurrently minimizing risk. See Raymond Théoret, 'Beta', *Encyclopedia of Alternative Investments* (CRC Press 2008); Michael C Jensen, 'The Performance of Mutual Funds in the Period 1945–1964' (1968) 23 The Journal of finance 389 <http://onlinelibrary.wiley.com/doi/10.1111/j.1540-6261.1968.tb00815.x/full> accessed 24 November 2016. Another way of defining beta is as the ratio of the covariance of an asset's return with the market return to the variance of the market return. Expressing this in quantitative terms looks like this: $\beta_{iM} = \frac{cov(R_i, R_M)}{\sigma^2(R_M)}$, where R_i is the return of the asset and R_M is the return of the market. For clarity: $\sigma^2(R_M)$ in this context is the variance of the market return mentioned above. See eg Eugene F Fama and Kenneth R French, 'The Capital Asset Pricing Model: Theory and Evidence' (2004) 18 Journal of economic perspectives 25. For an overview of the Capital Asset Pricing Model, which provides the foundation for these concepts, see William F Sharpe, 'Capital Asset Prices: A Theory of Market Equilibrium under Conditions of Risk' (1964) 19 The Journal of Finance 425.

considered active management, even if the entity taking action in actuality may consist of one or more computers following instructions written in code. Whether a human fund manager makes decisions with his brain as a ‘biological processor’, or a silicon-derived processing unit of a computer makes algorithmic decisions, ultimately makes no conceptual difference.[74] A classic example of an active fund management strategy is ‘stock picking’ where a manager will attempt to invest in equities that are presumed to perform better than a specific benchmark. Many hedge funds are actively managed.[75] Fees for active funds will typically be higher than fees for passive funds, as operational costs are higher for the manager, mainly due to the continuous involvement and additional effort needed to pursue active strategies. The returns actively managed funds generate can be divided into two categories, beta and alpha returns. Beta returns are the same returns an investor receives by exposing himself to the movements of the broader market. Alpha returns, by contrast, are superior returns the active manager generates through his own skill (or luck) that are above the return a simple investment in the market would have offered.[76] As an example, a skilled stock picker could select a number of stocks that would perform better than the market as a whole. The returns of this investment, meaning the result of choosing these specific stocks over others, could be partially due to the movement of the market as a whole (which presumably would have led to a higher value of the stocks picked regardless), and partially due to the performance of the specific stocks.[77]

Hybrid forms of active and passive investments exist as well. The most prominent of these is what is referred to as ‘smart beta’. Smart beta funds are usually funds of funds that seek to profit from superior returns generated by actively managed funds, while simultaneously gaining some of the diversification and cost benefits of passive funds. Whether smart beta can actually generate superior returns after fees to investors than either passive or active fund managers can, has not conclu-

74 Jussi Keppo and Antti Petajisto, ‘What Is the True Cost of Active Management? A Comparison of Hedge Funds and Mutual Funds’ (2014) 17 Journal of Alternative Investments 9, 9ff <http://search.ebscohost.com/login.aspx?direct=true&db=buh&AN=98721636&site=ehost-live> accessed 30 November 2016.

75 Stowell (n 59) 245–246.

76 Chambers and others (n 41) 18–19; Andrew W Lo, *Adaptive Markets: Financial Evolution at the Speed of Thought* (Princeton University Press 2017) 244–246; Jaeger and Pease (n 43) 5, 12, 17–18.

77 See Frederick P Schadler and Stanley G Eakins, ‘Merrill Lynch’s Focus Stock Picks: A Test of Analysts’ Stock Picking Ability’ [2001] Quarterly Journal of Business and Economics 17, 17–19. See also Jensen (n 73). See also fn 73.

sively been determined, but represents an interesting intersection of the two approaches to investing.[78]

2.4.4.3.2 Returns of Active and Passive Fund Management after Fees

The essential question any investor will ask when considering whether to invest in passively or actively managed funds, is whether an active fund can offer superior risk-adjusted performance after fees. As mentioned above, active funds generally charge higher fees, so to become attractive to investors, actively managed funds need to outperform passive funds to a degree where the higher returns cover the difference in fees and in addition generate an attractive return superior to that offered by a passively managed fund. Alternatively, an actively managed fund could offer lower returns but also lower risk overall, but again this differential would need to be sufficiently large to warrant higher fees. In essence, this means actively managed funds must be able to offer superior risk-adjusted returns *after fees* to investors that passively managed funds cannot compete with. A closer comparison of passive and active fund management reveals that actively managed funds as a collective slightly outperform passive funds, but that within the industry there are significant performance differences between individual funds. On the lower end of the distribution are funds that tend to underperform. A second portion of the market is grouped around the median with most funds performing slightly worse or better than comparable passively managed funds. Lastly, there is a small number of funds that significantly outperform the market and their passively managed peers. Generating superior and uncorrelated returns on a consistent basis while managing tail risks efficiently appears therefore to be an art a miniscule minority of fund managers within the industry have been able to master.[79]

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[78] For an overview of the performance of smart beta funds, see Christoph Buxtorf, 'Analysis of Smart Beta ETFs' (Msc thesis, University of Zurich 2016). The thesis comes to the conclusion, that as a whole, the risk-adjusted return profiles of smart beta ETFs are not consistently superior to more conventional passive funds.

[79] The fundamental difficulty in explaining hedge fund returns lies in reconciling evidence pointing toward financial markets being efficient in the sense of the efficient market hypothesis. Generally, depending on the specific market in question, financial markets are considered to be either weak-form (usually emerging markets) or semi-strong efficient, meaning they are seen as not perfectly efficient, but relatively close. Hence, an active strategy like those employed by hedge funds would only have limited possibilities to generate superior returns or alpha, assuming that markets are close to being perfectly efficient. Markets that are weak-form efficient offer more opportunities to exploit imperfections and irrational pricing, as the process of generating superior

returns generally becomes increasingly difficult the more efficient a market becomes. Hedge funds thus are faced with two obstacles they must overcome in order to be able to offer superior performance after fees. They must be able to 'beat the market' to a degree where they can 'make up' for higher fees they charge vis-à-vis passive funds, and they must also be capable of exploiting market inefficiencies and mispricings in such a manner that they can post superior performance compared to their 'dumb', that is their passive, counterparts. Beating an index in relatively efficient markets and compensating for higher fees in addition to this is what justifies the existence of the hedge fund industry. If hedge funds cannot offer this, they essentially are rent-seeking and inefficient in their behavior, as they overcharge investors for beta returns and also do not contribute to the efficiency of markets, but are to be classified as 'noise' generating participants. For an overview of the efficient market hypothesis and an extensive discussion thereof, see generally Eugene F Fama, 'Efficient Capital Markets: A Review of Theory and Empirical Work' (1970) 25 The journal of Finance 383. See also JS Jordan, 'On the Efficient Markets Hypothesis' (1983) 51 Econometrica 1325. See also Emanuel Derman, *Models. Behaving. Badly.: Why Confusing Illusion with Reality Can Lead to Disaster, on Wall Street and in Life* (Simon and Schuster 2011). For an overview of semi-strong market efficiency, see eg Senarath Dharmasena and David Bessler, 'Weak-Form Efficiency Vs Semi-Strong Form Efficiency in Price Discovery: An Application to International Black Tea Markets' (2004) 6 Sri Lankan Journal of Agricultural Economics 1; George Norman, *Semi-Strong Form Efficient Market Hypothesis* (Edward Elgar Publishing Limited 2014); Martin Gross, 'A Semi-Strong Test of the Efficiency of the Aluminum and Copper Markets at the LME' (1988) 8 The Journal of Futures Markets 67. For examples of weak-form market efficiency (from emerging markets), see eg R Ayodeji Olowe, 'Weak Form Efficiency of the Nigerian Stock Market: Further Evidence' (1999) 11 African development review 54; Martin Miles Laurence, Francis Cai and Sun Qian, 'Weak-Form Efficiency and Causality Tests in Chinese Stock Markets' (1997) 1 Multinational Finance Journal 291. The literature is divided as to whether hedge funds can generate superior returns after fees. For examples of recent studies examining hedge fund returns, see eg Turan G Bali, Stephen J Brown and Mustafa O Caglayan, 'Macroeconomic Risk and Hedge Fund Returns' (2014) 114 Journal of Financial Economics 1, 18. The authors of this paper find that hedge funds do generate superior returns or alpha. See also Ronnie Sadka, 'Liquidity Risk and the Cross-Section of Hedge-Fund Returns' (2010) 98 Journal of Financial Economics 54, 69–71. The author of this paper finds that hedge funds can generate slightly superior risk-adjusted returns compared to the broader market, but discuss difficulties in measuring hedge fund returns and whether some hedge fund alpha returns might actually be beta returns. See also Jaeger and Pease (n 43) 93ff, 147–148. The authors of this book also find that hedge funds offer superior returns, but discuss the possibility that some funds may be selling 'alpha' to investors, ie charging corresponding fees, when the bulk of their returns might in fact consist of alternative beta returns. See also Stowell (n 59) 251ff. Papers that find that hedge funds offer lower returns while taking disproportionate risk, ie take on excess risk to generate their returns include Burton G Malkiel and Atanu Saha, 'Hedge Funds: Risk and Return'

From the investor's standpoint, investing in an actively managed fund and receiving superior returns is therefore highly dependent on which fund or funds are invested in. In essence, the investor able to determine which funds will generate returns that cover higher fees and still outperform comparable passively managed funds while limiting risk will ultimately profit from investing in actively managed funds. For all other investors, investments in actively managed funds most likely will end up being a very expensive undertaking. There is an entire industry devoted to fund selection: the funds of funds industry. Funds of funds permit investments in portfolios of funds, providing both a selection and a diversification benefit. The performance of funds of funds is also debated, however, which ultimately results in a similar dilemma for an investor. The investor must identify successful funds of funds in order to receive a superior return on his investment. Again, the question becomes whether an investor can select the correct fund to invest in.[80]

It becomes evident from the descriptions above that investing in actively managed funds, whether these are hedge funds or other investment funds, does not guarantee superior returns. Significant informational asymmetries between investor and

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(2005) 61 Financial analysts journal 80, 87 <www.cfapubs.org/doi/abs/10.2469/faj.v61.n6.2775> accessed 24 November 2016. See also John M Griffin and Jin Xu, 'How Smart Are the Smart Guys? A Unique View from Hedge Fund Stock Holdings' (2009) 22 The Review of Financial Studies 2531. The findings of this paper are that most hedge fund managers do not exhibit superior skill in picking stocks when compared to mutual funds, which would indicate that their returns cannot be due to pure 'alpha'. See also Ilia D Dichev and Gwen Yu, 'Higher Risk, Lower Returns: What Hedge Fund Investors Really Earn' (2011) 100 Journal of Financial Economics 248. The authors of this paper find that the real alpha of most hedge funds is close to zero. See also Stephen J Brown, William N Goetzmann and Roger G Ibbotson, 'Offshore Hedge Funds: Survival and Performance 1989–1995' (1997) NBER Working Paper 5909, National Bureau of Economic Research <https://archive.nyu.edu/bitstream/2451/26856/2/wpa98011.pdf> accessed 31 August 2020. The authors find that also historically, hedge fund managers did not appear to exhibit superior skill and that the industry was (and is) characterized by a very high attrition rate. A survey of slightly less recent papers on hedge fund returns, where the reader can find much additional empirical work on hedge fund performance, can be found with Walter Géhin, 'A Survey of the Literature on Hedge Fund Performance' (2004) EDHEC Working Paper, EDHEC Risk Institute <https://ssrn.com/abstract=626441> accessed 31 August 2020. See also Stowell (n 59) 232–328. The interested reader can also find multiple hedge fund indices where the current performance of hedge funds can be examined. These indices are by definition incomplete and may not correct for various biases in the data, such as survivorship bias.

80 Stowell (n 59) 328, 359–360.

manager exist, which generally will make deliberate successful fund selection by the investor difficult.

2.5 Private Equity

2.5.1 Introduction

As has been described above,[81] private equity investments constitute an essential category of alternative investments. The strategies of private equity funds differ from those of most hedge funds and other, more conventional investment fund structures, due to the differing risk-return profiles of private markets compared to their public counterparts. This fundamental difference in the composition of the portfolio of a typical private equity fund versus funds that are invested in more liquid assets mandates a different regulatory response. The systemic relevance of private equity funds is also dependent on their fundamental strategies, which warrants a closer examination of the activities of private equity funds and companies. The following sections provide an overview of private equity and establish the basic argument as to why regulating this industry in much the same way as other alternative investment funds, and especially hedge funds, are regulated is suboptimal and leads to a distortion of the industry's approach to investing.

2.5.2 A (Very) Brief History of Private Equity

The origins of private equity can be traced back to the family offices of the late nineteenth and early twentieth century in the United States. These family offices managed the wealth of various prominent families, among them the Rockefellers and the Vanderbilts, investing in and advising various enterprises.[82] These families eventually hired outsiders to manage their investments. From this process, private equity emerged, though it was not until shortly after the Second World War that the first private equity firm was formed. This occurred in 1946, when the American Research and Development Corporation (ARD) was founded as the first private equity firm in history.[83] The founders included Georges Doriot, a Professor

[81] See section 2.3.2.

[82] Josh Lerner, Felda Hardymon and Ann Learmon, *Venture Capital & Private Equity: A Casebook* (5th edn, Wiley 2012) 1–2.

[83] ibid 2.

from Harvard Business School and later one of the founders of INSEAD,[84] Karl Compton, who at the time was the president of MIT, and various Boston business leaders.[85] Also involved were Ralph Flanders, a trustee at MIT and the president of the Boston branch of the Federal Reserve, and a man named Merrill Griswold.[86] The ARD was not exclusively a venture capital firm, but it specifically engaged in venture capital as one of its strategies and so was not only the first private equity firm, but concurrently also the first venture capital firm in history. It was also the first venture capital firm to raise its capital from institutional investors.[87] Its founding was an attempt to make capital available for entrepreneurship. While the ARD was the first, the idea for its foundation was not conjured out of thin air, of course. In actuality, the founding of the ARD was the product of a discussion that had been going on for at least the previous 15 years[88] about revitalizing the economy through the funding of early stage research for business ventures. The ARD was not the only venture capital to spring up in the aftermath of the Second World War. The three most notable examples were Payson & Trask (P&T), Rockefeller Brothers Inc. (RBI), and J.H. Whitney.[89] This marked the beginning of modern venture capital.[90]

The first leveraged buyout in history was completed in 1955 by using a holding company to purchase corporate assets with debt. Leveraged investments of this style became more common during the 1960s, with Warren Buffet's Berkshire Hathaway and Nelson Peltz engaging in this activity. Finally, in 1976, three former

84 See Claude Janssen and Oivier Giscard D'Estaing, 'Five Degrees of Doriot' (Harvard Business Alumni Stories, Harvard Business School, December 2014) <www.alumni.hbs.edu/stories/Pages/story-bulletin.aspx?num=4278> accessed 31 August 2020. See also INSEAD, 'Georges Frederic Doriot' (INSEAD Doriot Entrepreneurship Conference, INSEAD Website, 2018) <https://60.insead.edu/stories/georges-doriot> accessed 31 August 2020.

85 Lerner, Hardymon and Learmon (n 82).

86 David H Hsu and Martin Kenney, 'Organizing Venture Capital: The Rise and Demise of American Research & Development Corporation, 1946–1973' (2005) 14 Industrial and Corporate Change 579.

87 ibid 588.

88 ibid.

89 ibid.

90 ibid 589.

Bear Stearns bankers founded Kohlberg Kravis Roberts & Co. (KKR), a private equity firm which would become highly prominent in the coming decade.[91]

The 1980s saw an explosion of leveraged buyouts orchestrated by private equity firms, which were termed 'corporate raiders' by the press. Prominent 'corporate raiders' included T. Boone Pickens, Nelson Peltz, and Carl Icahn.[92] The apex of leveraged buyouts occurred in late 1988, when KKR took control of RJR Nabisco after a protracted bidding war. The total size of the buyout was USD 31.1 billion, which would not be surpassed until 2006.[93] The 1980s were also characterized by the emergence and growth of high-yield bonds, termed 'junk bonds', which fuelled many of the buyouts during that timeframe. Junk bonds were closely associated with Michael Milken and Drexel Burnham Lambert. Michael Milken was charged with securities fraud and racketeering, and indicted in 1989, while Drexel Burnham Lambert filed for bankruptcy a year later.[94] This development significantly reduced leveraged buyout activity in the following decade, due to the limited availability of large amounts of easily accessible debt to finance buyout activities that had been abundant in the 1980s.[95]

Private equity and leveraged buyouts saw a resurgence starting in 2002, as various relaxed lending standards and the availability of large amounts of accessible debt reinvigorated the industry.[96] 2006 saw various buyouts to the tune of a total of USD 375 billion with private equity firms buying 645 companies.[97] This new beginning was cut short by the beginning of the most recent financial crisis in 2007, when credit spreads widened in the second half of that year and caused buyout activity to stagnate.[98]

Following the financial crisis, buyout activity commenced, but remained somewhat muted, as the basic structure of private equity transactions changed to smaller buyouts with higher equity contributions, and fewer transactions.[99] The post-crisis

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91 Stowell (n 59) 348.

92 ibid.

93 ibid 349. For a comprehensive and accessible description of the entire buyout of RJR Nabisco by KKR, see Burrough and Helyar (n 8).

94 Stowell (n 59) 349.

95 ibid.

96 ibid.

97 ibid.

98 ibid.

99 ibid 363.

environment also led to a number of IPOs of private equity firms. Consequently, many of the large and prominent firms today are public companies. Examples include: Oak Tree Capital Group, Kohlberg Kravis Roberts & Co. (KKR), The Carlyle Group, Blackstone, Apollo Management, and Fortress Management.[100]

2.5.3 Defining Private Equity

The term 'private equity' is not dissimilar to the term 'alternative investments', in the sense that it also is an exclusionary term defined by what it is not. The term 'equity, as it is generally understood, refers to ownership rights, usually shares in a company, or, in an accounting context, the difference between assets and liabilities.[101] Since equity in a company listed on an exchange is offered to the public, ie the nonprofessional investor, it is referred to as 'public' equity. By contrast, 'private' equity would refer to ownership rights or shares in a company that is not listed on an exchange.[102]

Private equity in a strict sense therefore refers to shares in private companies, but the term has a secondary and more general meaning, in that it refers to a segment of the investment industry focused on investing in various forms of nonpublic equity shares.[103] Private equity funds therefore are closed-ended collective investment vehicles that utilize capital and debt to acquire stakes in companies with the intention of selling the acquired stakes for a profit at a later date.[104] In the context of this thesis, the term 'private equity' refers to this segment of the investment industry. Since private equity firms differ in their specialization and will typically invest only in a specific stage in the maturity of a company, the private equity industry can be subdivided into multiple categories according to the point of investment.[105] For instance, in early pre-IPO stages of a company's life cycle, private

[100] ibid 360.

[101] Richard A Brealey, Stewart C Myers and Franklin Allen, *Principles of Corporate Finance* (13th edn, McGraw Hill 2020) 4,14. See also David Kolitz, *Financial Accounting: A Concepts-Based Introduction* (Taylor & Francis 2016) 71–75.

[102] Paul Gompers, Victoria Ivashina and Richard Ruback, *Private Equity: A Casebook* (Anthem Press 2019) 3.

[103] Lerner, Hardymon and Learmon (n 82) 1. See also Gompers, Ivashina and Ruback (n 102) 3.

[104] Justin Robertson, 'Private Equity Funds' (2009) 14 New Political Economy 545, 545.

[105] Cyril Demaria, *Introduction to Private Equity, Debt and Real Assets: From Venture Capital to LBO, Senior to Distressed Debt, Immaterial to Fixed Assets* (3rd edn, John

equity investments will usually be referred to as ‘venture capital’. A ‘buyout’ occurs where the shares of public companies are bought on an exchange and then reside in private hands in a process called ‘going private’.[106] These buyouts are orchestrated by buyout funds. The shorthand ‘private equity’ will usually, but not necessarily, refer to such buyout funds. In addition to the two categories above, companies and funds specialized on mezzanine financing and investing in distressed debt securities also fall under the umbrella term of ‘private equity’.

One possible, fairly technical, definition of private equity might be:

(i) a negotiated investment at arm’s length in equity or debt for
(ii) a long holding period, bearing
(iii) specific and significant risks, and
(iv) generating hopefully high returns
(v) on behalf of qualified investors
(vi) to create value by implementing a plan and supporting entrepreneurs.[107]

2.5.4 Breaking Down Private Equity into Categories

As described above, private equity is a generic term that can be broken down into four distinct subcategories:

i. Venture capital (VC)
ii. Buyout funds
iii. Debt & mezzanine financing
iv. Distressed debt[108]

Wiley & Sons 2020) 148. See also Claudia Zeisberger, Michael Prahl and Bowen White, *Mastering Private Equity: Transformation via Venture Capital, Minority Investments and Buyouts* (John Wiley & Sons 2017) 39.

[106] This may involve leverage, in which case the process is referred to as a ‘leveraged buyout’. Usually, the company will be delisted from an exchange with the intention of optimizing the company’s processes outside of the pressures and expectations of shareholders. The hopefully improved and streamlined company then is re-launched in a subsequent public offering. See section 2.5.4.2.

[107] Demaria (n 105) 30.

[108] Chambers and others (n 41) 613; Stowell (n 59) 339–340.

2.5.4.1 Venture Capital[109]

Venture capital as a subcategory of private equity is composed of funds that provide financing for startups and companies in the early-stage of their life cycle. A venture capital firm will hope to be able to select companies to invest in that successfully mature and can be brought to market. To achieve this, the venture capital firm provides financing and usually receives an equity tranche in return.[110] The venture capital firm will normally also assists in growing the company into a profitable enterprise.[111] Due to the specialized nature of investing in entrepreneurial ideas, successful venture capital funds can generate superior risk-adjusted return that are uncorrellated with traditional asset classes. The 'exit' by the venture capitalist usually occurs when a company reaches the point of an initial public offering or slightly thereafter, since the speciality of many venture capitalists does not extend to investments in the secondary market.[112]

One subcategory that sits somewhere between venture capital and private equity or buyout funds is growth capital. Growth capital is a type of investment where a mature company seeks financing for a specific undertaking, from expansion to restructuring or when entering a new market. Certain acquisition plans may also generate a need for capital from a mature company. Growth capital can supply this by taking a minority stake in such a company, much like other forms of private equity, but without seeking to gain corporate control of the company that is being invested in.[113]

2.5.4.2 Buyout Funds

Buyout funds focus on companies later in their life-cycle than venture capitalists. A classical buyout fund will generally attempt to identify mature companies which could benefit from what is termed 'going-private'. 'Going-private' refers to the process of a buyout, where the private equity fund purchases all outstanding shares on the secondary market. A private equity fund or firm can afford this usually by utilizing debt, which is why the buyout process is generally referred to as an

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[109] Chambers and others (n 41) 643.

[110] Stephen D Prowse, 'The Economics of the Private Equity Market' [1998] Economic Review-Federal Reserve Bank of Dallas 21, 30–31.

[111] Zeisberger, Prahl and White (n 105) 19–24.

[112] D Gordon Smith, 'The Exit Structure of Venture Capital' (2005) 53 UCLA Law Review 315, 317.

[113] Stowell (n 59) 399.

'LBO', a leveraged buyout.[114] Following the purchase of the shares, the private equity firm implements changes in the hopes of being able to improve the company's profitability and improve its value.[115] This typically occurs in coordination with the board of directors and executives.[116] The company commonly also takes on the debt that was used to purchase its shares. After the changes have been implemented, the private equity fund ordinarily exits its positions.[117] If the value of the company has increased, the private equity fund profits from the appreciation of the market value of the shares it holds in the company; if not, the private equity fund usually still charges a management fee.[118]

2.5.4.3 Mezzanine Financing

Mezzanine financing refers to funds specialized on hybrids between debt and equity, where the lender has the right to convert debt to equity in the case of a default of a company. Mezzanine capital can also refer to investments in subordinated debt or investments in preferred stock where no voting rights in the company are taken.[119]

2.5.4.4 Distressed Debt

A distressed debt fund specializes on companies that are close to or in bankruptcy proceedings, and will purchase debt securities in such a company. Distressed debt funds primarily focus on companies in the latter part of their life cycle that are teetering on the brink of insolvency. Due to this fact, distressed debt funds are sometimes also referred to as 'vulture funds', for obvious reasons.[120]

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114 Gompers, Ivashina and Ruback (n 102) 4, 9–10.

115 ibid 5.

116 ibid 5–6.

117 ibid 8.

118 Stowell (n 59) 344–345.

119 ibid 340.

120 Depending on the categorization used, distressed debt funds are sometimes categorized as a form of hedge fund rather than a private equity fund, as both types of funds may invest in this asset class and certain fund structures are not clearly one or the other. See Mark JP Anson, 'A Primer on Distressed Debt Investing' (2002) 5 The Journal of Private Equity 6, 6. See also Michelle M Harner, 'Trends in Distressed Debt Investing: An Empirical Study of Investors' Objectives' (2008) 16 American Bankruptcy Institute Law Review 69, 75–76. See also Prowse (n 110) 25.

2.6 Hedge Funds

2.6.1 Hedge Funds as Alternative Investments

As mentioned above, hedge funds are usually categorised as alternative investments.[121] As we have seen in section 2.2.2,[122] alternative investments include a variety of fund structures, among them hedge funds. This categorisation reflects the viewpoint of the investor, since the investment falls outside of the scope of traditional investments. What must be noted, however, is that in many cases the investor might be indirectly invested in quite conventional investments, albeit through the fund. Of course, this will generally mean that from a purely legal standpoint, depending on the specific structure of the fund that is being invested in, the investor's claim will be limited to a stake in the investment funds and not necessarily the investments themselves. The idea that hedge funds are 'alternative' investments might likely be influenced more by unconventional and exotic strategies being employed by many hedge funds, rather than the assets being invested in.[123]

2.6.2 Defining Hedge Fund

The term 'hedge fund' does not refer to a precise legal definition, but encompasses an entire range of varied fund structures. The various definitions of the term are not universally accepted. Some definitions might be very general in nature to encompass the entire breadth of possible variations encountered in today's universe of funds.[124] Hedge funds are best seperated from traditional or other forms of investment funds by focusing on the strategies employed by fund managers versus the actual legal structure of funds. As we will see in later chapters,[125] hedge funds appear in many forms of legally defined structures while maintaining their distinct characteristics. The most prominent example that comes to mind is that of 'alternative UCITS' funds and AIFMD funds in the European

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[121] See among many others also John C Hull, *Risk Management and Financial Institutions* (5th edn, Wiley 2018) 75.

[122] See section 2.2.2.

[123] Ang (n 37) 564–565.

[124] Securities and Exchange Commission, 'Implications of the Growth of Hedge Funds' (Staff Report to the SEC, September 2003).

[125] See chapter 5.

Union. While the AIFMD specifically regulates alternative investment funds and hence hedge funds in the traditional sense, the UCITS directives[126] were originally intended to seve as enablers for the marketing and sale of funds in the EU to retail as well as instiutional investors (and not limiting them to sophisticated investors like the AIFMD does).[127] Nonetheless, hedge fund strategies have been emulated and recreated in a UCITS 'wrapper', meaning the hedge fund legally is structured to fall under the UCITS directive while being actively managed, and investing in assets traditionally reserved for AIFMD funds. This very prominent and tangible example describes the difficulty of classifying and regulating hedge funds solely according to their structure. A hedge fund exhibiting most general characteristics of hedge funds can be adapted to a variety of legal strucutres. Hence, an essential part of regulating hedge funds would need to deal more with strategies, risk profiles, leverage ratios, compensation of management, marketing, and investor protection of funds across the board to be effective in achieving its goal, rather than focusing on a specific structure. Any fund exhibiting certain characteristics would then be regulated accordingly, whether it falls under a strict academic definition or not.[128] Regulating bodies on the EU level have recognized this and therefore adapted regulatory prescriptions to be tethered to management and/or product structures, rather than traditional legal entities.[129]

2.6.2.1 Defining Hedge Fund: The Historical Perspective

To gain a more profound understanding of the term 'hedge fund', it is necessary to describe the characteristics of hedge funds, their strategies, and their most common legal forms. To do this, initially the first hedge fund in history needs to be examined.

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[126] Replicating hedge fund strategies was enabled by the broadening of possible assets UCITS could invest in the UCITS III directive. As described in much greater detail in chapter 4, the original UCITS directive in 1985 intended to create a single market for mutual open-ended funds investing almost exclusively in equities. The original directive was followed by multiple additional regulatory efforts, which has culminated in the current UCITS IV/V framework.

[127] See AIFMD recitals 10, 14, 15. Chapter 5 describes the exception to this rule, where member states can allow alternative investment funds to be marketed to retail investors. See also AIFMD recital 71.

[128] See the discussion on strategy-based regulation in chapter 6.

[129] See chapters 4 and 5.

The original hedge fund was established by a Alfred Winslow Jones as a private partnership in 1949. This original hedge fund was similar to hedge funds today in many respects, although his original fund was more conventional in nature when compared to today's iterations. Alfred Winslow Jones' fund only invested in equities, while modern funds invest in a plethora of financial assets and instruments.[130] The differentiating element of his hedge fund compared to other funds of the time was due to two factors: Jones used hedging strategies and utilized leverage to magnify the returns on his investments. As the name 'hedge' fund might imply, Jones used short-selling to protect the investments of the fund from movements of the broader market.[131] Jones also utilized leverage in his fund, which enabled him to magnify his returns.[132] The core objective of this new style of fund was to be able to offer investors positive returns consistently, regardless of the movements of the broader market.[133]

This process of hedging, ie reducing exposure to movements of markets led to the name hedge fund. The name was carried on to designate more modern iterations of Winslow's hedge fund, but the title is somewhat of a misnomer: 'hedge funds' may not be hedged at all.[134] In fact, due to the diverse strategies utilized by funds and the opaque nature of their risk profiles, a precise assessment of the risk in investing in hedge funds can be enourmously difficult to quantify for a potential investor. In addition, some strategies employed by hedge funds are susceptible to various movements of the broader market and due to their nature, such funds might not be able hedge against these risks. Therefore, from the standpoint of the investor, investing in hedge funds does not imply that such investments can be considered hedged or safe. While investments in alternatives might help diversify a portfolio with its other positions in traditional investments, the implication must be that hedge funds have the potential to be high risk investments. Certain authors

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[130] Carl Ackermann, Richard McEnally and David Ravenscraft, 'The Performance of Hedge Funds: Risk, Return, and Incentives' (1999) 54 The journal of Finance 833, 834–835 <http://onlinelibrary.wiley.com/doi/10.1111/0022-1082.00129/full> accessed 24 November 2016.

[131] Capocci (n 41) 5–6; Stowell (n 59) 242.

[132] However, it would also magnify his losses. Stowell (n 59) 243–244.

[133] Ang (n 37) 559–560. Ang focuses on three characteristics, namely secrecy, exemption from regulation, and management incentive fees.

[134] See chapter 3. See also Stowell (n 59) 220. See also Ang (n 37) 561. For an extensive discussion of hedging by hedge funds, see Clifford S Asness, Robert Krail and John M Liew, 'Do Hedge Funds Hedge?' (2001) 28 Journal of Portfolio Management 6.

therefore advocate a renaming of such funds to 'high-risk funds', since it might be a more accurate description of the trading strategies of many hedge funds.[135]

2.6.2.2 Modern Hedge Funds

The idea of using short-selling and making use of leverage to magnify returns (and conversely, losses, though this is obviously a less desirable fact of utilizing leverage), as well as pursuing more sophisticated strategies than diversification and long-only portfolio construction, has been carried on by modern iterations of hedge funds. Many modern hedge funds are remarkably similar to the original hedge fund with regards to the characteristics mentioned above. In fact, Jones' fund would not be considered anachronistic today, if perhaps somewhat conservative in its asset allocation. The original hedge fund would today most likely be characterized as a 'long-short equity' or 'equity hedged' fund.[136] The original compensation structure Jones used, which is today referred to as the '2 and 20' structure, has also been retained in many cases. While not all funds can or will adhere to this classical structure, and certain specific limitations such as high-water marks[137] and hurdle rates[138] have been introduced in some funds, the concept of charging a small permanent fee and a 'slice' of returns has remained a staple of hedge fund fee structures.[139] A number of modern funds today charge a management fee (the '2') which actually is still often exactly 2% annually, regardless of the firm's performance. In addition to this management fee, a (proportionally) larger 'incentive fee' of 20% of the profits will be charged by the

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[135] See the discussion on hedge fund risks and returns in Ang (n 37) 564–570. See also Jaeger and Pease (n 43) 18–20.

[136] Capocci (n 41) 12ff.

[137] A 'high water mark' is a threshold where a manager is only entitled to receiving a performance fee in a particular year if his performance exceeds its highest performance level. This essentially means that previous losses are carried forward and must be recovered before the manager can receive performance fees, thus ensuring that the investor pays the performance fee only when actual returns have been generated. See Hudson (n 56) 53.

[138] A hurdle rate is a minimum rate of return that must be paid to investors before the fund manager receives a performance fee on the returns of the fund. Two basic variations of the hurdle rate exist: If the hurdle rate is a so-called 'soft hurdle', the manager's performance fee is calculated according to all returns as soon as the hurdle is surpassed, whereas a 'hard hurdle' allows calculation of the performance fee only on returns above the hurdle. See ibid 52.

[139] ibid 1.

fund as well. Management and incentive fees are very much alive and well and still a common fee structure in modern hedge funds.[140] While these two fees will not always correspond exactly to two and twenty percent of the profits, frequently they will be only slightly higher or lower than these two established levels. An extreme deviation from the mean is rare.[141]

Also, Jones specifically structured his hedge fund as a private partnership. This idea lives on as well, since limited partnerships are the most commonly used legal structure for closed-ended funds investing in less liquid assets.[142] Choosing a limited partnership allows the fund to split its partners into two categories: limited and general partners. Investors will participate as limited partners in a fund and their liability is limited to their investment, while the general partner(s) will have unlimited liability for debts and liabilities of the fund.[143] Not all hedge funds are private partnerships, however. The legal framework and especially the tax system where a hedge fund is to be established will incentivize the adoption of certain legal forms over others. This reality is reflected in both the retail fund and alternative investment fund regulation of the European Union, where, due to the diverse nature of possible legal forms possible under the national law of the member states, no specific legal form for funds or their management companies is prescribed.[144]

The term hedge fund is not a precise definition, nor a legal one, but rather describes a collection of extremely heterogenous investment schemes with diverse legal structures. These structures are likely to share a number of common characteristics. Certain schemes that would be classified as hedge funds do not exhibit all characteristics and are specifically different in one respect or another. In order to understand and recognize hedge funds, it is therefore important to define three components: general characteristics, typical characteristics, and

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140 ibid.

141 As of 2018, the fees of hedge funds hovered around 1.5–2% management fees, with the mode around 1.5–1.75. See Chris Flood, 'Hedge Funds Forced to Cut Fees to Lure Investors' *Financial Times* (London, 19 February 2018) <www.ft.com/content/b889c3b8-1254-11e8-940e-08320fc2a277> accessed 31 August 2020. Jones may actually have gotten the idea of charging performance fees from Benjamin Graham, whom he had met during his studies at Columbia University, though this is not certain. See Capocci (n 41) 7.

142 Hudson (n 56) 9.

143 ibid 10.

144 See UCITS art 27 and art 96 and AIFMD recital 6.

investment strategies. The general characteristics are generic characteristics that will apply to a majority of hedge funds worldwide. Typical characteristics by contrast are markers that will appear with regularity in some types of funds, but not necessarily in the vast majority. Finally, strategies allow the categorization according to the investment and portfolio construction activity of a fund. The investment strategy might be the most prominent hedge fund descriptor. While a hedge fund might frequently appear distinctly similar to a different fund such as a mutual fund or an exchange traded fund with regards to its legal structure, the investment strategy or strategies a hedge fund utilizes is the differentiating factor.

The characteristics of modern hedge funds can be summarized as follows:

- **Pools of capital**
- **Actively** managed
- **Focused on absolute returns**
- With **performance related-fee structures** coupled with a management fee ('the 2 and 20')
- With comparably high **investment flexibility**
- **Weakly regulated**[145]

Addtionally, some, but not all hedge funds typically will be:

- Structured as **private partnerships** (or equivalent structures in the jurisdiction where they are incorporated).
- Utilizers of **leverage**
- Trading in **derivatives**, including structured debt securities
- Implementing **hedging** strategies
- Implementing **complex, non-traditional strategies** to generate absolute returns or 'alpha'
- Frequently incorporated in **'offshore' jurisdictions** that are lightly regulated and offer advantageous tax rates[146]

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145 Ivan Kühne, *Activist vs. Passivist Hedge Funds – An Empirical Study and Implications* (Haupt Verlag 2011) 17–19. See also Bruce GA Pollock, 'Shareholder Activism of Institutional Investors in Publicly Traded Companies: Effects on the Principle-Agent Problem and on the Requirement of Corporate Governance' (Mlaw thesis, University of Zurich 2014) 20.

146 See Stowell (n 59) 241–243. Compare this also to the characteristics mentioned in Frank J Travers, *Hedge Fund Analysis: An in-Depth Guide to Evaluating Return Potential and Assessing Risks* (Wiley 2012) 29–31.

Cliff Asness[147] has succinctly, albeit somewhat bluntly, formulated the essential elements of a hedge fund, which incorporates many of the characteristics listed above. According to him, hedge funds are the following:

> Hedge funds are investment pools that are relatively unconstrained in what they do. They are relatively unregulated (for now), charge very high fees, will not necessarily give you your money back when you want it, and will generally not tell you what they do. They are supposed to make money all the time, and when they fail at this, their investors redeem and go to someone else who has recently been making money. Every three or four years they deliver a one-in-a-hundred year flood. They are generally run for rich people in Geneva, Switzerland, by rich people in Greenwich, Connecticut.[148]

2.6.2.3 Categories of Hedge Fund Strategies

Hedge fund strategies can be broadly divided into five main categories, regardless of specific techniques or technological aids used:

I. Arbitrage strategies
II. Event-driven strategies
III. Equity-based strategies
IV. Macrostrategies
V. Funds of Hedge-Funds[149]

Arbitrage strategies involve the exploitation of price differences of identical assets, usually between markets, where no fundamental economic justification exists for the price difference. To use an example, if two derivatives are trading at different prices, but their underlying assets are identical, there should be no difference in price. If a price difference exists, an arbitrage opportunity presents itself. The implication is that due to market forces, eventually the prices of these two derivatives must converge. If an investor can spot such an opportunity, he can sell the more expensive security short and purchase the cheaper security, thus

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147 Cliff Asness is the founder and managing principal of AQR Capital Management, see AQR Capital Management, 'Cliff Asness' (*AQR Capital Management website,* 2020) <www.aqr.com/About-Us/OurFirm/Cliff-Asness-Bio> accessed 26 August 2020.

148 Ang (n 37) 558.

149 Stowell (n 59) 244. See for alternative classifications Capocci (n 41) 58–65.

profiting from the eventual market correction. Arbitrage strategies can also be categorized as relative value hedge fund strategies.[150]

Event-driven strategies are strategies that seek to profit from occurrences that are likely to significantly influence the price of investments in a specific direction. Funds that engage in these strategies seek either to predict, or even actively influence such occurrences, in order to achieve price adjustments in favorable directions. This category includes activist hedge funds, which attempt to influence decisionmaking in public companies. Merger arbitrage funds usually also fall within this category. A merger arbitrage fund will attempt to capitalize on price movements related to M&A activity. Distressed funds can also be included in the event-driven strategy category. Distressed debt funds will seek to profit from companies close to bankruptcy or insolvency through purchasing equity or debt in such companies.[151]

Equity-based strategies, also called equity hedge strategies, include strategies related directly to equity. Jones' original hedge fund would be included in this category and would be classsified as a long/short fund. Long/short funds attempt to balance their portfolios by being long certain securities and hedging these positions by selling other securities short. Also included in equity-based strategies are long-only funds and short selling funds, which engage only in one of the two activities of a long/short equity fund, namely purchasing only, or only selling short. Finally, market neutral funds attempt to balance out market movements in respect to the composition of their portfolio and hope to achieve consistent returns that are uncorrellated with market beta.[152]

Macrostrategies include funds that attempt to utilize macroeconomic predictions likely to influence the movements of global markets in order to generate alpha. One prominent example of a macro fund would have been George Soros' Soros Fund Management. A prominent example of the successful use of a macro strategy would have been Soros selling short the British pound in 1992, whereafter the UK withdrew from the European exchange mechanism, netting him a profit of over GBP 1 billion.[153]

[150] Stowell (n 59) 244.

[151] Travers (n 146) 37–40.

[152] ibid 32–34.

[153] Ang (n 37) 560.

Finally, funds of funds strategies seek to create portfolios composed of other funds in order to offer a diversification benefit and ostenisbly even superior returns to direct investment in individual funds. The funds of funds industry also offers a selection benefit and can act as a monitor of funds included in its portfolios. [154]

2.6.2.4 Table 2h: Overview of Hedge Fund Strategies

Table 2h: Categories of Hedge Fund Strategies[155]

Arbitrage	***Fixed-income based arbitrage***	Exploiting pricing inefficiencies in fixed income markets by combining long & short positions of fixed-income securities
	Convertible arbitrage	Purchase of convertible bonds while short selling underlying stock, thus hedging equity risk
	Relative value arbitrage	Profiting from pricing inefficiencies in various asset classes
Event-driven	***Distressed securities***	Investments in companies in distressed situations, such as restructuring or bankruptcies or shorting of companies expected to experience distress
	Merger arbitrage	Profiting from merger by shorting acquirer and taking long position of target company
	Activism	Shaping company policy and strategic decisionmaking by influencing or gaining representation on company's board of directors
Equity-based	***Equity long/short***	Purchase of equities while hedging positions through short-selling. Objective is to reduce overall market exposure
	Equity nonhedge	Long only investments in equities. Corresponds to 'stock picking'.

[154] Stowell (n 59) 244. See also Travers (n 146) 32–43.

[155] Stowell (n 59) 244. See also Capocci (n 41) 60–62.

Macro	***Global macro***	Leveraged investments in stock markets, interest rates, foreign exchange, and commodities, to profit from anticipated price movements
	Emerging markets	Investments (primarily long) in equities of companies of emerging or developing countries, or sovereign debt of these companies.

2.6.2.5 Hedge Funds: The Quantitative Dimension

2.6.2.5.1 Global Size of the Hedge Fund Industry

To measure the size of the global hedge fund industry, the most useful and common metric is to measure assets under management (AuM). This gives an idea of the total amount of capital that funds are entrusted with and provides a yardstick of the total influence the industry might have on financial markets. In examining these numbers, it is imperative to add that this amount can be magnified by leverage and the velocity with which certain funds will trade in and out of positions. The global AuM is therefore to be understood as a baseline, especially when dealing with questions related to systemic risk. Estimating the global size of hedge funds is difficult, but a common estimate hovers slightly above USD 3 trillion, according to hedge fund database HFR.[156] A second database, Eurekahedge, estimates this figure to be slightly lower, at USD 2.46 trillion, as of June 2018.[157] Credit Suisse and BarclayHedge both estimate the total size to be somewhere around USD 3.2 trillion, as the charts below indicate. Whatever the exact number might be in actuality, this figure has been rising steadily since the 2008 crisis and will likely continue to rise until the next financial crisis hits.[158] Figure 2i below

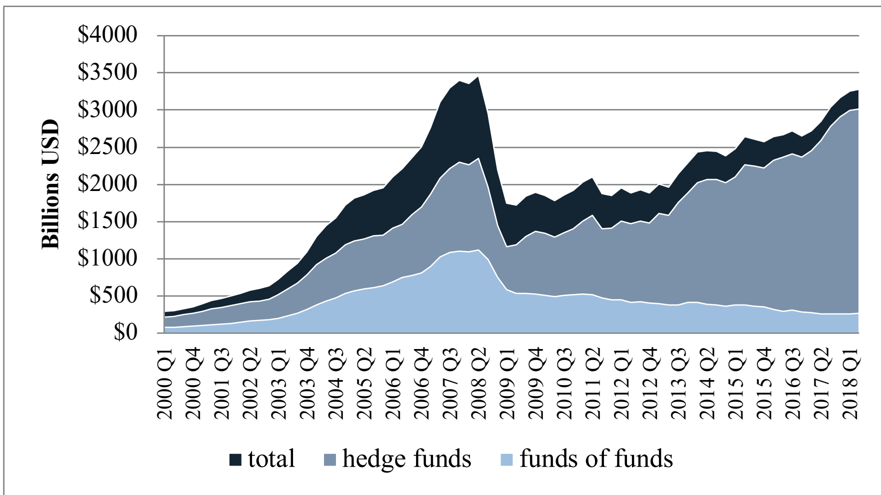
[156] Hedge Fund Research, 'Hedge Fund Assets Rise to Begin 2018 as HFRI Tops Equities' (HFR Q1 2018 Hedge Fund Industry Report, Hedge Fund Research Inc, April 2018) 1 <www.hedgefundresearch.com/sites/default/files/articles/1Q18_HFR_GIR_FINAL.pdf> accessed 22 August 2020.

[157] Eurekahedge, '2019 Key Trends in European Hedge Funds' (*Eurekahedge Research,* 2019) <www.eurekahedge.com/Research/News/1972/European-Hedge-Funds-Key-Trends-December-2019#lightbox[eureka]/0/> accessed 28 August 2020.

[158] Joseph Gasparro, 'Great Expectations: 2018 Survey of HF Investor Appetite and Activity' (Credit Suisse Prime Services, March 2018) 15 <https://slidelegend.com/queue/2018-globa-fund-and-a-2018-credit-suisse-global-survey-of-hedge-_5b2a646e097c470d158b4588.html> accessed 31 August 2020.

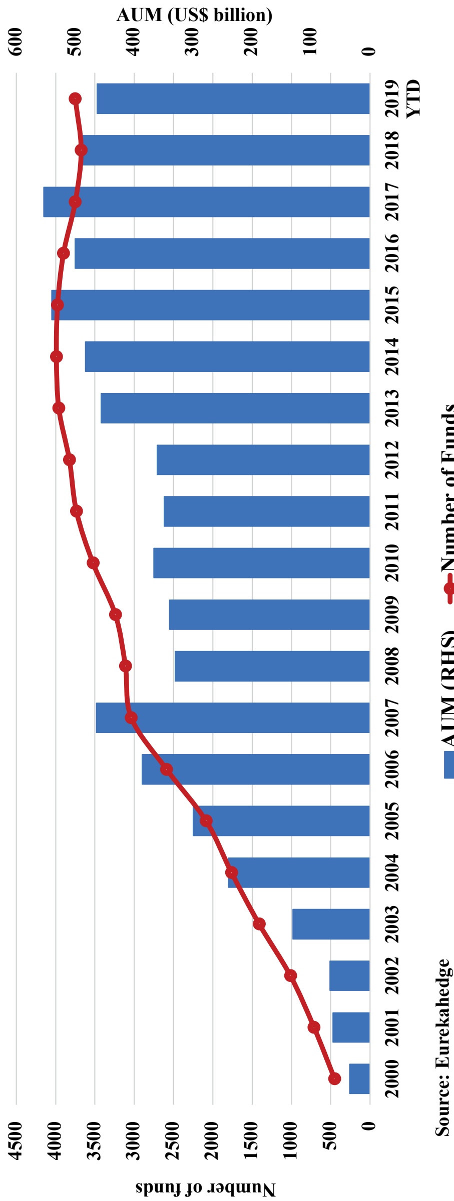
gives a good visual indicator of industry growth in percentage points during the last ten years since the financial crisis. Figure 2i provides a long-term view of the growth of both the hedge fund industry and the funds of funds industry. It is interesting to note that while the AuM of both hedge funds and funds of funds decreased following the financial crisis, the hedge fund industry has since recovered, while the funds of funds industry still remains smaller than it was at its peak prior to the crisis.

2.6.2.5.2 Figure 2i: Global Hedge Fund and Funds of Funds AuM[159]



159 Author's own figure, utilizing data from Barclayhedge.com, see BarclayHedge, 'Hedge Fund Industry Assets Under Management' (*Barclayhedge website,* 2018) <www.barclayhedge.com/solutions/assets-under-management/hedge-fund-assets-under-management/> accessed 20 August 2018.

2.6.2.5.3 Figure 2j: Size of the European Hedge Fund Industry[160]



160 Eurekahedge (n 157).

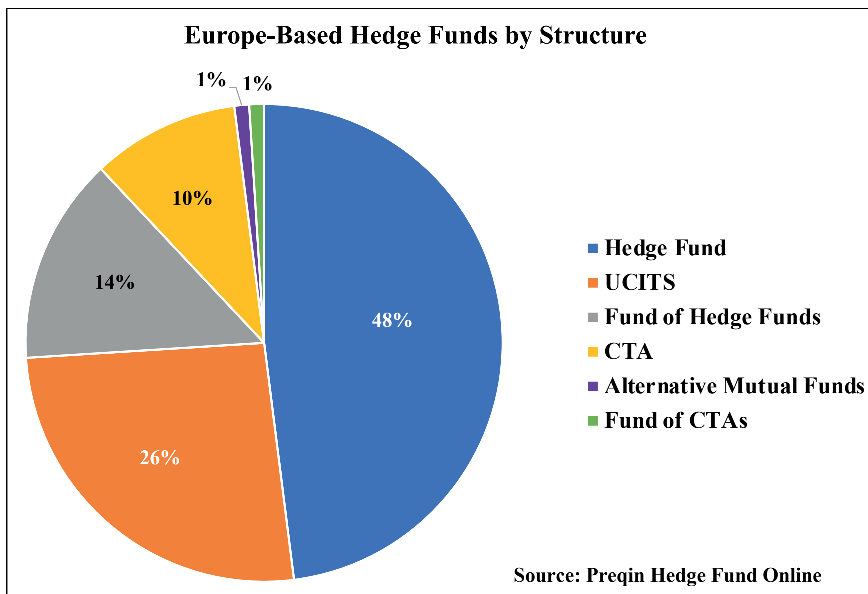
The European Hedge fund industry has an estimated size of somewhere around USD 450 billion in AuM divided into slightly fewer than 4'000 funds. This means that the European industry constitutes slightly less than 20% of the global hedge fund industry and is comprised of a large number of funds. Europe is the world's second largest hedge fund industry following the US hedge fund industry. The largest hedge fund hubs in Europe are currently in the United Kingdom, followed by Switzerland,[161] Sweden, France, and then the Netherlands.[162]

The largest two categories of hedge funds in Europe are European alternative investment funds and UCITS funds. These two categories are regulated by the UCITS and AIFMD frameworks, respectively.

[161] Switzerland is not a member of the European Union as of 2020, but but Swiss alternative investment fund managers can access the EU market as third country managers.

[162] Preqin, 'Preqin Special Report: Hedge Funds in Europe' (June 2017) 4 <https://docs.preqin.com/reports/Preqin-Special-Report-Hedge-Funds-in-Europe-June-2017.pdf> accessed 31 August 2020.

2.6.2.5.4 Figure 2k: Types of European Funds by Structure[163]



2.6.2.6 Harmonized vs Nationally Regulated and Offshore Fund Structures

The European hedge fund industry is to be understood as a slice of the global industry, but it does have certain characteristics that make a detailed analysis useful. From a purely legal perspective, a distinction can be made between two types of fund categories. The first category is composed of funds that operate and are subject to purely national regimes, or are incorporated outside of the European Union and do not actively market their funds to investors in the EU. These jurisdictions outside of the European Union are sometimes termed 'offshore' jurisdictions. The second category is composed of funds operating under the harmonized fund regime of the European Union. In this category, one might find funds from both within and from outside the EU, but what is common to all these funds is that they are subject to harmonized EU regulation[164] and will operate under the EU asset

[163] ibid.

[164] This is a somewhat simplified view, since at least the harmonized regime will have been adapted into national law of the member states, so technically speaking, on the directive level, the fund will still be subject to national law, albeit national law that

management framework, most often the UCITS or AIFMD. To make the analysis more accessible, the harmonized category will be reduced to AIFMD and UCITS funds while disregarding smaller fund structures within the EU. It is therefore important to make this distinction between these two categories when measuring the size of the industry and analyzing the current framework. The comparison also gives us insight into aspects of regulatory rationale and the relative success of the EU's harmonization efforts.[165]

2.7 Conclusion: Seeking Alpha

This chapter has provided an introduction to the world of alternative investments. It has also given an overview of private equity and hedge funds. The essence and raison d'être of both private equity and hedge funds is to offer superior risk-adjusted performance compared to a benchmark, which is usually an index of the traditional broader market. Not all funds are able to achieve this objective. The variance in returns to investors after fees is quite large and points to the fact that in both the hedge and private equity industry, not nearly every fund can deliver on what it promises. While several funds and companies have vastly outperformed traditional investments, this does not hold true in every case. An informational asymmetry exists between the investor and the fund manager, where the investor may have difficulties differentiating between funds that can actually perform above par and those that cannot. Given the comparably high fee structure of hedge and private equity funds, this may mean that an investor is paying a fund manager not for absolute returns, but is actually purchasing the equivalent of alternative beta.[166] By doing so, the investor and the fund manager himself may be unknowingly taking on much more risk than assumed to achieve superior returns. The funds of funds industry acts as a sort of gatekeeper by offering a pre-selection and diversification benefit.[167] It is doubtful however, if the funds of funds industry can

flows directly from supranational EU law. The fund will only be subject to EU regulatory efforts that are directly applicable.

165 Regulatory rationale will be discussed in more detail in chapter 6.

166 In such a case, the investor still might receive a diversification benefit, but is likely overpaying the fund manager for the privilege; see generally Jaeger and Pease (n 43) 147–156.

167 This may also be the only possibility for an investor to access certain fund types if the funds only accept subscriptions larger than a certain amount.

offset this informational asymmetry, given that its performance as a whole after fees is not substantially superior.[168] How diligent the funds of funds industry is in its selection is also not known in advance, and an investor faces the same informational disadvantage versus the fund of funds manager as he or she does vis-à-vis the fund manager in the case of a direct investment in a hedge or private equity fund.

This reality leads to a mixed conclusion regarding the regulatory rationale that will be examined in the chapters to come. In essence, the alleged superior performance is the very reason the two aforementioned industries would be preferred over other investments, but funds cannot consistently produce the returns they promise. This means that regulation must account for this fact.

[168] Stowell (n 59) 328–329.

3 Systemic Risk

'Life always has a fat tail.' – Eugene Fama[169]

Table of Contents

3 Systemic Risk ... 61
3.1 Introduction ... 62
3.2 Risk ... 62
3.3 Financial Risk ... 67
3.4 Risks for Alternative Investment Funds ... 72
3.5 Systemic Risk ... 73
3.6 Investment Funds and Systemic Risk ... 100
3.7 Conclusion ... 116

169 Lowenstein (n 7) 72.

3.1 Introduction

The first part of this chapter deals with the concept of risk and how to measure it. The examination of risk in a more general sense provides the reader with a broad and abstract description of the idea of risk. With this overview, general concepts will then be linked to risk in financial markets and finally, to systemic risk. The second part of the chapter will present various approaches to measuring systemic risk. The third part of this chapter will suggest various approaches to control or limit systemic risk with the help of various regulatory macroprudential tools. The last part will highlight various challenges in specifically regulating alternative investment funds.

3.2 Risk

Risk can be defined as 'a random event that may possibly occur and, if it did occur, would have a negative impact on the goals of [an] organisation'.[170] Thus, risk is a process that involves a concept of randomness, and a defined idea of what a negative impact might be. Risk is distinguished from opportunity only in one respect: the impact of an opportunity is positive.[171] Thus, risk is the possibility that an event with a negative impact might occur.

3.2.1 Distinguishing Between Risk and Uncertainty

Initially the core questions relating to the analysis of risk in general will be examined before progressing to the more specific aspects of systemic risk.[172] As a first step, a distinction needs to be made between risk and uncertainty. We could formulate the relationship between the two by incorporating damage or loss and examining the relationship between these three concepts.

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170 David Vose, *Risk Analysis: A Quantitative Guide* (3rd edn, John Wiley & Sons 2008) 3.

171 ibid.

172 Yacov Y Haimes, 'Systems-Based Risk Analysis' in Nick Bostrom and Milan M Ćirković (eds), *Global Catastrophic Risks* (OUP 2008) 145–146.

As defined above, risk is the possibility of a negative event occurring. Hence, risk can be seen as the sum of the uncertainty and damage.[173]

$$Risk = uncertainty + damage$$

Uncertainty is therefore a component of risk. Some authors see the two as distinct concepts, where risk is generally quantifiable, while uncertainty is not.[174] For instance, Frank Knight's description of this difference has led to the term 'Knightian uncertainty', which emerges when a distinction is made between a measurable uncertainty, which is risk, and that which is unmeasurable, which is uncertainty in the sense described above.[175] John Maynard Keynes wrote on this topic also. He characterized probabilities as 'degrees of belief', which reflect a person's belief in the likelihood of a future event occurring.[176] Keynes also wrote on uncertainty, which he described as an event whose likelihood is incalculable, where its probability cannot be scientifically determined.[177] A more radical position in direct opposition to this concept of risk versus uncertainty has been taken by Nassim Nicholas Taleb, who considers Knightian uncertainty to be nonexistent and, indeed, any event's probability calculable. The accuracy with which probabilities could be computed for events is the differentiating factor for Taleb,[178] meaning that no event is unquantifiable, but the factors that would permit exact calculation of the odds are frequently unknown in reality.[179] By this same token, most risks cannot

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173 Stanley Kaplan and B John Garrick, 'On the Quantitative Definition of Risk' (1981) 1 Risk Analysis 11, 11, 12.

174 Kevin Dowd, *Measuring Market Risk* (2nd edn, Wiley 2005) 1. See also Lo, *Adaptive Markets: Financial Evolution at the Speed of Thought* (n 76) 53–55. Derman (n 79) 154–156.

175 Frank Knight, *Risk, Uncertainty and Profit* (first published 1921, Martino Publishing 2014) 19–20. Peter L Bernstein, *Against the Gods: The Remarkable Story of Risk* (John Wiley & Sons 1998) 219.

176 John Maynard Keynes, *A Treatise on Probability* (Macmillan 1921) 9–19.

177 John Maynard Keynes, 'The General Theory of Employment' (1937) 51 The Quarterly Journal of Economics 209, 213–215; Bernstein (n 175) 229.

178 See Nassim Nicholas Taleb, *The Black Swan: The Impact of the Highly Improbable* (Random House 2007) 128. Taleb sees the distinction Knight makes on risk and uncertainty as artificial.

179 Nassim Nicholas Taleb, *Antifragile: Things That Gain from Disorder* (Random House 2012) 455. In Taleb's own words (on using models with parameter uncertainty): '[t]his further shows the defects of the notion of "Knightian uncertainty," since all tails are uncertain under the slightest perturbation and their effect is severe in fat-tailed domains, that is, economic life.' ibid.

be calculated in reality and the overwhelming majority of factors that create risks in life are not known, hence, most risk calculations are, at best, subjective educated guesses.[180] As Taleb describes in his criticism of Knight, '[h]ad [Knight] taken economic or financial risks he would have realized that these "computable" risks are largely absent from real life! They are laboratory contraptions!'[181]

3.2.2 Distinguishing Between Risk and Hazard

Keeping the idea of risk being composed of uncertainty and damage in mind, a second differentiation needs to be made between risk and hazard. Hazard is defined by the Merriam-Webster dictionary as: 'A source of danger', and 'the effect of unpredictable and unanalyzable forces in determining events.'[182]

To use an example in order to illustrate the concept of hazard, one could use the idea of a body of water. While a body of water might offer a multitude of opportunities and advantages, instinctively, a human also would recognize water as a source of danger. This source of danger is a hazard and represents the origin of risk. Hazard is therefore the source of risk.[183]

Hazards do not exist in isolation, but can be limited by safeguards. To limit the effect of a hazard, which in our example above would be a body of water, one would need to utilize some sort of protective device. Hence, to traverse a body of water, one might use a vessel of some sort. This vessel would provide a certain degree of protection against the hazard. Other factors, such as the size, center of gravity, and perhaps the vessel's buoyancy all determine the extent of this protection. On a large and volatile body of water such as the Atlantic Ocean, an ocean liner would therefore most likely be safer than a canoe or a similar small boat. In a more extended sense, in addition to the initial safeguard, an ex-post mechanism could be utilized that is activated only after the hazard is realized or the probability of damage has risen. In the example being used, this might be a lifeboat or a life

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[180] Taleb. On the fact that the probability of most future real-life events are uncalculable is a point on which all three, Knight, Keynes, and Taleb would agree. See also Nassim Nicholas Taleb, *Fooled by Randomness: The Hidden Role of Chance in Life and in the Markets* (Random House 2005) 188.

[181] Taleb, *The Black Swan: The Impact of the Highly Improbable* (n 178) 128.

[182] 'Hazard' *Merriam-Webster Encyclopedia* (2020) <www.merriam-webster.com/dictionary/hazard> accessed 25 August 2020.

[183] Kaplan and Garrick (n 173) 12.

vest, both of which are a secondary layer of protection that are only deployed if the first layer has failed. Hence, a hazard is reduced by some form of safeguard, which can take any number of forms, including even simple awareness. The simple knowledge of a hazard can offer protection against it. [184] Thus, risk can be thought of as the ratio of hazard to safeguards. This idea can be expressed symbolically as:

$$Risk = \frac{Hazard}{safeguards}$$

This equation also expresses an curious aspect of risk in general. Practically speaking, risk can be reduced by increasing safeguards, but it can never be brought to zero.[185] This conceptual understanding of risk can aid in understanding the mechanisms in risk management and regulation as well. Risk management as a process is a form of safeguard against hazards. Regulation itself can be a safeguard for society and in would be equivalent to a form of societal risk mitigation. Regulation also serves as a mechanism to prescribe effective risk management techniques in any area where hazards might become costly to society, should they become realized.

3.2.3 Finding a Formal Definition of Risk

As mentioned in the introduction, risk is a random event which could occur, and if it does, this event would have a negative impact. There are three elements to risk: a scenario, the probability of occurrence, and the size of the impact of the occurrence. This impact can be expressed as a fixed value or as a distribution:[186]

> [R]isk is either a condition of, or a measure of, exposure to misfortune – more concretely, exposure to unpredictable losses. However, as a measure, risk is not one-dimensional – it has three distinct aspects or 'facets' related to the anticipated values of unpredictable losses. The three facets are

184 ibid.

185 ibid. For the same concept applied to systemic risk, see Andrew W Lo, 'Hedge Funds, Systemic Risk, and the Financial Crisis of 2007–2008: Written Testimony for the House Oversight Committee Hearing on Hedge Funds' (US House of Representatives Committee on Oversight and Government Reform 13 November 2008 hearing on hedge funds, 2008) 8, 17–20 <https://oversight.house.gov/sites/democrats.oversight.house.gov/files/migrated/20081113101922.pdf> accessed 31 August 2020.

186 Vose (n 170) 3.

> Expected Loss, Variability of Loss Values, and Uncertainty about the Accuracy of Mental Models intended to predict losses.[187]

As the definition above illustrates, risk is composed of three aspects: a scenario, the probability of occurrence, and the size of the impact. This can be expanded on by utilizing three slightly more exact elements: expected loss, variability of loss values, and the uncertainty of the accuracy of mental models that predict losses. There exists therefore an expected value of losses which is tied directly to the variability of those losses and the certainty with which the predictions can be made accurately.[188] Expected value and variability of loss values will be incorporated into the formal conceptualizations below, while the aspect of uncertainty of the accuracy of models will be reexamined in the context of financial risk. The third concept describes the core difficulties faced by risk management institutions and the limits of value-at-risk (VaR) models in dealing with systemic risk and hedging against extreme value occurrences.

The definition of risk can be formalized using these three elements, of which risk is composed:

$$R = \{< S_i, L_i, X_i >\}$$

Where: S_i represents a scenario identification or description
L_i the probability of this scenario, and
X_i the measure of the damage or the consequence or evaluation measure of the scenario.[189]

This quantitative definition of risk is a formal representation of three essential questions in the analysis of risk that must be answered:

1. What can happen or what could go wrong?
2. How likely is it that this will happen?
3. What are the consequences or the damage of this does actually happen?[190]

[187] Ted W Yellman, 'The Three Facets of Risk' (2000) 109 Journal of Aerospace 1244, 1244.

[188] ibid 1245.

[189] Kaplan and Garrick (n 173) 13; Haimes (n 172) 151.

[190] Kaplan and Garrick (n 173) 22.

3.3 Financial Risk

While the general definition of risk above holds true for all forms of risk, this thesis is primarily concerned with risk related to financial systems and the actors within them. Financial risk is usually imagined as a statistical distribution of scenarios with various probabilities attached to each. On a very basic level, in a financial context, risk is thought of as the standard deviation of returns over a certain time period.[191] The idea behind this is that risk represents the danger and probability of returns falling to or below a certain threshold. Thinking of risk in the form of a distribution provides a shorthand way of illustrating a static situation and potential manifestations of the future, some of which feature the realization of risk. Value-at-risk is closely related to this concept. A value-at-risk or VaR measurement refers to estimated losses above a specified threshold with a defined probability over a specific time period. As an example, a 99% VaR prediction of EUR 1 million over the course of one trading day would mean the following: on average, in the time span of 100 days, on one of those days, losses would be at EUR 1 million or more.[192]

In the context of financial risk, risk is subdivided into a number of categories which financial institutions are confronted with. For instance, prudential regulation of banks is focused on the following categories of risk: credit risk, concentration risk, market risk, settlement risk, liquidity risk, and operational risk.[193]

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191 We can also think of this concept as a mean-variance framework. In such a framework, the assumption is made that profits and losses follow a normal distribution. More formally, a probability density function could be drawn where a random variable, say X, is distributed with a mean μ and variance σ^2 (or deviation σ), which would be expressed as follows:

$$f(x) = \frac{1}{\sigma\sqrt{2\pi}} exp\left[-\frac{(x-\mu)^2}{2\sigma^2}\right]$$

This function would give us a complete overview of possible random outcomes and their probabilities by telling us what outcomes are possible with which probability. Dowd (n 174) 20.

192 See Hull (n 121) 271. See also Dowd (n 174) 27ff. For a discussion of VaR and the shortcomings of such models, see Donald Geman, Hélyette Geman and Nassim Nicholas Taleb, ‘Tail Risk Constraints and Maximum Entropy’ (2015) 17 Entropy 3724, 2325; Derman (n 79) 53ff; Hull (n 41) 494–517.

193 Alexander, Dhumale and Eatwell (n 32) 24. See also Andrew W Lo, ‘Risk Management for Hedge Funds: Introduction and Overview’ (2001) 57 Financial Analysts Journal 16. Obviously, systemic risk is another focus and will be discussed later in this chapter.

3.3.1 Market Risk

Market risk is the risk of losses that can result from movements in market prices.[194] Subcategories of market risk include equity risks, interest and exchange rate risks, and commodity price risks among others.[195] Market risk is one category of risk that an investment fund will invariably be exposed to, which it needs to manage in order to be successful.

3.3.2 Credit Risk

Credit risk refers to the risk of losses arising from a 'credit event', either from a counterparty failing to make a promised payment,[196] or on account of an adjustment of the quality of credit.[197] More generally, when a positive cash flow is expected from a counterparty, due to the existence of a contractual obligation, a receivable, or a loan, the possibility of said counterparty not fulfilling its obligation constitutes credit risk.[198] The exact differentiating factors that separate credit risk from market risk, settlement risk, and what is termed 'specific risk' are not always obvious.[199] For the purposes of this thesis, credit risk will be treated as distinct from market risk, as from a regulatory perspective, credit risk is usually treated as a separate category. As an example of this, under the AIFMD framework, the im-

194 Basel Committee on Banking Supervision, 'Minimum Capital Requirements for Market Risk' (Bank for International Settlements, 2016) 10. See also Dowd (n 174) 15. See also David Murphy, *Understanding Risk: The Theory and Practice of Financial Risk Management* (Chapman and Hall/CRC 2008) 39.'

195 Dowd (n 174) 15. See also Tim Koller, Marc Goedhart and David Wessels, *Valuation: Measuring and Managing the Value of Companies* (6th edn, John Wiley and Sons 2015) 779. The second source defines market risk as '[…] the exposure to changes in interest rates, stock prices, currency rates, and commodity prices.'

196 Dowd (n 174) 1.

197 European Central Bank, 'The Use of Portfolio Credit Risk Models in Central Banks' (2007) ECB Occasional Paper Series 64 6 <www.ecb.europa.eu/pub/pdf/scpops/ecbocp64.pdf> accessed 30 August 2020.

198 Murphy (n 194) 41.

199 ibid.

plementing regulation explicitly mentions credit risk as one of the five categories for which qualitative and quantitative risk limits must be defined.[200]

3.3.3 Settlement and Counterparty Risk

Settlement risk or counterparty risk is conceptually similar to credit risk. In principle, both credit risk and counterparty risk represent the same type of risk: the risk that the other party in a contract will not fulfill their obligations under the contract and not pay what was agreed upon. Counterparty risk differs from credit risk in that credit risk refers to a unilateral exposure of one party through a loan, whereas counterparty risk is bilateral. In the case of counterparty risk, both parties are exposed, while in the case of a loan, only the lending party is exposed to credit risk and the borrowing party has no exposure.[201] Put simply, credit risk is the more general category that arises primarily from entering into loan agreements of any form, while counterparty risk is a more specific term reserved for derivative contracts where both parties could be exposed.[202]

3.3.4 Liquidity Risk

Liquidity represents the ability to satisfy demands for cash, regardless of whether these arise unexpectedly or not.[203] Accordingly, liquidity risk is the possibility that such a demand cannot be met when it arises. In a more specific financial context, the depth of liquidity of a market is determined by its size and the readiness of

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200 See AIFMD Implementing Regulation, art 44(2)(b). The other four categories are market risk, liquidity risk, counterparty risk, and operational risk. See AIFMD Implementing Regulation, art 44(2)(a), (c), (d), (e).

201 This distinction between credit and counterparty risk is made by the BIS under the Basel II framework (which at the time of writing has been replaced by the Basel III framework. The definition nonetheless still stands). See Basel Committee on Banking Supervision, 'International Convergence of Capital Measurement and Capital Standards: A Revised Framework' (Bank for International Settlements, 2005) 15 <www.bis.org/publ/bcbs118.pdf> accessed 31 August 2020. The terminology is not consistent throughout academia, the industry, and regulatory bodies. The BIS for instance, uses the term 'counterparty credit risk' when referring to counterparty risk. For the sake of clarity, this thesis differentiates between credit risk in the strict sense, and counterparty risk, and omits 'credit' when referring to counterparty risk.

202 ibid.

203 Murphy (n 194) 43–44.

availability of the assets or instruments that are traded. In this context, liquidity risk can also represent the risk that the price of an asset upon sale within a specific time frame may be suboptimal compared to the price of this asset could achieve in a more liquid market.[204] Generally speaking, for a single asset, the larger the bid-ask spread is, the greater the liquidity risk will be.[205]

3.3.5 Operational Risk

Operational risk in a bank can be defined in a very broad sense as all risk that is neither market nor credit risk.[206] This exclusionary definition can be augmented through the definition of the Basel Capital Accord. The Basel Capital Accord defines operational risk as the risk of losses 'resulting from inadequate or failed internal processes, people and systems or from external events'.[207] Operational risk includes a variety of sources, including internal and external fraud, business practices related to clients and employees, the destruction of physical assets, and the failure of processes and systems.[208] Due to the broad nature of operational risk, the table below provides an overview of subcategories related to it.

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204 Steven Allen, *Financial Risk Management: A Practictioner's Guide to Managing Market and Credit Risk* (2nd edn, Wiley 2012) 3, 30.

205 Anson, Fabozzi and Jones (n 38) 7.

206 Koller, Goedhart and Wessels (n 195) 779. See also Allen (n 204) 29ff.

207 Basel Committee on Banking Supervision, 'Principles for the Sound Management of Operational Risk' (Bank for International Settlements, 2011) 3 <www.bis.org/publ/bcbs195.pdf> accessed 31 August 2020.

208 Paul Hopkin, *Fundamentals of Risk Management : Understanding, Evaluating and Implementing Effective Risk Management* (5th edn, Kogan Page 2018) 206–207.

3.3.6 Table 3a: Overview of Operational Risk Categories[209]

Event Category	Definition	Description	Examples
Internal fraud	Losses due to fraud, misappropriation or circumvention of regulations by internal party	Unauthorized activity, theft and fraud	Unreported transactions Unauthorized transactions Theft and fraud Tax non-compliance Insider trading
External fraud	Losses due to fraud, misappropriation or circumvention of the regulations by third party	Systems security, theft and fraud	Theft/robbery Forgery Hacking/theft of information
Employees	Losses arising from injury or non-compliance with the employment legislation	In a safe environment, damaged employee relations and discrimination	Compensation claim Discrimination allegation
Clients	Losses arising from failure to meet professional obligations to clients	Disclosure and fiduciary	Fiduciary breaches Disclosure violations Misuse of confidential information
Physical assets	Losses arising from loss or damage to physical assets	Disasters and other events	Natural disaster losses Terrorism/vandalism
Systems	Losses arising from disruption of business or system failures	Systems	Hardware or software failure Telecommunications Utility disruption
Processes	Losses from failed transaction processing or process management	Transaction capture, execution, documentation and maintenance	Data entry, or loading error Missed deadline or responsibility Incorrect records Failed reporting obligation

209 ibid 209.

3.3.7 Concentration Risk

Concentration risk is not a traditional category of risk, but is of essential importance when dealing with systemic risk. Concentration risk in the context of banking refers to exposures present in a bank's portfolio, but can be present in the portfolios of non-bank institutions such as investment funds as well. Concentration risk arises from imperfect diversification and results from a large exposure to individual borrowers or sectors relative to the size of the portfolio in question.[210] Concentration risk can take the form of an excessive exposure to individual borrowers, also termed credit concentration risk, or an exposure to an overall sector, which corresponds to systematic components of risk.[211] Though concentration risk is generally associated with credit risk, it can also form a part of market liquidity risk.[212]

Managing concentration risk usually involves setting individual risk limits and can be quantified by using various concentration indices, examples of which include the Herfindahl-Hirschman Index, the Entropy Concentration Index, and the Tideman-Hall Index among others.[213]

3.4 Risks for Alternative Investment Funds

These categories of risk are also relevant to the asset management industry in general, and the alternative investment fund industry in particular, though their origins and manifestations may differ marginally from their emergence in the banking industry because of the fundamentally distinct characteristics of these industries.[214]

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210 See eg Basel Committee on Banking Supervision, 'Studies on Credit Risk Concentration: An Overview of the Issues and a Synopsis of the Results from the Research Task Force Project' (2006) BCBS working paper No 15, Bank for International Settlements 1, 8 <www.bis.org/publ/bcbs_wp15.pdf> accessed 31 August 2020.

211 The Joint Forum, 'Risk Concentrations Principles' (Basel Committee on Banking Supervision, International Organization of Securities Commissions, International Association of Insurance Supervisors, 1999) 2 <www.bis.org/publ/bcbs63.pdf> accessed 30 August 2020.

212 ibid 3–4.

213 Fernando Ávila and others, 'Concentration Indicators: Assessing the Gap between Aggregate and Detailed Data' (2013) 36 IFC Bulletin 542, 543ff.

214 As an example, liquidity risk, which is examined in more detail below, must be monitored and managed both in asset management firms and in banks, but the realization of

For alternative investment funds in particular, the European legal framework mandates risk management procedures be put in place for market risk, credit risk, liquidity risk, counterparty risk, and operational risk.[215] Risk management of other categories of risk is optional.[216] The direct risks and consequences for alternative investment funds are described in greater detail below.[217]

3.5 Systemic Risk

In the *Handbook on Systemic Risk,* Viral Acharya offers a roadmap of the necessary steps that lead to effective regulation of systemic risk. There are three essential steps:

(i) To **identify** and **measure** the systemic risk of financial firms

(ii) To **develop,** based on systemic risk measures, an optimal **policy** whose main purpose is to have financial firms internalize the systemic risk costs imposed on the rest of the financial sector and external real economy.

(iii) To make sure that this policy is **implementable,** is not subject to future regulatory arbitrage, and mitigates the moral hazard problem inherent to government guarantees such as deposit insurance and being too big to fail.[218]

These steps are crucial to understanding and regulating this phenomenon. Identification and measurement, development of an optimal policy to internalize costs of systemic risk, and the introduction of practical and implementable regulation while avoiding various regulatory pitfalls such as the creation of moral hazards are all key to effective regulation. This chapter deals with the initial step by providing a definition of systemic risk and summarizing current attempts at measuring it. The following chapters will follow the two other steps by first analyzing existing

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this risk will be due to different root causes. For instance, in banks, a classical bank run is caused by depositors withdrawing their deposits, while in an open-ended investment fund, redemption rights allow investors to redeem their initial investments in the fund.

[215] AIFMD Implementing Regulation, art 44(2)(a)–(e).

[216] See AIFMD Implementing Regulation, art 44(2) first subparagraph.

[217] See section 3.6.

[218] Viral V Acharya and others, ‘Taxing Systemic Risk’ in Jean-Pierre Fouque and Joseph A Langsam (eds), *Handbook on Systemic Risk* (CUP 2013) 229. See also Lo, ‘Hedge Funds, Systemic Risk, and the Financial Crisis of 2007–2008: Written Testimony for the House Oversight Committee Hearing on Hedge Funds’ (n 185) 1–2.

regulation and then proposing policies and amendments to the existing framework. A discussion of whether and how to implement these policy recommendations will be incorporated into the proposals of these policies.

3.5.1 Defining Systemic Risk

As a first step, the term 'systemic risk' needs to be identified. To do this, various definitions need to be examined, in order to provide an overview and to reach a synthesis and deeper understanding of systemic risk. The term 'systemic risk' is intuitively related to issues of micro- and macroprudential regulation; however, it remains somewhat opaque. No generally accepted definition of systemic risk exists.[219] A general abstract idea does exist, however, and appears be closely linked with issues of financial stability, financial crises, and perhaps financial contagion or interdependency as well. Many definitions, as will become evident over the course of the following pages, exhibit substantial overlap in their underlying conceptual foundations.[220] Systemic risk might best be characterized more as a 'know-it-when-I-see-it'[221] concept when used by policymakers rather than as a hard definition.[222] In this thesis, an attempt will nonetheless be made to extract a precise,

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219 Schwarcz, 'Systemic Risk' (n 34) 196; Alexander, Dhumale and Eatwell (n 32). See also Xavier Freixas, Luc Laeven and José-Luis Peydró, *Systemic Risk, Crises, and Macroprudential Regulation* (MIT Press 2015).

220 Monica Billio and others, 'Econometric Measures of Connectedness and Systemic Risk in the Finance and Insurance Sectors' (2012) 104 Journal of financial economics 535, 537.

221 This phrase originated in the US Supreme Court decision of Jacobellis v Ohio, where the central issue was whether the Louis Malle film 'Les Amants' was to be deemed obscene and, more importantly, whether such material was constitutionally protected. Justice Potter Stewart held that the Constitution protected such obscenity, with the exception of 'hard-core-pornography'. Instead of offering a definition of what constituted 'hard-core-pornography', Justice Stewart famously wrote, *'I shall not today attempt further to define the kinds of material I understand to be embraced within that shorthand description, and perhaps I could never succeed in intelligibly doing so. But I know it when I see it, and the motion picture involved in this case is not that.' See Jacobellis v Ohio, 378 US 184 (1964).*

222 Markus Brunnermeier and Arvind Krishnamurthy, *Risk Topography: Systemic Risk and Macro Modeling* (University of Chicago Press 2014). See also Traci M Pribbenow, 'Back in the Saddle Again: But Which Way Do We Go from Here-A View of Agency Suggestions for Systemic Risk Regulation' (2009) 60 Case Western Reserve Law Review 559, 560 <http://heinonline.org/hol-cgi-bin/get_pdf.cgi?handle=hein.journals/

if not universally accepted, definition. What follows is a synthesis of the understanding of this concept across multiple fields of academic research on systemic risk.

3.5.2 Common Elements of Systemic Risk Definitions

Multiple definitions of systemic risk exist, but many of them exhibit commonalities in their underlying conceptual ideas. To illustrate this, various definitions are provided below, which are compared and analyzed.

A very broad and general definition of systemic risk is provided by Billio and others, where '[systemic risk entails] any set of circumstances that threatens the stability of or public confidence in the financial system'.[223]

This very general definition describes two elements, a financial system, and a 'set of circumstances'. According to this definition, a financial system is influenced by a set of circumstances which may lead to a loss of confidence or a destabilization of said system. In choosing a slightly more concrete definition, this mechanism of destabilization mentioned above can be expanded on.

The second definition is provided by Chan and others, who define systemic risk as '[…] the possibility of a series of correlated defaults among financial institutions – typically banks – that occurs over a short period of time, often caused by a major single event'.[224]

This definition introduces a further element, that of correlated defaults. The idea is that there is a link between the various financial institutions within the financial system, which enables defaults or other adverse conditions in certain parts of the system to move to other parts. This connection enables contagion, which leads to

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cwrlrv60§ion=20> accessed 5 January 2017. See also International Monetary Fund, *Global Financial Stability Report: Responding to the Financial Crisis and Measuring Systemic Risks* (IMF 2009) 113. See also Lo, 'Hedge Funds, Systemic Risk, and the Financial Crisis of 2007–2008: Written Testimony for the House Oversight Committee Hearing on Hedge Funds' (n 185) 3.

223 Billio and others (n 220) 537.

224 Nicholas Chan and others, 'Systemic Risk and Hedge Funds' (2005) NBER Working Paper No 11200 1 <www.nber.org/papers/w11200.pdf> accessed 16 November 2016.

correlated defaults. Connectedness, correlation, and contagion will be examined further below.[225]

A third definition is provided by Schwarcz. He defines systemic risk as:

> [...] a trigger event, such as an economic shock or institutional failure, causes a chain of bad economic consequences—sometimes referred to as a domino effect. These consequences could include (a chain of) financial institution and/or market failures. Less dramatically, these consequences might include (a chain of) significant losses to financial institutions or substantial financial-market price volatility. In either case, the consequences impact financial institutions, markets, or both.[226]

In this third definition, certain familiar elements reappear. The 'set of circumstances' from the first definition appears as a 'trigger event with bad economic consequences' again. The 'threat to stability and public confidence' from the first definition is also very similar to Schwarcz's 'chain of significant losses' and 'price volatility' This third definition also includes the idea of 'connectedness and contagion' from the second definition, described here as a 'chain of consequences' and a 'domino effect'.

Examining these definitions demonstrates that common elements are found in virtually all definitions: firstly, a failure or the deficient functioning of a system appears; secondly, this deficiency spreads through some sort of contagion effect, where interconnected elements or nodes in a system are affected by the malfunctioning of the system; and finally, the possibility or realization of the collapse of the system as a whole becomes a reality. These three elements, **disruption, connection or contagion, and collapse,** constitute systemic risk and can also be understood as a chronological description of the realization of a systemic crisis. A system experiences a disruption in its functioning,[227] the disruption spreads to

225 See section 3.5.5.2.

226 Schwarcz, 'Systemic Risk' (n 34) 198.

227 It is important to note that in the context of financial markets, the disruption of the system should not be understood to imply that systemic risk necessarily results in market failure. It could convincingly be argued that the very disposition and structure of a market results in an outcome that, while well within the parameters of the functioning of said market, would nonetheless be viewed as undesirable from the standpoint of a regulator attempting to mitigate the effects of systemic risk. See George G Kaufman, 'Bank Failures, Systemic Risk, and Bank Regulation' (1996) 16 Cato Journal 17 <http://heinonline.org/hol-cgi-bin/get_pdf.cgi?handle=hein.journals/catoj16§ion=5>

other constituents within the system, and the system potentially ceases to function altogether.

3.5.3 The Realization of Systemic Risk

Schwarcz's definition illustrates more specifically what systemic risk entails in financial markets and elaborates on the third element, collapse. He defines the first step as a 'trigger event', which in a financial markets concept might be an economic shock or institutional failure, which sets off a chain of 'bad economic consequences'. The result is either substantial financial-market price volatility, a chain of significant losses to financial institutions, more seriously the failure of financial institutions, or market failure.[228] Again, familiar elements are reflected in this definition. The trigger event corresponds to a disruption, and the consequence is a chain of bad economic consequences, corresponding to connection or contagion, and finally an outcome, being volatility, significant losses, and potential failures of institutions or of the market, corresponding to collapse. What is notable is that the third element, collapse, can, in the context of financial markets, appear in various forms of severity, ranging from increased volatility to the unmaking of the entire system. A number of other definitions have been put forward,[229] but while elaborating on various points, there is no core variation in the conceptual understanding of what systemic risk is.

The study of these aspects allows us to formalize the core elements constituting systemic risk:

(i) **Disruption:** A failure or disruption of the ordinary functioning of a system is the initial shock which throws said system out of equilibrium.

(ii) **Contagion:** The disruption spreads from the initial starting point to other nodes within the system.

(iii) **Amplification:** The contagion to other nodes leads to secondary disruptions which spread and amplify the effect of the initial shock.

(iv) **Collapse:** The accumulated failures damage the system and, if the system is not resilient enough, may cause its complete collapse.

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accessed 5 January 2017; Schwarcz, 'Perspectives on Regulating Systemic Risk' (n 34) 40–41.

228 Schwarcz, 'Systemic Risk' (n 34) 198.

229 See above and below for a selection of definitions of systemic risk.

(v) **Second-round effects:** The first shock may reverberate through the system causing secondary disruptions which may restart the cycle or repeat it in similar form. [230]

It would therefore seem prudent to focus on various interpretations of systemic risk and similar phenomena outside of the literature of financial regulation. This enables us to specifically focus on the phenomenon of systemic risk in financial markets. By limiting ourselves to definitions highlighting various specific components, we can gain insights into how systemic risk is to be understood and consequently in a later chapter, what regulatory measures will prove effective.

3.5.4 Systematic Risk vs Systemic Risk

There is potential for confusion between the terms 'systemic' and 'systematic' risk. Systemic risk has been defined above and will be described in greater detail in the following parts of this chapter. The term 'systematic risk' on the other hand, refers to an aggregate, macroeconomic form of risk that cannot be diversified away, ie corresponds to the residual risk of a hypothetical perfectly diversified portfolio. Following this concept, an investor that might be exposed to systematic risk will require a form of compensation for taking on said risk. The additional risk would result in an adjustment to the expected returns.[231] The reason for the demand of the investor of an additional return according to the risk profile of an investment is illustrated best by a quote by William F Sharpe in his seminal paper on the Capital Asset Pricing Model in 1964, where he stated:

> [The Investor] thinks of the possible results [of an investment] in terms of some probability distribution. In assessing the desirability of a particular investment, however, he is willing to act on the basis of only two parameters

[230] Peter O Müllbert, 'Managing Risk in the Financial System' in Niamh Moloney and Eilís Ferran (eds), *The Oxford Handbook of Financial Regulation* (OUP 2015) 365, 382. See also George G Kaufman and Kenneth E Scott, 'What Is Systemic Risk, and Do Bank Regulators Retard or Contribute to It?' (2003) 7 The Independent Review 371, 372–375.

[231] See Lars Peter Hansen, 'Challenges in Identifying and Measuring Systemic Risk' (2012) NBER Working Paper 18505 4 <www.nber.org/papers/w18505.pdf> accessed 31 August 2020. For a similar definition, but reduced to three essential steps, see Thomas R Hurd, *Contagion! Systemic Risk in Financial Networks* (Springer 2016) 6.

> of his distribution—**its expected value and standard deviation.**[232] (emphasis added)

Systematic risk is also denoted as the 'beta coefficient'.[233] While systematic risk is an essential concept of portfolio management theory, it is related to systemic risk only on an abstract level. It is therefore imperative to recognize the distinction between the two terms. While in practice, the portfolios of each of the investment funds that are at the core of this thesis will be exposed to both systematic risk and systemic risk, systematic risk will not be examined in greater detail in the context of this thesis.

3.5.5 Examining the Components of Systemic Risk

3.5.5.1 Examining Initial Shocks and Disruption

An initial shock or trigger or multiple smaller shocks to a financial system constitute the beginning of systemic crises. While it is important to note that the shock itself might not be the root cause of an occurring crisis, it can act as a trigger of it. One example of such a trigger was an increase in subprime mortgage defaults in February 2007,[234] which was the starting point of the following financial crisis. The transition from an initial shock to an actual crisis will typically begin when liquidity evaporates. Liquidity drying up is a consequence of a decoupling of funds from expertise, as Brunnermeier puts it. This occurs when frictions hinder risk sharing to a point where investors do not have access to sufficient funds.[235] This transition phase between the trigger event and the amplification to where an actual

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232 Sharpe (n 73) 427–428.

233 See Frank J Fabozzi and Jack C Francis, 'Mutual Fund Systematic Risk for Bull and Bear Markets: An Empirical Examination' (1979) 34 The Journal of Finance 1243, 1243. For a general overview of the beta coefficient, see Robert A Levy, 'Beta Coefficients as Predictors of Return' (1974) 30 Financial Analysts Journal 61, 61ff <www.tandfonline.com/doi/abs/10.2469/faj.v30.n1.61> accessed 31 August 2020. To see how the beta coefficient relates to other concepts represented by letters in the Greek alphabet, see chapter 2.

234 For an excellent description of this trigger event and the subsequent financial crisis, see Markus K Brunnermeier, 'Deciphering the Liquidity and Credit Crunch 2007–2008' (2009) 23 Journal of Economic Perspectives 77, 82ff.

235 ibid 91.

crisis occurs can be understood both as a part of the initial shock and as the beginning of the amplification phase.[236]

3.5.5.2 Examining Contagion

The reader will recall that Chan and others describe systemic risk as *correlated defaults triggered by one initial event that rapidly occur.*[237] This description of course reformulates our standard elements, but more importantly, provides us with a new way of examining the second element, namely connection or contagion. Chan and others limit their definition to the default of institutions, but this should not be the focus here. Central to the argument is that there is a *correlation* between the defaults of these financial institutions. In essence, this means that the behavior of individual elements or institutions is somehow correlated and interconnected. The situation in which institutions are dependent upon one another and interconnected enables the spreading of losses and defaults throughout the system. This potential of infecting other portions of a given system will be referred to as contagion. Connectedness and correlation, as well as contagion are therefore intimately related. The presence of both connectedness and contagion in financial systems and their relationship with one another has been discussed at length by Scott.[238] The likelihood of financial disruption and a financial crisis will be positively related to the degree of correlation between assets of financial actors in a given financial system as well as the connectedness between the assets and the institutions themselves.[239] For the purpose of understanding systemic risk relating to investment funds, it is sufficient to understand that connectedness can lead directly to contagion.[240]

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[236] Brunnermeier, for example, does not clearly delineate between the initial shock and the amplification beyond describing the initial shock as an individual event and the amplification constituting the liquidity shortfall in the markets following the initial shock event. See ibid 91f.

[237] Chan and others (n 224) 1.

[238] Hal S Scott, *Connectedness and Contagion: Protecting the Financial System from Panics* (MIT Press 2016) 3–14, 15ff, 67ff.

[239] Billio and others (n 220) 4.

[240] This description might, according to Scott, oversimplify the issue somewhat. Scott argues that interconnectedness is not the root problem leading to financial instability, but that contagion is. It is therefore imperative to separate the two and focus regulatory and other mitigation efforts on contagion rather than connectedness in issues related to financial stability. The author tentatively agrees with this standpoint, but in the context

Contagion can be further divided into transmission mechanisms that are responsible for the spreading of systemic risk. The first is contagion in a stricter sense, the second is information contagion, and the third is the domino effect.[241]

Acharya introduces a similar concept when constructing a model of systemic risk by limiting his focus to the following factors: '[…] we define systemic risk as the joint failure arising from the correlation of returns on asset-side of […] balance sheets'.[242] By limiting our view to the asset-side of balance sheets, it would suggest that an individual institution's stability might be less relevant to that of the whole system, though this is to be assumed with much caution. Fragility of the institution versus fragility of the system might actually be inversely related, in the sense that, beyond a certain threshold, a decrease (or increase) in fragility of the individual institution might lead to an increase (or decrease) in fragility of the system.[243] The main risks faced by financial institutions fall into one of five categories: market risk, credit risk, illiquidity risk, operational risk, and systemic risk.[244] The first four risks are, insofar as they are related to individual institutions, not a component of systemic risk. The market-wide implications of these risks on the other hand are a

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of systemic risk and alternative investment funds, both connectedness and contagion are of secondary importance, especially when comparing the situation to that present in banking regulation. For the sake of clarity, the author has chosen to group both connectedness and contagion together and focus on other aspects of systemic risk. For a more detailed description of the relationship between connectedness and contagion, see Scott (n 238) 1–16.

241 Daniel Awrey, 'Law, Financial Instability, and the Institutional Structure of Financial Regulation' in Anita Anand (ed), *Systemic Risk, Institutional Design, And The Regulation of Financial Markets* (OUP 2016) 67. See also Freixas, Laeven and Peydró (n 219).

242 Viral V Acharya, 'A Theory of Systemic Risk and Design of Prudential Bank Regulation' (2009) 5 Journal of Financial Stability 224, 225 <http://linkinghub.elsevier.com/retrieve/pii/S1572308909000059> accessed 5 January 2017.

243 ibid 226, 230. This can be tied to concepts of modern portfolio theory and the core concept of diversification (and its antithesis, correlation). Within a single portfolio under a mean-variance optimization framework, diversification can lower volatility. Of course, the central question would be whether limiting the individual institution's exposure through diversification increases correlation and hence, potential volatility, of the system as a whole. In addition, the static approach of Modern Portfolio Theory might not capture the entirety of a dynamic strategy with constantly changing exposures in connection with hedging techniques to rebalance positions. See Chan and others (n 224). See also Bisias and others (n 35).

244 See Alexander, Dhumale and Eatwell (n 32) 24–25.

part of systemic risk.[245] This concept, assuming it holds true, implies that the soundness of individual financial institutions does not lead to stability of the system as a whole. The soundness of the individual institution might actually actively lead to instability of the system.[246] The idea of individual institutions contributing to the stability of the system, as opposed to inhibiting it, has been dubbed the 'composition fallacy'. From a regulatory standpoint then, microeconomic and microprudential tools alone may be insufficient, but need to be complemented by macroprudential tools.[247]

3.5.5.3 Amplification and Feedback Effects

3.5.5.3.1 Interconnectedness and the Phenomenon of Phase-Locking

Phase-locking is a phenomenon that has been observed in the natural sciences,[248] where previously uncorrelated movements begin to move in synchrony.[249] In financial markets, this phenomenon can be particularly perfidious, as it can transform investments that, from a risk management standpoint, would have been estimated to be uncorrelated and to provide a diversification benefit: from low-risk, unrelated investments into highly correlated and connected bets. The same can

245 Hurd (n 231) 4.

246 Why this might require further empirical research, it would appear logical, however, that a system in which the individual components depend on each other to maintain their individual stability (as is the case in financial systems) would lead to a composition that is highly problematic from a macro perspective. It would mean that the individual institution, while structurally sound, is connected to and dependent on the soundness of most other elements within the ecosystem. The result is an inflexible and highly fragile system. See Müllbert (n 230) 378.

247 ibid 368.

248 See eg Steven H Strogatz, *Sync: How Order Emerges from Chaos in the Universe, Nature, and Daily Life* (Hachette UK 2012). See also Esa Ranta and others, 'Synchrony in Population Dynamics' (1995) 262 Proceedings of the Royal Society B – Biological Sciences 113; Pat AP Moran, 'The Statistical Analysis of the Canadian Lynx Cycle.' (1953) 1 Australian Journal of Zoology 291; Andrew Liebhold, Walter D Koenig and Ottar N Bjørnstad, 'Spatial Synchrony in Population Dynamics' (2004) 35 Annual Review of Ecology, Evolution, and Systematics 467; David A Vasseur and Jeremy W Fox, 'Phase-Locking and Environmental Fluctuations Generate Synchrony in a Predator–Prey Community' (2009) 460 Nature 1007; Ilkka Hanski and Ian P Woiwod, 'Spatial Synchrony in the Dynamics of Moth and Aphid Populations' [1993] Journal of Animal Ecology 656.

249 Chan and others (n 224) 13.

occur across multiple funds, financial institutions, and market segments. With alternative investment funds, particularly hedge funds, there is a distinct danger that forced-selling by multiple funds through this mechanism within the same time frame may lead to the realization of systemic risk. If these funds are connected, eg through borrowing or brokerage arrangements, to other financial institutions, this might destabilize the entire financial system, causing an event equivalent to or worse than the LTCM crisis.[250] Pelizzon, Billio, and Getmansky show that this phase-locking phenomenon may affect hedge funds across multiple strategies simultaneously, even if these investment strategies may not initially appear to be correlated.[251]

3.5.5.3.2 Amplification Effects

Amplification effects in systemic crises can act as catalysts which expand both the velocity and damage that is occurring. The core danger present when a financial system experiences amplification is that the situation risks spiraling out of control, which limits both the response time and opportunities to contain the crisis. Brunnermeier sees the amplification effect as the result of liquidity drying up in the markets following the initial shock to the system.[252] Here, he differentiates between funding liquidity and market liquidity. Funding liquidity is determined by how easily funds can be raised by expert investors and arbitrageurs,[253] whereas market liquidity is the ease and price at which an asset can be sold in the market.[254] Market liquidity thus has three components: the bid-ask spread, market depth, and market resiliency. The bid-ask spread measures the difference between the price of an asset if a trader sold it and bought it back immediately. Market depth measures the number of units a trader could buy or sell without impacting the

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250 Nicholas Chan and others, 'Do Hedge Funds Increase Systemic Risk?' (2006) 91 Federal Reserve Bank of Atlanta Economic Review 49, 50.

251 Loriana Pelizzon, Monica Billio and Mila Getmansky, 'Phase-Locking and Switching Volatility in Hedge Funds' Ca' *Foscari University of Venice Working Paper No 54/WP/2006* (Ca' Foscari University of Venice Working Paper No 54/WP/2006, 2007) 39 <https://ideas.repec.org/p/ven/wpaper/2006_54.html> accessed 30 August 2020. The authors find that six of the eight strategies examined could become affected by one common factor. As a consequence, the authors conclude that liquidity risk is an essential factor affecting hedge fund returns. Liquidity risk in the context of alternative investment funds is examined in greater detail in section 3.6.5.1.

252 Brunnermeier (n 234) 91.

253 ibid.

254 ibid 92.

price. Finally, market resiliency measures the time it would take for prices to return to their initial levels after temporarily falling.[255] Said differently, funding liquidity is the ease with which one can borrow against an asset, whereas market liquidity is the ease with which one can sell the asset.[256] When both funding and market liquidity evaporate following a shock, the initial trigger is amplified into a full-scale crisis.[257] Section 3.6.5.1 demonstrates how this mechanism can be triggered by losses in interconnected alternative investment funds and subsequently lead to a financial crises through the amplification effect.[258]

One definition of systemic risk not yet examined incorporates the amplification effect into the definition itself; indeed, so closely do the authors view the link between systemic risk and amplification, that they 'define systemic risk as the risk that shocks affect the financial sector and trigger an endogenous adverse feedback significantly amplifying these shocks, causing further deterioration in the financial sector, and leading to significant output losses.'[259] The amplification effect can best be understood as a loop that is triggered by some form of economic shock. This shock leads to fire sales and falling prices, which in turn lead to tightening constraints. Each stage of this three-step process fuels the subsequent phase, as fire sales can cause prices to fall further, which in turn continue the cycle, ultimately leading to a feedback loop.[260] The graphical representation below provides a visual overview of the amplification effect.

255 ibid. Brunnermeier is building on Kyle here, who calls these three elements, the 'tightness', 'depth', and 'resiliency'. See Albert S Kyle, 'Continuous Auctions and Insider Trading' [1985] Econometrica: Journal of the Econometric Society 1315, 1330–1331.

256 Brunnermeier (n 234) 92.

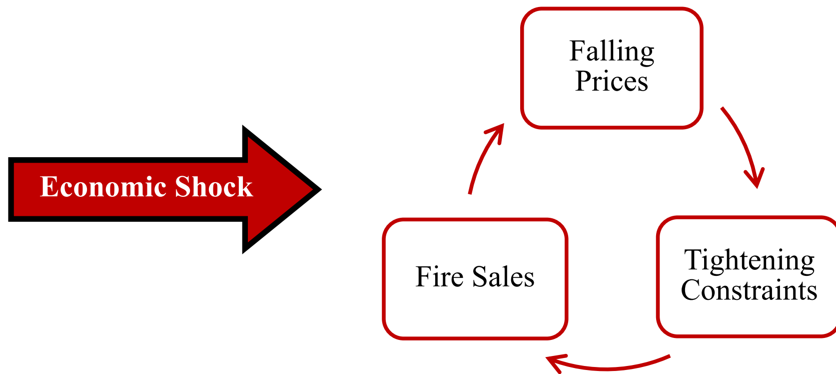
257 ibid.

258 See section 3.6.5.1.

259 Brunnermeier and Krishnamurthy (n 222) 169.

260 Anton Korinek, 'Systemic Risk-Taking: Amplification Effects, Externalities, and Regulatory Responses' (2011) ECB Working Paper 1345 5 <www.ecb.europa.eu/pub/pdf/scpwps/ecbwp1345.pdf> accessed 31 August 2020.

3.5.5.3.3 Figure 3b: The Amplification Effect[261]



3.5.5.4 Collapse & Second-Round Effects

3.5.5.4.1 Collapse

The preceding steps can lead ultimately to the collapse of individual institutions or an entire system. It usually is at this stage as well where the danger of causing externalities that have large, far-reaching effects outside of a financial system becomes most relevant.

3.5.5.4.2 Second-Round Effects

Second-round effects are conceptually related to contagion and feedback effects within a specific system. Second-round effects in essence are contagion and feedback effects that exist outside of a system or are effects that cause secondary cycles within said system. To give an example from a different context, second-round effects might be likened to the situation where primary explosions might trigger secondary explosions, or that of a larger forest fire causing smaller secondary fires, or a previously extinguished fire flares up out of the embers.[262]

3.5.5.4.3 The Impact of Systemic Risk: Externalities and Spillover Effects

One further important aspect of systemic risk is the broader implication of a systemic crisis on the wider economy and society at large. The narrower aspect in the

261 ibid 7.

262 Schwarcz, 'Systemic Risk' (n 34) 199, 202.

creation of excessive systemic risks is the fact that frequently, private actors will not internalize the costs of the risk they are creating, and therefore said risk is underpriced. This can lead to excessive risk-taking within the financial system, which in turn may act as the trigger for a systemic crisis.[263] The broader aspect operates on the same principle: due to an inherent agency problem[264] within the financial system, risk is underpriced and the total costs of this risk are not borne by their creators. The financial system itself as a whole may not internalize the total cost, and may burden society with the negative externalities it has created. The speculative activity within the financial system is underpriced and ultimately paid for by the broader economy and society.[265] Examining this specific facet of systemic risk, namely the consequences outside of the financial system itself, leads Alexander, Dhumale, and Eatwell to present a definition of systemic risk much more focused on the consequences than the mechanisms of systemic risk. Systemic risk can be seen as a negative externality that is imposed on a society due to mispricing of risk by the financial system in its speculative activities.[266]

3.5.6 Measuring Systemic Risk

3.5.6.1 Introduction

The measurement of systemic risk can be divided into two distinct categories: measures focused on individual institutions or specific markets on the one hand, and measures focused on macroeconomic imbalances.[267] This categorization can be thought of as being roughly akin to the division between the regulatory approaches of microprudential versus macroprudential regulation.[268] Bisias and oth-

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[263] Alexander, Dhumale and Eatwell (n 32) 24.

[264] See generally Jean-Jacques Laffont and David Martimort, *The Theory of Incentives: The Principal-Agent Model* (Princeton University Press 2009).

[265] Alexander, Dhumale and Eatwell (n 32) 24.

[266] ibid.

[267] Awrey (n 241) 67.

[268] Bisias and others (n 35) 10, 16. For the evolution from mircroprudential to macroprudential regulation, see eg Kern Alexander, ‘Bank Capital Management and Macro-Prudential Regulation’ (2012) 24 Zeitschrift für Bankrecht und Bankwirtschaft 331, 331–334. For an overview of the need for macroprudential regulation, here in the context of banking regulation, see eg Kern Alexander, ‘Reforming European Financial Supervision: Adapting EU Institutions to Market Structures’ (2011) 12 ERA Forum 229, 237–248.

ers, for instance, offer multiple approaches to categorizing systemic risk measures, one classification according to data requirements, one according to supervisory scope, a third according to research method, and a fourth according to decision/time horizon. This thesis follows the categorization method where measures are classified according to supervisory scope.[269]

Furthermore, since a single measure of systemic risk is unlikely to capture all the facets of systemic risk given the complexity of global financial markets,[270] a more successful approach is to divide systemic risk into subcategories of risk to achieve a sufficiently accurate model. Lo presents us with six such subcategories. These categories are: liquidity, leverage, correlation, concentration, sensitivities, and connectedness.[271] Similar to the distinction made above between micro- and macroprudential approaches, Lo's six subcategories can be sorted into two distinct categories: risks related to the system as a whole and the contagion within it, and risks contributing to systemic risk due to the compositions of individual actors' positions in financial markets. The first category of risks listed by Lo would hence contain the following risk measures: correlation, concentration, and connectedness. The second category would be composed of: leverage, liquidity, and sensitivities. Correlation and connectedness have been examined above and as a core aspect of systemic risk, they are of essential importance in the measures of systemic risk presented in this chapter. Concentration refers to the distribution of risk among financial institutions, which would give an indication of where within the system a buildup of systemic risk might occur.[272] Leverage on the other hand, is defined as the ratio of the quasi market value of assets and the market value of equity, where the quasi-market value of assets corresponds to the difference between book assets and book equity plus market equity.[273] Liquidity, which represents an essential element of systemic risk and is a core category of risk that in-

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269 Bisias and others (n 35) 16.

270 Lo, 'Hedge Funds, Systemic Risk, and the Financial Crisis of 2007–2008: Written Testimony for the House Oversight Committee Hearing on Hedge Funds' (n 185) 4.

271 ibid.

272 ibid 5.

273 More formally, this can be expressed as:
$LVG = \frac{quasi\ market\ value\ of\ assets}{market\ value\ of\ equity} = \frac{book\ assets - book\ equity + market\ equity}{market\ value\ of\ equity}$
See Viral V Acharya and others, 'Measuring Systemic Risk' (2017) 30 The Review of Financial Studies 2, 15.

vestment funds are confronted with,[274] refers generally to a company's ability to make cash payments when they are due.[275] In the context of trading, the liquidity of an asset refers to how quickly the position can be unwound at short notice.[276] Finally, measuring sensitivities in this context involves measuring how sensitive institutions are to changes in market prices and economic conditions,[277] which can an indicator of the soundness of these institutions and the likelihood of them acting as a trigger of, or relay during, a systemic crisis.[278]

As mentioned, systemic risk itself is described through a multitude of definitions that provide a rough sketch of a poorly understood idea at best. This means that the construction of a formal model of systemic risk will necessarily involve a multitude of approximations and a distinct lack of robustness. Limited data can be partially overcome through statistical measurement and approximation techniques, but a complete description of systemic risk in the form of a dynamic model remains an elusive target.[279] In theory, the optimal model of systemic risk would correspond to the financial market equivalent of Laplace's demon,[280] where all information could be absorbed into the model in order to measure and predict the exact level of systemic risk at all times. While this idea would represent the optimum, in reality this is most likely not achievable at such a level of precision.[281]

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274 Financial Stability Board (n 14) 11.

275 Hull (n 121) 562.

276 Jaroslaw Morawski, *Investment Decisions on Illiquid Assets: A Search Theoretical Approach to Real Estate Liquidity* (Springer Science & Business Media 2009) 11–12. Hull (n 121) 561.

277 Lo, 'Hedge Funds, Systemic Risk, and the Financial Crisis of 2007–2008: Written Testimony for the House Oversight Committee Hearing on Hedge Funds' (n 185) 5.

278 ibid.

279 See eg Prasanna Gai, *Systemic Risk: The Dynamics of Modern Financial Systems* (2nd edn, OUP 2018) 79–81; Freixas, Laeven and Peydró (n 219) 163–164. See also Bisias and others (n 35) 4–5. For a short list of the most common systemic risk modelling and measurement techniques (also described in greater detail below), see Scott (n 238) 14. See also Hurd (n 231) 2–4, 19ff.

280 Laplace's demon is a thought experiment where a being is imagined to have perfect knowledge of all items and positions of nature. Due to this knowledge, it is postulated that this being knows every interaction of any and every object in the universe, and thus becomes the equivalent of an omniscient god. See Pierre-Simon Laplace, *Essai Philosophique Sur Les Probabilités* (H Remy 1829).

281 Knight makes a similar point in saying that due to objects in the universe being practically infinite in variety and being able to interact with each other in various ways, this

3.5.6.2 An Overview of Techniques to Measure Systemic Risk

3.5.6.2.1 General Applications

3.5.6.2.1.1 Marginal Expected Shortfall and Systemic Expected Shortfall

One method of measuring systemic risk, or at least of receiving an indicator of systemic risk has been proposed by Acharya, Pederson, Philippon, and Richardson. In their initial paper, 'Measuring Systemic Risk', they denote the 'Systemic Expected Shortfall' ('SES'). In order to forecast systemic risk, the marginal expected shortfall[282] is used, which corresponds to '[…] [calculating] each firm's average return during the 5% worst days for the market.'[283] Systemic expected shortfall is conceptually similar to more general, expected shortfall measures of risk. Expected shortfall measures the average of the worst 100(1-α)% of losses.[284]

In essence, this technique uses the worst days of the market as a proxy for a systemic crisis in order to estimate how an institution would fare should it be confronted with the same type of losses as part of wider financial turbulence. By extending this measurement from an individual institution to all institutions in a given market, the aggregate shortfall corresponds to the total losses that would be suffered in the event of a systemic crisis. This sum of individual shortfalls is the expected total cost of a systemic crisis, the 'Systemic Expected Shortfall'. This technique allows the authors to estimate the total damage a systemic crisis might cause and also gives an indication of possible externalities and costs that might be levied on society in such an event.

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creates ever larger numbers of possibilities and scenarios. Hence, to grasp all these possibilities, infinite intelligence would be needed to comprehend and predict all these possibilities. Knight does concede, though, that finite intelligence can make certain predictions, since many properties and behaviors of these objects possess a level of consistency that makes understanding possible. See Knight (n 175) 207.

282 For a nontechnical description of expected shortfall, see eg Hull (n 121) 274.

283 Acharya and others (n 273) 4.

284 Expected shortfall can be seen as an extension of VaR measures, in that it also gives an answer to the question, 'how bad is bad' and gives an indication of the magnitude of potential losses. See Philippe Artzner and others, 'Coherent Measures of Risk' (1999) 9 Mathematical Finance 203, 223. See also Hull (n 121) 274. The question of how bad is bad is essential for systemic risk and therefore SES measurements provide an indicator for effects resultant from the realization of systemic risk.

3.5.6.2.1.2 CoVaR[285]

CoVaR is an additional method of measuring systemic risk. As proposed by Adrian and Brunnermeier, CoVaR is the value-at-risk (VaR) measurement of a financial system as a whole, conditional (Co) upon financial institutions being in a state of distress.[286] CoVaR permits the measurement of an institution's contribution to systemic risk. This contribution corresponds to the difference between its CoVaR conditional upon the institution being in a distressed state, and the CoVaR of the institution in its median state ('ΔCoVaR'). This means that the contribution of large and interconnected institutions to systemic risk can be measured, as well as smaller institutions which collectively might be systemically relevant due to crowding and herd behavior. [287] The latter category of institutions might be particularly relevant to measuring investment funds' contributions to systemic risk, as the individual fund is smaller, on average, than for example banking or insurance institutions, but the collective investment management industry as a whole is gigantic.[288] CoVaR can also capture externalities, crowded trade positions, and spillover effects, which means that these facets central to systemic risk are incorporated into the measurement.[289]

CoVaR gives insight into the relevance of an individual financial institution, and can also be used as a predictive tool. Furthermore, the measure can capture externalities which institutions might impose on the system, as well as manifestations of the 'too big to fail' and 'too interconnected to fail' problems.[290]

3.5.6.2.1.3 Co-Risk[291]

Co-Risk is a measure originally proposed in 2009 by the International Monetary Fund's April 2009 Global Financial Stability Report.[292] While CoVaR measurements, as described directly above, measure the contribution of an institution to

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[285] Adrian Tobias and Markus K Brunnermeier, 'CoVaR' (2016) 106 The American Economic Review 1705.

[286] ibid 1705.

[287] ibid 1706. See also Bisias and others (n 35) 105ff.

[288] The size of the asset management industry is described in the introduction and as part of the discussion of alternative investments. See chapters 1 and 2.

[289] Bisias and others (n 35) 105.

[290] ibid.

[291] International Monetary Fund (n 222) 75.

[292] ibid.

systemic risk, Co-Risk tracks codependencies between individual financial institutions, both in direct and in indirect form. The Co-Risk or co-movement between institutions can be, inter alia, caused by exposures to similar sources of risk, market perception of these firms, common business models and accounting practices.[293] Co-Risk primarily measures these linkages between institutions through quantile regression analysis, which is also a technique used in the CoVar measurement tool by Adrian and Brunnermeier.[294]

The analysis in the report in question utilizes CDS spreads to calculate exposures between institutions, in this case banking institutions and insurance companies during the last financial crisis. The results of the analysis using Co-Risk as a measurement are quite compelling. For instance, the spreads of Citigroup at the 95th percentile in March 2008 led to marked increases in the spreads of both Bear Stearns and Lehman Brothers. Additionally, Bear Stearns' conditional risk on the risk of AIG was 248% higher than the risk corresponding to its 95th percentile. These results imply that Bear Stearns, Lehman Brothers, and AIG would have needed to be closely monitored by supervisors.[295] While this analysis is not directly relevant to this thesis, the results of the survey demonstrate the usefulness and predictive power of the Co-Risk measurement technique in the case of CDS spreads preceding and during the financial crisis.[296]

The policy implications of the Co-Risk measurements are twofold. First, they show the development of common risks and where spillovers are most likely to occur. Second, Co-Risk also indicates how distress in one institution might affect other institutions where linkages exist.[297] Utilizing this technique would therefore permit the studying and monitoring of contagion and correlation effects that lead to the realization of systemic risk. Co-risk may also allow policymakers to gain a deeper understanding of interlinkages in financial systems.

3.5.6.2.1.4 Risk Topography

Risk topography is a proposal by Brunnermeier, Gorton, and Krishnamurthy, which consists not of a model in itself, but of a process to collect and disseminate data in order to inform policymakers, market participants, and researchers about

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[293] ibid 86.

[294] Tobias and Brunnermeier (n 285).

[295] Bisias and others (n 35) 114; International Monetary Fund (n 222) 89.

[296] International Monetary Fund (n 222) 89.

[297] ibid 86–87.

systemic risk. The general approach is to uncover liquidity and risk imbalances in the financial system by creating a reporting mechanism and data aggregation system.[298] This approach stems from the insight that part of the difficulty for public bodies during the 2007–2008 financial crisis was the absence of (reliable and usable) data, which placed decisionmakers in an information vacuum.[299] To avoid this in the future, the authors propose a two-step process. Initially, market participants are to report to regulators and supervisory bodies their risk estimates and liquidity sensitivities to various scenarios. In doing this, the public bodies collecting the data can profit from internal risk models of private actors. Risk and liquidity data are to be reported for various risk factors and liquidity scenarios, from '[...] a broad class of risk exposures[.]'[300] According to the authors, the key drivers of systemic crises are leverage in the financial sector and liquidity mismatches,[301] which is why the data that is to be reported should primarily be in this area. This data is then utilized to measure and model endogenous responses and examine feedback mechanisms that might be causal for system-wide disequilibria.[302]

3.5.6.2.1.5 The Leverage Cycle

This approach is less a formal model than a description of how a financial crisis may occur. Geanakoplos describes the 'anatomy of a crash' as follows:

1. Scary bad news causes assets to drop in value.
2. The natural buyers (ie optimists) who were leveraged suffer large losses, and the leveraged buyers are forced to sell to meet margin requirements.
3. Further drops in asset values and losses for natural buyers occur.
4. Margin requirements are tightened due to an increase in uncertainty.
5. This causes further forced sales and large losses.
6. Many natural buyers may go bankrupt.
7. Spillovers may occur if natural buyers are forced to sell assets previously not impacted by the crash.

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298 Brunnermeier and Krishnamurthy (n 222) 151.

299 ibid 149–150.

300 ibid 165.

301 ie liquidity exposures.

302 Bisias and others (n 35) 120–121. Brunnermeier and Krishnamurthy (n 222) 168–169.

8. Any investors that survive may see opportunities to purchase assets with severely depressed prices.[303]

This process can aid policymakers in the formulation of responses to crises by providing a tangible description of how a financial crisis typically unfolds. While the leverage cycle is not a quantitative model per se, it enhances the general understanding of practitioners and policymakers, which can build more formal models on the basis of the leverage cycle.[304] It must be noted that the leverage cycle has distinct parallels with the theories of systemic risk presented in this thesis. Familiar to the reader will be, among others, the loss and margin cycle, the concept of spillovers, and predatory buying at fire-sale prices.[305]

3.5.6.2.1.6 The Default Intensity Model

This model, proposed by Giesecke and Kim, attempts to capture the effects of systemic linkages between financial institutions. The authors use a '[…] hazard, or intensity-based, model of correlated default timing in the economy', incorporating macroeconomic and sector specific risk factors and their effects on defaults.[306] Their model enables the capturing of spillover effects which spread through various channels in an interconnected financial economy. This model hence captures both direct and indirect linkages in between financial systems in the economy.[307]

The empirical findings of the authors demonstrate that the model can indeed capture system-wide defaults. When utilized to measure defaults prior to and in the beginning of the 2008 financial crisis, the model accurately predicts further banking failures.[308] Hence, this model is fairly accurate at measuring and predicting defaults in financial institutions (particularly banks), but further work would be

303 John Geanakoplos, 'The Leverage Cycle' (2010) 24 NBER Macroeconomics Annual 1, 11–12 <www.journals.uchicago.edu/doi/full/10.1086/648285> accessed 2 September 2020.

304 Bisias and others (n 35) 122.

305 See section 3.3.4.

306 Kay Giesecke and Baeho Kim, 'Systemic Risk: What Defaults Are Telling Us' (2011) 57 Management Science 1387, 1390, 1402 <https://pubsonline.informs.org/doi/pdf/10.1287/mnsc.1110.1375> accessed 31 August 2020.

307 ibid 1392–1395. See also Bisias and others (n 35) 60.

308 Giesecke and Kim (n 306) 1402. See also Bisias and others (n 35) 62–63.

needed in order to be able to ascertain whether this model would be similarly applicable to non-bank financial institutions.

3.5.6.2.1.7 Contingent Claims Analysis

Systemic contingent claims analysis (CCA) models the joint systemic risk posed by multiple financial institutions that are in a state of distress. This is achieved by calculating the joint systemic risk as a portfolio of individual market-implied expected losses. In a first step, each institution's expected losses are estimated with an enhanced form of contingent claims analysis. Following this, in a second step, the model assumes that these losses follow a Generalized Extreme Value (GEV)[309] distribution. The authors then combine these losses by using their specific approach of a non-parametric dependence measure 'in order to derive the amount of joint expected losses […] as the multivariate conditional tail expectation (CTE)'.[310]

In the words of the authors:

> The model extends the traditional risk-adjusted balance sheet model (based on contingent claims analysis (CCA)) to determine the magnitude of systemic risk from the interlinkages between institutions based on the time-varying likelihood of a joint decline of implied asset values below the debt-driven "default barrier".[311]

CCA permits the estimation of not only the losses to financial institutions, but also the transfer of risk to the government.[312] In addition, CCA also measures an institution's contribution to contingent liabilities over time.[313]

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309 Generalized extreme value distributions are continuous probability distributions that can be used in extreme value theory to estimate various probabilities in the tail-end of distributions. For an excellent introduction (both nontechnical and technical) to extreme value theory, see eg Laurens de Hann and Ana Ferreira, *Extreme Value Theory: An Introduction* (Springer 2006).

310 Andreas A Jobst and Dale F Gray, 'Systemic Contingent Claims Analysis: Estimating Market-Implied Systemic Risk' (2013) IMF Working Paper WP/13/54 11–12 <www.imf.org/external/pubs/ft/wp/2013/wp1354.pdf> accessed 31 August 2020.

311 ibid 12.

312 ibid 33.

313 ibid 34. See also Bisias and others (n 35) 77.

3.5.6.2.1.8 Mahalanobis Distance

Mahalanobis distance is a technique used more generally in statistics for multivariate analysis and can measure the distance between two points in a multivariate space.[314] Originally developed to classify human skulls in order to measure resemblances and distances between various castes in India,[315] this technique has been used in finance to detect financial turbulence. Kritzman and Li utilize Mahalanobis distance to quantify this 'financial turbulence' which they define as a multivariate unusualness in financial markets data,[316] to include extreme price movements, decoupling of previously correlated assets, and the convergence of uncorrelated assets, as compared to their historical pattern of behavior.[317]

Malahanobis distance measurement techniques can be utilized in finance to stress-test portfolios and optimize portfolio composition by describing the behaviour of assets during financial turbulence.[318]

3.5.6.2.2 Macroprudential Measures

3.5.6.2.2.1 Costly Asset Boom/Bust Cycles

The first macroeconomic measure that will be examined is that of Alessi and Detken,[319] who show that global liquidity measures can be used as early warning signs of asset price booms.[320] Their approach utilizes an indicator to predict a bubble in asset prices. When a certain threshold is surpassed, it should be able to act as an early warning indicator of a looming boom-bust cycle.[321] Of the 89 indicators the authors test, two turn out to be the most reliable indicators. The first is the 'M1

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314 Kurt Varmuza and Peter Filzmoser, *Introduction to Multivariate Statistical Analysis in Chemometrics* (CRC Press 2016) 47ff.

315 Mark Kritzman and Yuanzhen Li, 'Skulls, Financial Turbulence, and Risk Management' (2010) 66 Financial Analysts Journal 30, 30.

316 ibid 31, 38.

317 ibid 30–31, 38.

318 ibid 35ff.

319 Lucia Alessi and Carsten Detken, 'Global Liquidity as an Early Warning Indicator for Asset Price Boom/Bust Cycles' 8 *Research Bulletin* (2009) 7 <www.ecb.europa.eu/pub/pdf/other/researchbulletin08en.pdf> accessed 31 August 2020.

320 ibid 7–8.

321 ibid 8.

global credit gap' and the second is the 'global private credit gap'.[322] The indicators, when calibrated correctly so as not to provide false-positives, can provide a reliable and persistent early warning indicator.[323] The results of this approach nonetheless include a caveat provided by the authors: 'Nevertheless, as recent events show, indicators that have historically performed equally well can provide different messages. Signals obtained should thus be interpreted carefully and should only be regarded as one of several inputs in the information set of decision-makers'.[324]

3.5.6.2.2.2 Property-Price, Equity-Price, and Credit Gap Indicators

A second early warning indicator, fundamentally similar to the method mentioned directly above, is proposed by Borio and Drehmann.[325] The objective of this framework is to predict crises in the banking sector rather than asset bubbles as in Alessi and Detken's measure. The fundamental approach is based on the concept that banking crises arise from 'financial imbalances', which in this context represent increased fragility of balance sheets in the private sector.[326] Financial imbalances in turn are connected to excessive risk-taking and ultimately unsustainable economic expansion. The core idea is that rapid growth in both asset prices and private sector credit indicate that prices have been pushed out of alignment and that the system will be unable to absorb the inevitable reversal as these prices correct without a crisis being triggered.[327] Three measures, composed of the credit gap, the property price gap, and the (real) equity price gap are used as potential indicators of a looming banking crisis. A similar method, used to predict asset price bubbles in Alessi and Detken's paper, is used here.[328] The approach here is also to find a threshold value that must be surpassed in order to be considered an early warning sign of a crisis. The authors find that these three indicators perform 'reasonably

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322 ibid. One source to obtain data for M1 is, for example, the OECD data website. See Organisation for Economic Co-operation and Development, 'Narrow Money (M1)' (2019) <https://data.oecd.org/money/narrow-money-m1.htm> accessed 26 August 2020.

323 Alessi and Detken (n 319) 9.

324 ibid. See also Bisias and others (n 35) 53.

325 Claudio E V Borio and Mathias Drehmann, 'Assessing the Risk of Banking Crises–Revisited' [2009] March BIS Quarterly Review 29 <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1513316> accessed 31 August 2020.

326 ibid 30.

327 ibid 31; Bisias and others (n 35) 53.

328 Bisias and others (n 35) 53; Borio and Drehmann (n 325) 31.

well' in predicting a banking crisis in advance.[329] As with the method above, the correct calibration of thresholds is essential to balance the correct prediction of an event and the avoidance of false positives. How these thresholds are chosen depends primarily on how reliable the indicator needs to be, as well as how much the occurrence of false-positives needs to be reduced.[330] Finally, like Alessi and Detken, Borio and Drehmann also caution the reader not to over-rely on the indicator framework.[331]

3.5.6.2.2.3 Principle Components Analysis

Kritzman, Li, Page, and Rigobon[332] attempt to measure systemic risk with the help of the 'Absorption Ratio'. The absorption ratio corresponds to the '[...] fraction of the total variance of a set of assets explained or absorbed by a finite set of eigenvectors'.[333] In principle, the method employed by the authors utilizes the absorption ratio to identify the factors in a set of data that are the main contributors to systemic risk. The absorption ratio also allows the authors to capture the extent to which markets are interconnected and tightly coupled, which is an indicator of how susceptible to systemic risk the system may be. High absorption ratios correspond to more tightly coupled markets, where systemic shocks can spread with greater velocity.[334]

The authors find in examining empirical data from financial crises of the last decades that the absorption ratio acts as an early warning indicator of crashes,[335] since the ratio usually begins to shift beginning around 40 days before turbulence in

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329 Borio and Drehmann (n 325) 44.

330 ibid. The calibration of a model depends on the objectives of the person or institution utilizing the indicators. A regulator might prefer not to be confronted with numerous false alarms even if the predictive power of the indicator is reduced, or the regulatory body might value safety more, and tolerate the frequent emergence of type I measurement errors. See also the discussion in Bisias and others (n 35) 13, 49.

331 Borio and Drehmann (n 325) 44–45.

332 Mark Kritzman and others, 'Principal Components as a Measure of Systemic Risk' (2011) 37 The Journal of Portfolio Management 112, 115, 123.

333 ibid 115. More formally, the authors define the absorption ratio as follows: $AR = \frac{\sum_i^n \sigma_{Ei}^2}{\sum_j^N \sigma_{Aj}^2}$ where AR is the absorption ratio, N the number of assets, n the number of eigenvectors used to calculate the absorption ratio, σ_{Ei}^2 the variance of the i-th eigenvector, or 'eigen-portfolio', and σ_{Aj}^2 the variance of the j-th asset.

334 ibid 115, 123.

335 ibid 116–120.

markets emerges.[336] The authors also find that the absorption ratio appears to correlate closely with other measures of financial contagion, implying that systemic risk and contagion are closely linked.[337]

3.5.6.2.2.4 GDP Stress Tests

Stress tests in general are a tool utilized to enable forward-looking analysis and to create scenarios in order to estimate the resilience of an institution in a potential upcoming financial crisis.[338] Alfaro and Drehmann utilize a simple autoregressive model of GDP growth and construct various scenarios as stress tests. The authors' empirical findings show that the statistical relationships of their models break down around the crisis date in 65% of cases.[339] This reflects the inherent difficulty in measuring and especially predicting financial crises and their impact. The authors find that the assumptions of over half of the stress tests are not severe enough when compared to actual crises.[340] While stress tests remain essential tools to evaluate and prepare for financial crises, the findings of the authors do warrant a reexamination of current stress testing practices in order to create a more effective and accurate form of stress testing.

3.5.6.2.2.5 Noise as Information for Illiquidity

Hu, Pan, and Wang attempt to measure liquidity in markets. Their approach rests on the connection between arbitrage capital and the amount of liquidity present in the financial market. The approach functions as follows. If institutional investors engaging in arbitrage such as investment banks and hedge funds have abundant capital, they will supply the market with liquidity and, through their arbitrage activities, push prices closer towards their fundamental values. If capital becomes scarce on the other hand, or willingness to deploy capital has diminished, prices will deviate further from their fundamental values, as fewer arbitrageurs are exerting pressure on prices. These price deviations, which the authors categorize as 'noise' in prices, are thus indicators of illiquidity in financial markets. The authors exploit this in their model, measuring illiquidity in financial markets by measuring the amount of 'noise' present. The model in question measures 'noise' in US

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336 ibid 120.

337 ibid 120, 123.

338 Rodrigo A Alfaro and Mathias Drehmann, 'Macro Stress Tests and Crises: What Can We Learn?' [2009] December BIS Quarterly Review 30; Bisias and others (n 35) 100.

339 Alfaro and Drehmann (n 338) 37.

340 ibid 38.

Treasuries to determine its effectiveness as a measure of overall market liquidity.[341]

The empirical findings of the model are that during normal times, there is only a small amount of 'noise' present, and prices deviate comparably little from their fundamental values. The authors find that during liquidity crises, there are distinct 'spikes' in the 'noise' measurement.[342] The model also has implications for the measurement of liquidity exposures of alternative investment funds. As part of the empirical findings, the authors also discover that market-wide liquidity risk can explain the cross-sectional variation in hedge fund returns, meaning it can measure liquidity exposures by hedge funds.[343] As has been mentioned, liquidity risk is a central concern for alternative investment funds, so this model could prove to be of particular importance as an indicator of systemic exposures of alternative investment funds.

[341] Grace Xing Hu, Jun Pan and Jiang Wang, 'Noise as Information for Illiquidity' (2013) 68 The Journal of Finance 2341, 2341f.

[342] Bisias and others (n 35) 124.

[343] Hu, Pan and Wang (n 341); Bisias and others (n 35) 125.

3.6 Investment Funds and Systemic Risk

3.6.1 General Remarks

Systemic risk and financial stability are concepts that are more closely associated with the banking system rather than other actors within financial systems. Apart from banks, insurance companies come to mind as potential secondary progenitors of systemic risk, which is why the classification of certain insurance companies as 'systemically important financial institutions' or SIFIs has been an additional step in achieving an integrated approach to regulating financial systems. These more prominent institutions overshadow smaller institutions, which, mainly due to their size and reduced footprint, might often be overlooked. One of these categories are investment funds. The discussion of the systemic relevance of investment funds is often framed by focusing on the smaller subset of hedge funds. As hedge funds must seek to generate superior returns versus their peers and the broader market in order to survive, their default alpha-seeking behavior creates a more aggressive and potentially riskier class of funds. Hedge funds have been called the 'Galapagos Islands of finance'[344] as well as the 'canary in the coal mine'[345] due to their readiness to rapidly evolve and their potential to act as an early warning sign of coming market distress.[346] The collapse of LTCM in 1998 is likely the most prominent example of a hedge fund failure, and its potential to destabilize markets was recognized by regulators and the bankers that ultimately bailed-out the fund by taking over its positions.[347] The potential of hedge funds to act as triggers of a systemic

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344 Lo, *Adaptive Markets: Financial Evolution at the Speed of Thought* (n 76) 222.

345 Mila Getmansky, Peter A Lee and Andrew W Lo, 'Hedge Funds: A Dynamic Industry in Transition' (2015) 7 Annual Review of Financial Economics 483, 531.

346 ibid.

347 LTCM (Long Term Capital Management) was a hedge fund which relied principally on fixed income arbitrage strategies. Partners in the fund included a number of prominent figures from both academia and finance, among them Myron Scholes and Robert Merton, who would later become Nobel Laureates in Economics. The fund became highly leveraged and had to be recapitalized in 1998 due to an extreme downturn of the fund's performance following the 1997 Asian financial crisis and the Russian default in 1998. To recapitalize LTCM, the Federal Reserve of New York organized a bailout by a consortium of banks. Although the fund's positions were taken over by the institutions that had bailed out LTCM and would ultimately net a profit, the hedge fund's failure has since become akin to the textbook example of the dangers of highly leveraged hedge funds. See Lo, *Adaptive Markets: Financial Evolution at the Speed of Thought* (n 76) 241–244. See also Philippe Jorion, 'Risk Management Lessons from

crisis and as conduits causing contagion in markets during a crisis are seen as the primary dangers. The following quote by Neel Kashkari epitomizes the idea that hedge funds might pose a threat to financial stability, but could also act as early-warning indicators of a looming crisis:

> A second lesson for me from the 2008 crisis is that almost by definition, we won't see the next crisis coming, and it won't look like what we might be expecting. If we, or markets, recognized an imbalance in the economy, market participants would likely take action to protect themselves. […] We looked at a number of scenarios, including an individual large bank running into trouble or a hedge fund suffering large losses, among others.[348]

3.6.2 Positive Effects of Investment Funds on Systemic Risk

A common and frequent argument that can be made for investment funds is that they can provide liquidity to the market and act as market makers, enabling capital to flow more efficiently and connecting buyers and sellers in markets.[349] Investment funds and hedge funds in particular are willing to bear risk that otherwise would have to be taken on by other market participants. This risk-sharing capacity is to be regarded as a positive feature of investment funds in financial markets.[350]

Long-term Capital Management' (2000) 6 European Financial Management 277, 278–284. Franklin R Edward, 'Hedge Funds and the Collapse of Long-Term Capital Management' (1999) 13 Journal of Economic Perspectives 189, 197–200. The circumstances surrounding LTCM's failures are described in much greater detail in Lowenstein (n 7).

348 Neel Kashkari, 'Lessons from the Crisis: Ending Too Big to Fail' (Speech at the Minneapolis Fed, 2016) 7 <www.minneapolisfed.org/news-and-events/presidents-speeches/lessons-from-the-crisis-ending-too-big-to-fail> accessed 14 August 2020.

349 Lo, 'Hedge Funds, Systemic Risk, and the Financial Crisis of 2007–2008: Written Testimony for the House Oversight Committee Hearing on Hedge Funds' (n 185) 8. See also Roger Ferguson and David Laster, 'Hedge Funds and Systemic Risk' (2007) 10 Financial Stability Review 45, 48 <https://publications.banque-france.fr/sites/default/files/medias/documents/financial-stability-review-10_2007-04.pdf> accessed 31 August 2020. Evidence that hedge funds in aggregate provide liquidity to the market is provided by Petri Jylhä, Kalle Rinne and Matti Suominen, 'Do Hedge Funds Supply or Demand Liquidity?' (2014) 18 Review of Finance 1259.

350 Lo, 'Hedge Funds, Systemic Risk, and the Financial Crisis of 2007–2008: Written Testimony for the House Oversight Committee Hearing on Hedge Funds' (n 185) 8. Ferguson and Laster (n 349) 48.

Investment funds, specifically hedge funds, can also provide private liquidity and funding in the case of a liquidity shortfall. Since hedge fund managers have wide discretion regarding the choice of investments for their funds, they can invest in investments with risk-reward profile within a time frame where other investors might not be willing or capable. Hedge funds therefore can provide a form of 'emergency funding' that contributes to financial stability.[351]

In Europe, because investment funds are a growing component of European financial markets,[352] they are an additional source of finance that exists in parallel to the more conventional bank credit intermediation process. This contribution to financial markets represents a positive addition to European financial markets.[353] In

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351 Itzhak Ben-David, Francesco Franzoni and Rabih Moussawi, 'The Behavior of Hedge Funds during Liquidity Crises' (2010) Ohio State University Working Paper <https://d1wqtxts1xzle7.cloudfront.net/60203050/The_Behavior_of_Hedge_Funds_during_Liqui20190804-31488-1ekgbd4.pdf?1564954836=&response-content-disposition=inline%3B+filename%3DThe_Behavior_of_Hedge_Funds_during_Liqui.pdf&Expires=1598889754&Signature=fTqtdyoTPaY803H4rT6WWucCJJZj2he68r-BhGwNCSQvxFqJtxenEr28KPaynsRh91vO4dvozgSUPlsgfVhi6pU3vioT6wpd7XkGMjF-ndRR1ZZQQtvC0QjUpNzFDyw1VfGaxskq5RnI~NzbGH1MPXTXG9QBtseEJcgSEhOgz5VAEgbNDcZkpg0LCJwBIfmO6GRmndFlym49ICBBs2JmgpMtkFHT3cAj1qQ7eBcXCEfITSzFGHkJgNJeYLwVTeqsXz-hmpf1shmZM6uSGzqAnousMivaNsc2b9Bm5rqvIF6JVD~~DNx153yf8~xWJQnN235Xa7rkYGqw5Pcsm~MMIw__&Key-Pair-Id=APKAJLOHF5GGSLRBV4ZA> accessed 31 August 2020. See also Michael S Haigh, Jana Hranaiova and James A Overdahl, 'Hedge Funds, Volatility, and Liquidity Provision in Energy Futures Markets' (2007) 9 The Journal of Alternative Investments 10. See also Lo, 'Hedge Funds, Systemic Risk, and the Financial Crisis of 2007–2008: Written Testimony for the House Oversight Committee Hearing on Hedge Funds' (n 185) 8. See also Ferguson and Laster (n 349) 48.

352 Compare the quantitative dimensions provided in chapter 2. See also Commission, 'Report from the Commission to the European Parliament and the Council Assessing the Application and the Scope of Directive 2011/61/EU of the European Parliament and of the Council on Alternative Investment Fund Managers' COM (2020) 232 final 5 <https://ec.europa.eu/transparency/regdoc/rep/1/2020/EN/COM-2020-232-F1-EN-MAIN-PART-1.PDF> accessed 31 August 2020.

353 Koen van der Veer and others, 'Developing Macroprudential Policy for Alternative Investment Funds: Towards a Framework for Macroprudential Leverage Limits in Europe: An Application for the Netherlands' (2017) European Central Bank Occasional Paper series, No 202, Joint European Central Bank – De Nederlandsche Bank project 5 <www.ecb.europa.eu/pub/pdf/scpops/ecb.op202.en.pdf> accessed 31 August 2020. See also Recommendation of the European Systemic Risk Board ESRB/2017/6 of 7 December 2017 on liquidity and leverage risks in investment funds [2018] OJ C151/1, recital 1 (ESRB 2017/6).

essence, this means that alternative funding mechanisms in financial markets by investment funds represent a positive development. As a general rule, an increase in sources of finance and competition between capital providers should lead to more liquid and better functioning markets.[354]

An additional note must also be made regarding investment funds: to date, no publicly funded bailout of an investment fund has been necessary. In marked contrast to bank bailouts, failures of investment funds and even hedge funds have been able to internalize the resulting losses without requiring tax-payer funded refinancing. While the failure of LTCM mentioned above represents a prominent example of a hedge fund bailout, subsequent research has shown the effect of the fund's failure to have been comparably mild, especially when compared to the failure of other financial institutions.[355]

3.6.3 FSB and IOSCO Recommendations

With regards to investment funds, the Financial Stability Board and the International Organization of Securities Commissions have identified four core structural vulnerabilities that result from collective asset management activities.[356] These four vulnerabilities are potential sources of systemic risk:[357]

354 This assumption is based on our current understanding of how financial markets function. Liquidity generally is thought to enhance the effectiveness of the price-finding mechanism, where market participants can continually reach a consensus of the value of an asset through buying and selling said asset. One caveat must be added to this approach, which can also apply to hedge funds: so-called noise traders, which are market participants buying and selling not based on information (whether they erroneously believe they are actually trading based on information or not), might disrupt this smooth mechanism. In such a case, more traders might not enhance the efficiency of a market, but detract from it. For an in-depth discussion of noise in financial markets, and why noise might ultimately be essential for the functioning of markets, see Fischer Black, 'Noise' (1986) 41 The journal of finance 528.

355 Mallaby (n 7) 375–376.

356 Board of the International Organization of Securities Commissions, 'Recommendations for Liquidity Risk Management for Collective Investment Schemes' (n 15) 1; Financial Stability Board (n 14) 9.

357 Board of the International Organization of Securities Commissions, 'Recommendations for Liquidity Risk Management for Collective Investment Schemes' (n 15) 1; Financial Stability Board (n 14) 9.

I. liquidity mismatch between fund investments and redemption terms and conditions for open-ended fund units;
II. leverage within investment funds
III. operational risk and challenges for asset managers in stressed conditions; and
IV. securities lending activities of asset managers and funds. [358]

The following sections analyze each of these vulnerabilities in turn. Whether the current regulatory environment addresses these four potential sources of systemic risk to a sufficient degree will finally be analyzed in chapters 4 and 5.

3.6.4 Liquidity Risk of Investment Funds

Liquidity risk can be seen as the most obvious and most dangerous form of risk that an investment fund is confronted with, because investment funds exhibit inherent structural vulnerabilities that render them susceptible to this category of risk.[359] In acting as financial intermediaries between investors and financial markets, investment funds are almost completely comprised of capital contributed by investors, which is capital that could be withdrawn, depending on the fund's rules on redemption. A potential mismatch between redemption requests by the investors and the liquidity of the assets the fund is invested can emerge and potentially massively impair a fund's capacity to conduct business.[360] Since the redemption conditions determine the frequency and speed with which investors can withdraw their contributions, a liquidity mismatch can emerge particularly rapidly in open-ended funds where redemption requests have to be honoured within an extremely short time frame.[361] This problem is exacerbated by two phenomena compounding the velocity of redemption requests: herding and a first-mover advantage. Herding occurs when investors anticipate and react to the redemption requests of other in-

[358] Board of the International Organization of Securities Commissions, 'Recommendations for Liquidity Risk Management for Collective Investment Schemes' (n 15) 1; Financial Stability Board (n 14) 9.

[359] Financial Stability Board (n 14) 9–10.

[360] ibid 11–12. See also Board of the International Organization of Securities Commissions, 'Recommendations for Liquidity Risk Management for Collective Investment Schemes' (n 15) 1, 23.

[361] Board of the International Organization of Securities Commissions, 'Principles of Liquidity Risk Management for Collective Investment Schemes' (Final Report FR03/13, IOSCO, 2013) 2 <www.iosco.org/library/pubdocs/pdf/IOSCOPD405.pdf> accessed 31 August 2020. See also Financial Stability Board (n 14) 11.

vestors and market participants, thus setting off a feedback loop of investors' withdrawal requests.[362] The first-mover advantage on the other hand means that in the context of redemptions, the first to request redemptions can profit from doing so while simultaneously imposing costs on the remaining investors. This can occur because most adjustments to a fund's portfolio following an abrupt and sizable redemption will occur only in the period after the initial redemption.[363] From the perspective of the investor, the net asset value will not yet reflect the adjusted costs the fund is to incur, and the investor can avoid the effect his redemption request has on the fund's value.[364] Consequently, the costs of the redemption and portfolio adjustments are borne by the remaining investors. It therefore pays to redeem early and quickly, which amplifies both the probability and the frequency of redemptions by investors.

Liquidity of funds and redemption requests are therefore intimately connected and are not dissimilar in process and effect to a traditional bank-run. Similar to a bank-run, redemption requests can send a fund into a death spiral from which it may be excessively difficult to recover. In times of market stress, redemption requests may lead to fire-sales[365] which in turn may lead to further redemption requests.[366] These redemptions may create another feedback loop caused by more fire-sales and the deterioration of the fund's performance, which in turn leads to yet further redemption requests that continue the cycle.

3.6.5 Phase-Locking Risk

Redemptions are not the only potential source of liquidity demands for investment funds. Margin calls from derivatives counterparties are another strain that can be

362 Financial Stability Board (n 14) 11.

363 ibid 13, 46.

364 van der Veer and others (n 353).

365 A fire-sale is defined as '[...] a forced sale of an asset at a dislocated price. The asset sale is forced in the sense that the seller cannot pay creditors without selling assets. The price is dislocated because the highest potential bidders are typically involved in a similar activity as the seller, and are therefore themselves indebted and cannot borrow more to buy the asset'; see Andrei Shleifer and Robert Vishny, 'Fire Sales in Finance and Macroeconomics' (2011) 25 Journal of Economic Perspectives 29, 30.

366 van der Veer and others (n 353) 10.

placed on a fund's liquidity.[367] A margin call occurs when a brokerage account reaches a specific threshold, beyond which the broker is unwilling to provide margin, or leverage, to a client. When a margin call is issued, the account holder must provide additional funds or collateral in order for the broker to allow further trading or maintenance of current trading positions. If the request for additional funds is not met by the account holder, the broker will close out the position. While a margin call might not necessarily mean that the trading position or liquidity of the account holder is in danger, in cases where the market has moved aggressively against the trader in question, it frequently means exactly that. It is apparent from this description that this mechanism is intended to protect the broker from counterparty risk[368] and can push a trading institution whose positions have moved against it into an even more precarious position. If the trading institution cannot satisfy the margin call, it will suffer additional losses and could, just as is the case where investors withdraw their investments, send it into a death spiral that is almost impossible to recover from.

Margin calls in volatile market conditions, especially in the realization of a systemic crisis, can cause contagion through adverse price movements of trading positions and, by extension, compromise the institutions that hold these trading positions. Especially in cases where volatility causes confidence in a market to drop and causes price movements that might be erratic and detached from fundamental values, trading positions that are fundamentally sound can become untenable due to liquidity constraints. Continuously maintaining sufficient margin over time on positions in volatile conditions can strain the liquidity of funds beyond what is sustainable, causing them to exit or close out those positions that have become unsustainable.[369] The possibility of such losses can have systemic consequences

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[367] Board of the International Organization of Securities Commissions, 'Principles of Liquidity Risk Management for Collective Investment Schemes' (n 361) 2, 3.

[368] Pedro Santa-Clara and Alessio Saretto, 'Option Strategies: Good Deals and Margin Calls' (2009) 12 Journal of Financial Markets 391, 393, 400.

[369] A description of this exact process occurring can be found in a letter by Victor Niederhoffer to his investors. An excerpt of this letter can be found in the paper above, see ibid 391–392. The same paper mentions also that margin calls have a substantial impact on the risk-return profile (as measured by the Sharpe ratio) of options based trading strategies. This conclusion is consistent with the idea presented in the text that margin calls are an important category of risk that funds are confronted with. ibid 409–410.

when a large amount of forced selling of this nature occurs within the same time frame.

3.6.5.1 Liquidity and Leverage

3.6.5.1.1 Leverage

Leverage used by investment funds can be an additional source of systemic risk, because leverage magnifies and accelerates both profits and losses. Leverage refers to the momentum gained when an investment of own funds is increased through financial transactions without investing additional own funds equal to the principal value of these transactions.[370] It is evident that in profitable times, this effect is beneficial both to the fund and its investors, but can lead to rapid losses and forced selling when the market moves against a fund. An investment fund can leverage its investment in several ways. It can directly leverage capital by purchasing securities on margin, ie taking out a margin loan, usually from a bank; a second direct method involves repossession agreements.[371] A fund can also leverage its capital through indirect means, either by selling short securities, or through the use of derivatives and structured products.[372]

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370 See Danny Busch and Lodewijk Van Setten, 'The Alternative Investment Fund Managers Directive' in Danny Busch and Lodewijk Van Setten (eds), *Alternative Investment Funds in Europe: Law and Practice* (OUP 2014) 24. Leverage in an investment fund is typically defined as a ratio of market exposure to the net asset value of a particular fund: $Leverage = \frac{market\ exposure}{net\ asset\ value}$. See Board of the International Organization of Securities Commissions, 'IOSCO Report: Leverage' (Consultation Paper CR08/2018, IOSCO, 2018) 2 <www.iosco.org/library/pubdocs/pdf/IOSCOPD615.pdf> accessed 11 August 2020.

It is possible to further distinguish between *gross, net,* and *long-only* or *long* leverage. The sum of long and short exposure per share divided by the NAV represents gross leverage, while the difference between said exposure per share divided by NAV represents net leverage. Finally, long-only or long leverage can be calculated by dividing long positions per share by the NAV. See Andrew Ang, Sergiy Gorovyy and Gregory B Van Inwegen, 'Hedge Fund Leverage' (2011) 102 Journal of Financial Economics 102, 103–104.

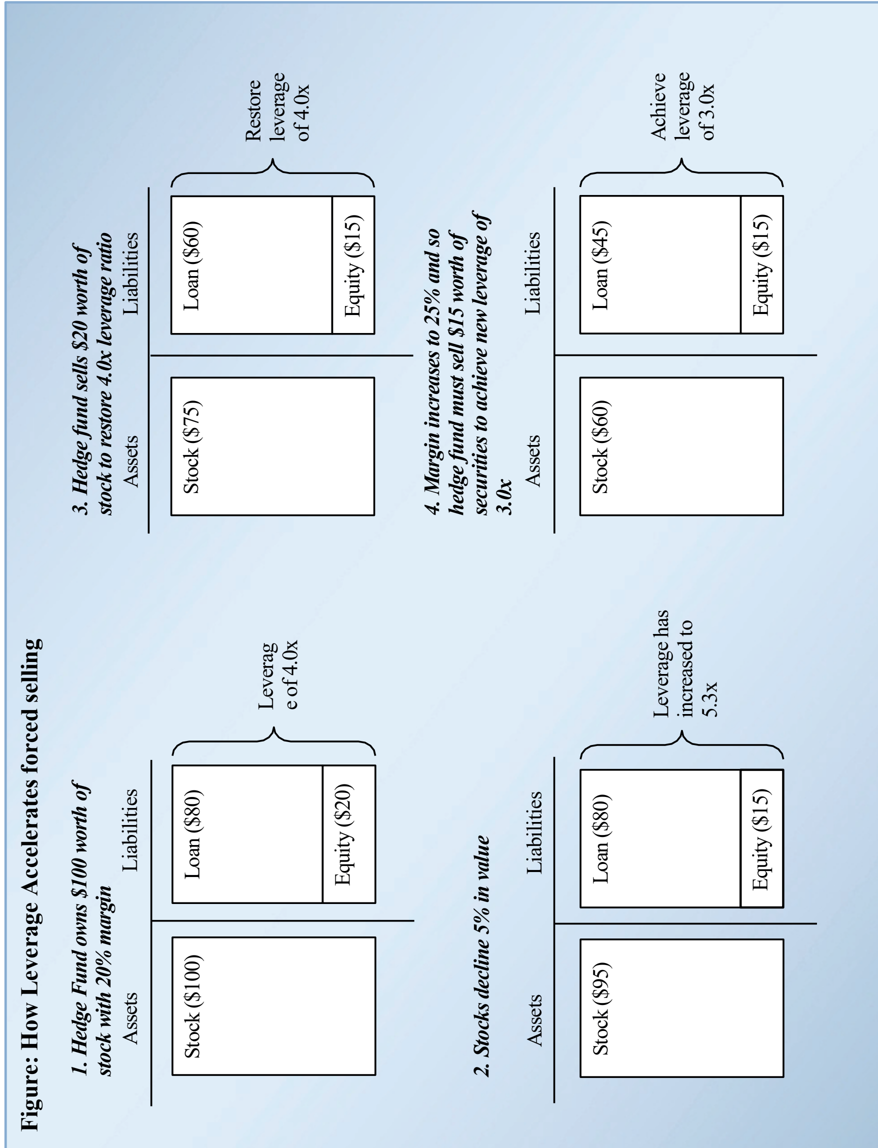
371 Repossession agreements ('repos') involve one party selling a security at a given price and then buying it back at a later time for a higher price. See Stowell (n 59) 243–244.

372 Short selling involves borrowing securities from a counterparty and selling them to a third party. Identical securities generally will be bought back at a later point in time and returned to the counterparty they were borrowed from. Leverage through short

The graphical representation below illustrates the effect leverage can have not only on the losses of the fund, but in the acceleration of forced selling, which in turn leads to further losses. As is seen quickly, the use of leverage can increase the momentum with which a fund can be forced to sell assets, which in turn enhances the exposure of a fund to market volatility. This gaining of momentum means the decision-making and turnaround time for a fund caught in and exposed to market turbulence is shortened dramatically if it is using leverage. The example below is that of a hedge fund, but can, in principle, apply to any type of fund, provided the legal environment permits the buildup of leverage:

selling can be achieved by borrowing securities, selling them short, and then using the funds from the sale to buy other securities. See ibid 244.

3.6.5.1.2 Figure 3c: Leverage and Forced Selling[373]



373 ibid 315.

3.6.5.1.3 Liquidity

In addition to the risk that leverage creates, liquidity is an essential element for the continuous operation of an alternative investment fund. As has been mentioned in section 3.6.4, liquidity risk is a central concern in alternative investment funds. The loss of liquidity has macroprudential implications as well, as losses of interconnected alternative investment funds can act as a trigger event for a systemic crisis through the loss spiral and margin spiral. Section 3.5.5 has described the two liquidity forms, which are market liquidity and funding liquidity, the first being the ease with which one can borrow against assets and the second the ease with which and the price at which assets can be sold in the market.[374] Losses in an alternative investment fund can lead to both a loss spiral and a margin spiral. Similar to the mechanism described directly above,[375] a loss spiral can cause funding problems which force the liquidation of certain positions. This in turn, if it occurs on a larger scale, moves prices away from their fundamental values, which causes both higher margin requirements[376] and further losses on existing positions. These losses then are the source of further funding problems, which restarts the loss spiral and may even result in so-called predatory trading, ie forcing other market participants to sell at fire-sale prices.[377] Figure 3d below visualizes these two liquidity spirals.

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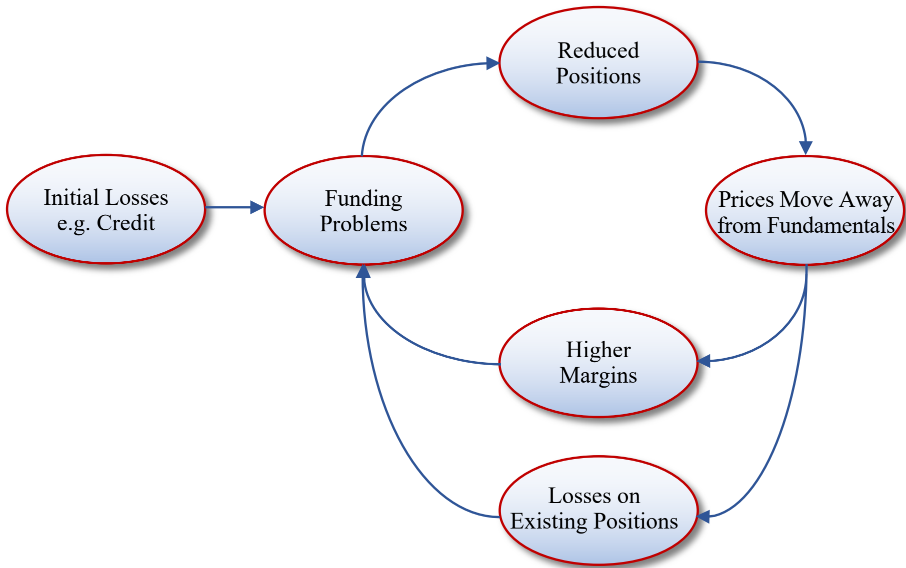
374 Brunnermeier (n 234) 91. See also section 3.6.4 for a detailed description of liquidity and how they can amplify initial shocks to a financial system.

375 See section 3.6.4.

376 For risks related to margin calls, see fn 369.

377 Brunnermeier (n 234) 93f. Fire-sales are described in detail in section 3.6.6.

3.6.5.1.4 Figure 3d: The Loss Spiral and the Margin Spiral[378]



3.6.5.2 Operational Risk

Operational risk is another risk category which is of essential importance. Operational risk is defined as risk supporting the operating environment of a fund. It includes middle and back-office functions such as accounting, the processing of trades, valuation, and administrative processes.[379] In an analysis dating from 2005, it was found that of all hedge fund failures, more than 56% were directly related to failures in operational processes[380] with the most common operational issues

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[378] ibid 93.

[379] Capco, 'Understanding and Mitigating Operational Risk in Hedge Fund Investments' (2003) The Capital Markets Company White Paper 4 <https://cdn2.hubspot.net/hubfs/4256284/Understanding_mitigating_hedge_fund.pdf?__hssc=198419440.5.1539346866247&__hstc=198419440.ea4263a8db6d9c56961b7c6f045f2509.1525959406150.1539289383539.1539346866247.162&__hsfp=2029327947&hsCtaTracking=b00d986c-8b92-4c3f-90f0-370927707998%7C946b2a69-17f0-4081-bf49-56458d4f52b9&t=1539474306514> accessed 26 August 2020. See also section 3.3.5.

[380] Jean-René Giraud, 'Mitigating Hedge Funds' Operational Risks: Benefits and Limitations of Managed Account Platforms' (EDHEC-RISK Institute 2005) 7 <https://

consisting of the following: misrepresentation of investments, misappropriation of funds, unauthorized trading, and inadequate resources.[381]

While these findings are primarily related to hedge funds and cannot be transposed directly to all investment funds, they nonetheless underline the importance of dealing with operational risks. The systemic implications of operational risk failures are related to reputational damage and loss of confidence. Where a fund or multiple funds have operational difficulties, this may impact their reputation, leading to a loss of confidence by investors, which in turn might lead to redemption requests. This reputational damage might not necessarily be limited to the individual institution, but may have effects on other similar institutions, whereby a loss of confidence in these other institutions and subsequent additional redemption requests may be the consequence. The transfer of client accounts in such situations may be difficult as well. In addition, if a fund is involved in providing critical services to other financial institutions, the operational difficulties or failures may also result in the transmission of these difficulties to these other institutions if the fund cannot continue to provide the critical services, which could result in consequences of systemic importance.[382]

3.6.5.3 Securities Lending Activities

Investment funds will act both as beneficial owners and as borrowers of securities, and a limited number of funds will also act as agent lenders.[383] When acting as an agent lender, an investment fund can offer borrower or counterparty indemnifications, which are similar to insurance commitments. Borrower or counterparty indemnifications provide insurance against losses incurred when counterparties default or do not return borrowed securities, and collateral is not sufficient to make up for these losses.[384] Securities lending activities by investment funds generate financial stability risks, which range from fire-sales of collateral to insufficient valuation practices. Further risks are composed of maturity and liquidity transfor-

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risk.edhec.edu/sites/risk/files/pdf/Mitigating Hedge Funds Operational Risks.pdf> accessed 26 August 2020.

[381] Capco (n 379).

[382] Financial Stability Board (n 14) 30.

[383] Borrowers are usually hedge funds that are covering short positions. Beneficial owners will also frequently facilitate lending through the use of agent lenders. See ibid 30–31, 35.

[384] ibid 35.

mation issues and leverage in connection with reinvestment of cash collateral and procyclical effects connected to financing transactions.[385]

Large scale agent lender indemnifications pose another threat to financial stability. The chain of events given for this threat to become relevant is this: If borrowers became unwilling to engage in securities lending unless indemnification was provided, the indemnification commitments could lead to lenders withdrawing from the market, which would force borrowers to find other lenders. Defaults on indemnification commitments could then lead to confidence in other indemnification commitments being lost.[386] Whether this explanation is sufficiently probable and realistic for it to become a reality and to justify regulatory efforts, it would need to be examined in greater detail; the concept does warrant mentioning, however.

3.6.6 Effects on Financial Stability

It is unlikely that an individual fund would have the financial leverage to trigger a systemic crisis singlehandedly.[387] Investment funds are comparably small, which becomes evident when the AuM of even the largest individual fund is compared to a systemically important financial institution.[388] From a systemic perspective, investment funds are therefore much more likely to amplify and transmit existing financial instability to other market participants through procyclical behavior and spillover effects.[389] The potential effects of investment funds on financial stability

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[385] ibid 14, 35, 37.

[386] ibid 35. See also Schwarcz, 'Systemic Risk' (n 34) 202–203.

[387] Even LTCM arguably did not cause a crisis, but was swept up in the effects of the Russian default. In addition, LTCM at its most dangerous was highly leveraged. This leverage would be difficult to achieve in Europe today without alerting the national regulatory authority monitoring leverage levels of the fund. For a detailed description of leverage requirements in AIFMD and UCITS regulation, see chapters 4 and 5. See also fn 347

[388] If many funds are in a state of distress or fail at the same time, then this may, however, have systemic implications. See Andrew W Lo, *Hedge Funds: An Analytic Perspective* (2nd edn, Princeton University Press 2010) 199.

[389] van der Veer and others (n 353). See also European Systemic Risk Board, 'Recommendation of the European Systemic Risk Board of 7 December 2017 on Liquidity and Leverage Risks in Investment Funds' (n 353) recital 2. ESRB 2017/6, recital 2.

are primarily related to contagion and amplification effects.[390] It is important to note that the size of individual funds does not automatically render them benign in a systemic sense. While size can serve as an indicator of systemic importance, it is not the sole determinant of an institution's contribution to systemic risk. As the systemic risk framework analyzed above indicates, an institution which takes on risks that are highly correlated with one another might cause these institutions to become, as a collective, 'jointly systemic'.[391] This correlation becomes even more difficult to detect if phase-locking phenomena described above occur and institutions taking on previously uncorrelated risks abruptly see these risks become highly correlated.[392] Market conditions are a further element that, unconnected to an institution's actual size, can render an institution systemically relevant.[393] Finally, the size of an institution's positions relative to the specific market it operates in can render the institution systemically relevant. This concentration issue becomes relevant if the fund or institution can materially disrupt the function of the specific market, which may in turn hamper the function of other markets through contagion and spillover effects.[394] These four elements, namely correlation, contagion, market conditions, and concentration, all are relevant to certain investment funds and result in financial stability risks.

It is therefore highly beneficial to examine the main risks and dangers that investment funds might pose. In the case of alternative investment funds, three main elements have been identified that are also relevant for many other types of investment funds as well. The three main dangers that emanate from investment funds from a systemic perspective are:

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[390] See James B Thomson, 'On Systemically Important Financial Institutions and Progressive Systemic Mitigation' (2009) 8 DePaul Business and Commercial Law Journal 135, 139–141 <http://via.library.depaul.edu/cgi/viewcontent. cgi?article=1090 &context=bclj> accessed 21 August 2020.

[391] ibid 139–140.

[392] See section 3.5.5.3.1; Chan and others (n 224) 13–16.

[393] One example of this from the hedge fund sphere is the comparison between the failure of LTCM and Amaranth Advisors. LTCM was considered systemically relevant in 1998 due to turbulent market conditions, while Amaranth in 2006 was not, despite having more than twice the amount of AuM that LTCM had had. See Thomson (n 390) 142. See also Mallaby (n 7) 316–322. See also Ferguson and Laster (n 349) 51. See also fn 347.

[394] Thomson (n 390) 135–142.

1. Fire-sales
2. Direct negative spillovers to financial institutions
3. Sudden reductions of debt financing, potentially leading to a credit crunch[395]

Fire-sales are closely related to liquidity risk in investment funds. Fire-sales, as has been mentioned above, can hasten a fund's demise if it is forced into selling otherwise sound positions at a steep discount. Fire-sales are not only damaging to the institution compelled to sell, but can generate externalities which lead to a net loss in a financial system. Fire-sales are also a potential contagion channel which might cause distress in a system to spread from one institution to others.[396] This means that fire-sales can cause systemic risk directly and threaten financial stability. As investment funds can be connected to larger institutions in the financial system, either through various transactions, counterparty exposures, or depositary and brokerage services, investment funds can act as the progenitor of a systemic crisis. Even if the fund or asset management industry as a whole may not be the ultimate cause of a crisis, a fire-sale or the failure of a fund or group of funds could very well constitute the initial shock that triggers it.[397] Closely related to this concept is the second danger of negative spillovers to financial institutions mentioned above. As is the case with fire-sales, other generic forms of spillover could cause losses or the collapse to institutions directly exposed to investment funds.[398] The current high level of interconnectedness in the financial system results in alternative investment funds being connected to other financial institutions, which are exposed to them via various investment channels, such as the credit channel or various brokerage services.[399] Finally, a credit crunch describes a situation where the 'credit availability is unusually restrictive for the current stage of the business

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[395] van der Veer and others (n 353) 3, 8, 34.

[396] For an overview of this phenomenon, see Lorenzo Cappiello and Dominik Supera, 'Fire-Sale Externalities in the Euro Area Banking Sector' (2014) 2 Financial Stability Review 99, 99–100, 108 <www.ecb.europa.eu/pub/pdf/fsr/art/ecb.fsrart201411_01.en.pdf?202b7ccacb7fabd4149e6034dae177cf> accessed 31 August 2020.

[397] For the mechanism of fire-sale externalities and systemic risk, see Fernando Duarte and Thomas M Eisenbach, 'Fire-Sale Spillovers and Systemic Risk' (2018) Federal Reserve Bank of New York Staff Report 6–13, 53 <www.newyorkfed.org/medialibrary/media/research/staff_reports/sr645.pdf> accessed 18 August 2020.

[398] Ferguson and Laster (n 349) 51–53. See also Tokuo Iwaisako, 'Global Financial Crisis, Hedge Funds, and the Shadow Banking System' (2010) 6 Public Policy Review 347, 361–363.

[399] van der Veer and others (n 353) 9.

cycle'.[400] As a result, alternative investment funds potentially could generate a number of externalities and act as initial triggers for systemic crises transmitted through direct or indirect channels.[401]

3.7 Conclusion

This chapter has defined and described systemic risk and also given an overview of various measurement techniques. It has highlighted that currently, data on alternative investment funds, particularly hedge funds, is incomplete and therefore makes precise measurement of exposures by various funds and the industry as a whole a challenging task. The chapter has also described the various risks that alternative investment funds are exposed to and has shown that the two main risks are leverage and liquidity risks. Alternative investment funds as an aggregate appear to provide some benefits to financial markets, which mainly consist of promoting market efficiency through the provision of liquidity and driving prices closer to their fundamental values through arbitrage activities. Unfortunately, at the same time, there are various externalities that alternative investment funds in general and hedge funds in a particular might generate. Alternative investment funds have the potential to act as catalysts and triggers of systemic crises, creating externalities in the form of fire-sales, negative spillovers, and the creation of a credit crunch. As a consequence, regulation of alternative investment funds must account for this reality. It must be designed to enable funds to continue to enhance the efficiency of financial markets while also limiting potential externalities and exposures to other financial institutions and it must address leverage and liquidity risks present in the industry. The following chapters will analyze whether the current European framework satisfies these requirements and what an optimal form of regulation might look like.

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400 Richard F Syron, 'Are We Experiencing a Credit Crunch?' [1991] New England Economic Review 3, 4.

401 van der Veer and others (n 353) 9.

4 UCITS

'I am responsible for managing more schoolteachers' and firemen's money than anybody in the world. That's an enormous responsibility.' – Laurence D. Fink[402]

Table of Contents

4 UCITS 117
4.1 Introduction 118
4.2 Regulation of Asset Management in Europe 118
4.3 The European Fund Management Framework 120
4.4 The History of UCITS 124
4.5 The Current UCITS IV/V Regulatory Regime 135
4.6 Conclusion 190
4.7 Appendix Chapter 4 192

[402] Nick Summers, 'BlackRock's Larry Fink on the Retirement Savings Crisis' *Bloomberg* (8 August 2013) <www.bloomberg.com/news/articles/2013-08-08/blackrocks-larry-fink-on-the-retirement-savings-crisis> accessed 25 August 2020.

4.1 Introduction

This chapter is structured as follows: In a first step, it describes the history and evolution of the UCTIS directive in the European Union from 1985 until the present day. In doing so, the chapter provides an explanation of the essential structures and features of the UCITS directive as it is in force today, and how these came to be. The chapter then attempts to provide a comprehensive overview of the current UCITS IV and UCITS V framework and its relationship with other parts of the European framework. The facets and effectiveness of measures related to the mitigation of systemic risk under UCITS are examined in greater detail, and their effectiveness is tested under the regulatory rationale methodology outlined in chapter 6. Finally, the convergence of the UCITS directive and the AIFMD is described to provide the reader with a general outline of the comparative discussion as it appears in chapter 5 on the AIFMD.

4.2 Regulation of Asset Management in Europe

4.2.1 Collective vs Discretionary Fund Management

Asset management can be divided into two main types: discretionary and collective asset management. Discretionary asset management involves managing a client's portfolio, both professional and retail clients, according to a mandate that the manager and the client have agreed upon. Discretionary asset management, where the portfolio of an individual client is managed, is fundamentally different from collective asset management. In collective asset management, a fund of pooled assets of a number of clients is managed. The management of this pool is conducted according to specified asset-allocation parameters and risk levels.[403] Fund management generally falls into the second category. Discretionary asset management in the EU is part of the investment services regime and falls under the 2014 Markets in Financial Instruments Directive II (MiFID II)[404] and the Markets in

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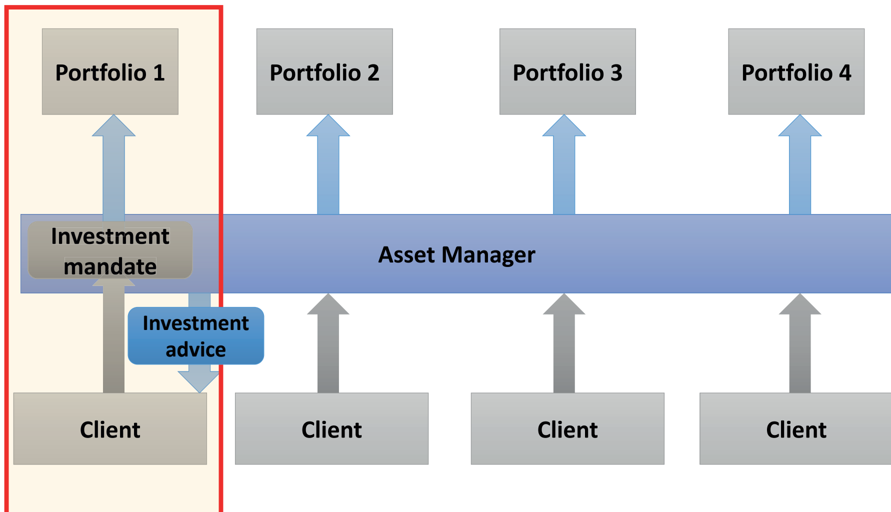
[403] Moloney (n 65) s 194.

[404] See Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU [2014] OJ L173/349, recital 74, 75 (MiFID II).

Financial Instruments Regulation (MiFIR)[405] regime.[406] While under certain circumstances collective fund management may be subject to provisions contained in this regime, the main regulation relating to collective asset management is contained in other legislation described in this and the following chapter.

4.2.2 Figure 4a: Discretionary vs Collective Asset Management

Discretionary Fund Management:

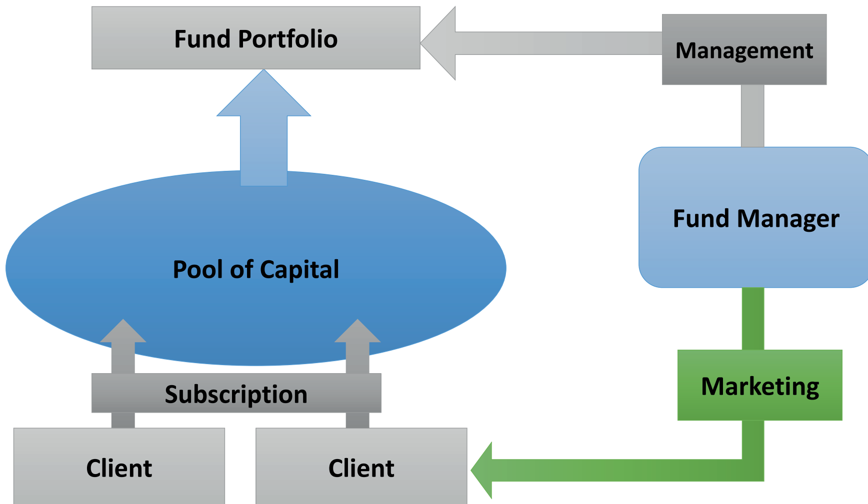


In discretionary asset management, the asset manager will have a direct relationship with each individual client, generally in the form of an investment mandate. He may provide investment advice and involve the client in investment decisions.

405 Regulation (EU) 600/2014 of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Regulation (EU) No 648/2012 [2014] OJ L173/84 (MiFIR).

406 Moloney (n 65) 195.

Collective Fund Management:



> *Collective asset management involves a client subscribing to, i.e. paying in to, a pool of capital, which will be invested in total into the components of a portfolio. The management company will market the fund to potential clients and will make investment and management decisions for the entire pool of capital. The client's influence is limited to fund selection prior to investing, and whether and when (subject to redemption conditions) to invest or redeem shares in the pool of capital.*

4.3 The European Fund Management Framework

4.3.1 Collective Asset Management and its Regulation in the EU

The UCITS directive, as it is in force today, is embedded in a higher-level regulatory framework related to asset management in the European Union. This framework related to asset management could be expanded further to include regulation related to banking and capital markets law. For the purpose of this chapter, it appears most prudent only to include the framework more imminently related to collective and discretionary asset management in the EU. EU asset management reg-

ulation relies primarily on the following regulation: UCITS, AIFMD, MiFID II, and MiFIR.[407] Of these four, the two core directives for collective asset management are the UCITS IV,[408] as amended by the UCITS V[409] directive, and the AIFMD.[410] The UCITS and AIFMD directives primarily regulate collective asset management in the EU related to fund management and distribution. Three additional, but more limited forms of investment funds, are harmonized in the EU as well: venture capital funds, long-term investment funds, and social entrepreneurship funds. These three types of funds are regulated by an EU regulation specifically applicable to each of them, namely the EuVECA, ELTIF, and EuSEF regulations.[411] A fourth and the youngest piece of regulation is the money market funds regulation, or MMFR, which came into force on 21 July 2018 and is the final framework mentioned here.[412] The MMFR is a document aimed at regulating money market funds in the EU. In addition to these directives and regulations, a

[407] Thomas Jutzi / Christoph Feuz, MiFID II, AIFMD und UCITSD: Auswirkungen des EU-Vermögensverwaltungsrechts auf das grenzüberschreitende Geschäft Schweizer Finanzintermediäre, in: Jusletter 25 April 2016 <www.iwr.unibe.ch/unibe/portal/fak_rechtwis/e_dep_dwr/inst_iwr/content/e36453/e162340/e172868/e172869/files426879/2016_04_25_Jusletter_ger.pdf> accessed 26 August 2020.

[408] Directive 2009/65/EC of the European Parliament and of the Council of 13 July 2009 on the coordination of laws, regulations and administrative provisions relating to undertakings for collective investment in transferable securities (UCITS) [2009] OJ L302/32 (UCITS IV).

[409] Directive 2014/91/EU of the European Parliament and of the Council of 23 July 2014 amending Directive 2009/65/EC on the coordination of laws, regulations and administrative provisions relating to undertakings for collective investment in transferable securities (UCITS) as regards depositary functions, remuneration policies and sanctions [2014] OJ L257/184 (UCITS V).

[410] Directive 2011/61/EU of the European Parliament and of the Council of 8 June 2011 on Alternative Investment Fund Managers and amending Directives 2003/41/EC and 2009/65/EC and Regulations (EC) No 1060/2009 and (EU) No 1095/2010 [2011] OJ L174/1 (AIFMD).

[411] Regulation (EU) 345/2013 of the European Parliament and of the Council of 17 April 2013 on European venture capital funds [2013] OJ L115/1 (EuVECA); Regulation (EU) 2015/760 of the European Parliament and of the Council of 29 April 2015 on European long-term investment funds [2015] OJ L123/98 (ELTIF); Regulation (EU) 346/2013 of the European Parliament and of the Council of 17 April 2013 on European social entrepreneurship funds [2013] OJ L115/18 (EuSEF).

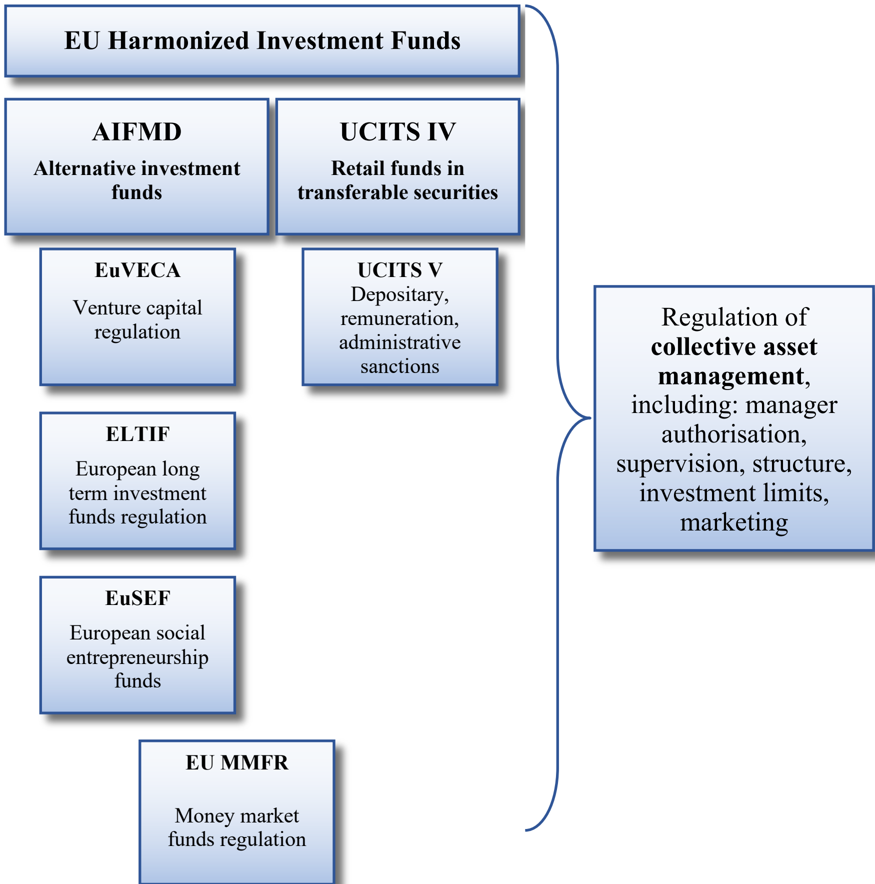
[412] Regulation (EU) 2017/1131 of the European Parliament and of the Council of 14 June 2017 on money market funds [2017] OJ L169/8, art 47 (MMFR).

plethora of supplementary and implementing regulations support this core structure.[413]

Two frameworks already mentioned, MiFID II on the one hand and MiFIR on the other hand, which themselves are flanked by supplementary regulation, mainly contain regulatory solutions to questions related to discretionary asset management and the distribution of investment products. While this description may be a simplification of the reality, and some overlap does actually exist in the relationship between the regulation collective and discretionary asset management, this shorthand description is sufficient to give the reader a general roadmap of the regulatory geography of asset management in the European Union.

413 The supplementary and implementing regulation will be examined in detail in the chapters directly related to EU asset management regulation, ie this chapter in relation to UCITS and the following chapter on the AIFMD.

4.3.2 Figure 4b: EU Harmonized Investment Funds[414]



414 Commission, 'Proposal for a Directive of the European Parliament and of the Council Amending Directive 2009/65/EC of the European Parliament and of the Council and Directive 2011/61/EU of the European Parliament and of the Council with Regard to Cross-Border Distribution of Collective Investment Funds' COM (2018) 092 final 2.

4.4 The History of UCITS

4.4.1 Table 4c: Overview of the Development of UCITS from its Inception[415]

UCITS I	UCITS II	UCITS III	UCITS IV	UCITS V	UCITS VI
1985	**Abandoned (1998)**	**2001**	**2009** (in force)	**2014** (amends UCITS IV, in force)	**To be determined** (Proposal from 2012)
• Original UCITS directive • European market for open-ended funds • Funds marketable and sellable to the public • Eligible assets limited almost exclusively to equities	• UCITS II proposal abandoned. • EU member states failed to reach an agreement on the directive's scope and purpose. • Provisions included many elements of the later UCITS III directive	• UCITS III was split into two parts, the **management directive** and **product directive** • Expansion of eligible assets	• Streamlining of regulator-to-regulator notification procedures • Management company passport • Key investor information document replacing simplified prospectus • Master-feeder fund structure introduced • Framework for domestic and cross-border fund mergers created	• Depositary regime • Remuneration policies • Sanctions regime • Whistle-blowing procedure	• Eligible assets and use of derivatives • Efficient portfolio management techniques • Over the counter (OTC) derivatives • Extraordinary liquidity management rules • Depositary passport • Money Market Funds (MMF) • Long term investments • Addressing UCITS IV

415 Author's own, adapted from: Ernst and Young, 'European Mutual Funds: An Introduction to UCITS for US Asset Managers' (EY Financial Services Thought Gallery Ireland, Ernst & Young LLP, 2015) 1.

4.4.2 The Origins of UCITS

The origins of the European Union's drive to establish a common market for collective asset management can be traced back to the 'Segré Report' from 1966.[416] The Segré Report specifically identified the potential of private investment to increase capital supply to the European market.[417] One of the main barriers identified by the report was the widely diverging set of rules across the union in regards to the legal status of investment funds.[418] To remedy this situation, the report recommended the alignment of the regulatory environment for European investment funds. Harmonizing the legal environment for funds would lead to an increase in the number and activities of investment funds, the report concluded: 'Expansion of the activities of investment companies throughout the Community would be encouraged by alignment of the rules governing their management, information for the public and supervision.'[419] It is interesting to note that the report already focused on three core areas that subsequently would become essential features of supranational financial regulation. The first feature was the suggestion that to regulate funds, the focus should be on the management company, a concept that subsequently would be realized in both the AIFMD and the management directive portion of UCITS III and IV. The second area the report focused on was to ensure investor protection through the disclosure of information. The idea that investor protection can be ensured, or at least enhanced, through information provided to the investor by a counterparty, is a central facet of modern financial regulation, and appears in various legislatorial efforts, among them PRIIPs and the MiFID II/MiFIR frameworks to name a few.[420] The third and final focus was the issue of ensuring effective supervision. Supervision of financial actors has also become a central element, especially of post-crisis financial regulation, supervisory bodies

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416 Claudio Segré and others, 'The Development of a European Capital Market' (Report to the European Commission, 1966) <http://aei.pitt.edu/31823/1/Dev_Eur_Cap_Mkt_1966.pdf> accessed 8 July 2018.

417 For equity funds, see ibid 203f. For fixed income funds, see ibid 183f.

418 Segré and others (n 416) 206.

419 ibid 207.

420 Kern Alexander and Vivienne Madders, 'Financial Market Regulation in the Internal Market' in Fabian Amtenbrink and Christoph Herrmann (eds), *EU Law of Economic & Monetary Union* (OUP 2020) 1091–1092, 1099. See also Regulation (EU) 1286/2014 of the European Parliament and of the Council of 26 November 2014 on key information documents for packaged retail and insurance-based investment products (PRIIPs) [2014] OJ L 352/1. See also MiFID and MiFIR.

constituting a core element in ensuring financial stability. While the Segré Report may appear to have been almost prophetic in its suggestions in 1966, the regulation of European funds on a supranational level would not be realized until almost twenty years later. In fact, national frameworks frequently did not have discrete rule sets for fund management, either.[421] According to Moloney, by 1976, European countries relied on general company law to enable the formation and the management of collective investment schemes, with only France having regulation specifically governing investment vehicles.[422] Investment schemes without corporate structures operated in most member states and were specifically regulated in Germany, France, Belgium, and the United Kingdom.[423]

4.4.3 UCITS I

4.4.3.1 Establishing a European Market for Open-Ended Fund Structures

Council Directive 85/611/EEC was the first iteration of the UCITS directive (henceforth referred to as UCITS I) and was introduced in 1985[424] with the express objective of enabling the free circulation of collective undertakings and ultimately to bring about a European capital market by establishing basic rules for such funds.[425] 'UCITS' stands for 'Undertakings for Collective Investment in Transferable Securities' and is both a description of the core objective of the directive and, at the same time, a brand name for funds authorized under said directive. The directive's core objective was to enable open-ended fund structures which invested exclusively in transferable securities to sell their funds to any investor within the European Union (then still the European Community) under a harmonized regula-

[421] Moloney (n 65) 204.

[422] ibid.

[423] ibid. It is interesting to note that the operational structure of these funds was very similar conceptually to today's investment schemes. The schemes would generally be split into a management company, a depositary, and the fund itself.

[424] Johannes Höring, *Investmentrecht: Rechtliche Grundlagen Für Die Anlageberatung* (Springer Gabler 2013) 215.

[425] Council Directive 85/611/EEC of 20 December 1985 on the coordination of laws, regulations and administrative provisions relating to undertakings for collective investment in transferable securities (UCITS) [1985] OJ L375/3 (UCITS I).

tory regime.[426] UCITS funds[427] were supposed to become the European transnational equivalent of national mutual funds, with the added benefit that they could be distributed within member states without substantial national regulatory barriers.[428] Closed-ended funds were not a part of the UCITS I directive, nor were funds that did not raise capital without sale to the public in the (formerly termed) European Community. In essence, this meant that any closed-ended structures could not be authorized under UCITS and therefore could not benefit from the cross-border marketing advantages described above.[429]

4.4.3.2 Investments under UCITS I

UCITS I limited investments of funds subject to the directive almost completely to transferable securities. In addition to this, the securities a fund was permitted to invest in had to be dealt in a member state and had to be either admitted to official listing on a stock exchange or, alternatively dealt in on a different regulated, recognized market. This market had to be open to the public and operate regularly.[430] Investment in transferable securities admitted in non-member states or in recently issued transferable securities was also possible, as long as these securities were admitted (or in the case of recently issued securities soon to be admitted) to official listing on a stock exchange of the non-member state. Investment was also possible if the securities in non-member states or the recently issued securities were dealt in another regulated market, provided the exchange operated regularly, and was recognized and open to the public. Additionally, this choice of exchange would

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426 ibid, art 1. See also Höring (n 424).

427 The term ‘UCITS fund’ is technically somewhat of a pleonasm. Since the letter ‘U’ in the acronym stands for ‘undertakings’, essentially funds, adding the term fund might appear superfluous. In fact, the directive itself refers to such funds only as UCITS. For the sake of clarity, this author has decided to choose the term ‘UCITS fund’ when referring to the investment schemes themselves, and ‘UCITS I-VI’ or ‘UCITS directive’ only when referring to legislation.

428 ibid. See also Michael Busack, Wolfgang Drobetz and Jan Tille, ‘Do Alternative UCITS Deliver What They Promise? A Comparison of Alternative UCITS and Hedge Funds’ 24 Applied Financial Economics 949 <www.tandfonline.com/doi/abs/10.1080/09603107.2014.916386> accessed 30 November 2016.

429 UCITS I, art 2. On the European level, closed-ended funds and funds with only privately supplied capital would therefore not be regulated at all. This situation would change radically through the introduction of the AIFMD in 2011. See chapter 5 on AIFMD.

430 UCITS I, art 19(1)(a), (b).

either have to be approved by the competent authorities, be provided for in law, or be provided for in the fund's rules or the investment company's instruments of incorporation.[431] In essence, this means that UCITS funds were permitted to invest in a broad number of securities, both in member states and non-member states. Investment in recently issued securities was also possible without much issue.

In addition to the types of transferable securities described above, UCITS funds were permitted to invest their assets in only two other categories. The first category was movable and immovable property. Investment in movable and immovable property was permitted, but only such which was essential for the direct pursuit of the fund's business.[432] The second category allowed up to 10% of the fund's assets to be invested in types of transferable securities other than the ones listed above.[433] In addition, if a member state permitted in its local regulation the investment in debt instruments for UCITS funds, the fund could invest in these as well, provided their value could be determined at least once a month and they were sufficiently transferable and liquid.[434] If the fund invested in one of these three other options, the combined total investment could not exceed 10% of the total assets of the fund.[435] Investments in precious metals or certificates representing them were explicitly prohibited.[436] In essence, this meant that the types of investment classes UCITS funds could invest in was extremely narrow, almost exclusively limited to investments in publicly traded equities on regulated markets. The options offered beyond that were restricted to essential purchases of property for business purposes (in essence office space and furniture as well as equipment for the operational side of the business), or liquid and transferable debt instruments with a market value that could be easily determined, and was limited to a tenth of total assets. With investment possibilities limited to equities and equity-like debt instruments, UCITS essentially limited a fund's strategies to long-only investments with very limited hedging possibilities. Investments in alternative investments were almost completely prohibited for these funds. It is also evident that any investment strategy based on alternative investments would not have been practical for UCITS funds under the UCITS I directive.

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[431] ibid, art 19(1)(c), (d).

[432] ibid, art 19(2)(c).

[433] ibid, art 19(2)(a).

[434] ibid, art 19(2)(b).

[435] ibid, art 19(3).

[436] ibid, art 19(2)(d).

Despite the efforts on the European level and the establishment of a framework under the UCITS directive, the implementation of UCITS I within member states did not have the desired effect of enabling simple cross-border marketing of open-ended equity funds under UCITS. This was mainly due to restrictive marketing rules within individual member states.[437] The aforementioned restrictions on the investments permitted under UCITS constituted a second problematic aspect. UCITS funds being limited to plain vanilla equity investment strategies may have impacted their attractiveness and marketability to potential investors.[438] In essence, this meant that the UCITS I directive would eventually need to be revised and its scope expanded if the objective of creating a European market for investment funds was to be realized in an effective fashion. This situation did eventually lead to further regulatory efforts which would eventually culminate in the quite extensive range of European fund management regulation that exists today.

4.4.4 The Failed UCITS II Draft Directive

The shortcomings of UCITS I were recognized on the European level, and to remedy this situation, the European Commission submitted a proposal for a new directive to amend the original UCITS directive in 1993. The first draft directive of UCITS II was focused on allowing new fund types to be marketed across the European Union by extending the scope of financial assets UCITS funds could invest in.[439] The directive would have enabled UCITS funds to invest in units of other funds, as well as money market instruments, banks deposits, and even in options

[437] See European Central Bank, 'Opinion of the European Central Bank of 16 March 1999 at the request of the Council of the European Union under Articles 109l(2) and 109f(6) of the Treaty establishing the European Community and Article 5.3 of the Statute of the European Monetary Institute on two European Commission proposals for European Parliament and Council Directives amending Directive 85/611/EEC on the coordination of laws, regulations and administrative provisions relating to undertakings for collective investment in transferable securities (UCITS), ref. 98/0242 – COM(1998) 451 final and ref. 98/0243 – COM(1998) 449 final [1999] OJ C285/9' [1999] CON/98/54 9. See also Christopher P Buttigieg, 'National Marketing and Product Distribution Rules for UCITS: A Critical Analysis' (2013) 7 Law and Financial Markets Review 192, 194.

[438] Moloney (n 65) 205–206.

[439] European Central Bank (n 437) 9–10. See also Commission, 'Proposal for a European Parliament and Council Directive Amending Directive 85/611/EEC on the Coordination of Laws, Regulations and Administrative Provisions Relating to Undertakings for Collective Investment in Transferable Securities (UCITS)' COM (94) 37 final.

and futures contracts.[440] The second draft directive, on the other hand, dealt primarily with the management company, i.e. the service provider itself.[441] UCITS II would have therefore extended the scope of possible investments, much like the UCITS III reforms ended up doing. As the UCITS II draft directive was never implemented, this meant that after the introduction of the original UCITS directive in 1985, it would take until 2002 for a successful reform to remedy the shortcomings of the framework.

4.4.5 The UCITS III Reforms

Following the failed UCITS II draft directive, UCITS III was proposed in 1998[442] and entered into force in 2002. The UCITS III revision was split into two directives: directive 2001/107/EC and directive 2001/108/EC. Directive 2001/107/EC, the management and prospectus directive, concentrated on the management companies of UCITS funds and prospectuses for the sale of UCITS. The second directive, directive 2001/108/EC, remedied the most obvious limitation of the original UCITS directive by changing the portfolio composition possibilities for funds by expanding the types of investments permitted under the UCITS framework.[443]

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[440] A second, amended proposal was published by the Commission: Commission, 'Amended Proposal for a European Parliament and Council Directive Amending Directive 85/611/EEC on the Coordination of Laws, Regulations and Administrative Provisions Relating to Undertakings for Collective Investment in Transferable Securities (UCITS)' COM (94) 329 final.

[441] European Central Bank (n 437) 9.

[442] Commission, 'Proposal for a European Parliament and Council Directive Amending Directive 85/611/EEC on the Coordination of Laws, Regulations and Administrative Provisions Relating to Undertakings for Collective Investment in Transferable Securities (UCITS)' COM (1998) 449 final; Commission, 'Proposal for a European Parliament and Council Directive Amending Directive 85/611/EEC on the Coordination of Laws, Regulations and Administrative Provisions Relating to Undertakings for Collective Investment in Transferable Securities (UCITS) with a View to Regulating Management Companies and Simplified Prospectuses' COM (1998) 451 final.

[443] See Directive 2001/107/EC of the European Parliament and of the Council of 21 January 2002 amending Council Directive 85/611/EEC on the coordination of laws, regulations and administrative provisions relating to undertakings for collective investment in transferable securities (UCITS) with a view to regulating management companies and simplified prospectuses [2002] OJ L41/20 and Directive 2001/108/EC of the European Parliament and of the Council of 21 January 2002 amending Council Directive 85/611/EEC on the coordination of laws, regulations and administrative pro-

By radically expanding investment possibilities for UCITS funds, the new directives fundamentally changed the character and risk profiles of UCITS funds in Europe and therefore represent a watershed moment for the regulation of open-ended fund structures in Europe.

4.4.5.1 UCITS III: Structure and Objectives

As mentioned above, UCITS III split the systematic approach into two parts, a 'Product Directive' and a 'Management Company Directive'. The first directive created a ruleset for the fund itself, mainly extending the range of assets that funds could invest in, while the second part focused on the manager or management company of the fund, codifying capital and organizational requirements.[444]

4.4.5.2 A Change of Investment Paradigms: Replicating Hedge Funds under UCITS III

The extension of the product part of UCITS enabled a myriad of hedge fund strategies to be replicated under the UCITS framework. This fact was recognized in the 2006 report of the Expert Group on Alternative Investments, an expert committee tasked by the European Commission to examine hedge funds in Europe. The group proposed to allow retail access to alternative strategies in its report and suggested various methods to implement this. One possibility the Group suggested was to allow access via the realization of alternative investment strategies in UCITS III compliant funds:

> [F]irst, many traditional fund managers are developing their product range to include absolute return and 'alpha' strategies. UCITS III has been a catalyst for these developments by extensively broadening the scope of eligible assets for UCITS to include the use of on-exchange and OTC financial derivatives. It has also allowed extensive index-tracking strategies and the use of derivatives for return-enhancing purposes. As a result of these changes, a new generation of UCITS III funds potentially give retail

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visions relating to undertakings for collective investment in transferable securities (UCITS), with regard to investments of UCITS [2002] OJ L41/35.

444 Commission, 'Green Paper on the Enhancement of the EU Framework for Investment Funds' (2005) COM 314 final 4, 4.

> investors access to some of the absolute return performance characteristics of hedge funds.[445]

The Expert Group did conclude however, that to 'shoe-horn' hedge fund strategies into the UCITS compliant funds might prove difficult. The report stated that '[...] the structural conditions on valuation, redeemability and portfolio liquidity (which may often be at the price of lower returns) have proven to be too restrictive for all but a few hedge funds to date'.[446] The Group also recommended against modifying UCITS to enable the authorization of funds of hedge funds.[447]

4.4.6 The UCITS IV Proposal and Implementation

Following the UCITS III reforms, by 2007, assets under management of UCITS funds had increased to EUR 6 trillion, UCITS funds representing around 75% of the total EU investment fund market.[448] Despite this positive development, the review process of the UCITS regime highlighted a number of difficulties with the state of the UCITS regime, specifically related to the supply-side of the industry.[449] The review process, which began in 2004, was extensive and, in the EU regulatory reform process at the time, of unprecedented sophistication.[450] The review led ultimately to a reform proposal in 2008 which laid the groundwork for what would become the UCITS IV reform.[451] The proposal sought to address five major areas where the aim would be the creation of new rules on mergers, on master/feeder structures, and on key investor information. Additionally, the proposal contained

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445 Alternative Investment Expert Group, 'Report of the Alternative Investment Expert Group: Managing, Servicing and Marketing Hedge Funds in Europe' (European Commission Internal Market and Services DG, 2006) 21.

446 Alternative Investment Expert Group (n 445).

447 ibid.

448 Commission, 'Proposal for a Directive of the European Parliament and of the Council on the Coordination of Laws, Regulations and Administrative Provisions Relating to Undertakings for Collective Investment in Transferable Securities (UCITS) {SEC(2008) 2263} {SEC(2008) 2264}' COM (2008) 458 final 2.

449 Moloney (n 65) 207.

450 ibid.

451 Commission, 'Proposal for a Directive of the European Parliament and of the Council on the Coordination of Laws, Regulations and Administrative Provisions Relating to Undertakings for Collective Investment in Transferable Securities (UCITS) {SEC(2008) 2263} {SEC(2008)' (n 448).

an attempt to simplify and improve the rules on notification, and new rules aimed at strengthening supervisory cooperation.[452] Other areas of the UCITS III regime would remain substantially unchanged.[453] The UCITS IV directive, directive 2009/65/EC is, as of writing, still in force. Since its introduction, however, the directive has been amended by the UCITS V reforms, which themselves are only limited to specific areas of the framework and leave large parts of the UCITS IV directive unchanged. The UCITS V reform process is described in greater detail below.

4.4.7 UCITS V: Aligning UCITS and the AIFMD

The UCITS V directive is the youngest reform of the UCITS framework and principally represents an attempt to bring the AIFMD and the UCITS framework into alignment. It was published in the Official Journal of the European Union in 2014 and came into force in the same year.[454] It is therefore unsurprising that UCITS V contains similar provisions to what the AIFMD introduced for the alternative investment industry, since the AIFMD had entered into force roughly three years earlier.[455] As a matter of fact, both the proposal in its explanatory memorandum and a Commission staff working document impact assessment related to it explicitly reference the AIFMD and the coherence of its depositary rules.[456] UCITS V

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452 ibid 7–11.

453 ibid 7.The proposal listed the articles which would remain substantially unchanged: ‘1(1),1(2), 1(3)(a), 1(4) to 1(7), 2(1)(a) to (d), 2(1)(g) to (m), 2(1)(o), 2(1)(p), 2(2) to (7), 3, 5(1), 5(3) to (5), 6 to 15, 16(1) to (4), 16(6), 16(7), 17, 18, 19(2), 19(3)(b), 19(3)(c), 20 to 33, 45(1)(a) to (h), 45(2), 46 to 48, 49(1), 49(2), 50, 51(2) first subparagraph points (a) to (c), 51(2) second subparagraph, 52, 63(2), 65(1), 65(4), 68, 71, 78(1) except 78(1)(b), 78(2)(a) except second indent, 79, 80, 82, 83(1) except 83(1)(b), 83(2), 84 except 84(b), 97 to 99, 100, 101, 102(1), 102(2), 103(2), 104, 106, 107, 108, 109 and Annexes II, III and IV.’

454 Directive 2014/91/EU of the European Parliament and of the Council of 23 July 2014 amending Directive 2009/65/EC on the coordination of laws, regulations and administrative provisions relating to undertakings for collective investment in transferable securities (UCITS) as regards depositary functions, remuneration policies and sanctions [2014] OJ L257/186, arts 2–4.

455 AIFMD, art 70.

456 See Commission, ‘Proposal for a Directive of the European Parliament and of the Council amending Directive 2009/65/EC on the coordination of laws, regulations and administrative provisions relating to undertakings for collective investment in transferable securities (UCITS) as regards depositary functions, remuneration policies and

concentrates on three core aspects neglected under UCITS IV and creates detailed provisions that extend to these areas. These new regulatory fields are composed of: the duties and liability of depositaries, the remuneration policies of UCITS funds, and the introduction of criminal sanctions.[457] These aspects are now subject to regulation in order to fulfill three essential functions: firstly, in specifying the duties of depositaries, the UCITS V directive imparts a monitoring role on a UCITS fund's respective depositary and provides a single point of contact for both investors and funds for issues related to the safekeeping of assets.[458] Introducing liability of depositaries creates a direct incentive for the depositaries to act as monitors in the design of the directive and fulfills the very concrete function of investor protection by providing legal redress to investors.[459] These provisions were introduced as an explicit reaction to the Madoff scandal and the Lehman bankruptcy to address diverging standards regarding depositary rules and liability issues, specifically in cases of delegation by a custodian to a sub-custodian and in conflict of interest problems between portfolio managers and their depositaries.[460] Secondly, the prescription of remuneration policies under UCITS V primarily attempts to correct risk management and risk-taking behavior within UCITS fund structures. The articles related to remuneration policies seek to adjust the risk-taking attitudes of individuals and the risk management processes to shape the risk profiles of the UCITS funds.[461] The overall objective is to achieve 'sound and effective risk man-

sanctions' COM (2012) 350 final, recital 15 (UCITS V Proposal); Commission 'Commission Staff Working Document Impact Assessment Accompanying the document Proposal for a Directive of the European Parliament and of the Council amending Directive 2009/65/EC on the coordination of laws, regulations and administrative provisions relating to undertakings for collective investment in transferable securities (UCITS) as regards depositary functions, remuneration policies and sanctions' SWD (2012) 185 final 7 (UCITS V Proposal Impact Assessment), remarking that '[t]he precedent set by the AIFMD constitutes [...] an essential point of reference for the improvement of the current depositary rules for UCITS.'

457 See UCITS V, recital 1, arts 99ff.

458 ibid, recitals 12, 15.

459 ibid, recitals 24–28.

460 UCITS V Proposal, 2–3. See also UCITS V Proposal Impact Assessment, 5–6. For a description of the Madoff Ponzi scheme, see Lo, *Adaptive Markets: Financial Evolution at the Speed of Thought* (n 76) 332–335.

461 ibid, recital 2.

agement'.[462] Finally, the introduction of additional sanctions creates an enforcement mechanism to ensure adherence to the UCITS IV and V directives.

4.5 The Current UCITS IV/V Regulatory Regime

4.5.1 Scope of Regulation

Unlike the AIFMD, the UCITS framework does not explicitly mention the intent to regulate only the management company versus regulating the fund or product itself. In stark contrast to the AIFMD directive, the title of the UCITS IV and V directives imply the regulation of UCITS (funds) themselves while omitting any mention of the management company. Nonetheless, UCITS utilizes similar methods as the AIFMD to regulate the management company of UCITS funds.[463] The UCITS framework differs from the AIFMD, however, in that it also contains detailed regulation regarding UCITS funds themselves. An example of this is the authorization process. In order for a manager to be permitted to manage a UCITS fund, the process is split into two distinct phases: The authorization of management companies and the authorization of the funds themselves.[464] Furthermore, UCITS IV and V contain provisions on depositaries. The framework also contains detailed rules governing competencies and behavior of the competent authorities in the member states. These rules relate to, inter alia, the monitoring and supervision of UCITS funds, management and investment companies, and depositaries, as well as rules related to the exchange of information between the authorities.

UCITS IV explicitly excludes four types of funds. The first, and most important, are closed-ended funds. The second type contains funds which do not promote the sale of their units to the public in the EU. In the third category are funds which are only sold to the public in third countries, as would be stipulated in fund rules or the instruments of incorporation of the investment company. Finally, funds established and regulated in member states by national regulations are excluded if their borrowing practices and investment policies are of a nature that renders the provisions of chapters VII and article 83 of UCITS IV 'inappropriate' for their regulation.[465] Hence, closed-ended funds, private funds, funds sold to third countries,

[462] ibid, recital 2.

[463] See eg UCITS IV, recitals 6, 8–11, arts 5, 6, 12.

[464] UCITS IV, arts 6, 7–10.

[465] UCITS IV, art 3.

and national funds investing and borrowing in a certain fashion therefore fall outside of the scope of UCITS IV. UCITS funds, by contrast, must be open-ended and only invest or borrow according to the rules stipulated by the directive. The units of UCITS funds can be marketed to the public within the EU under the directive, unlike their non-authorized counterparts.[466]

4.5.2 The UCITS IV and UCITS V Provisions in Detail

4.5.2.1 Funds, Management Companies, and Investment Companies

Due to the diverse nature of legal provisions on company law in member states of the European Union regarding structures of investment funds and managers, the UCITS directive does not prescribe the precise legal form a fund or manager must take, but permits three possible 'categories'. The first structure of UCITS fund that is permitted is to create a contractual arrangement that establishes the fund itself with a separate management company that operates the fund, according to the law in the specific member state where the fund and/or manager is to be established. The second option is to create an investment company by statute, where the company is the UCITS fund, but can also manage itself. The third option is to establish a trust, which then constitutes the UCITS fund. Finally, there is a hybrid option, which is based on the second variant. An investment company based on statute is permitted to appoint a management company as its manager, in which case it becomes analogous to the first option; the investment company is the UCITS fund, and the management company operates it like any other collective investment vehicle. The rules on authorization of the fund, the manager, and the investment company can be found in three separate sections of the UCITS directive, which is why each process will be described separately and in turn in the following sections.

4.5.2.2 Authorization of UCITS and of Management Companies

As described above, the UCITS framework has been an instrument to create a European market of funds for retail investors since its inception. Consequently, the authorization process might be the most important component of the directive, since it acts as a primary barrier and control mechanism in the inception phase of

[466] UCITS IV, recital 5. UCITS IV, art 3 also implies this. If a non-UCITS fund is subject to the AIFMD directive, it can market and sell its units under that framework, however.

UCITS funds. Admission to the UCITS fund market needs to be granted only to management companies and funds whose structures and objectives are aligned with the designs of the framework. The directive therefore explicitly states that authorization is only to be granted to management companies if their solvency is ensured, a sufficient level of investor protection is reached, and the authorization is granted with 'a view to contributing to the stability of the financial system'.[467] Solvency, investor protection, and financial stability are the three drivers which shape the authorization provisions for UCITS funds and managers.

4.5.2.2.1 Authorized Activities

Within each member state, one or multiple authorities are responsible for the authorization of UCITS funds. These authorities permit companies to act as management companies of UCITS funds by granting authorization in the so-called home member state of the manager.[468] Management companies are permitted to manage multiple UCITS funds and can also manage other types of funds that are not governed by the UCITS directive.[469] Management companies are permitted to engage in a limited number of other asset management-related activities. These activities include discretionary client-by-client portfolio management services, and, as a non-core service, the provision of investment advice, as well as safekeeping and administrative tasks in connection with the shares or units of the different funds they manage.[470] Non-core services that go beyond the management of UCITS funds may only be offered if the management company is concurrently authorized to provide one or more of the 'core services'.[471] This essentially means that management companies are limited to four activities: management of UCITS funds, administration and safekeeping of units of funds, discretionary asset management services, and providing investment advice. Since the management of UCITS funds is a fundamental element of management companies, authorization of any activity can only be granted together with this fundamental element.[472] In addition, the two non-core services, administration and safekeeping of units, and providing investment advice, can only be authorized after the management has been granted au-

[467] UCTIS IV, recital 8.
[468] UCITS IV, art 6(1).
[469] UCITS IV, art 6(2).
[470] UCITS IV, art 6(3)(a), (b).
[471] UCITS IV, art 6(3).
[472] ibid.

thorization to conduct discretionary asset management.[473] This means there is a clear hierarchy of authorization: UCITS fund management is the prerequisite for any other activity. Discretionary asset management can only be authorized together with or after this core activity is permitted, and the two non-core services are in turn only permitted if discretionary asset management activities are being or have been allowed.

4.5.2.2.2 Initial Capital

Rules on initial capital require that prior to authorization, a management company must have initial capital of at least EUR 125'000. If the combined total value of all portfolios the management company manages exceeds EUR 250 mio, an additional amount of initial capital must be provided for. The amount of additional initial capital corresponds to 0.02% of the total amount of capital being managed as part of the portfolios of the company that exceeds EUR 250mio. Additionally, the total amount of initial capital is limited to EUR 10 mio, meaning that the sum of the initial EUR 125'000 and the additional capital for large total managed portfolios does not have to exceed an upper limit of EUR 10 mio. This implies that management companies with portfolios worth less than EUR 250 mio are only subject to the basic rule, whereas companies with a total value of assets over EUR 250 mio must provide additional capital up to a combined total of EUR 10 mio.[474]

To calculate the total value of the portfolios managed by a company, common funds are included, as are funds whose management has been delegated to another entity or a different management company. If a management company is managing portfolios for other companies, meaning it is managing the portfolio as part of a delegation arrangement with another company, then the value of that portfolio is excluded from the calculations for the first company. Put more simply, delegating management does not exclude the value of the portfolio from the calculations for the delegating entity. Portfolios of other entities that a manager manages are not added to the calculation of the total value of portfolios of this manager.[475] If the

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473 ibid.

474 UCITS IV, art 7(1)(a)(i). Mathematically, at a portfolio value of slightly below EUR 750mio (EUR 743'750'000 to be precise), the upper threshold is reached and any additional growth of the total value of portfolios would not mandate the putting aside of additional capital. Any company with a total value of portfolios larger than that would only have to provide EUR 10mio of total capital.

475 This is the case, since they are logically included in the calculation of the value of portfolios of some other company which has been the delegator.

company is the designated management company of an investment company, it is also included in the calculation of total assets.[476] To summarize, any fund structures, whether UCITS or others, and investment companies, are included in the calculation of the total value to determine how much additional capital is needed, unless the management of portfolio in question has been delegated by another entity.

Finally, an exception to the additional capital rule is provided for by UCITS IV. Member states can authorize management companies to only provide 50% or more of additional capital that would be mandated according to the rules described above. This is only permitted if an insurance company or credit institution guarantees the residual amount, ie can vouch for the difference between what is provided and what would otherwise be mandated. The institution or company issuing the guarantee must, however, either be registered in a member state or, alternatively, be registered in a country outside of the EU, a so-called third country, where the regulatory framework is considered equivalent to the provisions under EU law, as considered by the competent authorities.[477]

4.5.2.2.3 Third Countries, Information, and Behavior of Managing Persons

UCITS IV permits authorization only if the persons effectively conducting the business of a management company 'are of sufficiently good repute and are sufficiently experienced'[478] in the management of the UCITS fund type in question.[479]

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[476] UCITS IV, art 7(1)(a)(ii).

[477] UCITS IV, art 7(1), ie '[…] subject to prudential rules considered equivalent to EU law'. The total capital may also not drop below the amount mandated by Directive 2006/49/EC of the European Parliament and of the Council of 14 June 2006 on the capital adequacy of investment firms and credit institutions [2006] OJ L177/201. As this Directive is no longer in force, the current iteration presumably takes its place, which is the CRD IV package. See articles 28 and 29 of Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, amending Directive 2002/87/EC and repealing Directives 2006/48/EC and 2006/49/EC [2013] OJ L 176/338 and Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012 [2013] OJ L176/1.

[478] UCITS IV, art 7(1)(b).

[479] ibid.

Potential conflict of interest issues are also addressed: close links between legal or natural persons and a management company are only permitted if these ties do not lead to the people in question being compromised in the exercise of their supervisory functions.[480] The same applies if a third country has regulation that inhibits the supervision of a management company.[481] The management company must provide information required for monitoring and ensuring compliance continuously.[482] Among the information that must be provided are the identities of persons who effectively conduct the business of the management company.[483] The management company must also inform the competent authorities of the identities of shareholders or members who have qualifying holdings. The competent authorities must also be informed of the amounts of these holdings.[484]

4.5.2.2.4 Refusal and Withdrawal of Authorization

After an application for authorization has been submitted, the competent authorities must inform the applicant whether it has decided to grant authorization or if it has rejected the application. If an application is rejected, then this information must be provided within six months, and the competent authorities must state the reasons why it has been rejected.[485] Branches of management companies that are registered in third countries and those of companies registered in a member state must be treated equally in the same circumstances.[486] Consultation of competent authorities in other member states prior to authorization is prescribed in cases where the authorization concerns one of the following: subsidiaries of another management company, a credit institution or an insurance company or the parent company of any of the aforementioned categories, if these companies or institutions are authorized in another member state.[487] The same applies if the same natural or legal persons control the company seeking authorization while also controlling any of the categories listed above authorized in another member state.[488] Refusal of authorization is possible if management of the management company

[480] UCITS IV, art 7(2).

[481] ibid.

[482] ibid.

[483] UCITS IV, art 7(1)(b).

[484] UCITS IV, art 8(1).

[485] UCITS IV, art 7(3).

[486] UCITS IV, art 8(2).

[487] UCITS IV, art 8(3)(a), (b).

[488] UCITS IV, art 8(3)(c).

is not considered to be prudent and sound, or if the shareholders or members are not suitable.[489]

Withdrawal of authorization is possible in the following cases: the management company does not make use of the authorization, ceases its activities more than six months prior to the withdrawal, renounces the authorization,[490] no longer fulfills the conditions under which authorization was granted, or no longer complies with the relevant regulation if it engages in discretionary portfolio management.[491] Withdrawal is also possible in cases where the management company obtained the authorization through false statements or other irregular means,[492] or seriously and systematically infringed or abused the provisions adopted pursuant to the UCITS IV directive,[493] or national law contains provisions necessitating withdrawal.[494]

4.5.2.2.5 Authorization of UCITS Funds

Authorization of a UCITS fund itself is a second process that is prescribed in parallel to the process of management company authorization described above. In order to receive authorization, the competent authorities in the member state in question have to approve the depositary that has been appointed and the rules of the fund. Additionally, the authorities will only approve a fund if the designated management company has been authorized to manage the fund in question. [495]

In the case of an investment company, the process is similar. Since, depending on the specific jurisdiction, an investment company will have been established by statutes or articles of incorporation, the competent authorities must approve these. As is the case with UCITS funds established through contracts, the depositary must also be approved. In cases where the investment company has appointed a management company, it must be authorized to manage the investment company.[496] Authority will not be granted to an investment company if the management company is not compliant with the obligations regarding investment compa-

489 UCITS IV, art 8(1).

490 UCITS IV, art 7(5)(a).

491 UCITS IV, art 7(5)(c), (d).

492 UCITS IV, art 7(5)(b).

493 UCITS IV, art 7(5)(e).

494 UCITS IV, art 7(5)(f).

495 UCITS IV, art 5(2).

496 ibid. See also UCITS IV, art 5(4)(b).

nies.[497] The depositary that has been appointed and its directors must also fulfill certain conditions: their reputation must be of a standard deemed acceptable to the competent authorities, and the experience level must reflect the challenges the type of fund in question will pose.[498] Accordingly, the identities of the directors that are to be assessed must be communicated to the competent authorities so they can be evaluated.[499] Finally, if the fund cannot market its units or shares in its home member states for legal reasons, then authorization will not be granted either.[500]

When a UCITS fund can appoint a management company in a different member state, the competent authorities in the fund's member state review the applications, not those in the manager's member state.[501] Authorization is valid for all member states.[502] Following the submission of this application, the authorities have up to two months to assess it and then inform either the investment company for self-managed funds, or otherwise the management company, whether they are granting authorization or not.[503] If any of the three elements of the authorization process are replaced, changed, or revised, the competent authorities must have approved this prior to the adjustment. Consequently, prior approval is required in cases where fund rules, statutes, or instruments of incorporation are changed, the depositary is replaced, or a different management company is to be appointed.[504]

4.5.2.3 Operating Conditions

4.5.2.3.1 Prudential Supervision and Rules of Conduct

The prudential supervision of management companies falls under the purview of the competent authorities in the member state where the company is established, the home member state.[505] The competent authorities are tasked by the directive with creating rules on administration and accounting within management companies. The authorities are furthermore mandated to create additional rules on inter-

497 UCITS IV, art 5(4)(a). These obligations are outlined in articles 27ff of UCITS IV.

498 UCITS IV, art 5(4).

499 ibid.

500 UCITS IV, art 5(5).

501 UCITS IV, art 5(3).

502 UCITS IV, art 5(1).

503 UCITS IV, art 5(4).

504 UCITS IV, art 5(6).

505 UCITS IV, art 10(2).

nal control mechanisms as well as procedures related to the processing of data in electronic form. Furthermore, rules must be drawn up to ensure the structure and organization minimizes potential conflict of interest situations between any combination of the company, the clients, and UCITS funds.[506] Further categories of rules must also be created. Rules of conduct must also be created by member states which ensure that management companies' business is conducted in an honest and fair fashion, [507] in the best interests of the funds being managed, being effective in the employment of resources, and ensuring that conflict of interest problems are minimized.[508] The manager must additionally act 'with due skill, care and diligence, in the best interest of the UCITS [funds] it manages and the integrity of the market'.[509] The management company must comply with rules that protect investor interests and market integrity when conducting its business.[510] A further essential ruleset regulating operating conditions has been introduced by way of amendment of UCITS IV by the UCITS V directive. The amendment concerns compensation arrangements and contains detailed rules concerning remuneration policies. These rules on remuneration require management companies to create internal policies and rules that ensure that an appropriate balance is struck between risk limitation and risk-taking, as well as specifics on how fixed and variable compensation are structured.[511]

4.5.2.3.2 Operating Conditions for Management Companies

In order to be authorized and stay authorized, the management company has a number of rules it must be cautious not to breach. First, the level of its initial capital cannot drop below a specific threshold, as defined by UCITS IV. If initial capital does fall beneath the specified level, competent authorities can specify a period within which the capital can be brought back up to the prescribed levels, if the circumstances allow this.[512] A management company providing portfolio man-

[506] UCITS IV, art 12(1)(a), (b).

[507] UCITS IV, art 14(1)(a), (b).

[508] UCTIS IV, art 14(1)(d).

[509] UCTIS IV, art 14(1)(c).

[510] UCTIS IV, art 14(1)(c), (e).

[511] UCITS V, art 1(2), which amends UCITS IV by inserting articles 14a and 14b. Articles 14a and 14b contain detailed provisions regulating remuneration policies and practices.

[512] UCITS IV, art 10(1).

agement on a client-to-client basis[513] must receive prior approval from the client in question if it intends to invest the client's capital in its own funds, ie in funds the manager itself manages as part of its collective asset management activities.[514] Management companies and, where applicable, investment companies must set up procedures in cases where an investor files a complaint, and must allow these complaints to be filed in one of the official languages of the complainer's member state. Where the UCITS fund and the manager are situated in different member states,[515] this must not impact an investor exercising his or her rights.[516] Finally, a management company must also provide for requests for information by the public or competent authorities and fulfill these requests.[517]

4.5.2.3.3 Operating Conditions Concerning Delegation of Activities

It is possible for a management company to delegate certain functions to other entities, but specific rules govern the process. If a manger delegates any or multiple functions to another entity, it must notify the competent authorities in the home member state of the management company. The authorities will then forward the information concerning the delegation to the UCITS fund(s) in question.[518] In cases where the function that is being delegated concerns portfolio or investment management activities, the entity that is to conduct this activity must have been authorized to manage UCITS funds to the same extent as the management company delegating the function.[519] After having delegated the task of investment management, the delegating management company must define criteria on how the delegated task is to be conducted and must monitor the entity it has delegated the task to during the entire time frame. The entity that has been selected for delegation has to be sufficiently capable and offer sufficient qualifications so as to be competent in performing the tasks necessary.[520] It is also possible to delegate functions to entities established and/or situated outside the Union, which are termed 'third country' undertakings. In cases where the delegations of investment management activities are to be delegated to such an entity, it is only possible if suffi-

513 So-called discretionary portfolio management.

514 UCITS IV, art 12(2)(b).

515 Ie they have different so-called 'home member states'.

516 UCITS IV, art 15.

517 ibid.

518 UCITS IV, art 13(1)(a).

519 UCITS IV, art 13(1)(c).

520 UCITS IV, art 13(1)(f), (h).

cient cooperation exists between the two authorities, those in the manager's home member state, and those in the third country.[521]

Furthermore, the delegation cannot impact or compromise the level of supervision that existed prior to the authorization, nor may the process have an impact on the manager acting in the best interests of the investors in its fund or funds.[522]

Conflict of interest issues are also relevant in this context. Where such issues might arise, delegation is not possible or permitted. Furthermore, delegating any function to the depositary is wholly prohibited.[523] If functions have been delegated by the manager, these activities must be reflected in the information that is given to investors, meaning the fund prospectus that is given to potential investors in the UCITS fund in question must contain information regarding which functions have been delegated by the manager of the fund.[524] Issues related to the liability of the manager are not influenced by whether delegation has taken place, meaning the management company stays fully liable even after delegation. In addition, though delegation is permitted, it cannot be taken to a point where so many of a manager's functions have been delegated that it de facto does not conduct any management activity, but is rendered a 'letter box entity'.[525]

4.5.2.4 Freedom of Establishment and Freedom to Provide Services

Since the function of the UCITS framework is to enable the development of the European investment fund industry as well as the sale of open-ended funds across EU borders,[526] establishing the rules on cross-border activities is a central tenant of the framework. Three possible constellations exist where a situation related to cross-border activities within the EU emerges: if a manager sets up a branch in a different member state,[527] if it provides cross-border services in other member states,[528] and if it intends to manage a UCITS fund in a country within the Union

[521] UCITS IV, art 13(1)(d).

[522] UCITS IV, art 13(1)(e).

[523] UCITS IV, art 13(1)(g).

[524] UCITS IV, art 13(1)(i).

[525] UCITS IV, art 13(2).

[526] See UCITS IV, recitals (2), (5).

[527] The rules of this are mainly listed in articles 16 and 17 of UCITS IV.

[528] See UCITS IV, art 18.

which is not the same member state it is established in.[529] A branch of a management company is defined as 'a place of business which is a part of the management company, which has no legal personality and which provides the services for which the management company has been authorised'.[530] The main difficulty in regulating such cross-border situations is to delineate clearly the limits between the competencies of the authorities in the manager's member state, and that of the competent authorities in the country where the cross-border activity takes effect. Concurrently, the complete flow of information between the two authorities must be structured to enable and enhance effective supervision and monitoring. This necessitates the formulation of precise instructions to both the manager and the fund on which information must be provided to which authority. In addition, authorities must know which information they must pass on to their counterparts in other jurisdictions. The terminology used in this section follows that of the UCITS framework. In this section, the competent authority of the *home* member state refers to the authority of the member state in which the management company is established. In cases where the home member state authorities of the UCITS fund itself are being referred to, the term 'UCITS *home* member state's competent authorities' is used. The authorities in the member state in which a branch has been established or services are provided as part of the freedom to provide services are referred to as the '*host* member state authorities'.[531]

4.5.2.4.1 Establishing a Branch

4.5.2.4.1.1 Obligations of the Management Company

As mentioned above, a branch can be set up by a management company, which is a place of business without separate legal personality. The branch is permitted to offer services and engage in the same business activities the manager is authorized to carry out. The country the branch gets established in, is the 'host' member state of the management company.[532]

Unlike in the case of management companies, establishment of a branch is not tied to an authorization process; rather, it is sufficient to notify authorities in the man-

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529 See UCITS IV, arts 19ff.

530 UCITS IV, art 2(1)(g).

531 UCITS IV art 2(1)(d) defines this as follows: '"management company's host Member State" means a Member State, other than the home Member State, within the territory of which a management company has a branch or provides services'.

532 See section 4.5.2.4.

ager's home member state. Host member state authorities are not notified by the management company.[533]

When notifying the authorities in the manager's member state, the management company must provide the following information: the member state in which the branch is to be established, a program of operations, the address of the management company's host member state where the necessary documents can be obtained, and the names of the people that will manage the branch. The program of operations must include information describing the activities and services the branch will provide,[534] its organizational structure including risk management processes, and the procedures for dealing with investor complaints.[535] The information is passed on by the authorities to the authorities of the host member state. After the host member state authorities have received the information, they must, within two months of reception, inform the management company on whether the branch can commence with its activities. [536] If the host member state authorities do

[533] UCITS IV, art 117(1). This also means that no additional requirements such as endowment capital or equivalent measures may be prescribed by a member state authority. See UCITS IV, art 16(2).

[534] These activities must be in accordance with the management company's activities under UCITS IV, art 6(2), (3). See UCITS IV, art 17(2)(b).

[535] UCTIS IV, art 17(2). The procedures dealing with investor complaints must correspond to the provisions described above under section 7.5.1.2.2. See also UCITS IV, art 15.

[536] UCITS IV, arts 17(6), (7). The process of passing on information from home member state authorities to host member state authorities is described in article 17(3) of UCITS IV. The home member state authorities will pass on the required information, including compensation schemes, unless there is reason to doubt the soundness of the financial situation and of the administrative structure of the management company. If the management company intends to engage in collective portfolio management activities in the host member state, the home member state must also provide the host member state authorities with information regarding the scope of authorization and any restrictions on the types of UCITS funds the management company may oversee. The information must be provided within two months and the home member state authority will inform the management company that the information has been provided to the host member state authorities. If the home member state authorities refuse to communicate the information, they must provide reasons to the management company within two months. If there is a change to the administrative structure of financial situation of the management company that leads to the home member state's authorities to doubt their adequacy, or there is a change in the scope of the management company's authorization or restrictions, then the home member state authorities must inform the host member state authorities of these changes.

not communicate with the manager before time limit expires, then the branch can be established and can begin its business activities.[537] The management company must comply with the host member state's rules of conduct.[538] Compliance with the rules of conduct is assured and supervised by the host member state's authorities.[539] If the program of operations, the address in the host member state, and the names of the managers of the branch change, it must be communicated in writing to both authorities one month in advance of the intended implementation, so authorities can decide on the issue.[540]

4.5.2.4.1.2 Flow of Information Processes Between Member State Authorities

The process of passing on information from home member state authorities to host member state authorities is a separate process that serves the purpose of permitting the monitoring of the activities of a management company via its branch by authorities in a host member state. The home member state authorities will pass on the relevant information, including compensation schemes, unless prior to this, there is reason to call into question the soundness of the manager's financials and of the management company's administrative organization. If the management company intends to conduct any fund management activities[541] in the host member state, the manager's authorities will also provide the authorities in the host member state with information on the scope of authorization and, where applicable, any restrictions on the types of UCITS funds the manager is permitted to manage. The information must be provided within two months. Following this, the authorities in the home member state will communicate to the manager that the information has been transmitted. If the home member state authorities refuse to communicate the information above to their counterparts in the other member state, they have two months to provide reasons to the management company with reasons for why they are not transmitting the required information.[542]

If there is a change to the administrative structure or financial situation of the management company that leads the home member state authorities to ascertain that they are not adequate, or if the manager's authorization changes in scope, the home

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537 ibid.

538 See UCITS IV, art 17(4). These rules of conduct are described in section 4.5.2.3.1 and correspond to UCITS IV, art 14.

539 UCITS IV, art 17(5).

540 UCITS IV, arts 17(8) and 17(2)(b), (c), (d).

541 ie collective portfolio management activities.

542 UCTIS IV, art 17(3).

member state authorities must inform the host member state authorities of these changes. The same holds for changes to restrictions that may have been placed on the manager regarding their authorization.[543]

4.5.2.4.2 The Freedom to Provide Services as a Management Company

A branch is not a prerequisite to providing services in other member states. A management company may also provide services in another member state without going through the process of setting up a branch. The process and requirements are similar, but less onerous, than the branch establishment process. First, if a management company solely wants to market shares or units of its UCITS fund or funds in a different member state, but does not have a branch in that country, it only has to comply with the requirements of the framework related to marketing.[544] If the manager wants to pursue activities authorized in its home member state, it has to provide information to the home member state competent authorities. The management company has to determine in which member state it intends to operate and provide a program of operations containing the same information as the program of operations it would have to submit if it wanted to establish a branch.[545] The home member state competent authorities must then forward this information to the host member state authorities, along with information regarding compensation schemes. If the management company wants to engage in collective portfolio management, the home member state must include the same additional information regarding the scope of authorization and restrictions outlined above.[546] Following this, the management company may then begin with the conduct of business in the member state, which becomes the host member state.[547] In a process functionally identical to the process when establishing a branch, a management company must communicate to both competent authorities any adjustment or change to the program of operations before the change can be implemented. Any changes to the scope of authorization or restrictions must also be communicated by the authorities in the home member state to those in the host member state.[548]

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543 UCITS IV, art 17(9), (10).

544 See UCITS IV, art 16(1). The marketing requirements are outlined in chapter XI of UCITS IV, arts 91–96.

545 UCITS IV, art 18(1).

546 UCITS IV, art 18(2).

547 UCITS IV, art 18(2), notwithstanding arts 20 and 93 of UCITS IV.

548 UCTIS IV, art 18(4).

4.5.2.4.3 Cross-Border Collective Portfolio Management

When managing funds and carrying out activities related to collective asset management in various member states, ie on a cross-border basis, a manager must remain compliant with the rules laid out in its home member state by the competent authorities.[549] The rules that are imposed on such a manager may not be stricter, however, than the rules for managers not managing funds and engaging in other asset management activities across Union borders, meaning these rules may not be stricter than they would be for companies only active in their home member state.[550] The management company must also follow the rules of the fund's home member state related to the proper function of the fund[551] and those laid down by the fund's own instruments of incorporation or fund rules and the prospectus.[552]

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[549] UCITS IV, art 19(1). The company must comply with all rules related to the organization of the company, including risk management, delegation arrangements, prudential rules and supervision, as well as to the reporting requirements and procedures of article 12 of UCITS IV.

[550] UCITS IV, art 19(2).

[551] See UCITS IV, art 19(3)(a)–(o). The list is of rules is extensive and contains the following:

(a) the setting up and authorisation of the UCITS;
(b) the issuance and redemption of units and shares;
(c) investment policies and limits, including the calculation of total exposure and leverage;
(d) restrictions on borrowing, lending and uncovered sales;
(e) the valuation of assets and the accounting of the UCITS;
(f) the calculation of the issue or redemption price, and errors in the calculation of the net asset value and related investor compensation;
(g) the distribution or reinvestment of the income;
(h) the disclosure and reporting requirements of the UCITS, including the prospectus, key investor information and periodic reports;
(i) the arrangements made for marketing;
(j) the relationship with unit-holders;
(k) the merging and restructuring of the UCITS;
(l) the winding-up and liquidation of the UCITS;
(m) where applicable, the content of the unit-holder register;
(n) the licensing and supervision fees regarding the UCITS; and
(o) the exercise of unit-holders' voting rights and other unitholders' rights in relation to points (a) to (m).

[552] UCITS IV, art 19(4). The fund rules or articles of incorporation and the prospectus must be consistent with the requirements of UCITS IV, arts 19(1)–(3). The management company must organize itself so it can comply with these requirements, see UCITS IV art 19(6).

As is to be expected, compliance with these rules must be ensured by the competent authorities of the manager's home member state and the authorities of the fund's home member state.[553] The UCITS fund's home member state may not create any additional rules beyond those outlined in the UCITS IV framework.[554]

A UCTIS fund is free to designate any management company authorized in any member state.[555] The manager must in this context also remain compliant with provisions on cross-border activities under UCITS.[556] Management companies managing UCITS funds in another member state must provide the following information to the UCITS fund's home member state's competent authorities: the written agreement with the depositary, and all information on delegation agreements.[557] Managers who are already actively engaged in managing another UCITS fund in the member state in question can also refer to whatever information it has already provided.[558] In the case of any changes to the points outlined above, the management company is obligated to make the authorities of the UCITS home member state aware of this fact.[559] The UCITS fund's home member state authorities can request additional information from the authorities of the manager's member state, especially if it relates to the scope of authorization and restrictions on the UCITS fund types which the management company is actually permitted to manage. After receiving such a request for additional information, the manager's home member state authorities must respond within 10 working days.[560]

Refusal of an application by the fund's authorities in its home member state is only possible if the management company is in breach of any provisions on cross-border fund management, the company is not authorized by their home member state authority to manage the type of UCITS in question, or the company has not provided the required information related to depositary and delegation arrange-

553 UCITS IV, art 19(5), (7).

554 UCITS IV, art 19(8).

555 UCITS IV, art 16(3).

556 In this case, articles 17–20 of UCITS IV contain the relevant provisions. The management company must comply with article 17 or 18 and 19 or 20 of UCITS IV. See UCITS IV, art 16(3)(a), (b).

557 UCITS IV, art 20(1)(a), (b).

558 UCITS IV, art 20(1)

559 UCITS IV, art 20(4).

560 UCITS IV, art 20(2).

ments.[561] Prior to rejecting an application, the UCITS home member state authorities must consult the competent authorities of the management company's home member state.[562]

4.5.2.4.4 Providing Information to Host Member States

Since correct and timely information is essential for effective supervision by authorities in asset management, UCITS IV contains additional detailed provisions to ensure host member states receive the information they require. For statistical purposes, periodical reporting of activities of all branches in their member states can be required by host member states.[563] UCITS fund home member state authorities can also require that the authorities are notified and receive the necessary information if complaints by investors have occurred.[564] In addition to the information that is collected by home member state authorities, the authorities in host member states are also permitted to request information from branches or managers engaging in cross-border activities.[565] If an authority in a host member state detects a breach of rules in its member state, it can require the manager to remedy the situation and then inform the home member state authorities of the situation.[566] Where the manager does not comply with the instructions of the host member state authorities, these authorities can inform the manager's home member state authorities. The latter authorities will then correct the situation accordingly.[567]

If the breach persists despite the intervention by the home member state authorities, the host member state authorities can penalize the behavior or prohibit the manager from engaging in further business activities within the member state in order to prevent subsequent irregularities, if necessary.[568] In cases where a UCITS fund is being managed in the host member state, the authorities of that state may prohibit further management of the fund.[569] The host member state authorities

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561 UCITS IV, art 20(3)(a)–(c). See also UCITS IV, art 20(1)(a), (b) and s 7.5.1.3.3.

562 UCITS IV, art 20(4).

563 UCTIS IV, art 21(1).

564 UCITS IV, art 21(3).

565 UCITS IV, art 21(2).

566 UCITS IV, art 21(3).

567 UCITS IV, art 21(4). The home member state will also communicate the 'nature of those measures' to the host member state's competent authorities.

568 UCITS IV, art 21(5).

569 ibid.

must inform the home member state authorities prior to taking any such action, however.[570] Any measures taken must be followed by a communication to the manager, which outlines the justifications for these actions.[571] In emergencies, where there is the possibility that investors' or other clients' interests might be in jeopardy, the host member state authorities may take precautionary measures to ensure those interests are not compromised.[572] Withdrawal of a manager's authorization by authorities is possible, but the home member state authorities which are evaluating the withdrawal must first consult the authorities of the UCITS home member state prior to taking action. The UCITS home member state authorities must then support the main effort in their own member state by taking measures which protect the investors' interest; this can include preventing the management company from transacting within the fund's home member state's territory.[573] In cases where precautionary measures are taken, authorities must inform the Commission and ESMA whenever measures are taken to penalize and prevent irregularities. Authorities must also inform the Commission and ESMA where authorization of a management company is refused or rescinded.[574]

4.5.2.5 Depositary Obligations

4.5.2.5.1 The Depositary

The depositary plays an essential role in collective asset management and is consequently a focal point of regulatory efforts, both under UCITS IV and UCITS V, as well as in the AIFMD.[575] UCITS V has since replaced provisions of UCITS IV related to depositary obligations, so the following presents the current, updated rule set.[576] A depositary administers and acts as a custodian for the assets of a UCITS fund.[577] Under the revised regime, a depositary may only take the form of

[570] ibid.

[571] UCITS IV, art 21(6). The measures taken must also be able to be reviewed by the courts of the member state.

[572] UCITS IV, art 21(7).

[573] UCTIS IV, art 20(8).

[574] UCTIS IV, art 20(7), (8), (9). The Commission will issue a report every two years on the latter two cases (withdrawal of authorization with appropriate measures, refusal of authorization under article 17 or 20).

[575] See eg UCITS IV, art 22; UCITS V, art 1(4); AIFMD, art 21.

[576] As of the date of publication of this thesis.

[577] Moloney (n 65) 242.

either a national central bank, a credit institution,[578] or a different legal entity that has been authorized in a member state. Additionally, this entity has to be subject to capital adequacy requirements[579] and prudential regulation as well as ongoing supervision.[580] For each investment company and for every UCITS fund, a depositary must be appointed. Appointment of a depositary has to occur through a written contract.[581] Instructions by the manager or an investment company that are issued to the depositary are to be carried out by the depositary, with the exception of any instructions that are in conflict with relevant legal provisions, as well as the fund's rules or instruments of incorporation.[582] The assets of a fund are protected in the case of a depositary's insolvency. In such a case, the assets that the depositary holds on behalf of a fund are prohibited from being distributed to creditors.[583]

4.5.2.5.2 Safekeeping of Assets

The primary task of the depositary is the safekeeping of fund assets. The depositary holds the fund's assets in custody. The depositary can either hold the fund's assets in physical form, or it can register them in a segregated account.[584] The

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578 The credit institution must be authorized in accordance with the CRD IV Directive.

579 UCITS V, art 1(6), UCITS IV, art 23(2) first subparagraph (a)–(c). Member states can determine which of these categories of institutions are eligible to be depositaries. See UCITS V, art (6), UCITS IV, art 23(3).

580 UCITS V, art 1(6), UCITS IV art 23(2), second subparagraph. The entity must also have the infrastructure to keep the financial instruments in custody and must ensure compliance through adequate policies and procedures. It must also have administrative and accounting procedures, internal control mechanisms, and risk assessment systems that are sound, as well as sound control and safeguarding arrangements for their IT-infrastructure. It must take all reasonable steps to avoid conflict of interest by creating the appropriate administrative and organizational arrangements. Records of services, activities, and transactions must be kept to enable supervision and enforcement actions by the competent authorities. Reasonable steps must be taken to ensure continuity and regularity in the performance of the depositary. Lastly, the members of the depositary's management body and senior management must be of sufficiently good repute, possess the knowledge, skills, and experience, which must be adequate to understand the depositary's activities and main risks, and act with honesty and integrity. See UCITS V, art 1(6), UCITS IV, art 23(2), second subparagraph (a)–(i).

581 UCITS V, art 1(4), UCITS IV, art 22(1), (2).

582 UCITS V, art 1(4), UCITS IV, amended article 22(3)(d).

583 Both creditors of the depositary and/or of a third party. UCITS V, art 1(4) UCITS IV, amended article 22(8).

584 UCITS V, art 1(4) UCITS IV, amended article 22(5)(a)(i), (ii).

depositary verifies ownership of the assets and creates and maintains a record of all assets.[585] The depositary must also periodically provide an inventory of all assets to the management or investment company.[586] Reusing assets held in custody is generally prohibited.[587]

4.5.2.5.3 Monitoring Functions

In addition to safeguarding fund assets, the depositary also acts as a monitor. The depositary is responsible for monitoring against breaches of law or fund rules. The depositary therefore has a number of monitoring responsibilities: it monitors cash flows, specifically the reception of payments for or by investors. Furthermore, it is responsible for monitoring the cash of the UCITS fund.[588] In addition, the depositary monitors the calculation of the value of fund units,[589] and will monitor their sale, issue, repurchase, redemption, and cancellation.[590] Moreover, the depositary must monitor the UCITS fund's income,[591] and finally ensure that consideration is remitted in transaction involving the fund's assets.[592] As a measure to facilitate monitoring and supervision by authorities, a depositary must forward all information it has acquired to the competent authorities of the depositary, those of the manager, or those of the fund. If these authorities are different bodies, the competent authorities of the depositary will transmit the information they have received from the depositary to the other competent authorities.[593]

585 UCITS V, art 1(4) UCITS IV, amended article 22(5)(b)(i), (ii).

586 UCITS V, art 1(4) UCITS IV, amended article 22(6).

587 UCITS V, art 1(4) UCITS IV, amended article 22(7). Reuse is prohibited for the depositary and third parties. Reusing assets is only allowed if the reuse is executed for the account of the UCITS fund, the depositary is acting on instructions of the management company (on behalf of the UCITS fund), the reuse is for the benefit of the fund and in the interest of the unit holders, and liquid collateral of high quality covers the transaction (this collateral is transferred to the UCITS fund via a title transfer arrangement). See UCITS V, art 1 (4), UCITS IV amended article 22(7)(a)–(d).

588 UCITS V, art 1(4), UCITS IV amended article 22(4).

589 UCITS V, art 1(4), UCITS IV amended article 22(3)(b).

590 UCITS V, art 1(4), UCITS IV amended article 22(3)(a).

591 UCITS V, art 1(4), UCITS IV amended article 22(3)(e).

592 UCITS V, art 1(4), UCITS IV amended article 22(3)(d).

593 UCITS V, art 1(10), UCITS IV amended article 26a.

4.5.2.5.4 Delegation of Depositary Functions

Under the revised framework, the delegation of depositary functions is possible, but only under a fairly restrictive regime. The monitoring functions of the depositary, both monitoring of cash flows and the other functions described above, may not be delegated to any third parties.[594] Functions related to custody and record keeping functions can be delegated, but only under specific conditions: first, there must be an objective justification for delegating one or multiple functions; second, due skill, care and diligence must be exercised in the choice of the delegate; third, the depositary must monitor and review the performance of the delegate during and after the delegation process.[595] Additionally, the delegation may not constitute a measure intended to circumvent the provisions of UCITS IV,[596] and finally, the third party delegate must satisfy certain qualitative requirements.[597]

There is a special case where the delegation takes place in a jurisdiction outside of the European Union, which means the depositary is delegating from a member state to an entity in a third country. This is permitted if the law of the third country mandates that certain assets must be held by an entity in that country. If none of the entities fulfill the delegation requirements, the depositary can nonetheless delegate to an entity in a third country, but only if the manager or investment company instructs the depositary to do so. In such a case, the investors in the fund must be informed, before they have invested in the fund, of the risks and the fact that this delegation is due to provision of the law in the third country.[598]

594 UCITS V, art 1(5), UCITS IV amended article 22a(1).

595 UCITS V, art 1(5), UCITS IV amended article 22a(2)(b), (c).

596 UCITS V, art 1(5), UCITS IV amended article 22a(2)(a).

597 UCITS V, art 1(5), UCITS IV amended article 22a(3). The requirements are that the delegate offers structures and expertise proportionate to the complexity and nature of the assets of the UCITS fund or management company, is audited externally, and is subject to prudential regulation and supervision as well as minimum capital requirements. The delegate must segregate its own assets and those of the client and depositary and take steps to ensure that, in the event of insolvency, the assets held in custody are not available for distribution to creditors. The delegate must also comply with the provisions in articles 22(2), (5), and (7), as well as article 25 of the UCITS IV/V framework.

598 UCITS V, art 1(5), UCITS IV amended article 22a(3) second subparagraph and article 22a(3) second subparagraph (a), (b). In the case of a second subdelegation in a third country, the liability of the depositary remains unchanged and article 24(2) of the revised UCITS IV directive still applies. See UCITS IV amended article 22a(3) third subparagraph.

4.5.2.5.5 Depositary Liability

As outlined above, liability of the depositary is a key component that UCITS V seeks to address. Under the UCITS IV/V framework, the loss of any assets or financial instruments that the depositary holds renders it liable to the fund and to the investors who hold units in it. Delegation of the custodian function to third parties does not impact depositary liability.[599] The depositary cannot limit its liability with an agreement, as such an agreement is explicitly considered void.[600] In cases where the depositary is held liable, the depositary can replace the loss with a financial instrument of an identical type or the corresponding amount. This replacement must be returned to the UCITS fund or to the manager 'without undue delay'. The exception to this rule is if the depositary can prove that the loss was caused by an event beyond the depositary's control, and that the resulting loss could not have been avoided if (reasonable) preventive measures had been taken.[601] If the depositary cannot fulfill the appointed tasks under UCITS IV/V, it assumes liability for the resulting losses to investors and to the fund, regardless of whether this loss is due to negligence or intentional behavior.[602] For investors, invoking liability is possible in two ways: they can either invoke the liability directly, or they can go through the investment or management company. This is possible as long as the principle of equal treatment between investors is maintained and causes no multiplication of redress.[603]

4.5.2.5.6 Conflict of Interest Issues

As a general rule, management companies and investment companies must act honestly, fairly, professionally, independently, and in the interest of the fund and its investors.[604] The depositary may not engage in activity that might create a conflict of interest, regardless of whether that conflict is between the depositary and the fund's investors, the depositary and the manager, or the depositary and the fund. Such activity is only permitted if there is a separation in the functional and

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[599] UCITS V, art 1(7), UCITS IV amended article 24(1) first subparagraph and article 24(2).

[600] UCITS V, art 1(7), UCITS IV amended article 24(3), (4).

[601] UCITS V, art 1(7), UCITS IV amended article 24(1) second subparagraph.

[602] UCITS V, art 1(7), UCITS IV amended article 24(1) third subparagraph.

[603] UCITS V, art 1(7), UCITS IV amended article 24(5).

[604] UCITS V, art 1(8), UCITS IV amended article 25(2). While the management company must act in both the interest of the UCITS fund and the investors, an investment company must act only in the interest of its investors.

hierarchical sense of the depositary tasks from the tasks that are creating the conflict. In addition, potential conflicting activity is only permitted if the conflict is identified, managed, monitored, and disclosed to the fund's investors.[605] Furthermore, it is prohibited for a company to concurrently act as depositary and as a manager or investment company.[606]

Replacing the manager or the depositary also could lead to a myriad of conflicts of interest and other issues, which is why the UCITS IV/V framework mandates that either law, the fund rules, or the articles of incorporation must define when a replacement of the depositary is possible while simultaneously preventing investor protection issues.[607]

4.5.2.6 Investment Company Obligations

4.5.2.6.1 Authorization

As mentioned above, the UCITS framework distinguishes between management companies, UCITS funds, and investments companies. All three categories are components of the asset management process. An investment company differs from a management company or a UCTIS fund in that it manages itself. It is thus a hybrid form and can be thought of as a fund that has internalized the management company. An investment fund can nonetheless designate a management company to manage it, in which case it operates much like a UCITS fund.

An investment company is authorized by the competent authorities of its home member state, in which the company's registered office must be situated. Which legal form a member company takes is determined by the specific provisions in the national law of the member state.[608] Investment companies may only engage in collective asset management activities and activities related to the sale and redemption of its own units.[609] In cases where no management company has been designated to manage an investment company, it is subject to an initial capital rule. A self-managed investment company must have sufficient initial capital of EUR 300'000 or more.[610] In addition, it must also provide a program of operations

[605] UCITS V, art 1(8), UCITS IV amended article 25(2) second subparagraph.

[606] UCITS V, art 1(8), UCITS IV amended article 25(1).

[607] UCITS V, art 1(9), UCITS IV amended article 26(1), (2).

[608] UCITS IV, art 27.

[609] UCITS IV, art 28.

[610] UCITS IV, art 29(1).

which describes its organizational structure. The investment company's directors must also fulfill requirements regarding their experience and reputation, which must correspond to the specificities of the company they manage. If the investment company and any legal or natural persons might be closely linked, then authorization will only be granted if these links are not an obstacle to the effective supervision of the company.[611] Authorization will also not be granted if there are close links and the persons with which these links exist are subject to third-country legislation that prevents effective supervision.[612] The investment company is mandated to supply the necessary information to their supervisory authorities, and must in particular supply the identities of the directors of the company and any changes to these positions.[613] After the submission of the application, the investment company is informed whether it is to be authorized. If the application has been rejected, the reasons for this are also communicated. This information must be relayed to the investment company within six months.[614]

Withdrawal of authorization is possible only in a limited number of cases: where the company does not make use of authorization within 12 months, if it renounces the authorization, or has stayed inactive for more than six months. Furthermore, if the company made false statements in the authorization process or utilized other irregularities which come to light, or the company no longer fulfills the conditions under which authorization was originally granted; if it has infringed upon the provisions of the UCITS directive in a serious or systematic way, or national law of the member state provides a reason for withdrawal.[615]

4.5.2.6.2 Operating Conditions

Operating conditions for investment companies are identical in respect to delegation, conduct, and remuneration rules.[616] An investment company is limited to the management of its own portfolio and is expressly barred from engaging in any asset management activities by mandate on the behalf of third parties.[617] Investment companies must follow the prudential rules that are created and implemented

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[611] UCITS IV, art 29(1) second subparagraph (a)–(c).

[612] UCITS IV, art 29(1) third subparagraph.

[613] UCITS IV, art 29(1) fourth subparagraph and article 29(1) second subparagraph (b).

[614] UCITS IV, art 29(2).

[615] UCITS IV, art 29(4)(a)–(e).

[616] UCTIS IV art 30 first paragraph.

[617] UCITS IV, art 30 third paragraph.

in their member states.[618] The prudential rules must contain provisions related to administrative and accounting procedures, control and safeguard arrangements for IT systems, as well as internal control mechanisms. The rules must also contain control mechanisms that govern personal transactions by employees and the holding and investment processes of the company's initial capital. The law and instruments of incorporation must further prescribe the investment of the company's assets. Records must be kept of each investment transaction including the date and time of the transaction, the place, its origins, which persons were party to the transaction, and its nature.[619]

4.5.2.7 Mergers Rules under UCITS

An area that also requires a detailed set of rules is the merger of UCITS funds. The basic problem is apparent: in creating a European market for UCTIS funds, merging of these funds leads to various cross-border situations and investor protection issues. The UCITS IV framework hence contains an authorization process for UCITS fund mergers. Mergers between UCITS funds can take one of three forms: a transfer of the assets of a fund to another existing UCITS fund followed by the dissolution of the first fund,[620] a transfer of assets to a new UCTIS fund while dissolving the old fund,[621] and a transfer of assets to a different UCITS fund without dissolving either fund (until liabilities have been discharged).[622] The UCITS fund to which assets are transferred is termed the 'receiving UCITS', while the UCTIS fund transferring and subsequently being dissolved, or existing until liabilities are discharged, is termed the 'merging UCITS'. The rules on mergers apply to funds, as well as their investment compartments, meaning that mergers between smaller compartments must adhere to the same general rules as mergers between UCITS funds.[623] Both national rules for cross-border mergers and rules for domestic mergers must be established by member states.[624]

As mentioned above, in order to merge, authorization must be applied for in advance. The authorities responsible for granting authorization are those of the merg-

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[618] UCITS IV, art 31 first paragraph.

[619] UCITS IV, art 31 second paragraph.

[620] UCTIS IV, art 2(1)(p)(i).

[621] UCTIS IV, art 2(1)(p)(ii).

[622] UCTIS IV, art 2(1)(p)(iii).

[623] UCITS IV, art 37.

[624] UCITS IV, art 37(1), (2).

ing fund's home member state. The merging fund must provide certain information: first, the draft terms of the merger must be provided.[625] These terms must have been approved by both parties in advance. Second, it must supply a current prospectus and updated 'Key Information Investor Document (KIID)'[626] Both these documents are those of the receiving UCITS fund, but these must be provided only in cases where the receiving fund is in another member state. Third, the merging fund must provide a statement by both depositaries. The statement by the depositaries of both funds must confirm the identity and type of both the merger and UCITS funds involved, the date on which the merger is to take place, and the rules applicable to the transfer of assets. The statement must also confirm that the depositary has verified the merging parties as compliant with the UCITS IV directive, as well as the rules of the fund or instruments of incorporation. Finally, the merging UCITS fund must also provide the information on the coming merger that will be presented to the investors in the two funds.[627] The information provided then goes through an information exchange process and possibly a modification process. Once the information has been received, the authorities in the merging fund's home member state will supply their counterparts in the receiving fund's state with a complete dossier containing all the relevant information. If the information that the investors are to receive needs clarification, the authorities of the merging fund's home member state can require this in writing.[628] The receiving fund's home member state authorities, on the other hand, can require a modification in writing of this information for the investors within 15 working days. In such a situation, these authorities will notify the merging fund's home member state authorities. After receiving the modified information, the receiving fund's

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[625] The draft terms of the merger must contain the following: an identification of the type of merger and of the UCITS funds involved, the background and rationale, the expected impact on the unit holders of both funds, the valuation criteria of the assets and liabilities and the calculation method for the exchange ratio of fund units, the planned effective date of the merger, the applicable rules to the asset transfer and unit exchange procedure, and the fund rules or instruments of incorporation in the case where the receiving UCITS fund is a newly constituted fund. The UCITS funds involved in the merger may include further items in the draft terms. See UCITS IV, art 40(1)(a)–(h), (2).

[626] See UCITS IV, art 78.

[627] UCITS IV, art 39(2)(a)–(d). The information must be supplied in official languages of the respective member states or in a language approved by the competent authorities, in order to enable the authorities in both member states to be able to read them. See UCITS IV, art 39(2) second subparagraph.

[628] UCITS IV, art 39(3) second subparagraph.

home member state authorities can inform their counterparts in the merging fund's member state of their satisfaction or dissatisfaction within 20 working days.[629]

The merging fund's competent authorities must authorize the merger if three conditions are satisfied: the merger process satisfies the requirements laid out by the rules on mergers,[630] the receiving fund has been notified that it is to market its units in the merging fund's member state while following the rules on cross-border marketing,[631] and neither of the authorities require further investor information to be communicated. Within 10 working days, the authorities of the merging fund's home member state can request additional information in cases where it is incomplete.[632] Within 20 working days, the merging fund's home member state authorities will communicate to the merging fund and to the competent authorities of the receiving fund whether the merger has been authorized.[633]

The merger rules also contain detailed provisions regarding two core areas that are an essential part of the authorization process described above: the conformity of the valuation and unit exchange process, and the information provided to unit holders of both UCITS funds.[634] The fund's assets must be valued by either a depositary or an independent auditor,[635] the results and information of which must be contained in the information that is forwarded to authorities and, on request, to investors, in the process outlined above.[636] The depositary or auditor must validate three aspects: first, the criteria that are utilized to value assets and liabilities, second, the cash payment per unit, and third, the calculation of the exchange ratio, as well as the actual exchange ratio.[637] The information that is provided to investors is authorized in advance, as seen above. After the merger has been authorized, the information must be provided to investors no less than 30 days before the last date

629 UCITS IV, art 39(3) second and third subparagraphs.

630 Specifically of articles 39–42 of UCITS IV.

631 In accordance with UCITS IV, art 93.

632 UCITS IV, art 39(4).

633 UCITS IV, art 39(5) first and second subparagraphs. Member states may also, according to UCITS IV article 39(6), provide for a derogation of the investment rules in articles 52–55 of UCITS IV for the receiving fund.

634 UCITS IV, art 41ff.

635 Depending on the law of the particular member state, see UCITS IV, art 42(1).

636 See also UCITS IV, art 42(3).

637 UCITS IV, art 42(2)(a)–(c).

for repurchase or redemption, or conversion of shares or units.[638] The information must include the rationale and background for the merger; its possible impact on the investors;[639] which rights the unit holders have during the process;[640] the date when it will take place; the details on the procedure; and finally, the 'key investor information'.[641]

Unit holders can request that disinvestment costs are covered, or that they can repurchase or redeem their units. Where possible, unit holders can also request that their stake in the fund is converted into a stake in a UCITS fund whose policies and approaches to investment are similar to the fund they originally invested in. This 'replacement' fund can either be a fund the manager is currently managing itself, or a fund that is linked to the manager in a different fashion.[642] The subscription, redemption, or repurchase of fund units can be temporarily suspended if competent authorities permit this, and the measure is justified by investor protection objectives.[643]

National law can mandate approval by the unit holders of UCITS funds for a merger to be allowed to go through. The UCITS IV framework mandates that no more than 75% of votes cast can be required. Existing laws with other quorums are not affected by this provision. If national laws specify a quorum, it must be equal for domestic mergers and for cross-border mergers. Such rules must be identical for UCITS fund mergers and for mergers of corporate entities.[644] Costs resultant from

[638] Under UCITS IV, art 45(1).

[639] '[I]ncluding but not limited to any material differences in respect of investment policy and strategy, costs, expected outcome, periodic reporting, possible dilution in performance, and, where relevant, a prominent warning to investors that their tax treatment may be changed following the merger', according to UCITS IV, art 43(3)(b).

[640] '[I]ncluding but not limited to the right to obtain additional information, the right to obtain a copy of the report of the independent auditor or the depositary on request, and the right to request the repurchase or redemption or, where applicable, the conversion of their units without charge as specified in Article 45(1) and the last date for exercising that right', according to UCTIS IV, art 43(3)(c).

[641] UCITS IV, art 43(3)(a)–(e). The key investor information is described in article 78 of UCITS IV.

[642] According to UCITS IV, art 45(1), either through common management or control, or through a holding. This right comes into existence as soon as the unit holders have been informed of the planned merger and ends five working days before the date the exchange ratio is calculated, according to article 47(1) of UCITS IV.

[643] UCITS IV, art 45(2).

[644] UCITS IV, art 44.

the merger procedures, whether these are related to legal, administration, or advisory aspects, are not allowed to be charged to either the fund or to their investors, except in cases where no management company has been designated.[645] The exact date of a merger depends on the laws of the country in cases where a domestic merger takes place. In the case of cross-border mergers, the law of the home member state of the receiving fund determines the date of the merger. A breach of this provision leads to the merger being null and void. The merger must be publicized according to the receiving fund's member state's laws. The depositary must also be notified.[646]

A merger that goes through can have one of three effects, depending on which type of merger has occurred. The three types are a merger between two existing funds where the merging fund is subsequently liquidated, a merger between two existing funds where the merging fund continues to exist in order to satisfy any outstanding liabilities, and a merger between an existing fund and a newly created fund where the existing fund is subsequently dissolved. In all three cases, a transfer of all assets of the merging fund to the receiving fund or its depositary takes place. Liabilities of the merging fund also transfer, unless that fund continues to exist, as described above. In all three cases, the investors in the merging fund become investors in the receiving fund and their units in the merging fund become units of the receiving fund. Where the merging fund is dissolved, investors can additionally be entitled to a cash payment of up to 10% of the NAV of their original units.[647] Finally, once the merger is complete, the receiving fund or its manager, if one has been designated, must inform the depositary that the assets and liabilities have been transferred, and the merger has been completed.[648]

4.5.2.8 Portfolio Construction under UCITS IV

UCITS IV permits the investment in a wide range of products, a legacy effect of the UCITS III product directive. This leads to the same possibilities and the same dangers the portfolio construction allowances of the UCITS III directive led to. As a concrete example, the replication of many hedge fund strategies utilizing the UCITS 'wrapper' is possible under UCITS IV as well. The section below describes

[645] UCITS IV, art 46.

[646] UCITS IV, art 47(1)–(3).

[647] UCITS IV, art 48(1)–(3).

[648] UCITS IV, art 48(4).

in detail which portfolio compositions are permissible under UCITS IV, and where the limits to UCITS funds are set.

The framework restricts investment possibilities through three limits. In essence, the set provides answers to three questions related to the investment process of UCITS funds: *what* the fund may invest in, *how much* it may invest *where or with whom,* and *how* it must invest it. Firstly, UCITS IV limits the types of assets a UCITS fund is permitted to invest in. Secondly, it sets specific investment limits for the types of assets the fund can invest in with a single issuer, in order to avoid certain risk concentrations. The framework also contains specific rules related to master-feeder structures, tracker funds, and funds of funds. Thirdly, UCITS IV contains rules related to investment and portfolio management techniques and risk management processes, as well as techniques to limit exposure to certain derivatives positions.[649]

4.5.2.8.1 Eligible Assets under UCITS IV

Principally, a UCITS fund is permitted to invest in one or more of the following asset categories:

1. Transferable securities[650] and recently issued transferable securities
2. Money market instruments
3. Financial derivative instruments
4. Deposits with credit institutions
5. Units of other UCITS funds or of other collective investment undertakings.[651]

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[649] See also Moloney (n 65) 224ff.

[650] The term transferable security is not defined in the UCITS IV directive itself, but makes reference to the MiFID II framework, which defines transferable securities as – those classes of securities which are negotiable on the capital market, with the exception of instruments of payment, such as:

(a) shares in companies and other securities equivalent to shares in companies, partnerships or other entities, and depositary receipts in respect of shares;

(b) bonds or other forms of securitised debt, including depositary receipts in respect of such securities;

(c) any other securities giving the right to acquire or sell any such transferable securities or giving rise to a cash settlement determined by reference to transferable securities, currencies, interest rates or yields, commodities or other indices or measures[.]

See MiFID II art 4(44).

[651] UCITS IV, art 50(1)(a)–(h).

The scope of eligible assets is additionally narrowed down further by detailed restrictions regarding each of the aforementioned categories. Despite these restrictions, it becomes apparent that investments under the UCITS Directive for funds remain extremely broad and flexible, ranging from traditional investments like equities to less conventional ones like money market instruments and derivatives.

Transferable securities and money market instruments must be dealt on or admitted to a MiFID II regulated market. They can alternatively be admitted to or dealt on a regulated market in a member state or third country. The market must be public, recognized, and operate regularly. In cases where a fund's investments are to include assets dealt on markets in third countries, either there must be a legal provision that allows this, the fund rules allow such investments, or the competent authorities have permitted it.[652] Investment is permitted in securities that have only recently been issued, but only if these securities are listed on a regulated market or stock exchange,[653] and the application is secured within a year of issue.[654]

Investments by funds in other UCITS funds or in other types of funds is possible,[655] but only if a set of prerequisites are met. The funds must be authorized and supervised in a fashion that is equivalent to laws of the European Union. Cooperation must be ensured between both authorities. Furthermore, the funds' investor protection measures must be roughly equivalent to those of UCITS funds.[656] Additionally, no more than 10% of total assets may consist of investments in yet other funds. Finally, such funds[657] must also satisfy reporting requirements, including semiannual reports on business activities and an annual report.[658]

Investment in derivative instruments is also possible.[659] Both derivatives traded on regulated markets and OTC derivatives can be invested in, but they are subject to

652 UCTIS IV, art 50(1)(a)–(c).

653 This exchange must satisfy the same prerequisites which are satisfied by markets where eligible securities are dealt on. See UCTIS IV, art 50(1)(a)–(c); UCITS IV, art 50(1)(d)(i).

654 UCITS IV, art 50(1)(d)(i), (ii).

655 UCITS IV, art 50(1)(e) first subparagraph. Whether the fund to be invested in is established in a member state or not is irrelevant.

656 UCITS IV, art 50(1)(e)(ii).

657 Ie, those funds that the UCITS fund is investing its capital in.

658 UCITS IV, art 50(1)(e)(i)–(iv).

659 UCITS IV, art 50(1)(g).

different levels of requirements.[660] In all cases, the underlying of any derivatives that a fund invests in must consist of instruments the fund's investment objectives allow it to invest in, and are provided for by the UCITS IV framework.[661] Investments in OTC derivatives are permitted, but the UCITS IV framework implements some safeguards to mitigate the two main risk categories associated with such products. These categories consist of counterparty risk and liquidity risk. These risks are mitigated through permitting UCITS funds only to invest in OTC derivatives where the counterparties are 'institutions subject to prudential supervision' and are approved by the fund's home member state's authorities. The value of the derivatives themselves must be updated daily, and they must offer a specific minimal level of liquidity where they can be sold[662] at a price reflecting their 'fair value' at any time.[663]

Money market instruments that fall outside of those already mentioned above, ie are dealt on a regulated market, can form a part of a fund's portfolio, as long as the issuer complies with regulation guaranteeing a sufficient level of investor protection and general prudential regulation.[664] The issuer or guarantor of these money market instruments must also satisfy additional requirements, which in principle mandate that these issuers or guarantors are one of the following: official bodies of a government; institutions who also have issued securities on regulated markets of the nature listed in the sections above; an entity where prudential supervision under EU law or equivalent is assured; or, finally, other entities that have sufficient minimal capital reserves where investor protection is assured.[665]

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660 ibid.

661 UCITS IV, art 50(1)(g)(i). In addition to what is named in article 5(1), the underlying may also consist of financial indices, interest rates, and foreign exchange rates or currencies.

662 Or they can liquidated, or the position closed out by an offsetting trade.

663 UCITS IV, art 50(1)(g)(ii),(iii). It is evident that technically, no asset is so liquid that it could be sold at any time at fair value. What is presumably meant is that liquidity is so high that the UCITS fund can sell the asset within a sufficiently short time frame at or extremely close to the bid-ask spread, or the price at which the asset is valued, so as not materially to impact the fund's liquidity risk.

664 UCITS IV, art 50(1)(h).

665 UCITS IV, art 50(1)(h)(i)–(iv). Specifically, the possible issuers or guarantors can be: central, regional, or local authorities or central banks of member states, the ECB, the European Investment Bank, or a third country. In federal states, the issuer or guarantor can also be a member or part of a federal state. Lastly, a public international body to which one or more member states belong can also act as issuer or guarantor. The 'other

It is also permitted to make deposits with a bank, ie a credit institution.[666] Such an institution must have its registered office in a member state. If this is not the case and the entity in question is established in a third country, then there must be equivalence between the prudential rules such an institution is subject to and those in EU jurisdictions. As would be assumed, withdrawal of deposits and their repayment must be able to occur immediately. Furthermore, the maturity of the deposits cannot be longer than twelve months.[667]

UCITS funds are expressly prohibited from investing in precious metals or any certificates which may represent precious metals. They are permitted to hold additional liquid assets, and can acquire property, irrespective of whether it is of a movable nature or consists of immovable property, as long as these purchases are essential and have the objective of furthering the fund's business pursuits.[668]

4.5.2.8.2 Limits to Individual Investments

UCITS IV creates upper thresholds for investment concentrations by placing upper limits on the percentage of a portfolio that may consist of financial products from the same issuer.[669] The most basic limit is the 10% limit to assets in money market instruments or transferable securities, other than those types mentioned in the section above.[670]

4.5.2.8.2.1 The General Rules Regarding Investments with a Single Issuer or Counterparty

While the rules regarding investments in a single issuer or body are comparably extensive and intertwined in their nature, the underlying intention is to ensure investor protection by preventing counterparty and concentration risks from emerg-

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bodies', which are referred to in the text, and where investor protection must be assured, must have capital and reserves of at least EUR 10mio and must publish annual accounts in accordance with the relevant EU law. The level of investor protection must be equivalent to that of other bodies listed in the paragraph, and the entity must be dedicated to the financing of the group to which it belongs or the financing of securitization vehicles (which benefit from a banking liquidity line).

[666] UCITS IV, art 50(1)(f).

[667] ibid.

[668] UCITS IV, art 50(2)(b), 50(2) second subparagraph, 50(3).

[669] UCTIS IV, arts 50(2)(a), 52ff.

[670] UCITS IV, art 50(2)(a). See also section 4.5.2.8.1.

ing in a UCITS fund's portfolio.[671] As a consequence, specific portfolio composition rules must be followed, which set upper thresholds for various investments. Money market instruments and transferable securities follow such rules, where the construction of any UCITS portfolio must follow what is termed the 5/10/40 rule.[672] First, no more than 5% of assets may be invested in assets of the same issuer.[673] Member states may raise this threshold to 10%; however, in this case, the value of all the investments from the same issuer that are above 5% cannot, in total, consist of more than 40% of all the fund's assets.[674] A fund's exposure to OTC derivatives is also subject to percentage limits: it cannot exceed 10% if the counterparty to a derivatives transaction is a credit institution, and cannot exceed 5% in cases where it is not.[675] Finally, a maximum of 20% of the assets of a fund can be deposited with just one entity.[676]

Any combination of investments that exposes more than 20% of assets to one single entity is prohibited, regardless of whether these are transferable securities or any of the other permissible categories.[677] Cumulative investments with companies within the same financial group are considered to be the same entity or issuer in this context. Investments in groups can be allowed by member states up to a threshold of 20% of a fund's assets.[678]

4.5.2.8.2.2 Exceptions to the General Rules

The limits described directly above are not absolute, but have specific exceptions. It is possible to revise the 5% limit and set it at up to 35% of the assets in a portfolio consisting of transferable securities and money market instruments issued by member states. This is only permitted if such securities or instruments are guaranteed or issued by either a member state, a local authority in a member state, a third country, or a public international body the member state or states belong to.

671 See Moloney (n 65) 229.

672 Franziska Bolle, 'Die Umsetzung Marktneutraler Anlagestrategien in Regulierten UCITS-Investmentfonds' (PhD thesis, University of Leipzig 2017) 11.

673 UCITS IV, art 52(1) first subparagraph (a).

674 UCITS IV, art 52(2) first subparagraph.

675 UCITS IV, art 52(1) second subparagraph (a), (b).

676 UCITS IV, art 52(1) first subparagraph (b).

677 UCITS IV, art 52(2) second subparagraph (a)–(c).

678 UCITS IV, art 52(5) third and fourth subparagraph.

The same limit can be raised to 25% if the investments in question consist of certain types of bonds.[679] These must have been issued by a financial institution. The institution must be subject to special prudential supervision, the objective of which is the protection of the bondholders. Additionally, the institution's registered office must also be in a member state.[680] If a fund's portfolio contains investments that have been issued by the same issuer exceeding 5% of all its assets, then this is only permissible if the total value is not above 80% of the value of all assets of the fund.[681]

Investments in both of the categories described above are excluded from calculations of the 40% limit under the 5/10/40 rule.[682]

All these investment limits may not be combined, which means that a UCITS fund may therefore not manage a portfolio with more than 35% of assets from a single body, issuer, or counterparty.[683]

The table below contains a complete overview of the portfolio composition rules and the thresholds to specific types of investments, as well as concentration limits designed to limit counterparty risk.

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679 Member states must send the Commission a list containing categories of bonds and issuers which have been authorized. This list is available to the public and can be found here: <www.esma.europa.eu/document/categories-covered-bonds-and-issuers-covered-bonds> accessed 29 August 2020. As of the time of writing, the most recent document dated from March 2014: See ESMA, 'List of Categories of Covered Bonds and Issuers of Covered Bonds' (consolidated document, 2014) <www.esma.europa.eu/sites/default/files/library/consolidated_document_update_march_2014.pdf> accessed 31 August 2020.

680 UCITS IV, art 52(4) first subparagraph. Specifically, it is stated that 'sums deriving from the issue of those bonds shall be invested in accordance with the law in assets which, during the whole period of validity of the bonds, are capable of covering claims attaching to the bonds and which, in the event of failure of the issuer, would be used on a priority basis for the reimbursement of the principal and payment of the accrued interest.'

681 UCITS IV, art 52(4) second subparagraph.

682 UCITS IV, art 52(5) first subparagraph.

683 UCITS IV, art 52(5) second subparagraph. The investments include, as would be assumed, transferable securities and money market instruments, deposits, and derivatives.

4.5.2.8.2.3 Table 4d: Overview of Investment Limits[684]

Investment	Limit	Exceptions	Provision
Transferable securities and money market instruments outside of article 50 (1)	10% of assets		
Transferable securities and money market instruments issued by the same body	5% of assets	10% subject to member state's decision. In this case total exposure to issuers in each of which more than 5% is invested, cannot exceed 40% of the value of fund's assets (the two categories listed directly below are not taken into account for this 40% limit). 35% if issued or guaranteed by public authorities. 25% for bonds issued by credit institutions (subject to conditions under article 52 (3) and 52 (4). Total value may not exceed 80% of the value of assets, if investments over 5% of assets invested.	
Deposits with the same body	20% of assets		
Counterparty exposure in OTC derivatives transactions	5% of assets	10% if counterparty is credit institution subject to appropriate supervision	

684 Author's own, based on the relevant UCITS IV/V provisions.

Investment	Limit	Exceptions	Provision
Overall exposure to a single body (transferable securities, money market instruments, deposits, and exposures from OTC derivatives).	20% of assets		
Transferable securities and money market instruments of companies in the same group	20% of assets		
Overall exposure to a single body including all limits	35% of assets		

4.5.2.8.3 Investment Limits under Certain Investment Policies

Certain investment policies of UCITS funds make adjustments to investment limits necessary. The UCITS IV framework provides for this by permitting alternative limits for three investment policies. Tracker funds replicating an index or indices, funds of funds, and master-feeder funds have separate investment limits. Tracker funds and funds of funds are described in this section; master-feeder structures are described below. For index funds or 'tracker' funds, there are specific requirements to the composition of their portfolio, which permit such an exception: if the index the fund replicates is diversified to a specific adequate degree, the fund represents an acceptable benchmark for the market or index it replicates, and the investment policy is published according to the prerequisites of the UCITS framework, then investment limits can be raised to 20%. This exception exists only specifically for investments in shares or debt securities by one issuer, however.[685] This limit can be raised up to 35% if justified by 'exceptional market circumstances', particularly where certain securities or instruments are highly dominant. This limit may only apply to a single issuer.[686]

A significant exception to the investment rules outlined above exists, where government issued or guaranteed investments can form the entirety of a fund's portfolio, in which case the ordinary investment limits are not applicable. Member

685 UCITS IV, art 53(1)(a)–(c).

686 UCITS IV, art 53(2).

states can authorize funds to invest wholly in securities or money market investments, as long as these investments have either been issued or are guaranteed by an official body, to include only member states, third countries, local authorities, and public international bodies with one or more member states as a member. As long as investors in such a fund are considered to be protected to an equivalent degree vis-à-vis investors in UCITS funds subject to the general investment limits, up to 100% of assets can be invested in transferable securities or money market instruments of the nature described directly above. The fund rules for funds invested or intending to invest only in these types of assets where more than 35% of the portfolio has been issued or is guaranteed by the same entity must mention these issuers or guaranteeing bodies. These rules must also have been sent to and accepted by the competent authorities. Additionally, a 'prominent statement' must form a part of the fund's prospectus, and marketing materials must name the issuers or guarantors and specify that the fund is permitted to invest in such a manner.[687]

In the case of funds of funds, the upper limit to assets that are allowed to be invested in units of one single other fund is set at 10% of assets, or can be raised to 20% if member states decide to do so. Overall, investments in other collective investment undertakings cannot rise above 30% of all assets.[688] Member states may exclude investments in other collective investment pools from being combined when calculating the applicable limits as outlined by the general investment limits.[689]

4.5.2.8.4 Limits Related to Voting Rights

To prevent a UCITS fund from exercising undue influence over the issuers of its investments through voting rights, the UCITS IV directive contains provisions limiting the volume of investments that can be made if they lead to significant influence over an issuer.[690] Accordingly, a fund may not purchase more than 10% of either non-voting shares, debt securities, or money market instruments of a single issuer. The percentage limit on the purchase of shares or units of other funds,

[687] UCITS IV, art 54.

[688] UCITS IV, art 55(1), (2).

[689] UCITS IV, art 55(2) second subparagraph. See also section 4.5.2.8.2 and UCITS IV, article 50 for the general rules.

[690] UCITS IV, art 56(1).

UCITS funds or different collective investment schemes, is set at 25%.[691] These limits may only be disregarded if at the purchasing stage the specific amount of the acquisition cannot be calculated.[692] Member states can decide not to apply these limits if the investments in question concern either transferable securities or money market instruments from an issuer or guarantor that is either a member state, third country, or public international body with member states belonging to it.[693] The limits can also be waived by member states where shares of subsidiaries are being repurchased (by investment companies) at the request of a unit holder, but only where the subsidiary is in the business of management, marketing, or advisory services within the subsidiary's own member state. Member states also do not have to apply the limits in cases where the only option for a fund is to acquire securities of issuers in a third country. Specifically, the limits do not need to be applied if this can only be accomplished indirectly by investing in shares of a company which in turn invests in such third-country securities.[694] The company in the third country must follow the rules on the general limits and also the limits for funds of funds, however.[695]

4.5.2.8.5 Exceptions and Remedies in the Case of Limits Exceeded

For the exercise of subscription rights that are attached to either money market instruments or transferable securities that are already part of a fund's portfolio, the investment limits are not applicable.[696] For six months following authorization, member states can allow funds to deviate from the general limits and the limits for funds of funds investments.[697] A fund that exceeds these limits, whether through exercising subscription rights or due to events that are not under the fund's control, must aim as its primary objective to remedy the situation while still remaining observant of and acting according to the interests of its investors.[698]

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691 UCITS IV, art 56(2).

692 UCITS IV, art 56(2) second subparagraph.

693 UCITS IV, art 56(3)(a)–(c).

694 UCITS IV, art 56(3)(d)–(e).

695 UCITS IV, art 56(3) second subparagraph.

696 UCITS IV, art 57(1) first subparagraph.

697 UCITS IV, art 57(1) second subparagraph.

698 UCITS IV, art 57.

4.5.2.8.6 Risk Management and Operational Requirements

Monitoring and measuring positions and the contribution to total risk of a portfolio is an essential facet of risk management, consequently the UCITS IV directive mandates that an investment or management company has such a process in place. In addition, a valuation process that is both accurate and independent must exist for OTC derivatives.[699] The investment or management company must also communicate information to its competent authorities regarding its derivatives positions, their types, underlying risks, the methods of risk estimation used and the underlying risks, and quantitative limits. This information must be provided for each UCITS fund the company manages.[700]

Management companies that manage UCITS funds that are invested in each other are prohibited from charging duplicate fees on subscription or redemption of fund shares or units. Whether the manager is managing the funds in question due to delegation arrangements or not is irrelevant. Managers are not permitted to charge such fees in cases where they are linked to another fund's manager, one of which intends to charge these fees. If this link is established through a holding company, direct management or corporate control is irrelevant.[701] The prospectus on a UCITS fund must mention the upper limit of fees that it is charged or are charged to the funds it intends to invest in. The maximum fees charged to the fund itself and the funds it invests in must be listed in the investing fund's annual report.[702]

More generally, portfolio management techniques may be permitted by member states as long as these contribute to efficient portfolio management as mandated by the fund's rules. These techniques employed, and instruments connected to them, must adhere to the general investment limits, however.[703] Global exposures to derivatives cannot be larger than the total net value of the fund's portfolio.[704] Investments in derivatives that form a part of these techniques also must adhere to

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[699] UCITS IV, art 51(1) first and second subparagraph.

[700] UCITS IV, art 51(1) third subparagraph.

[701] UCITS IV, art 55(3) first subparagraph.

[702] UCITS IV, art 55(3) second subparagraph.

[703] UCITS IV, art 51(2).

[704] UCITS IV, art 51(3) first subparagraph. In calculating total exposure, the current value of the underlying assets, counterparty risks, future market movements, and the liquidity of the position must be taken into account. See UCITS IV, art 51(3) second subparagraph.

the general rules.[705] If embedded derivatives form a part of transferable securities or money market instruments that are being invested in, meaning essentially that a derivative is contractually included as part of an asset,[706] then derivatives must be taken into account, and the rules on derivatives described in this section become applicable.[707]

4.5.2.9 Master-Feeder Structures

4.5.2.9.1 Permissible Structures and Approval by Competent Authorities

The provisions regarding master-feeder structures concern structures where one UCITS fund invests its funds in a single other UCITS fund.[708] A fund is considered the 'feeder UCITS' if 85% or more of its assets are invested in another fund.[709] The fund which is being invested in, on the other hand, is the 'master UCITS'.[710] A master UCITS fund cannot itself concurrently be a feeder fund for a third fund, nor can it hold units or shares in feeder funds.[711] A master fund with two or more feeder funds is permitted to decide whether it wants to sell its units or shares to the public or to other investors.[712]

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705 See section 4.5.2.8.2.1. See also UCITS IV, art 52. If the investments are index-based, then these investments do not need to be combined in the context of the limits of that article. See UCITS IV, art 51(3) third subparagraph.

706 The IFRS accounting standards (IFRS 9) define an embedded derivative as follows: 'An embedded derivative is a component of a hybrid contract that also includes a non-derivative host – with the effect that some of the cash flows of the combined instrument vary in a way similar to a stand-alone derivative.' See Commission Regulation (EU) 2016/2067 of 22 November 2016 amending Regulation (EC) No 1126/2008 adopting certain international accounting standards in accordance with Regulation (EC) No 1606/2002 of the European Parliament and of the Council as regards International Financial Reporting Standard 9 [2016] OJ L323/1, 15.

707 UCITS IV, art 51(3) fourth subparagraph.

708 Moloney (n 65) 232.

709 UCITS IV, art 58(1).

710 UCITS IV, art 58(3).

711 ibid.

712 UCITS IV, art 58(4) second subparagraph (a), (b). A UCITS master fund with one or more feeder funds that does not raise funds from the public in a different member state has relaxed standards in that it does not have to follow provisions related to cross-border marketing and supervision by host member states (see UCITS IV, chapter 11 and article 108(1) second subparagraph).

As mentioned above, a feeder fund has most of its assets invested in a master fund; accordingly, it can invest the remaining 15% of its assets in other investments. For these 15%, a feeder fund may be invested only in 'ancillary liquid assets', financial derivatives, and property, both movable and immovable.[713] A feeder fund has to calculate the cumulative global exposure of its derivative positions combined with the derivative positions of the master fund. It must calculate either the master fund's proportional actual global exposure, or its the maximum potential exposure.[714]

A feeder fund is approved by the competent authorities in its home member state. In order for a feeder UCITS fund to be approved,[715] it must submit the following: the fund rules or instruments of incorporation of both the feeder and master funds, the agreement between feeder and master fund or the internal conduct of business rules, the prospectus and key investor information of both funds, the information to be provided to unit holders, and information sharing agreements in the cases where the funds have differing depositaries and/or auditors.[716] If the feeder and master funds have different home member states, a specific document that attests to the eligibility of the master fund to act as such must be supplied. This attestation is provided by the authorities of the master fund's home member state.[717] The feeder fund must be informed on whether application has been confirmed or denied by the authorities within 15 days of its submission.[718] The 'master-feeder' fund agreement mentioned above is a prerequisite, which ensures the feeder fund has all the documents required. Before the agreement becomes effective, the feeder fund cannot invest more than the general investment limit[719] in the master fund. If

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713 UCITS IV, art 58(2)(a)–(c). Movable and immovable property must be essential for the direct business activity of the feeder fund, in the case where it is an investment company.

714 UCITS IV, art 58(2) second subparagraph (a)–(b). The maximum potential exposure of the master fund will be provided for in the instruments of incorporation or in the fund rules.

715 UCITS IV, art 59(1). Approval in this context means a fund is permitted to exceed the general investment rules regarding investment in other UCITS funds, here article 55(1).

716 UCITS IV, art 59(3)(a)–(f).

717 UCITS IV, art 59(3) second subparagraph. These documents are provided by the feeder fund in one of the official languages of its home state or another approved language.

718 UCITS IV, art 59(2)(a)–(f).

719 See UCITS IV, art 55(1).

the manager of the master and feeder fund is the same, the agreement can be supplanted with internal rules regarding the conduct of business.[720]

4.5.2.9.2 Coordination, Liquidation, and Mergers

Master and feeder funds must coordinate certain actions, namely the calculation of their NAV, and the temporary suspension, redemption, and repurchase of their units.[721] When the master fund is liquidated, the feeder fund is liquidated as well. An exception to this rule is provided where the competent authorities of the feeder fund allow it to convert into a non-feeder fund, or, alternatively, allow the feeder to reinvest in a different master fund.[722] A merger of the master fund with a different fund or a division where the master fund divides itself into two or more separate UCITS funds results in the liquidation of its feeder fund. Liquidation of the feeder fund is only avoided if the fund's competent authorities permit it to either remain a feeder fund of the master fund, become a feeder fund to a master fund resulting from the merger, or reinvest its assets in a fund not connected to the merger. Finally, in analogy to the situation that occurs when a master fund liquidates, the feeder fund can avoid its own liquidation if authorities allow its conversion into a non-feeder fund.[723] A merger cannot become effective, however, if the master fund has not afforded the feeder fund the opportunity either to organize the repurchase of its units or shares in the master fund prior to the merger, or allow their redemption.[724]

4.5.2.9.3 Depositaries and Auditors

Master-feeder structures require distinct rules for depositaries and auditors as well. These provisions aim to ensure the flow of information in situations where the master and the feeder fund have different auditors or depositaries. To this end, if

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[720] UCITS IV, art 60(1).

[721] UCITS IV, art 60(2), (3). In the case of temporary suspension of redemption, repurchase, and subscription rights by the master fund, the feeder fund can do the same (but is not mandated to do so). This action must remain compliant with article 84(2), however.

[722] UCITS IV, art 60(4). The liquidation of the master fund cannot take place until three months after the master UCITS fund informs its unit holders and the competent authorities of the feeder fund.

[723] UCITS IV, art 60(5)(a)–(c). The master fund must provide the required information to its unit holders under article 43. See UCITS IV, art 60(5) second subparagraph.

[724] UCITS IV, art 60(5) third subparagraph.

feeder UCITS funds and master UCITS funds have different depositaries or different auditors, the depositaries must enter into information-sharing agreements with each other, and the auditors must do the same. Before such agreements are effective, the feeder may not invest in the master fund. The feeder fund or its manager is responsible for providing the information that the depositary requires.[725] When preparing its audit report, the feeder fund's auditor is obligated to pay notice to the relevant portions of the master fund's audit report. Any irregularities the feeder fund's auditor discovers, especially if it discovers these in the master fund's audit report, must be reported.[726] If the master fund's depositary detects any irregularities, it must communicate these to the master fund's home member state authorities, the feeder fund itself, the feeder's management company, or its depositary.[727]

4.5.2.9.4 Marketing Communications by the Feeder Fund

In addition to the information provided to investors in any UCITS fund,[728] a feeder fund must provide the following additional information in its prospectus. It must provide:

1. A declaration that it is a feeder fund in a master fund.
2. The fund's investment objective and policy, the risk profile, and its performance and differences between the master fund and itself.
3. A brief description of the master UCITS fund.
4. A summary of the agreement between master and feeder fund.
5. How to obtain further information on the master fund.
6. A description of all remuneration or reimbursement of costs payable by the feeder fund resulting from its investment in the master fund.
7. Tax implications of the investments in the master fund.
8. A statement of aggregate charges of both the feeder and master fund.

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[725] UCITS IV, arts 61(1) and 62(1).

[726] UCITS IV, art 62(2).

[727] UCITS IV, art 61(2).

[728] See UCITS IV, Annex 1 sch A.

9. In the annual and half-yearly report: a statement how the master fund's reports of the same nature can be found.[729]

The feeder fund must, together with the other documentation that needs to be provided,[730] send to the competent authorities of its home member state all of the following: the prospectus, the key investor information, and the annual and semi-annual reports.[731] In any market communications, the feeder fund must declare that it is invested in a master fund, with at least 85% of its portfolio invested in that fund's units.[732]

4.5.2.9.5 Converting Feeder Funds and Changing Master Funds

Converting a UCITS fund that is already in operation into a feeder fund requires authorization by the competent authorities, the process of which is described above.[733] A non-feeder fund that wants to convert into a feeder fund and feeder funds with different master UCITS funds must provide information 30 days prior to the start of the investment in the master fund in question to its unit holders.[734] The information must include a statement that confirms that competent authorities are allowing the investment activity in question; a second statement that informs investors of their right to request that their units be repurchased or redeemed; the date in which investment in the master fund will begin;[735] and the key investor information of both funds, master and feeder.[736]

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[729] UCITS IV, art 63(1)(a)–(g), 63(2). A paper copy of both prospectus and annual as well as half-annual reports of the master fund must be delivered by the feeder fund to investors that request this. This service must be free of charge. See UCITS IV, art 63(5).

[730] See UCITS IV, arts 82 and 74.

[731] UCITS IV, art 63(3). The key investor information is described further in article 78.

[732] UCITS IV, art 63(4).

[733] See section 4.5.2.9.

[734] UCITS IV, art 64(1). This information must be provided in an official language of the home member state or in a language approved by the competent authorities. See UCITS IV, art 64(2). The feeder fund cannot invest in the master fund before a 30-day period has expired. See UCITS IV, art 64(3).

[735] Or the date on which general limit of article 55(1) will be surpassed.

[736] UCITS IV, art 64(1)(a)–(d). The key investor information that needs to be provided is described in article 78.

4.5.2.9.6 Monitoring, other Obligations, and the Flow of Information

A UCITS feeder fund is entrusted with a limited monitoring role under the UCITS IV directive. The feeder fund is not required to verify the information it receives from the master fund or its manager, unless there is a specific reason to call the accuracy of said documents or information into question.[737]

Any monetary benefit a feeder UCITS fund receives must be reinvested in its own assets. It is irrelevant whether this benefit is in the form of a distribution, commission, or another type of monetary benefit that results from the investment relationship between master and feeder fund.[738] Conversely, a master fund is not allowed to charge the feeder fund any subscription fees, nor can it charge redemption fees.[739]

The flow of information from the master fund to the competent authorities is ensured by mandating the master UCITS fund make all the required information available 'in a timely fashion'. The same applies to information relayed to competent authorities, the feeder fund, or the feeder's depositary and auditor.[740] The master fund must also provide the identity or identities of the feeder fund or funds to its home member state competent authorities. The competent authorities will pass this information on, if feeder and master funds have diverging home member states.[741]

In order for the feeder fund to receive information on the decisions, measures, and observations of non-compliance regarding the master fund, the competent authorities are mandated to inform the feeder fund immediately. The same is mandated for cases involving the master fund's depositary, auditor, or management company. If the funds are in same member state, the competent authorities will pass on the information to the feeder fund directly and immediately. When multiple member state authorities are involved, the master fund's competent authority will inform its counterpart in the feeder fund's home member state, which will then proceed to immediately forward the relevant information to the feeder fund.[742]

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737 UCITS IV, art 65(1).

738 UCITS IV, art 65(2).

739 UCITS IV, art 66(2).

740 UCITS IV, art 66(3).

741 UCITS IV, art 66(1).

742 UCITS IV, art 67.

4.5.2.10 Information to Investors

4.5.2.10.1 The Prospectus, Annual and Half-Yearly Report

Providing information to investors represents a cornerstone of investor protection measures, and the UCITS IV framework proves no exception, especially because UCITS funds are meant to be mass-market financial products that are sold to retail investors. The section related to information to investors of the UCITS IV directive hence demands that the investor receive an extensive and very detailed amount of information. As the section below elaborates,[743] the design of these provisions must find a balance between the volume of information provided to investors and the ability and willingness of the investor to consume and comprehend this information.

The central instrument of investor information is the prospectus, which rivaled only by the key investor information document. Apart from the prospectus, an annual report[744] and a half-yearly report[745] must be published by the manager.[746]

The prospectus aims to provide an investor with all the current information, which is intended to facilitate the potential investor's decisionmaking process on the basis of this information. To this end, the prospectus must include a risk profile which is presented in a fashion making it easy to understand and clear.[747] The prospectus must contain the categories of assets the fund is authorized to invest in. Where a UCITS fund invests in asset categories outside of the general category of transferable securities and money market instruments,[748] this must be stated in the prospectus with sufficient prominence. A prominent statement and possible effects

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[743] See section 4.5.2.10.2

[744] The annual report has to contain a balance sheet or statement of assets and liabilities, an income and an expenditure account for the financial year, and a report on activities during the financial year. Finally, the annual report has to contain significant information from UCITS IV, Annex I Schedule B. See UCITS IV, art 69(2). The annual report must be audited, and the report of the audit reproduced in the annual report in full. See UCITS IV, art 73.

[745] The half-yearly report must contain the information of UCITS IV, Annex I Schedule B. If interim dividends have been paid, this must be indicated, as after tax, in the half-yearly report. See UCITS IV, art 69(4).

[746] UCITS IV, art 68(1). The annual report must be published within four months of the end of the period it relates to; the half-yearly report within two months. See UCITS IV, art 68(2).

[747] UCITS IV, art 69(1). See also art 72.

[748] See UCITS IV art 50.

on the fund's risk profile must also form a part of the prospectus if the fund invests in derivatives. In the same fashion, a prominent statement is required if a fund is replicating a stock or bond index, or where the fund's NAV is likely to experience high volatility resulting from the composition of its portfolio or management techniques.[749] The instruments of incorporation or fund rules must form a part of the prospectus. If they aren't included in the prospectus, investors must be informed on where to obtain these documents.[750] Quantitative limits and the fund's risk management methods, as well as evolutions in risks and yields of the asset categories in the fund's portfolio do not have to be contained in the prospectus, but can be requested by investors.[751] In addition to what is listed above, the prospectus must include a list of contents from the annex of the UCITS IV directive.[752]

The home member state authorities of the fund must receive copies of the prospectus, the annual, and the half-yearly reports.[753] These documents must be accessible to investors free of charge. The prospectus must be delivered in paper form if this is requested, otherwise a website or other 'durable medium' is sufficient.[754] The annual and half-yearly reports must also be delivered in paper upon request; otherwise they take the form specified by the key investor information and the prospectus.[755]

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[749] UCITS IV, art 70(1)–(3). A prominent statement must be included in the marketing communications for funds with volatile NAV as well.

[750] UCITS IV, art 71. Either the fund can provide these upon request, or it can inform investors of where they can obtain the documents themselves.

[751] UCITS IV, art 70(4).

[752] This does not apply if this information is already contained in the instruments of incorporation or the fund rules that are contained in the prospectus. See UCITS IV, art 69(2) and schedule A of Annex I.

[753] UCITS IV, art 74. Upon request, these documents must also be sent to the management company's home member state competent authorities.

[754] UCITS IV, art 75(1), (2).

[755] UCITS IV, art 75(3).

4.5.2.10.2 Key Investor Information[756]

The KIID, or key investor information document contains the key investor information specified in the UCITS IV directive.[757] This is intended to be a short document that provides an overview at a glance of the relevant aspects a potential investor might be interested in. Behavioral economics show the limits of human cognition and abilities to comprehend and compute financial data as traditionally presented to the investor. The KIID seeks to remedy this through its inherent brevity and simplicity, in order to achieve a format understandable and digestible by the average retail investor. The KIID is also presented in a standardized format, which facilitates comparisons between UCITS funds, especially with regards to risk profiles and costs.[758] The KIID must therefore be formulated in a concise, non-technical language, in order to make it accessible to retail investors.[759]

A KIID must be drawn up for each individual UCITS fund, and has to contain the words 'key investor information'.[760] The KIID is comprised of five elements which provide the investor with core information related to the fund in question. The five elements are:

1. **Identification** of the UCITS fund,
2. **Investment objectives and investment policy** in a short description,
3. A presentation of **past performance** or alternatively of **performance scenarios**,
4. **Costs** and **associated charges**,
5. **A risk and reward profile**, including 'guidance and warnings' on the risks an investment in the fund might entail.[761]

These five elements need to be self-contained in the sense that they must be understandable without any miscellaneous documents or references,[762] but must also inform the investors on where to find additional information on the fund, the pro-

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756 The official template of the KIID, as published by the CESR is included in the appendix. See the appendix to this chapter.

757 The KIID is regulated by a number of ESMA level 3 Guidelines and other regulations, which are listed below.

758 See eg UCITS IV, recital 59 and article 78(2), (5).

759 UCITS IV, art 78(4).

760 UCITS IV, art 78(1).

761 UCITS IV, art 78(3)(a)–(e).

762 UCITS IV, art 78(3) second subparagraph.

spectus, the annual report, and finally, the half-yearly report.[763] While key investor information forms a part of the pre-contractual information, UCITS IV excludes civil liability from arising solely from the key investor information, unless it is either misleading or inaccurate, or in contradiction with the prospectus.[764] Key investor information must be provided in advance of the sale of units of a UCITS fund free of charge.[765]

4.5.2.10.3 Marketing Communications and other Obligations

Marketing communications may not contradict or diminish the KIID or the prospectus. In marketing communications, a reference to where the key investor information and the prospectus can be found must be included. Marketing communications must be clear, fair, and not misleading, and must clearly be identifiable as marketing communications.[766] Finally, the issue, sale and redemption or repurchase price of units of the UCITS must be disclosed to the public when it occurs and at least bimonthly, unless the competent authorities allow a reduction of this reporting to occur only once a month.[767]

4.5.2.11 Cross-Border Marketing

Cross-border marketing of UCITS funds in other member states is possible, but must be preceded by a notification letter to the competent authorities of the fund's home member state and must contain information on marketing arrangements in the country in which the fund intends to market its units, the so-called host member state. Where applicable, the letter must also include an indication that the fund is marketed by its manager.[768] Furthermore, the rules or instruments of incorporation, the prospectus, and the annual report as well as the latest half-yearly report must also be provided to competent authorities in the fund's home member state. Finally, the authorities are to be provided with the key investor information[769] related

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763 UCITS IV, art 78(4).

764 UCITS IV, art 79(1), (2). The KIID must contain a warning of this.

765 UCITS IV, art 80. If the fund in question is sold by intermediaries, they must also provide the key investor information.

766 UCITS IV, art 77.

767 UCITS IV, art 76. If the competent authorities reduce the frequency to once a month, this may not go against the interests of the unit holders.

768 UCITS IV, art 93(1).

769 See section 4.5.2.10.2 and UCITS IV, art 78.

to the fund.[770] The fund's home member state authorities verify what has been submitted and, if the information is complete, transmit it within 10 working days of having received the dossier to the competent authorities of the host member state. [771] The fund can commence marketing activities as soon as its authorities have informed it that the information has been passed on.[772] If units of a fund are to be marketed in a host member state of a fund, the investor information from section 4.5.2.10[773] must be provided to all of its investors in the host member state, which corresponds to the information that would be provided to investors in the fund's home member state.[774]

4.5.2.12 Competent Authorities

Competent authorities are designated by their respective member states. After appointing the competent authorities from public bodies or other public authorities, the Commission and ESMA have to be informed of which authorities have been appointed and how specifically the authorities' competencies are divided in the case of multiple authorities.[775] So authorities can effectively act as supervisors, the authorities are to be given a number of supervisory and investigative powers, including criminal sanctions. Should sanctions be imposed, these must be published, and redress provisions must provide a forum to permit the resolution of disputes and complaints.[776]

4.5.2.13 Outlook: UCITS VI and KID

The key investor documents, or KID, is equivalent to the KIID of the UCITS framework, but is mandated by the PRIIPs regulation. Since UCITS funds (as products) fall under the PRIIPs regulation, they would technically need to publish a KID as well. The KID is similar to the KIID. The current political developments have led to the postponement of mandatory publication of the KID due to its con-

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[770] UCITS IV, art 93(2).

[771] UCITS IV, art 93(3).

[772] UCITS IV, article 91(3) third subparagraph.

[773] See UCITS IV arts 68ff.

[774] UCITS IV, art 94(1).

[775] UCITS IV, art 97(1), (2).

[776] See UCITS, arts 98–101. The set of rules is extensive, in order to create effective supervisory bodies without compromising the rule of law in member states.

troversial nature.[777] Originally, the KID and the KIID were to be published concurrently starting on 1 January 2020, but this was postponed further until 2021 due to strong resistance from lobbyists and industry representatives.[778]

The future of the UCITS framework does not have a clearly delineated roadmap. In 2012, the European Commission launched a consultation which would have marked the beginning of the UCITS VI regulatory efforts. The consultation focused on liquidity management procedures, product and depositary rules, money market funds, and long-term investments.[779] While 97 responses were received following the consultation, no summary of responses was published, and no further official action was taken or documentation was published following the consultation. For the time being, UCITS VI remains in limbo, and it appears the focus has since shifted to ensuring the proper implementation of the existing UCITS IV/V framework and to creating lower level regulation to supplement the existing set of rules. In addition, the European fund management framework as it exists would benefit more from the consolidation and calibration of the UCITS and AIFMD systems, in order to create a coordinated and comprehensive single framework rather than deviating from the established direction.

4.5.3 Conclusion: A Comprehensive Framework for Open-Ended Funds?

The current UCITS IV/V regime represents the culmination of nearly three decades of development in the creation of a passporting system for retail funds in the European Union. In this respect, the framework has been quite successful, and total AuM recently hit record highs.[780] The UCITS brand has gained popularity

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777 Certain issuers going so far as to label the KID rules as 'toxic'. See Kate Beioley, 'Investment Trusts given Fortnight to Object to "Toxic" New Rules' *Financial Times* (London, 23 November 2018) <www.ft.com/content/01c7c2e0-eda7-11e8-8180-9cf212677a57> accessed 26 August 2020.

778 See PRIIPs article 32 (as amended).

779 Commission, 'Consultation Document on Undertakings for Collective Investment in Transferable Securities (UCITS) – Product Rules, Liquidity Management, Depositary, Money Market Funds, Long-Term Investments' (July 2012) <https://ec.europa.eu/finance/consultations/2012/ucits/docs/ucits_consultation_en.pdf> accessed 31 August 2020.

780 Jennifer Thompson, 'Europe's Investment Funds Scale New Heights' *Financial Times* (London, 25 June 2018) <www.ft.com/content/dfe50d18-73b7-11e8-b6ad-3823e4384287> accessed 25 August 2020.

since its inception in non-European markets to the point where the brand has become popular and respected outside of Europe, and has even led to companies in the US setting up and managing their own UCITS funds.[781]

4.5.4 Systemic Risk and UCITS

In its regulatory approach, the UCITS framework sets up detailed rules related to both the manager and the product. This leads to a relatively fine-grained regulatory approach which prescribes in detail the permissible investment strategies and techniques, a list of permissible assets to invest in, and rules related to risk management procedures. While the detail of the framework might be considered impressive, it falls short in respect to systemic risk issues. As a product targeted at retail investors, the prominence of investor protection provisions is a logical result, but apart from leverage and borrowing limits, it draws the focus away from issues of macroprudential regulation and financial stability. The rise of what are referred to as 'Newcits', which are alternative UCITS funds utilizing or replicating hedge fund strategies, is a worrying consequence of the current regulatory approach. Alternative UCITS funds have faced difficulties in their ability to generate superior returns, or alpha, and appear to exhibit risk profiles that could potentially prove to be susceptible to the realization of systemic risk.[782]

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781 Suchita Nayar, 'Ucits Catch on with US Managers' *Financial Times* (London, 6 June 2010) <www.ft.com/content/7caa6b56-7002-11df-8698-00144feabdc0> accessed 24 August 2020. Of course these funds are compliant with the UCITS framework and are consequently usually set up by partnering up with a European company that is based in a 'fund-friendly' EU jurisdiction, such as Luxembourg. See also Tobias Adrian and Bradley Jones, *Shadow Banking and Market-Based Finance* (International Monetary Fund 2018). UCITS are sometimes even referred to as a 'gold standard' for regulated, branded retail funds. As such, they are also increasingly popular in Asia. See eg Siobhan Riding, 'What Does the Post-Brexit Future Hold for City of London Fund Managers?' *Financial Times* (London, 1 August 2020) <www.ft.com/content/9ba1086f-cdeb-4d8e-87c5-65eaee2d3a35> accessed 31 August 2020.

782 Busack, Drobetz and Tille (n 428); Pauline Skypala, 'De Franssu Warns on Newcits' *Financial Times* (London, 18 July 2010) <www.ft.com/content/80baa522-9103-11df-b297-00144feab49a> accessed 31 August 2020; Attracta Mooney, 'Alternative Mutual Funds Sales Plunge as Investors Turn Wary' *Financial Times* (London, July 2018). It must be noted that Busack, Drobetz, and Tille find that alternative UCITS funds offer slightly better risk-adjusted returns than offshore hedge funds, but to do this they employ comparably risky hedge fund strategies, as listed on page 28 of said paper.

UCITS fund regulation does, however, contain several aspects that directly mitigate the creation of systemic risk, regardless of whether their primary aim is investor protection or not. The implementation of risk management rules and limitations on leverage, as well as the introduction of provisions mandating the provision of information to supervisors all ensure that the individual fund's portfolio composition and consequently, its risk exposures, remain in balance. The supervisory body and a form of 'division of labor' and flow of information between the competent authorities of the various member states where funds and management companies are established, contribute to more effective supervisory and monitoring functions. By not limiting the monitoring function to supervisors, but creating private monitors such as the depositary and in some cases the feeder fund, the UCITS framework also aligns the incentives of these bodies and thus mitigates some aspects of the principal-agent problem. The most obvious example of this is the creation of potential civil liability of the depositary, which forces the depositary to take an active monitoring function of the fund(s) for whom it holds assets. The principal-agent problem between investor and fund is reduced by placing the depositary as a monitor in the place of the investor which cannot or will not monitor due to information asymmetries and costs incurred. The incentives of the depositary to avoid incurring monitoring costs at best, and acting purely in the interest of the funds to maximize the fees it receives at worst, are realigned with those of the investors in the fund(s) through the potential threat of civil liability. The depositary has a direct stake in the fund's behavior, and risks internalizing the externalities of the fund in the case of any behavior that would otherwise impose these externalities on the investor. A similar situation is created in the case of feeder funds. Similar to how the funds of funds industry operates in other areas of asset management, the most prominent example being the funds of hedge funds industry,[783] a selection and monitoring process is conducted by the industry for its investors.[784] Fund liquidity risks, which can be regarded as the greatest threat to

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[783] While the European Stability Mechanism (ESM) has a primary focus on banks, it is worth contemplating whether the scheme could be extended to collective investment schemes as well. The ESM describes itself as follows: 'The ESM's mission is to provide financial assistance to euro area countries experiencing or threatened by severe financing problems. This assistance is granted only if it is proven necessary to safeguard the financial stability of the euro area as a whole and of ESM Members'. See European Stability Mechanism, 'Lending Toolkit' (2018) <www.esm.europa.eu/assistance/lending-toolkit> accessed 17 November 2018.

[784] In the case of the funds of funds industry, a diversification benefit also results from investment in a fund of funds portfolio. See eg Malkiel and Saha (n 79). Michael Farrell and Greg Gregoriou, 'Fund of Funds: When More Definitely Means Less' (2000) 8

an individual fund's survival, are addressed through ensuring the assets invested in are sufficiently liquid and that counterparty risk is reduced.

What the UCITS framework lacks are provisions explicitly related to interconnectedness and macroprudential stability. Historically, no fund bailout has imposed externalities on the taxpayer. This explains why banking regulation is much more strongly focused on macroprudential regulation and systemic risk than the regulation of investment funds. The asset management industry nonetheless contributes to systemic risk, at least in acting as a conduit in the transmission of such risks in the financial system. The essential question therefore becomes whether it is possible to adapt existing methods from banking regulation and implement a similar set of rules in the collective asset management industry. The most prominent of possibilities would be the creation of an insurance scheme, either on a national level, or on the Union level similar to the European Stability Mechanism.[785] If this same idea is taken to its logical extreme, emergency funding by official government bodies for ailing funds whose failure might have systemic implications could be contemplated as well. The advantages and drawbacks of these concepts will be discussed in greater detail in chapter 6.[786]

4.6 Conclusion

In the context of this thesis, the UCITS framework can be seen as both the predecessor and a quasi-baseline framework for European funds. UCITS funds are in many ways the antithesis of alternative investment funds, as they are tailored to retail investors and intended to act as vehicles for investments in traditional assets. While it is possible to act as a manager of both UCITS funds and alternative investment funds, and therefore fall into the purview of both the UCITS and AIFMD as a management company, the individual UCITS funds and alternative investment funds in the sense of the AIFMD directive must be structured as one or the other, ie the two frameworks are mutually exclusive. Despite the clear delineation between the two forms of funds, the European asset management regulatory framework is slowly converging and moving toward a complementary if not uni-

Canadian Business Economics 82<https://search.proquest.com/openview/ca1449b0663f117d6e39893b1a900f3d/1?pq-origsite=gscholar&cbl=32805> accessed 29 August 2020.

785 This idea is explored further in chapter 6.

786 See chapter 6.

fied framework for fund management in the EU. This is mirrored in the adaptation of certain rule structures from one framework into the other, as will become apparent in the next chapter. Certain provisions of the AIFMD are clearly at the very least strongly inspired by those of UCITS IV, while UCITS V amendments clearly have adopted depositary and other provisions from the AIFMD and retrofitted them to the UCITS framework. The final two chapters will discuss ways in which a convergence of the two frameworks might be possible, and if a complete replacement of the UCITS and AIFMD directives would be feasible, thereby creating a single set of rules for all European funds. It remains to be seen whether legal developments and political aspirations will indeed lead to this outcome, but recent amendments[787] and regulations point to the fact that a streamlining and the unification of asset management rules appear to be the long-term goal as of now.

[787] See the discussion in chapter 6 on the implementation of Directive (EU) 2019/1160 of the European Parliament and of the Council of 20 June 2019 amending Directives 2009/65/EC and 2011/61/EU with regard to cross-border distribution of collective investment undertakings [2019] OJ L188/106; Regulation (EU) 2019/1156 of the European Parliament and of the Council of 20 June 2019 on facilitating cross-border distribution of collective investment undertakings and amending Regulations (EU) No 345/2013, (EU) No 346/2013 and (EU) No 1286/2014 [2019] OJ L188/55.

4.7 Appendix Chapter 4

4.7.1 Figure 4e: KIID Template as Published by CESR[788]

Key Investor Information

This document provides you with key investor information about this fund. It is not marketing material. The information is required by law to help you understand the nature and the risks of investing in this fund. You are advised to read it so you can make an informed decision about whether to invest.

123 Fund, a sub-fund of ABC Fund SICAV (ISIN: 4321)
This fund is managed by ABC Fund Managers Ltd, part of the XYZ group of companies

Objectives and Investment Policy

Joint description of the objectives and policy of the UCITS in plain language (not copy-out of the prospectus)

Essential features of the product which a typical investor should know:

- main categories of eligible financial instruments that are the object of investment
- a statement that the investor may redeem units on demand, and how frequently units are dealt in
- whether the UCITS has a particular target in relation to any industrial, geographic or other market sectors or specific classes of assets
- whether discretionary choices regarding particular investments are allowed, and whether the fund refers to a benchmark and if so which one
- a statement of whether any income arising from the fund is distributed or reinvested

Other information if relevant, such as:

- what type of debt securities the UCITS invests in
- information regarding any pre-determined pay off and the factors expected to determine performance
- if choice of assets is guided by growth, value or high dividends
- how use of hedging / arbitrage / leverage techniques may determine the fund's performance
- that portfolio transaction costs will have a material impact on performance
- minimum recommended holding term

Risk and Reward Profile

Lower risk — Higher risk
Typically lower rewards — Typically higher rewards

1	**2**	3	4	5	6	7

Narrative explanation of the indicator and its main limitations:

- Historical data may not be a reliable indication for the future
- Risk category shown is not guaranteed and may shift over time
- The lowest category does not mean 'risk free'
- Why the fund is in its specific category
- Details of nature, timing and extent of any capital guarantee or protection

Narrative presentation of risks materially relevant to the fund which are not adequately captured by the indicator:

- Credit risk, where a significant level of investment is made in debt securities
- Liquidity risk, where a significant level of investment is made in financial instruments that are likely to have a low level of liquidity in some circumstances
- Counterparty risk, where a fund is backed by a guarantee from, or has material investment exposure through contracts with, a third party
- Operational risks including safekeeping of assets
- Impact of any techniques such as derivative contracts

[788] See CESR, 'CESR's Template for the Key Investor Information Document' <https://www.esma.europa.eu/sites/default/files/library/2015/11/10_1321.pdf> accessed 27 December 2018..

Charges for this Fund

The charges you pay are used to pay the costs of running the fund, including the costs of marketing and distributing it. These charges reduce the potential growth of your investment.

One-off charges taken before or after you invest	
Entry charge	[]%
Exit charge	[]%
This is the maximum that might be taken out of your money [before it is invested][before the proceeds of your investment are paid out].	
Charges taken from the fund over a year	
Ongoing charges	[]%
Charges taken from the fund under certain specific conditions	
Performance fee	[]% a year of any returns the fund achieves above the benchmark for these fees, [insert name of benchmark].

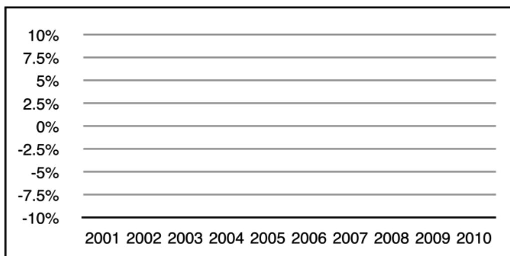
The **entry** and **exit charges** shown are maximum figures. In some cases you might pay less - you can find this out from your financial adviser.

The **ongoing charges** figure is based on expenses for the year ending []. This figure may vary from year to year. It excludes:

- Performance fees
- Portfolio transaction costs, except in the case of an entry/exit charge paid by the UCITS when buying or selling units in another collective investment undertaking

For more information about charges, please [see pages x to x / section x] of the fund's prospectus, which is available at www.ucitsfund/prospectus

Past Performance



The chart will be supplemented with prominent statements which:

- warn about its limited value as a guide to future performance
- indicate briefly which charges have been included or excluded
- state the year when the fund started to issue units
- indicate the currency in which past performance has been calculated.

Practical Information

- Name of the depositary
- Where and how to obtain further information about the UCITS (prospectus, reports & accounts)
- Where and how to obtain other practical information (e.g. where to find latest unit prices)
- A statement that tax legislation of the fund's Home State may have an impact on the personal tax position of the investor
- A statement that "[Name of management company] may be held liable solely on the basis of any statement contained in this document that is misleading, inaccurate or inconsistent with the relevant parts of the prospectus for the fund"
- Specific information relating to umbrella funds (e.g. any switching rights between sub-funds)
- Information about other share classes, if applicable (KII may be based on a representative class)

This fund is authorised in [name of Member State] and regulated by [identity of competent authority].

[Name of management company] is authorised in [name of Member state] on and regulated by [identity of competent authority].]

This key investor information is accurate as at [the date of publication].

4.7.2 Table 4f: Investment Possibilities under UCITS III[789]

Asset	Constraints
Money Market Instruments **Arts 19(1) A,B,C,H; 22(1),(2) UCITS III**	• Must be admitted or dealt in on a regulated market • If not traded on a regulated market, they must be issued or guaranteed by central, regional, or local institutions such as: o central banks, o third countries, o recognized institutions • or enterprises whose securities are traded on a regulated market
Units of Other Investment Funds **Arts 19(1)E; 24;25(2) UCITS III**	• The underlying investment fund may not have invested more than 10% of its assets in units of another investment fund. Investment in non-UCITS funds cannot exceed 30% of the portfolio o Protection levels of investors and the level of supervision of these funds must be equivalent to that established by legislation. Investment in another fund may not exceed 25% of that fund's units.
Deposits with Credit Institutions **Arts 19(1)F, 22(1) UCITS III**	• Must be repayable on demand or can be withdrawn • Mature in less than 12 months • Under 20% of the UCITS' assets are held by the same credit institution
Financial Derivatives **Arts 19(1); 21; 22 UCITS III**	• Underlying assets consist of instruments covered by the directive, indices, interest rates, exchange rates or currencies, provided the investment is consistent with the objectives outlined in fund rules

789 Tommaso Derossi, Michele Meoli and Silvio Vismara, 'From UCITS Directive to UCITS III Provisions' in Filippo Seffanini (ed), *Newcits: Investing in UCITS Compliant Hedge Funds* (Wiley 2010) 21–22.

Asset	Constraints
	• Global exposure relating to derivative instruments is less than the UCITS' NAV • The fund's exposure is calculated in relation to the current value of the underlying assets, counterparty risk, future market movements, and time available to liquidate positions. **In the case of OTC derivatives:** • Counterparties must be institutions subject to prudential supervision and must be approved by the competent authorities for UCITS. • Derivatives must be subject to a reliable and verifiable valuation on a daily basis • Derivatives can be sold, liquidated or closed by an offsetting transaction at any time, at their fail value • Exposure to a single counterparty is less than 5% of the UCITS funds total assets • If the counterparty is a bank or a credit institution, exposure may be can be less than 10%
Index-Tracking Funds **Art 22a UCITS III**	• No more than 20% of the assets of a UCITS can be invested in a single issuer (if the objective is index replication, then a member state may raise the limit to 35%). • Index must be sufficiently diversified, must be published, and represent an appropriate benchmark.

5 The Alternative Investment Fund Managers Directive

'Hedge funds are a very efficient way of managing money. But there are clearly some risks. Hedge funds use credit and credit is a source of instability. Transactions involving credit should be regulated.' – George Soros[790]

Table of Contents

5 The Alternative Investment Fund Managers Directive 197

5.1 Introduction 198

5.2 European Asset Management Regulation 198

5.3 The Alternative Investment Fund Managers Directive 199

5.4 The AIFMD in Detail 210

5.5 The Context of the AIFMD: ELTIF, EuVECA, EuSEF, and the MMFR............... 273

5.6 Systemic Risk and the AIFMD 279

5.7 Conclusion.. 284

[790] Mathias Müller von Blumencron, Gregor Peter Schmitz and Gabor Steingart, 'Spiegel Interview with George Soros: "The Economy Fell off the Cliff"' *Der Spiegel* (24 November 2008) <www.spiegel.de%2Finternational%2Fbusiness%2Fspiegel-interview-with-george-soros-the-economy-fell-off-the-cliff-a-592268.html&usg=AOvVaw2_bjRCWKHCdnFtiefXVFGV> accessed 31 August 2020.

5.1 Introduction

This chapter provides an overview of the AIFMD framework and the most important amendments and regulations. First, the history of the AIFMD will be discussed, which provides insight into why the AIFMD is structured the way that it is. The AIFMD will also be compared and contrasted to the UCITS framework, which has been discussed in chapter 4. Following this, the provisions of the AIFMD will be described and analyzed in detail, so the reader can gain an understanding of the mechanisms of the directive and their implications for the management and reduction of systemic risk. Finally, the most recent additions to the AIFMD will be examined, which consist of regulations for venture capital funds, long-term investment funds, social entrepreneurship funds, and money market funds. In this discussion, some convergent trends between the UCITS and AIFMD will be pointed out. As a final step, the implications of the AIFMD's provisions related to systemic risk will be discussed, which lays the groundwork for the in-depth discussion of the effectiveness and future developments of the AIFMD.

5.2 European Asset Management Regulation

As the reader will recall from chapter 4, asset management can be divided into two main types: discretionary and collective asset management. Discretionary asset management involves managing a client's portfolio, both professional or retail clients, according to a mandate that the manager and the client have agreed upon, whereas in collective asset management, a fund of pooled assets of a number of clients is managed. The management of this pool is conducted according to specified asset-allocation parameters and risk levels.[791] The chapter below is focused on collective asset management of alternative investment funds.

EU asset management regulation relies primarily on the following regulation: UCITS, AIFMD, MiFID II, and MIFIR.[792] In addition to these four core documents, the system is supplemented by EuVECA, EuSEF, and ELTIF regulation. This supplementary regulation deals with European Venture Capital Funds, European Social Entrepreneurship Funds, and European Long-Term Investment Funds. In addition, the MMFR now regulates money market funds. The entirety of this

791 Moloney (n 65) 194.

792 Jutzi and Feuz (n 407) 10.

legislation provides a comprehensive framework for asset management throughout the European Union. The result of this is that generally, there is a variety of options for funds under the EU asset management framework to gain access to the single market across the union under one of the classifications. As will be seen shortly, this is in stark contrast to the historical situation, where the main divider, namely UCITS versus non-UCITS classification systems resulted in a stark division between 'compliant' funds within the passporting system of UCITS and all other funds regulated under diverse national regimes.

5.3 The Alternative Investment Fund Managers Directive

5.3.1 Background

5.3.1.1 Context: The Regulatory Environment Prior to the AIFMD

20 December 1985 marks a starting point of supranational regulation of funds within the European Union. This is the date the Council of the European Communities adopted the original UCITS directive.[793] After 1 October 1989,[794] it became possible to receive authorization as an 'undertaking for collective investment in transferable securities'[795], for open-ended funds investing in equities.[796] Being authorized in the context of the UCITS directive would enable the fund in question to be offered to the general public in any member state, regardless of which member state the fund was registered in.[797] Though the original directive has since been superseded by a successor, the UCITS IV/V directive, the creation of the original UCITS directive enabled a binary classification system for funds in the European

[793] See UCITS I.

[794] This is the deadline set for implementation of UCITS in the national legislation of member states. See UCITS I, art 57.

[795] The wording of the UCITS directive may confuse readers, especially when contrasting the original directive with secondary literature. The directive refers to funds as 'UCITS', while secondary literature will refer to such collective investment schemes as 'UCITS funds'. For clarity, this thesis refers to funds structured and authorized according to the UCITS framework as 'UCITS funds' and refers to the directive or framework as 'UCITS'.

[796] See UCITS I Art 2.

[797] See chapter 4 on cross-border distribution of UCITS funds.

Union. UCITS explicitly divided (and divides) funds into two categories: UCITS funds authorized by the directive and funds outside of the scope of the UCITS directive. Article 2 of the original directive excluded fund structures exhibiting certain characteristics. Not subject to the directive were:

1. Closed-ended funds
2. Funds whose units are not offered or promoted to the public within the European Union
3. Funds only sold to the public of countries outside the European Union
4. Funds prescribed by regulations in member states in which they are situated, where, in view of the fund's investment and borrowing practices, the rules of the UCITS directive relating to borrowing[798] and investment policies[799] are inappropriate.[800]

Closed-ended funds, funds not sold to the public, and funds whose investment and borrowing practices would not fit the mold of the UCITS directive consequently were not part of UCITS regulation. Their regulation would remain at the discretion of the member states. Typical characteristics of generic alternative investment funds outlined in chapter 2,[801] namely marketing to sophisticated or professional (ie non-retail) investors, limitations on withdrawal of funds (making them closed-ended), and nonconventional investing and borrowing strategies would mean that many to most alternative investment funds would not be subject to the directive.

The consequences of this were twofold. On the one hand, the typically lightly regulated industry would remain regulated only on the national level, while on the other hand, the advantages offered by registration as a UCITS (most importantly the possibility of marketing and selling a fund to the public throughout the European Union with minimal national regulatory barriers) would not be available to other fund types. This eventually led to the emergence of alternative investment funds structured according to the UCITS III directive, so-called 'alternative UCITS', a phenomenon examined in more detail in chapters 4 and 6.[802] The eventual harmonization of regulation related to supranatural alternative investment funds would eventually follow in the form of the AIFMD.

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[798] UCITS I, art 36.

[799] UCITS I, arts 19ff.

[800] UCITS I, art 2.

[801] See chapter 2.

[802] See chapter 4.

5.3.1.2 The Emergence of the AIFMD

The origins of the AIFMD date back to 2005, when the European Commission published a Green Paper on investment funds.[803] The report focused on enhancing the existing framework for investment funds in the EU, and therefore was mainly concerned with the further development of UCITS. The paper already contained a chapter that specifically mentioned alternative investment funds as a potential avenue for regulation.[804] In the paper, alternative investment funds are defined as alternative investments consisting of hedge funds and private equity funds, [805] which is indicative of an early fixation on these two forms of funds versus other forms of alternative investment funds (presumably the reason for concentrating on these two forms would have been the relative size of these two industries versus other alternative investment fund structures as a whole.[806]) The Commission recognized already then that the alternative investment industry would remain a permanent feature of the European financial ecosystem.[807]

Consequently, the Commission decided to form a study group with the objective of '[studying] whether a common regulatory approach can facilitate the further development of European markets for hedge funds and private equity funds [and] also [to] look at the types of action that could be most helpful in overcoming barriers to their cross-border development.'[808] The task of the study group would therefore be twofold: On the one hand, approaches to regulating the industry were to be researched, and at the same time, methods would be studied to remove cross-border barriers for alternative investment funds. This very early assessment reveals what would become a defining characteristic of the AIFMD up until the current day: that the AIFMD is a mixed bag from the standpoint of the regulated entities. The removal of cross-border barriers simplifies many procedures related to fund distribution within the EU. It therefore extends the potential market for a fund in Europe, where, theoretically at least, it should become possible to advertise

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[803] Commission, 'Green Paper on the Enhancement of the EU Framework for Investment Funds' (n 444).

[804] ibid.

[805] ibid.

[806] See chapter 2 for a quantitative comparison of alternative investments and fund strategies.

[807] Commission, 'Green Paper on the Enhancement of the EU Framework for Investment Funds' (n 444).

[808] ibid 9.

and distribute a fund to investors across the EU without encountering a multitude of artificial national restrictions and bureaucracy.

This benefit comes at a price, however: it results in the emergence of a stricter regulatory regime. Funds become subject to an explicit and limiting regulatory framework within the entire European Union, wherein, if the fund wants to be active, an 'escape' to more lightly regulated jurisdictions is only possible by excluding the marketing and sale of fund units to EU investors (and being denied access to this very large and lucrative market). Management of EU-based funds in different jurisdictions would also not be possible without coming into the scope of the AIFMD. This double-edged sword would prove to have precisely this effect, as we will see in chapter 6: while the harmonization of regulatory regimes enabled fund managers to incorporate, market, and sell their products in various jurisdictions and streamline the process, at the same time the new regulation would be viewed as restrictive for a traditionally lightly regulated industry.

The study group ultimately published two reports in July 2006, one on hedge funds,[809] and one on private equity.[810] In the report on hedge funds, the study group described the legal situation for funds in the European Union at the time as follows: 'hedge funds have been promoted under a legislative patchwork, which varies across Member States, in some cases allowing for the private placement of products to non-retail investors, and in other cases prohibiting all such promotion'.[811] The report on private equity went in a similar direction, outlining the problems faced by private equity funds attempting to invest in various jurisdictions with various regimes. Interestingly, in stark contrast to the political climate and generally negative perception in the media outlined directly below, the report was generally very positive on the impact of private equity funds in Europe.[812]

In addition to the study group's efforts, a second major influence would shape the AIFMD's final form. The drive to regulate alternative investment funds already had been highly politicized, even prior to the most recent financial crisis.[813] A

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809 Alternative Investment Expert Group (n 445).

810 Alternative Investment Expert Group, 'Report of the Alternative Investment Expert Group: Developing European Private Equity' (European Commission Internal Market and Services DG, 2006).

811 Alternative Investment Expert Group (n 445) 16.

812 Alternative Investment Expert Group (n 810) 2.

813 Noël Amenc and Samuel Sender, 'Response to ESMA Consultation Paper to Implementing Measures for the AIFMD' (consultation paper response, EDHEC) 5 <www.

prominent and telling example of this atmosphere is exemplified by various statements of the then Chairman of the German Social Democratic Party, Franz Müntefering, in 2005. Müntefering likened financial investors to locusts, feeding on the harvest of others before moving on to wreak destruction elsewhere.[814] The attitude and general perception of financial investors, typified by hedge and private equity fund structures, as being 'locusts' and parasites that would feed on the fruits of the labor of others, picking them dry before moving on to greener pastures, was picked up by the media and so brought into the public eye.[815] While no overt and specific bias against such funds can be identified in early documents and the resulting regulation, the case can convincingly be made that at least the subconscious image touted by the media and the public may have influenced the post-crisis regulatory response.[816]

This description of the pre-crisis environment enables the understanding of the subsequent drive toward legislation in the area of alternative investment funds. The AIFMD in its current form was a direct result of a political process of post-crisis regulation triggered by the financial crisis of 2008/2009, rather than a con-

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edhec-risk.com/features/RISKArticle.2011-10-24.1131/attachments/EDHEC Position Paper Response to ESMA Consultation Paper.pdf> accessed 31 August 2020.

814 See Wolfgang Münchau, 'Wolfgang Munchau: The Politics of Envy' *Financial Times* (London, 1 May 2005) <www.ft.com/content/89cd910c-ba61-11d9-a27b-00000e2511c8> accessed 31 August 2020. accessed 23 September 2017. See also Richard Milne, '"Locusts" of Private Equity Help Grohe' *Financial Times* (London, 5 June 2008) <www.ft.com/content/7d885ddc-331c-11dd-8a25-0000779fd2ac> accessed 18 June 2020. accessed 23 September 2017. See also Ralph Atkins and Patrick Jenkins, 'German Business Welcomes the Private Equity "Locusts"' *Financial Times* (London, 5 May 2005) <www.ft.com/cms/s/0/156bb098-bd02-11d9-b1e3-00000e2511c8.html?ft_site=falcon&desktop=true#axzz4tWCG4hPp> accessed 29 August 2020.

815 See for example Bertrand Benoit and James Wilson, 'Köhler Attacks Markets "Monster"' *Financial Times* (London, 14 May 2008) <www.ft.com/content/d1f94010-21e8-11dd-a50a-000077b07658> accessed 31 August 2020. James Wilson, 'Private Equity: Public Image Improves as Critics Move On' *Financial Times* (London, 29 September 2008) <www.ft.com/content/2a1f46c2-8dbe-11dd-83d5-0000779fd18c> accessed 29 August 2020. See also Atkins and Jenkins (n 814). See also Münchau (n 814). See also Paul Hodkinson, 'Germany's "locust" Controversy Continues' (*Wall Street Journal,* 7 April 2008) <www.wsj.com/articles/SB120752084723093403> accessed 1 September 2020.

816 Dirk A Zetzsche, 'Introduction' in Dirk A Zetzsche (ed), *The Alternative Investment Fund Managers Directive* (2nd edn, Wolters Kluwer Law & Business 2015) 4–6. See also Busch and Van Setten (n 370) 9–11.

tinuation of the earlier process.[817] The crisis caused 'frenetic action by supervisors and banks',[818] leading to a drive toward enhanced regulation in various areas of the financial system, of which the alternative investment fund industry was one. Spurred on by the recent developments, the AIFMD took form.[819] The charged political environment regarding hedge and private equity funds of the pre-crisis days carried into the new paradigm, and consequently various political aspects became a part of the process.[820]

5.3.2 Table 5a: Key Differences Between the AIFMD and the UCITS Directive[821]

AIFMD	UCITS
• Introduced 2011	• Introduced 1985 (UCITS IV: 2009, UCITS V: 2014)
• Nominally only regulates manager, funds regulated indirectly	• Both manager and fund (product) regulated directly and explicitly
• Closed and open-ended funds possible	• Only open-ended funds permitted
• Sophisticated investors only (inclusion of retail investors at discretion of member states)	• All investors, including retail investors
• Investments in traditional and alternative investments permitted	• Investments primarily only in liquid, traditional investments permitted
• Portfolio composition not regulated	• Extensive portfolio composition requirements

817 William Lyons, 'Are Newcits the Future of Hedge Funds or Does the AIFM Directive Provide a More Attractive Framework for Hedge Fund Managers and Investors?' (2012) SSRN 2014882 8 <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2014882> accessed 31 August 2020.

818 Roel Theissen, *EU Banking Supervision* (Eleven international publishing 2013) 27.

819 Commission, 'Proposal for a Directive of the European Parliament and of the Council on Alternative Investment Fund Managers and Amending Directives 2004/39/EC and 2009/…/EC {SEC(2009)576}{SEC(2009)577}' (n 44).

820 See Amenc and Sender (n 813) 7.

821 Author's own.

AIFMD	UCITS
• Directive allows for all hedge fund and private equity strategies	• Only replication of liquid hedge fund strategies possible
• Reporting requirements for leverage	• Limits on leverage
• Strong focus on systemic risk	• Focus on investor protection

5.3.3 Scope

5.3.3.1 Who is Subject to the AIFMD

AIFMD stands for 'Alternative Investment Fund Managers Directive'.[822] The main focus of the directive, as the title implies, is on the *manager* of an alternative investment fund or of multiple funds. The *product,* namely the *fund* itself, does not nominally fall into the scope of the AIFMD directive.[823] This is in stark contrast to the systematic approach of the current UCITS directive, where the product and the manager are both regulated in separate parts of the regulation (which under the UCITS III regime was evenly split into two distinct directives referred to as the 'product directive' and the 'manager directive', while the current UCITS regime contains provisions related to both in a single directive).[824]

Initially, regulating the manager instead of the fund may seem like a counterintuitive approach, but in the case of alternative investment funds, this is both logical and effective. The reason for this is that the product, specifically the fund or funds, can be legally based outside of EU jurisdiction, and in cases where the fund is in a member state, the legal forms investment funds can take across the EU are of an extremely heterogenous nature.[825] The reader will recall chapter 2 in this context,

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[822] See Directive 2011/61/EU of the European Parliament and of the Counsel of 8 June 2011 on Alternative Investment Fund Managers and amending Directives 2003/41/EC and 2009/65/EC and Regulations (EC) No 1060/2009 and (EU) No 1095/2010 [2011] OJ L174/1 (AIFMD).

[823] The directive itself explicitly states that it does not regulate alternative investment funds, only the manager. See AIFMD, recital 10.

[824] See chapter 4. This division between the product and management directive is a key component of the UCITS IV structure.

[825] The heterogeneity of the legal forms of investment funds makes intuitive sense when one takes into account the diverse development of corporate law systems across Europe. AIFMD therefore cleverly sidesteps this by including all investment funds, re-

where common structures of alternative investment funds are described.[826] Also, as the directive itself mentions, the extremely heterogeneous nature of possible legal forms and rule sets governing alternative investment funds in various member states would make harmonization efforts of the product a herculean task of extreme complexity.[827] Regulating the manager specifically and not the product is therefore a more efficient method to regulate the EU alternative investment industry.[828] In practice, the AIFMD does not completely exclude regulation of the fund, however. Certain provisions lead to regulatory effects for funds in an indirect sense. In certain cases, a result equivalent to direct regulation of the product is achieved, albeit through indirect regulation.[829]

The scope of the AIFMD, as the directive itself states,[830] extends to *all* managers of *any type* of fund *not* covered by the UCITS framework.[831] This means in principle that any manager managing a fund outside of the scope of UCITS automatically is subject to the AIFMD. While the regulatory efforts related to UCITS funds are comparably directed and precise, the scope of the AIFMD becomes enormously broad and extensive, and results in a one-size-fits-all approach, whereas the UCITS framework is an opt-in system.[832] While the AIFMD is de facto closer to a 'mandatory' directive, which certain managers are subject to by default, those managers explicitly excluded by the directive are permitted to opt-in in case they want to benefit from the advantages the directive offers.[833] In such cases, the directive becomes applicable to the manager who has opted-in.[834]

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gardless of how they have been constituted and regardless of their legal structure. See AIFMD, art 2(2)(b)–(c).

826 See chapter 2.

827 AIFMD, recital 10. See also Ulf Klebeck, 'Interplay between the AIFMD and the UCITSD' in Dirk A Zetzsche (ed), *The Alternative Investment Fund Managers Directive* (2nd edn, Wolters Kluwer 2015).

828 Jutzi and Feuz (n 407) 11–12.

829 See eg leverage rules under the AIFMD. Article 25 of the AIFMD creates a mechanism through which leverage limits can be imposed on leveraged funds. These limits are set and reported by the management company and not the fund itself, however.

830 AIFMD, recital 2.

831 AIFMD, recital 3.

832 Busch and Van Setten (n 370) 14.

833 AIFMD, art 3(4).

834 ibid. Dell'Erba aptly characterizes the AIFMD as the directive that regulates the 'residual category' of funds outside of the UCITS framework. See Marco Dell'Erba, 'The

Excluded from the scope of the directive are certain alternative investment fund managers, due to either their fund's investor profile or its size. Managers of funds whose only investors are the manager itself are excluded, as are funds whose only investors are subsidiaries or parent companies of the manager, or other subsidiaries of the manager's parent company.[835] Managers of smaller funds are partially excluded, and although they must register and identify themselves and the funds they manage, are only required to provide their competent authorities with information on their funds' positions, the instruments they trade, and the general investment strategies of the funds they manage.[836] This information must be provided on a continual basis, and must be updated according to the current situation.[837] Small funds in this context are defined as funds with total AuM of no more than EUR 100 mio, including leverage. Alternatively, unleveraged funds with redemption gates of five years or longer with a maximum size of up to EUR 500 mio AuM are also included in this category.[838]

The AIFMD also excludes a number of entities that would otherwise potentially be subject to the directive. The list contains entities which are clearly not suitable for regulation under the AIFMD due to their structure, and national or supranational entities which do not operate as funds and generally are subject to some form of oversight by a government or supranational body already. Excluded from the scope of the AIFMD are: holding companies, pension funds,[839] and suprana-

Regulation of Alternative Investment Funds in Europe: The Alternative Investment Fund Managers Directive' in Raphaël Douady, Clément Goulet and Pierre-Charles Pradier (eds), *Financial Regulation in the EU* (Springer 2017) 331ff.

835 AIFMD, art 3(1).

836 AIFMD, art 3(3)(a)–(d).

837 AIFMD, art 3(3)(d).

838 AIFMD, art 3(2). The implementing regulation further specifies exactly how these thresholds are calculated and in which cases surpassing the threshold is considered temporary or permanent. See articles 2–5 of the AIFMD Implementing Regulation.

839 The AIFMD excludes 'institutions for occupational retirement provision' which fall under Directive 2003/41/EC of the European Parliament and of the Council of 3 June 2003 on the activities and supervision of institutions for occupational retirement provision [2003] OJ L235/10 (Pension Fund Directive). Article 6(a) of said directive defines such institutions as follows: '[...] an institution, irrespective of its legal form, operating on a funded basis, established separately from any sponsoring undertaking or trade for the purpose of providing retirement benefits in the context of an occupational activity on the basis of an agreement or a contract [...]'.

tional institutions, including the ECB, the EIB, the World Bank, the IMF and others.[840]

Since the AIFMD focuses on regulating fund managers, there is a cross-border component and even an EU member state and third country dynamic inherent in the framework. This means that where managers and funds are in different countries, they be in the scope of the AIFMD or not, depending on the constellation. The building blocks of this system are:

1. The manager is located in the EU (EU AIFM)
2. The fund is located in the EU (EU AIF)
3. The manager is located outside the EU (non-EU AIFM)
4. the fund is located outside of the EU (non-EU AIF).[841]

The AIFMD sets up specific rules related to marketing und managing of funds by managers according to the possible combinations of managers inside and outside the EU managing or marketing funds from within or from outside the EU. All combinations with the respective articles are described in the table below:

5.3.3.2 Table 5b: Management and Marketing of AIFs[842]

		EU AIF	Non-EU AIF
EU AIFM	*Managing*	• Art.6 • Art. 33	• Art. 6 • Art. 34
	Marketing to professional investors	• Art. 31 • Art. 32	• Art. 35 • Art. 36 • Art. 37
Non-EU AIFM	*Managing*	• Art. 37 • Art. 41	• Art. 37
	Marketing to professional investors	• Art. 39 • Art. 42	• Art. 40 • Art. 42

840 AIFMD, art 2(3)(c).

841 AIFMD, art 2(1)(a)–(c).

842 Van Setten and Busch (n 26).

Of the possible combinations, only non-EU managers managing and marketing non-EU funds outside the EU are not subject to the AIFMD. Any constellation where either manager or fund is registered in the EU, or any fund marketed to investors in the EU brings the management company into the purview of the AIFMD.[843]

5.3.4 Structure of the AIFMD

The AIFMD is structured in a similar fashion to the current UCITS IV/V framework. Many fundamental concepts and procedures, such as authorization of managers, initial capital requirements, risk management and especially liquidity management, and depositary rules for example, are conceptually related to the relevant provisions of the UCITS framework. Unlike the UCITS framework however, the AIFMD has provisions tailored to specificities of alternative investment funds, whereas the UCITS directives focus more strongly on issues related to retail funds. Investor protection is one example of this. UCITS funds are intended as retail products and therefore necessarily are governed by an investor protection-focused regime. Alternative investment funds on the other hand are traditionally limited to sophisticated or professional investors without a comparable focal point on investor protection. A further interesting aspect is the crossover between AIFMD and the UCITS framework, which is relevant in cases where both UCITS funds and alternative investment funds are to be managed under or by a single legal structure. How this is possible and which limitations are set by the two frameworks is described in greater detail below.[844]

The AIFMD principally can be understood as a framework consisting of three focus areas, which also can be understood as a three-step process. These three areas consist of the authorization process, operating requirements for managers, and finally of rules of supervision. The first two steps principally focus on the manager, while the third step centers on the authorities and their responsibilities, especially their monitoring tasks and supervisory duties. The first focus involves the authorization process, where a manager becomes authorized to manage one or multiple alternative investment funds under the directive. Following authorization, the manager is admitted to the EU-wide alternative investment fund management system, ie acquires a ‘passport.’ Following authorization, the second focus of the di-

[843] See section 5.4.6ff for the exact rules on distributing and marketing funds.

[844] See AIFMD, art 6(2). See also AIFMD, recitals 3, 21.

rective becomes relevant. As the manager becomes operational and begins managing and marketing funds through the passporting system, the directive steers this process through a set of rules. Most importantly, the manager must fulfill reporting and information sharing requirements, where the authorities supervising it or its funds provided with the pertinent information prescribed by the directive. In the case where the funds themselves need to comply with certain requirements, the AIFMD achieves this by mandating its manager to ensure compliance of the fund. Some of the more important operational requirements include, inter alia, the appointment of a depositary, risk and liquidity management functions, and valuation practices. Finally, as part of last portion of the framework, the directive shifts its attention away from the manager to the tasks of the authorities by prescribing their monitoring and supervisory tasks and providing them with certain powers and sanctions. Through this process, the directive provides the information and the tools to authorities, so they can effectively enforce the rules of the directive or the equivalent provisions of national law.

5.4 The AIFMD in Detail

5.4.1 Authorization

The authorization process of the AIFMD is a core component of the passporting system. Authorization is the initial hurdle a manager must pass in order to manage funds in the European Union. Since authorization is valid for all member states, once it has been granted to a manager by its member state competent authorities, it can be utilized throughout the European Union. The manager receives a ‘passport’ to conduct business as permitted by the directive.[845] Structurally, the authorization of the manager of an alternative investment fund follows much the same pattern as the authorization of the management company of UCITS funds.

5.4.1.1 Information Provided by Managers

Authorization involves an application process, where a manager applying for authorization must provide certain information both in relation to the manager and to the fund or funds that are to be managed.[846] The competent authorities then can

845 AIFMD, art 8(1) second subparagraph.

846 See AIFMD, art 7.

verify that the conditions for authorization are fulfilled.[847] The manager must provide the following information related to itself: it must provide information on the persons 'effectively conducting the business of the [management company]',[848] the identity of the manager's shareholders or members,[849] a program of activity which includes the organizational structure of the manager and information on compliance obligations,[850] remuneration policies and practices,[851] as well as arrangements made on delegation and sub-delegations of certain functions to third parties.[852]

Information on the fund or funds that are to be managed must also be provided by the manager on investment strategies, risk profiles, characteristics of the fund, and the leverage policies of the manager. Furthermore, rules or instruments of incorporation must be included, as well as depositary arrangements and information on the member states or third countries where the fund is incorporated. This information is compiled for each fund that is to be managed.[853] Information that is to be communicated to investors under the investor disclosure rules is also forwarded to the authorities.[854]

In two specific cases, namely with funds of funds and feeder funds, additional information must be provided: where funds of funds are concerned, types of underlying funds are a part of the required information, and in the case of master-feeder structures, the authorities must be informed of the location of the master fund, ie where it is established.[855] Finally, an exception is made for managers who already manage funds under the UCITS framework. In such a case, information already provided under the management authorization process of UCITS manage-

847 See AIFMD, art 8.

848 AIFMD, art 7(2)(a).

849 The information relates to qualified holdings of legal or natural persons, regardless of whether these holdings are indirect or direct. Information on the amounts of these holdings must also be provided. See AIFMD, art 7(2)(b).

850 AIFMD, art 7(2)(c).

851 AIFMD, art 7(2)(d).

852 AIFMD, art 7(2)(e).

853 AIFMD, art 7(3)(a)–(d).

854 AIFMD, arts 7(3)(e) and 23.

855 AIFMD, art 7(3)(a), (b).

ment companies does not have to be provided a second time under the AIFMD process, as long as the information provided previously remains current.[856]

5.4.1.2 Conditions for Granting Authorization

5.4.1.2.1 General Conditions

Before granting authorization, a number of conditions must be met. The first set of conditions concerns the authorities themselves. Authorization cannot be granted if the authorities' supervisory function is compromised either by close links between the manager or other persons, by legal provisions governing persons with whom the manager has close links, or more generally by difficulties in enforcement of the relevant legal provisions.[857] Authorization of a manager may also require that the competent authorities coordinate their actions, specifically where a cross-border situation between multiple member states exists. Consequently, prior to granting authorization, the competent authorities of a member state are required to consult with a number of other competent authorities. This could occur in cases where the manager in question is either a subsidiary of another company or is controlled by the same natural or legal person that simultaneously controls a different company, regardless of whether this company is another alternative investment fund manager, a UCITS management company, an investment firm, a credit institution, or an insurance company authorized in another member state.[858]

The competent authorities must also ensure the manager applying fulfills a number of conditions. First and foremost, the authorities must ascertain that the manager is capable of complying with the rules of the AIFMD.[859] Additionally, the location of the head office and the registered office of the manager is relevant. Both must be situated in the same member state.[860] Moreover, there are certain qualitative requirements that the persons who are effectively executing the business activities of the management companies must satisfy. Specifically, the reputation of these persons must meet a certain minimal threshold, as does their experience.[861] Fur-

[856] AIFMD, art (7)(4).

[857] AIFMD, art (8)(3)(a)–(c).

[858] AIFMD, art (8)(2)(a)–(c).

[859] AIFMD, art (8)(1)(a).

[860] AIFMD, art (8)(1)(e).

[861] AIFMD, art 8(1)(c).

thermore, shareholders or members of the fund manager with qualifying holdings must be suitable to ensure its 'sound and prudent management'.[862]

5.4.1.2.2 Capital Requirements

Capital requirements, or initial capital, are an essential part of the authorization process. The competent authorities must ensure a manager fulfills the capital requirements as outlined by the AIFMD. The rules under the AIFMD are not dissimilar to those of the UCITS framework. First, a lower boundary is laid out, which is the absolute minimal amount a manager must have as minimal capital. If funds of a certain size or above are managed, additional funds are added for these large funds, the amount of which is dependent on the total AuM of these funds. In addition, certain rules that determine which portfolios or assets are included and which are not counted for the calculation of the amount of initial capital are specified by the framework. The AIFMD has the same thresholds and calculation methods for own funds, but applies them to internally and externally managed funds and their managers rather than to management companies and investment companies as under the UCITS directive. The AIFMD also contains exceptions that differ from the rules under the current UCITS framework.

The general rule describes initial capital and distinguishes between managers who manage funds as external managers, and internally managed funds. In the first case of externally managed funds, the manager and fund are two distinct legal entities; in the second case, the fund is managed internally, meaning the manager is legally part of the fund, making the fund 'self-managed'. For internally managed funds, initial capital needs to amount to EUR 300'000 or higher, whereas EUR 125'000 is the amount for externally appointed managers.[863]

Similar to the rules for UCITS funds, as seen in chapter 4, the general rule is supplemented by provisions mandating additional funds. These additional funds are referred to as 'additional own funds', the same terminology as used by the UCITS framework. In cases where the value of the portfolios of all alternative investment funds managed by the manger exceed EUR 250 mio, additional capital must be provided that is equal to 0.02% of the value exceeding the EUR 250 mio threshold. The sum of all initial capital that must be provided is capped at EUR 10 mio under the AIFMD, meaning even for managers with very large funds under management,

[862] AIFMD, art 8(1)(d).

[863] AIFMD, art 9(1), (2).

once the limit of EUR 10 mio is reached, no further capital must be provided.[864] This provision is also identical to the rules of the UCITS framework. In order to calculate capital requirements, portfolios whose management has been delegated by the manager to a third party are included, but portfolios the manager manages under delegation are excluded.[865] In any case, the manager's 'own funds' may not fall below the amount required by the Capital Requirements Directive.[866]

Reducing the capital requirements prescribed by the rules above is only possible if a guarantee can compensate for the smaller amount of capital held by a manager. The rule in the AIFMD is as follows: Additional own funds can be reduced by up to 50% if a credit institution or insurance company in a member state or a third state with equivalent prudential rules offers a guarantee for the amount of the reduction in own funds.[867]

The AIFMD also requires appropriate protection against potential indemnity. A fund must hold appropriate indemnity insurance to shield itself against costs arising from liability risks. If it is not insured, then it must hold sufficient additional own funds that correspond in size to losses that could arise from potential liability suits resulting from professional negligence. These additional funds must be held in addition to the initial and additional capital requirements.[868]

Since the principal function of capital requirements is to ensure the continuous functioning of the manager in its management activity, own funds must remain sufficiently liquid.[869] All own funds that a manager holds must be invested assets

[864] AIFMD, art 9(3). Mathematically, just like under the UCITS directive, at a portfolio value of slightly below EUR 750mio (EUR 743'750'000 to be precise), the upper threshold is reached and any additional growth of the total value of portfolios would not mandate the putting aside of additional capital. Any company with a total value of portfolios larger than that would only have to provide EUR 10mio of total capital.

[865] Since they are logically included in the calculation of the value of portfolios of some other company which has been the delegator. See AIFMD, art 9(4).

[866] The Capital Requirements Directive contains capital requirements as outlined under the Basel II and III rules. See Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, amending Directive 2002/87 EC and repealing Directives 2006/48/EC and 2006/49/EC [2013] OJ L176/338.

[867] AIFMD, art 9(6).

[868] AIFMD, art 9(7). See also AIFMD Implementing Regulation, arts 12–15.

[869] AIFMD, recital 23.

of a liquid nature or those that are sufficiently liquid that they could be converted into cash on short notice. The AIFMD also explicitly states that these funds cannot be invested in 'speculative positions'.[870]

5.4.1.2.3 Withdrawal of Authorization and Changes in Scope

Once authorization has been issued to a manager, competent authorities can also withdraw it in specific cases. If the manager is not making use of the authorization, ceases activity, or renounces it expressly, withdrawal is possible. Withdrawal is also permitted if it is discovered that the authorization was obtained by false statements or other irregular means in the first place. In cases where the manager was previously authorized, but has since not fulfilled the conditions which enabled the authorization, or does not comply with capital adequacy rules for discretionary asset management firm if it provides such services, authorization can be withdrawn as well. Serious or systematic infringement of provisions of the AIFMD[871] by a manager also leads to withdrawal of authorization. Finally, if in a member state there are provisions in national law that mandate withdrawal, this can also have the effect of causing authorization to be withdrawn.[872]

If a manager intends to implement material changes that are related to the original conditions for authorization, then it cannot implement these changes, unless competent authorities have been notified of the change. This is especially relevant in the case of changes regarding the information previously provided under the authorization process. Within one month of receiving notification, the competent authorities can reject the changes or restrict the scope of authorization and must notify the manager within that timeframe. In exceptional circumstances, the authorities can extend this timeframe by another month if the manager is notified of this. If the authorities do not refuse the changes or do not oppose them, these changes can be implemented after the specific period of one or two months has expired.[873] The scope of authorization can be changed or restricted, especially if there is an impact on the investment strategies in one or more funds the manager intends to or already manages.[874]

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[870] AIFMD, art 9(8).

[871] Withdrawal also occurs if the manager infringes on provisions adopted under national law that correspond to the provisions of the AIFMD.

[872] AIFMD, art 11(a)–(f).

[873] AIFMD, art 10(1), (2).

[874] AIFMD, art 8(4).

5.4.1.2.4 Timeline

As mentioned directly above, the authorities of a member state can restrict or reject changes a manager requests, but must notify the manager within one month of having received the notification.[875]

Within three months of having submitted a complete application for authorization, the competent authorities must inform the manager whether authorization has been granted.[876] The period can be extended by another three months in specific circumstances where the authorities consider this necessary.[877]

When granted authorization, managers are permitted to begin managing funds, as long as at least one month has passed since the authorities have received missing information related to either delegation and sub-delegation; or rules or instruments of incorporation of each fund; or information on depositary appointments; or finally, information to investors.[878]

5.4.2 Operating Conditions

Following the authorization process, a manager must continuously fulfill certain operating conditions. Firstly, the manager must follow general conditions. The general conditions are primarily related to remuneration policies, conflict of interest issues, risk management procedures, liquidity management, and investments in securitization positions. Secondly, managers must comply with organizational requirements. Organizational requirements contain administrative procedures, accounting procedures, and also valuation procedures. Thirdly, if a manager delegates certain functions, specific delegation rules apply and must be followed. The delegation of functions by managers is possible, but must meet certain requirements. The fourth and final component of the operating conditions is composed of extensive rules regarding the depositary. The depositary rules create requirements both for managers and the depositaries themselves.

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875 AIFMD, art 10(2).

876 AIFMD, art 8(5).

877 ibid.

878 AIFMD, art 8(5) third subparagraph.

5.4.2.1 General Requirements

5.4.2.1.1 General Principles

The first subcategory of the general requirements are the general principles. As the name implies, these principles are related to conduct of business rules, compliance, and general behavior of the manager. A manager must at all times act honestly and fairly in its professional conduct, as well as with 'due skill, care, and diligence'.[879] Resources and procedures must also be applied effectively to achieve 'proper performance' of the manager's business activities.[880] The manager also has a duty to act in the best interests of the fund or its investors and in the best interest of the integrity of the market while complying with all regulatory requirements that apply to its business activities.[881] Investors are also to be treated fairly and equally. In cases where unequal or preferential treatment does occur, it must be disclosed in the specific fund's rules or instruments of incorporation.[882]

In cases where managers are authorized to offer discretionary portfolio management services, they are subject to the European directive on investor compensation

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[879] AIFMD, art 12(1)(a).

[880] AIFMD, art 12(1)(c).

[881] AIFMD, art 12(1)(b), (e). It is interesting to note that this provision requires the manager to act in the interests of both the fund itself and its investors. It remains unclear whether the fund or investors are to be preferred in cases where their interests are not identical or even incompatible altogether. A similar discussion exists in the field of corporate law, where the fiduciary duties of directors in a corporation are owed either to the company or to the shareholders when a conflict arises. In the case of the AIFMD, as is the case in corporate law, various jurisdictions and judicial systems might prioritize these duties differently. For a general discussion of the duties of directors, see eg Reinier Kraakman and others, *The Anatomy of Corporate Law: A Comparative and Functional Approach* (OUP 2017) 84f; Kern Alexander, 'Corporate Governance and Banks: The Role of Regulation in Reducing the Principal-Agent Problem' (2006) 7 Journal of Banking Regulation 17, 27–29; Kern Alexander, 'Corporate Governance and Banking Regulation' (2004) CFAP, Cambridge Judge Business School, University of Cambridge <www.repository.cam.ac.uk/bitstream/handle/1810/225166/wp17.pdf?sequence=1> accessed 31 August 2020.

[882] AIFMD, art 12(1)(f), art 12(1) second subparagraph. This fairness clause and its exact application in practice also appears related to corporate law issues and might become a source of regulatory uncertainty. The text of the AIFMD is not conclusive on what level of equal treatment is required and when and to what extent unequal treatment is permissible if disclosed.

schemes.[883] Additionally, managers offering discretionary portfolio management services are not permitted to invest all or parts of a client's assets under their care in funds they manage themselves, unless the client has approved this in advance.[884]

5.4.2.1.2 Conflicts of Interest

The general principles also contain a provision aimed at reducing or preventing conflict of interest issues. Managers must take 'all reasonable steps'[885] to avoid them. If these conflicts cannot be avoided, then they must be identified, managed, and monitored. Disclosure of conflict must also take place in certain instances, in order to safeguard the interests of both the funds and their investors and to ensure that the funds receive fair treatment.[886] To ensure this treatment, 'all reasonable steps' must be taken and organizational and administrative arrangements must be structured to achieve this objective.[887]

Under the AIFMD, managers must take 'all reasonable steps' to identify a number of potential conflicts of interest.[888] Any conflict between any combination of the following could present a conflict of interest: the manager, a fund or its investors, both alternative investment funds and UCITS funds, clients, or the manager.[889]

5.4.2.1.3 Remuneration

Remuneration rules are essential from the standpoint of creating the correct incentives for decisionmakers in alternative investment funds. The AIFMD therefore requires that member states to create compensation practices and policies for people in funds that are involved in or have influence over risk profiles of the fund.

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[883] AIFMD, art 12(2)(b). See also Directive 97/9/EC of the European Parliament and of the Council of 3 March 1997 on investor-compensation schemes [1997] OJ L84/22.

[884] AIFMD, art 12(2)(a).

[885] AIFMD, art 12(1)(d). The concrete requirements for conflict of interest policies and procedures are specified in articles 31–33 of the AIFMD Implementing Regulation.

[886] ibid.

[887] AIFMD, art 14(1) second subparagraph. See also Reg 231/2013, art 31.

[888] AIFMD, art 14(1) first subparagraph.

[889] AIFMD, art 14(1)(a)–(e). Specifically, all conflicts between the manager and the fund or its investors must be identified. The same is required for conflicts between funds or their investors and other funds or their investors. Conflicts between a fund or its investors and another client of the manager or a UCITS fund it manages or that fund's investors must be identified. Finally, the same rule applies to conflicts between two clients of the manager.

Specifically, the remuneration rules have to be designed to create 'sound and effective' risk management practices and may not promote the types of risk-taking that are not aligned with the fund's fundamental investment strategies as reflected in its risk profile or fund rules.[890] The AIFMD provides a list of who is included as senior management: actual 'senior management', 'risk takers', 'control functions', and 'employees in the same remuneration bracket as senior management' are all considered senior management in the context of remuneration rules. Remuneration rules must outline the remuneration of employees falling into any of these categories.[891] The AIFMD also contains an Annex, where the concrete parameters for remuneration policies are outlined.[892]

The remuneration policy must be consistent with the risk profile of the specific fund and with risk management and risk-taking principles as outlined in the fund rules. Consistency must also exist with the business arrangements and objectives of the manager. The policy must be reviewed regularly and at least once a year. Remuneration can consist of fixed and variable compensation, where a balance must be struck between the two. If a component of the total remuneration package consists of variable compensation, then the variable component must reflect the performance of the individual being paid, the performance of the fund or department the person is part of, and the performance of the manager. Variable remuneration must also reflect a long-term outlook on performance, and not simply short-term performance. Variable compensation that is guaranteed in advance cannot be a standard facet of the remuneration policy, but must be the exception and is limited to the first year of an individual's employment. Half of variable compensation must consist of shares or units in the fund. A retention policy must have also been included as a part of the remuneration policy, where at least 40% of variable compensation is deferred. The remuneration policy must also be structured in a fashion that ensures negative performance of a fund has a direct impact on the variable compensation of the individuals responsible for the fund's losses. Carried interest also forms a part of the compensation arrangements and the rules described above must also be applied to this category of remuneration.[893] Managers where the total AuM of the funds they manage are significant must establish a remuneration committee, which must be sufficiently independent and prepare the decisions regard-

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[890] This can also be reflected in the fund's instruments of incorporation. See AIFMD, art 13.

[891] ibid.

[892] See AIFMD, Annex II.

[893] AIFMD Annnex II (1)(a)–(r).

ing remuneration.[894] The AIFMD hence mandates a system of fixed and variable remuneration that ensures that, through performance-related compensation, payment in the form of shares, as well as deferring payment, the incentives of the individual, the fund, and its investors are realigned. The compensation rules also shift the outlook of the employees managing alternative investment funds from pursuing short-term performance to a more consistent performance over a longer time frame. Finally, remuneration policies as mandated by the AIFMD also promote sound risk management procedures and a balanced approach to generating returns while limiting the potential downside when managing fund portfolios.

5.4.2.1.4 Risk Management

The AIFMD also contains detailed rules regarding risk management in funds. This is a logical step in light of one of the fundamental objectives of the directive, which is to limit or contain systemic risk. The internal risk management functions represent the first and most effective barrier against a fund overreaching in a financial sense and incurring losses with consequences of systemic relevance. A fund with an unbalanced risk profile invested in positions which could prove difficult to unwind in turbulent market conditions can reach a critical size where it destabilizes the market and its actors. Risk management rules are therefore a quintessential microprudential approach to preventing systemic risks from building up within funds. The relationships between funds and the macroprudential approach is only addressed insofar as risk management within a fund has a highly effective and conservative approach to measuring and mitigating counterparty risk. By limiting counterparty risk, the buildup of connection and contagion in a macroprudential sense could be limited or possibly even avoided.

From an organizational standpoint, risk management functions within a fund must be kept functionally and hierarchically separate from other functions within the fund. The risk management department of people responsible for it must be separated from operating units and especially from portfolio management functions. Interweaving portfolio management or trading functions and their profit-driven incentive structures with risk management functions within a firm can lead to them acting in the interests of these functions rather than as a counterbalance to them. The LIBOR scandal is a perfect example of this phenomenon from the banking sector.[895] As a result of this, risk management is kept separated from other func-

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[894] AIFMD Annex II (2), (3).

[895] See for example Simon Ashby, Tommaso Palermo and Michael Power, 'Risk Culture in Financial Organisations: An Interim Report' (Centre for Analysis of Risk and

tions.[896] Supervising and monitoring that the separation of these functions is established and maintained in a fund falls to the home member state competent authorities of the fund manager. The objective of competent authorities, which is to be achieved 'in accordance with the principle of proportionality',[897] is to avoid conflict of interest issues and enable independent risk management that is sufficiently effective.[898]

The AIFMD also prescribes more detailed aspects of risk management. A fund's risk management function must be designed to identify, measure, manage, and monitor all risks the fund could be exposed to up to an acceptably effective degree, including risks that may be generated from of the fund's strategies.[899] Specifically, a manager must implement and update a process of due diligence, implement stress

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Regulation, London School of Economics and Political Science, 2012) <www.lse.ac.uk/accounting/assets/CARR/documents/Risk-Culture-in-Financial-Organisations/Risk-culture-interim-report.pdf> accessed 20 August 2020.

896 AIFMD, art 15(1) first subparagraph. See also AIFMD Implementing Regulation, art 42(1)–(3).

897 The principle of proportionality is a fundamental principle in public law. Proportionality seeks to maintain a balance between the interests of the regulating state, which usually amounts to achieving a regulatory objective, and the interest of the citizen subject to the regulation. A balance must be struck between public and private interest. In order to maintain this balance, these two interests are weighed against each other in what is termed the 'proportionality test', which classically consists of three elements: legitimacy of the aim of the measure in question, suitability of the measure, necessity of the measure, and finally, that the means chosen are reasonable and do not have an excessive effect on the interests of the subject. See eg Case C-8/55 *Belgique v High Authority* [1954] ECR 245. For an extensive discussion of the concept of proportionality, see also Mads Andenas and Stefan Zleptnig, 'Proportionality and Balancing in WTO Law: A Comparative Perspective' in Kern Alexander and Mads Andenas (eds), *The World Trade Organization and Trade in Services* (Brill 2008) 148ff.

898 AIFMD, art 15(1) second subparagraph. See also AIFMD Implementing Regulation, art 43(1), (2) and especially AIFMD Implementing Regulation, art 43(3), where the effectiveness of safeguards is mandated.

899 The wording of the AIFMD prescribes that the risks must be monitored 'appropriately'. See AIFMD, art 15(2), 15(3)(b). The exact requirements of risk management systems are described in the AIFMD Implementing Regulation, arts 38–40. The AIFMD also mandates that neither credit rating, nor the assessments of credit ratings made by managers, may be relied on blindly ('solely and mechanistically'). See AIFMD, amended article 15(2), 15(3a).

tests and continually assess all risks, and finally, tailor the risk profile to the fund's size, its objectives, and the overall strategy.[900]

5.4.2.1.5 Leverage Limits

Leverage limits are a further component of the rules related to risk management, but are of such importance that they merit a separate subsection. Leverage limits seek to contain liquidity risk that funds are confronted with. As a general concept, alternative investment funds as pools of capital are essentially actively managed investment vehicles without much of a support structure. Liquidity risk is therefore an essential concern. Funds which make use of leverage as part of their investment strategy are at an even greater risk of becoming illiquid if the market turns against them than unleveraged funds. Since leverage both magnifies and increases 'velocity' of a trading position's movements, it leaves much less room for error.[901] Historically, it could be argued that both the failure of LTCM and of Amaranth Advisors may have partly been due to the over-leveraged nature of both funds.[902]

The AIFMD seeks to mitigate this risk through imposing guardrails within which fund managers are permitted to specify the leverage limits within which their funds can operate. Managers must therefore define an upper limit they can employ for each fund under management. Included in these specifications are the re-use of collateral or guarantee agreements that are connected to leverage arrangements. The leverage limits are set according to the type, investment strategy, source of leverage, and systemic risk considerations. These systemic risk considerations include issues of interconnectedness or similar relationships with financial services

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900 AIFMD, art 15(3)(a)–(c).

901 For a more in-depth discussion of liquidity risks and leverage in investment funds, see chapter 2 and the discussion on liquidity.

902 See, for example, Lo, *Adaptive Markets: Financial Evolution at the Speed of Thought* (n 76) 242–243. Lo states that by 'September 25 1998, however, LTCM's balance-sheet leverage ratio had risen to 250-to-1 and was rapidly shooting to infinity'. The story of Amaranth is slightly different, as Amaranth was not as highly leveraged as LTCM, at around 5 to 1, but was heavily invested in (traditionally volatile) energy markets, at one time holding up to 70 percent of 'natural-gas futures contracts for November 2006 delivery on the New York Mercantile Exchange and about 60 percent of the contracts for January 2007'. See Mallaby (n 7) 314. See also Alistair Barr and Marketwatch, 'Amaranth Energy Trades Leveraged Five Times in May' *Marketwatch* (25 September 2006) <www.marketwatch.com/story/amaranths-energy-portfolio-was-leveraged-five-times-in-may> accessed 27 August 2020. For a complete overview of the collapse of Amaranth and the aftermath, see Mallaby (n 7) 316–322.

institutions of the managed funds. In addition to the considerations listed above, exposures to counterparties, collateralization of borrowing, the ratio of assets to liabilities, and more generally, the activity of the manager in financial markets must also be taken into account.[903] The calculation methods for leverage and leverage limits are not described in the directive, but are part of the AIFMD Implementing Regulation. [904] Two calculation methods, the gross method and the commitment method, are prescribed in the regulation.[905] The first annex of the regulation defines which investments and transactions must form a part of the calculations, and which do not.[906] While interesting, the rules on exact leverage calculations are of a granular nature that goes beyond the scope of this thesis, and the exact methodology is of limited relevance.

5.4.2.1.6 Liquidity Management

Liquidity management is a process that is intimately connected to the preceding sections. Liquidity, leverage, and risk management processes are interrelated concepts. The risk management procedure must result in a particular vigilance in an alternative investment fund with regards to its liquidity. Leverage, in essence, increases the need for effective liquidity management, in that it can impose an additional strain on liquidity within a fund.

The AIFMD mandates a distinct system of liquidity management, which must be created by the manager for each fund it manages.[907] This system must ensure that the liquidity profile of investments is congruent with each fund's underlying obligations, as well as enable the manager to monitor the liquidity risks of its fund or funds.[908] Stress tests are also explicitly a tool that must be utilized by managers to gauge the liquidity risks of its fund or funds in normal and exceptional market

[903] AIFMD, art 15(4)(a)–(h). The activity of the manager on financial markets as a general consideration must include an analysis of the scope, nature, and extent of that activity in the relevant markets. See article 15(4)(h).

[904] AIFMD Implementing Regulation, arts 6–11.

[905] AIFMD Implementing Regulation, arts 7, 8 (gross method and commitment method).

[906] AIFMD Implementing Regulation, Annex I.

[907] Only unleveraged, closed-ended alternative investment funds are exempt. See AIFMD, art 16(1). See also the AIFMD Implementing Regulation, art 46.

[908] See AIFMD Implementing Regulation, art 47(1)–(3). If it is appropriate given the strategy and structure of a fund, then risk limits are to be imposed as well, see AIFMD Implementing Regulation, art 48(1).

conditions.[909] Finally, the AIFMD requires that consistency must be achieved regarding a fund's strategy, liquidity profile, and its redemption agreements and policies.[910]

5.4.2.1.7 Investment in Securitization Positions

Investments in securitization positions are possible, but must be in line with other EU legislation on securitization. As of the time of writing, this legislation primarily consists of the CRD IV directive.[911] Especially important in this regard are rules regarding a 'net economic interest'. Net economic interest is a concept whereby originators and other parties involved in the creation of securitized products retain a portion of the products they sell to ensure they bear part of the risk. This ensures that their incentives are at least somewhat aligned with those of the purchasers, and that they have 'skin in the game'.[912] The relevant provisions in the AIFMD[913] have since been superseded by the more general European framework for securitization. The relevant European regulation aims to establish 'high-quality securitization markets' within the EU.[914] As was previously an aim of the AIFMD provisions, aligning the incentives of parties involved in the securitization process, such as sponsors, originators, and original lenders, is a central objective of the new regulation as well.[915] Retaining an economic interest, meaning parties continue to have 'skin in the game', is the central method used to achieve this.[916] Aside from

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909 AIFMD, art 16(1). See also AIFMD Implementing Regulation, art 48(2), which specifies the method and frequency of stress tests.

910 AIFMD, art 16(2). See also AIFMD Implementing Regulation, art 49.

911 See the Capital Requirements Directive (CRD IV) and the Capital Requirements Regulation (CRR).

912 For a thorough discussion of the idea of 'skin in the game', see Nassim Nicholas Taleb, *Skin in the Game: Hidden Asymmetries in Daily Life* (Random House 2018). See also the AIFMD Implementing Regulation, art 51(1), where the minimal net economic interest is described.

913 Specifically, AIFMD, art 17. See also AIFMD Implementing Regulation, art 51(2).

914 See recital 2 of Regulation (EU) 2017/2402 of the European Parliament and of the Council of 12 December 2017 laying down a general framework for securitisation and creating a specific framework for simple, transparent and standardised securitisation, and amending Directives 2009/65/EC, 2009/138/EC and 2011/61/EU and Regulations (EC) No 1060/2009 and (EU) No 648/2012 [2017] OJ L347/35 (Securitisation Regulation). See also AIFMD Implementing Regulation, art 51(2).

915 See Securitisation Regulation, recital 10.

916 ibid.

aligning incentives, the overarching primary objective of the new securitization regulation is to achieve a differentiation between opaque and complex securitization products and what are termed as 'safe, transparent, standardized' products, abbreviated as STS-products.[917] Differentiating between these products is hoped to cause an increase in supply of STS-products, which in turn will reinvigorate the European market for securitization products.[918] Since the regulation has been applicable only since 1 January 2019, its broader impact remains to be seen.[919]

5.4.2.2 Organizational Requirements

Organizational requirements under the AIFMD are provisions related to corporate governance issues within management companies. The AIFMD seeks to introduce control mechanisms to avoid issues that could arise from poor internal governance and leadership.[920] An essential component of these requirements is composed of rules related to the valuation of funds and assets. Valuation can be defined as the process through which the current value of an asset is determined.[921] Due to the opaque and frequently illiquid nature of many alternative investments, and specifically the opaque nature of the hedge fund industry, where some funds operate by

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[917] See Commission, 'Commission Staff Working Document: Impact Assessment Accompanying the Document Proposal for a Regulation of the European Parliament and of the Council Laying down Common Rules on Securitisation and creating a European Framework for Simple and Transparent Securitisation and Amending Directives 2009/65/EC, 2009/138/EC, 2011/61/EU and Regulations (EC) No 1060/2009 and (EU) No 648/2012 and Proposal for a Regulation of the European Parliament and of the Council amending Regulation (EU) No 575/2013 on Prudential Requirements for Credit Institutions and Investment Firms' SWD (2015) 185 final 22 <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52015SC0185> accessed 31 August 2020.

[918] Commission, 'Commission Staff Working Document: Executive Summary of the Impact Assessment Accompanying the Document Proposal for a Regulation of the European Parliament and of the Council Laying down Common Rules on Securitisation' (n 917).

[919] See Securitisation Regulation, art 48.

[920] See AIFMD, recital 22 and art 18(1).

[921] See eg Aswath Damodaran, *Damodaran on Valuation: Security Analysis for Investment and Corporate Finance* (Wiley 2016) 1ff; Aswath Damodaran, *Investment Valuation: Tools and Techniques for Determining the Value of Any Asset* (Wiley 2012) 1ff. For a discussion of valuation and an extensive overview of corporate valuation techniques (determining the value of companies), see Koller, Goedhart and Wessels (n 195).

restricting access to information on their trading strategies and referring to their operations as secretive 'black boxes',[922] the independent valuation of assets is frequently both more difficult and less objective than the valuation of other assets or investments. Supervisors and investors are therefore frequently at an informational disadvantage compared to a fund manager. This informational imbalance, as has been mentioned in other contexts, leads to agency problems and can even result in fraudulent behavior of unscrupulous fund managers. This informational asymmetry means that determining the value of an alternative investment and measuring fund performance is intrinsically linked to both investor protection issues and systemic risk perspectives. It is therefore another essential component of the AIFMD.

5.4.2.2.1 General Principles

The general principles require that both analog, ie human, and digital resources are to be utilized in order to ensure the 'proper management' of a manager's funds.[923] Competent authorities in the member states must also ensure a plethora of administrative and organizational aspects of a manager function appropriately. The list of these aspects includes administrative and accounting procedures, control and safeguarding arrangements for electronic data processing,[924] and internal control mechanisms. Conflict of interest issues are also a part of these aspects, among them investment procedures and principles, and especially issues of personal transactions, as well as self-dealing. The provisions emphasize as a minimum that such dealings must be recorded so that, if the need arises, they can be reconstructed after the fact.[925]

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922 The term 'black box' refers to hedge funds that do not disclose the details of their investment strategies and do not permit investors to view the mechanisms that underpin a fund's profit generation process. In the context of quantitative, algorithmic, and high-frequency trading funds, a 'black box' can refer to the algorithmic trading strategy or program, which is 'fed' with inputs and generates outputs without the fund disclosing the specific workings of the program. The program thus becomes a metaphorical 'black box'. For a detailed overview of 'black boxes', see Rishi K Narang, *Inside the Black Box: A Simple Guide to Quantitative and High Frequency Trading* (Wiley 2013).

923 AIFMD, art 18(1). See also AIFMD Implementing Regulation, art 57(1)–(5).

924 See AIFMD Implementing Regulation, art 58(2).

925 AIFMD, art 18(1) second subparagraph. See also AIFMD Implementing Regulation, art 63 and specifically art 63(2)(c). The Implementing Regulation also imposes additional record keeping requirements which range from records on portfolio transactions to subscriptions and redemptions. See articles 64 and 65 of the AIFMD Implementing

5.4.2.2.2 Valuation

As mentioned above, valuation forms an essential component of the AIFMD framework and effectively facilitates supervision and investor protection.

Under the AIFMD, valuation of a fund can either be performed by a legal or natural person. This person must both be independent and cannot have close ties to the fund or its manager in question. [926] This independent third person, the 'external valuer', cannot be the depositary, unless the depositary and valuation functions are separate and compartmentalized. If a conflict of interest arises in this context, valuation is only permitted if this conflict is identified, managed, monitored, and disclosed to the investors in the fund.[927] It is also permissible for the manager to perform the valuation on its own, but only if separation of the function responsible for valuation is guaranteed and potential conflict of interest issues have been addressed.[928]

In cases where the manager does not conduct its own valuation, but appoints a different valuer, it must make certain that valuer is subject to professional registration which is recognized by law, other provisions, or professional conduct rules. External valuers must also provide professional guarantees that they can perform their functions effectively. The appointment of a valuer must also comply with delegation rules of the AIFMD, which are outlined below.[929] Liability is unaffected by such an appointment, as the manager remains liable. While the valuer is liable toward the management company for any losses the manager suffers due to negligence or intent in the execution of its tasks, the manager stays liable to its investors for any liability resultant from the valuer's actions.[930]

Regulation. These records must be kept for five years or longer, see AIFMD Implementing Regulation, art 66(1).

926 AIFMD, art 19(4)(a), (b).

927 AIFMD, art 19(4) second subparagraph.

928 AIFMD, art 19(4)(b).

929 AIFMD, art 19(5)(a)–(c).

930 This constellation is a typical figure in the allocation of liability for damages. For example, this figure is roughly equivalent to the principle of *Rückgriff* (regress) in Swiss law. See in Swiss law, for example, BGE 137 III 352. In the specific case of the AIFMD and valuation, the manager remains liable toward the investors and the fund, but can still hold the valuer liable for any damages suffered. The result is a sort of 'cascade of liability', where each party damaged has a party it can hold responsible. See also AIFMD, art 19(10).

A management company is permitted to perform a valuation itself, but only if the process is conducted by a part of the company that is functionally independent from portfolio management functions. In addition, the valuation cannot be assigned to persons where compensation arrangements or the presence of other conflicts of interest might cause undue influence on the task.[931] Where management companies perform their own valuations, it remains at the discretion of competent authorities to demand the valuations and related procedures be verified by a different valuer or even an auditor.[932]

For each fund that a manager manages, procedures must exist so the fund assets can be valued in an independent manner. This valuation process must follow the rules of provisions of the directive, the relevant member state's law, and the fund's instruments of incorporation or rules.[933] The assets must be valued impartially and with 'care, skill, and diligence'.[934] Calculation of the NAV of a fund also must also be executed by following the same rules and provisions.[935] The calculation of the NAV must occur either annually or more frequently,[936] unless the fund is open-ended, in which case frequency with which the NAV is determined must be correspondent to how often the fund's units are redeemed and issued, and also according to what assets the fund holds.[937] In closed-ended funds, if capital increases or decreases, this triggers a new calculation and valuation of fund assets and NAV.[938]

On a technical level, the exact calculation of the value of a fund's assets is prescribed in greater detail in the implementing regulation.[939] Fund's must calculate

931 AIFMD, art 19(4)(b).

932 AIFMD, art 19(9).

933 AIFMD, art 19(1). The rules governing the valuation and calculation of the NAV of the fund is laid down according to the national law of the member state in which the fund is established. See AIFMD, art 19(2) and AIFMD Implementing Regulation, art 72.

934 AIFMD, art 19(8).

935 AIFMD, art 19(3) first subparagraph.

936 AIFMD, art 19(3) second subparagraph.

937 AIFMD, art 19(3) third subparagraph.

938 AIFMD, art 19(3) fourth subparagraph.

939 AIFMD Implementing Regulation, art 67(1).

the value of their assets according to the valuation method prescribed by the country in which the fund is established.[940]

5.4.2.3 Delegation

Delegation provisions primarily have consumer protection as a primary objective. The delegation of any functions carries with it the inherent risk of transferring responsibility for task to parties who might be less capable than the fund manager. In a more general sense, this has implications for systemic risk and financial stability as well. Firstly, it reduces oversight over the processes normally conducted within fund managers, and secondly, it creates potential for incompetence due to informational asymmetries between the delegating party and the delegate. In a legal sense, delegation of tasks also creates issues of liability. The AIFMD addresses these issues by permitting delegation only in certain cases and under certain conditions. The first provision ensures that oversight remains possible. A fund manager has to inform its competent authorities if a delegation is to take place.[941] The delegation is subject to various specific conditions. These conditions are the following: a justification must exist with objective reasons, the delegate's resources must be sufficient to perform the entrusted tasks, the people involved in the functions that are to be delegated must be both of good repute and experienced enough to conduct such tasks, and the delegation cannot impact supervision materially nor may it cause the performance of activities in the best interests of investors to become compromised. Furthermore, the manager has to demonstrate the delegate's capability and that it is qualified to handle the given tasks. The manager must also show that the delegate has been chosen with all due care. The manager must be capable of monitoring the delegate effectively, give instructions, and, at any time, withdraw the delegation. In the situation where the delegation of either risk or portfolio management functions takes place, the competent authorities of the manager's home member state must either supervise the delegate or have approved the delegation. The delegate must also be registered specifically for asset management tasks. Additionally, the manager and competent authorities must cooperate and work together to enable the fulfillment of the authorities' supervisory objectives.[942]

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[940] AIFMD Implementing Regulation, art 67(1) second subparagraph.

[941] AIFMD, art 20(1).

[942] See AIFMD, art 20(1)(a)–(f).

Liability of the manager toward any of its funds or the investors therein is not affected by delegation. Furthermore, delegation may not lead to the manager becoming the equivalent of a 'letter box entity'.[943] Sub-delegation by the delegate is not prohibited, as long as the manager has consented to this and has notified the competent authorities in advance, and the same conditions applicable to the delegate are also applied to the sub-delegate.[944] If this 'cascade' of delegation continues, and a further delegate is appointed, the same rules apply as described above.[945]

Delegation or sub-delegation to the depositary is prohibited, as is delegating to any of its own delegates. This has the objective of avoiding conflict of interest problems that might emerge from such delegation. Accordingly, the delegation to any other entity where a conflict might emerge is also prohibited, unless this conflict is identified, managed, monitored, and disclosed to the investors of the fund in question. Should a conflict be prone to emerge, the entity in question must separate the tasks where this conflict might exist from both the risk and the portfolio management functions.[946] The services provided by both the delegate and sub-delegate must be reviewed 'on an ongoing basis'.[947]

5.4.2.4 Depositary

As is the case under the UCTIS framework,[948] the depositary and its functions in relation to the fund and manager are an essential component of the regulatory efforts that result in the AIFMD.[949] Accordingly, the provisions governing the relationship between manager and depositary are extensive.[950] In general, 'the depositary [must] act honestly, fairly, professionally, [and] independently'. In addition, the depositaries actions must be in the interest of the fund and its investors, so if a conflict of interest were to arise, the depositary would not be permitted to carry

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[943] AIFMD, art 20(3).

[944] AIFMD, art 20(4).

[945] AIFMD, art 20(6).

[946] AIFMD, art 20(2), (5).

[947] AIFMD, art 20(5) second subparagraph, art 20(1) second subparagraph.

[948] See chapter 4.

[949] See AIFMD, recital 32.

[950] While consisting of a single article in the AIFMD, article 21 of the AIFMD contains 17 paragraphs and numerous subparagraphs. The AIFMD Implementing Regulation dedicated an entire chapter to the depositary, comprised of articles 83–102. See AIFMD Implementing Regulation, arts 83–102.

out an activity going against these interests. An exception to this rule only exists if a separation[951] is put into place between the tasks creating the conflict and other activities carried out for the benefit of the manager and/or fund. In addition, the conflict must be identified, managed, monitored, and disclosed to the investors of the fund.[952]

It is interesting to note that the depositary takes on an interesting role in assisting competent authorities, as the depositary is tasked with certain oversight and monitoring roles vis-à-vis the fund whose assets it is holding. Accordingly, all information pertinent to supervisory duties regarding the fund and manager must be made available to competent authorities on request by the depositary. In cases where two different competent authorities are responsible for oversight of the fund or manager, the authorities that receive information must pass it on to their peers in the other countries involved in the situation in question.[953]

5.4.2.4.1 Appointment of the Depositary and Eligibility

For each fund that a management company manages, a single depositary must be appointed. For EU alternative investment funds, the depositary has to have been established in the home member state of the fund, whereas for non-EU alternative investment funds, the depositary must be established either in the same third country where this fund is established, or alternatively in the home member state where the fund's management company is established. It is also possible to appoint a depositary of a non-EU fund in what is termed the 'member state of reference' of the management company of that fund.[954] The depositary agreement must be underpinned by a contract in writing.[955] The contract must include a description of how the depositary will fulfill its oversight function through exchanging information or other arrangements.[956]

[951] This separation must be both functional and hierarchical in nature.

[952] AIFMD, art 21(10).

[953] AIFMD, art 21(16). See also the AIFMD Implementing Regulation, art 92.

[954] AIFMD, art 21(5).

[955] The AIFMD Implementing Regulation describes which points must be included in the contract. The prerequisites that are described are quite detailed and extensive. See AIFMD Implementing Regulation, art 83(1)–(3), (5)–(6). Certain portions of this written contract can also be transmitted electronically, if both parties agree, see AIFMD Implementing Regulation, art 83(4).

[956] AIFMD, art 21(1), (2).

5.4.2.4.2 Eligible Institutions in the EU and in Third Countries

The choice of depositary is connected to certain prerequisites that must be present in order for an institution to be eligible. For EU funds, three primary categories of institutions can be appointed. Firstly, credit institutions, in this context banks, that are authorized under the CRD IV directive can be appointed. Secondly, investment firms may also be appointed, but only if their registered offices are in the European Union and fulfill capital adequacy requirements and initial capital requirements. Such investment firms must be permitted to perform both the ancillary service of safe-keeping and administration of financial instruments under the MiFID II framework. Finally, if an institution is already permitted to serve as a depositary for a fund governed by the UCITS framework, it can also serve as a depositary for an alternative investment fund.[957] As mentioned above, the appointment of third country institutions as depositaries is possible for third country non-EU alternative investment funds, but this is also subject to a number of requirements. Third country depositaries must be subject to effective prudential regulation in their country which corresponds to the legal situation within the European Union, ie is sufficiently equivalent. In addition, the country in question cannot be on the Financial Action Task Force's list of non-cooperative countries. Cooperation agreements must be present and information exchange arrangements between the competent authorities of the member state where the non-EU fund's units are to be marketed and the authorities tasked with oversight of the depositary in the third country. Furthermore, agreements on information exchange in tax matters must be in place. Finally, the depositary must be contractually liable toward the alternative investment fund.[958]

5.4.2.4.3 Safe-Keeping of Assets and Monitoring of the Fund by the Depositary

The depositary has several monitoring obligations. Since the depositary is, at its core, a safe-keeping mechanism for financial instruments and other assets, the depositary usually holds these in custody for a fund. Under the AIFMD, however, the depositary simultaneously acts as a verification and documentation mechanism, as it must verify ownership and keep records of the assets it holds on behalf of the fund.

[957] AIFMD, art 21(3).

[958] AIFMD, art 21(6)(a)–(e). See also AIFMD Implementing Regulation, art 83(1)(c).

The general monitoring rules are primarily related to the specific aspects. These aspects include any of the fund's cash flows, payments made associated with subscription to the fund by investors, and the administration of cash amounts must all be monitored by the depositary. The management and monitoring of cash accounts involves making certain that payments in connection to subscription rights are received and booked in the correct cash accounts. These accounts can be in the manager's or the depositary's, or also the fund's name.[959] Finally, if the depositary has cash accounts in its own name it administers on the fund's behalf, these have to be kept separated from the depositary's own accounts, its cash, and its assets.[960]

The fund's financial instruments must be kept in a registered financial instrument account on the depositary's books. Financial instruments that are physically delivered are held in custody.[961] These financial instruments must be kept separate in segregated accounts and must be clearly identifiable as the fund's property at all times.[962] For assets other than those described directly above, their ownership by the fund must be verified, and an up-to-date record must be maintained by the depositary. The depositary must conduct an assessment on whether the fund or management company owns the assets based on information and documentation provided by the fund or manager, or on external evidence.[963]

The depositary also has several ancillary tasks. Primarily, any instructions from the manager to the depositary must be carried out, unless fund rules or legislation prohibit it.[964] The sale, repurchase, redemption, and cancellation of shares or units must also occur in line with fund rules and the applicable law. The valuation of fund shares or units is also a task that must be controlled by the depositary. It must make sure that the valuation is conducted in a permissible and legal fashion, regardless of whether the applicable rules are contained in national law, EU law, or

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[959] AIFMD, art 21(7). The cash account can also be set up by an equivalent entity in the name of the fund, as long as the entity is subject to prudential regulation and supervision on the same level as European Union law mandates. This addendum is to be understood as a sort of catch-all clause primarily relevant in cases involving third countries where the depositary might be structured and regulated differently from EU entities.

[960] ibid.

[961] AIFMD, art 21(8)(a)(i).

[962] AIFMD, art 21(8)(a)(ii).

[963] AIFMD, art 21(8)(b)(i)–(iii). See also AIFMD Implementing Regulation, art 90(2)–(4).

[964] AIFMD, article 21(9)(c). See also AIFMD Implementing Regulation, art 95.

the fund rules or instruments of incorporation. Finally, the depositary is also tasked with making certain that consideration[965] is remitted to the fund, and that the fund's income is processed and utilized according to national law and the fund's rules or instruments of incorporation.[966]

5.4.2.4.4 Delegation of Depositary Functions

In the same fashion that managers are permitted to delegate certain functions, depositaries can delegate functions as well. The depositary can only delegate the safekeeping function to third parties, however.[967] Such a delegation is only permitted in the following case: the delegation may not have the objective of skirting the rules of the AIFMD framework, delegation is due to an objective reason and this can be demonstrated by the depositary, the selection and appointment has occurred while applying all due skill, care and diligence, and the depositary oversees and monitors the entity to become the delegate during the entire delegation process.[968] The third party may also sub-delegate these functions, in which case the

[965] See AIFMD, art 21(9)(d) and AIFMD Implementing Regulation, art 96(1). Consideration in this context refers to an element in contract law of common law systems, where a contract is only valid if offer, acceptance, and consideration are all components of the agreement. Consideration is a type of 'quid pro quo', involving anything of value. In the context of the AIFMD, consideration would be returned to the fund, which must be overseen by the depositary. See Lawrence Meir Friedman and Grant M Hayden, *American Law: An Introduction* (3rd edn, OUP 2017) 143–144. The German, French and Swedish versions of the AIFMD describe this consideration as *Gegenwert, contrepartie*, and *ersättning,* which all roughly translate to some form of restitution, reimbursement, or compensation in a transaction.

[966] AIFMD, art 21(9)(a)–(e). See also AIFMD Implementing Regulation, art 97(1)(a).

[967] AIFMD, art 21(11) first subparagraph. Securities settlement systems and similar systems are not considered delegation, see AIFMD, art 21(11) fifth subparagraph.

[968] AIFMD, art 21(11). The monitoring function of the depositary is not general, but tied to five precise aspects the depositary must ensure are present in the third party. First, the third party must exhibit both the expertise and structures that correspond to the complexity and nature of the assets of the fund or manager that it is entrusted with. Second, the third party must be subject to prudential regulation and oversight that is effective and contains capital requirement rules as well as a periodic audit. Third, the third party has to segregate the assets it is entrusted with from its own and must continually be able to identify them. Fourth, the third party may not use the assets without consent from the fund and manager, and must inform the depositary beforehand. Lastly, the third party must comply with the same provisions that the depositary must follow with regards to safekeeping obligations. See AIFMD, art 21(11)(i)–(v).

rules on delegation apply ‘mutatis mutandis’ to this delegate and its sub-delegate.[969]

As is the case with delegation by managers, liability remains unaffected. Discharge of liability only can be achieved if a contractual agreement in writing exists that explicitly transfers liability to the third party and enables the fund or manager to hold said third party responsible, if and the contract gives an objective reason that can justify this transfer.[970]

In third countries, local law can require that a local entity must have custody over certain assets, even though this entity might not fulfill the delegation requirements. In such a case, the depositary can also avoid liability, but only if a contractual agreement in writing between depositary and fund or manager allows the discharge and transfer of liability to the local entity and enables the fund or manager to hold the local entity responsible. In such a situation, the depositary must have been instructed by the fund or manager to delegate custody to the local entity, the instruments of incorporation or rules of the fund allow for this, and investors have been duly informed.[971]

5.4.3 Transparency Requirements and Disclosure to Investors

While systemic risk, not investor protection, is the primary aim of the AIFMD, investor protection still plays a crucial secondary role. The AIFMD passport allows only the marketing and distribution of funds to professional investors within the EU. Distribution to retail investors is only possible if member states permit this, in which case it is only permitted within that jurisdiction.[972] Professional investors have traditionally been subject to lower investor protection than retail investors. Creating harmonized European rules for alternative investment funds and managers thus poses a distinct regulatory challenge. An industry with investments

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[969] AIFMD, art 21(11) fourth subparagraph.

[970] AIFMD, art 21(13)(a)–(c). In order for the depositary to be permitted to transfer liability, the general requirements for the delegation of custody under article 21(11) must have been met as well.

[971] AIFMD, art 21(14). Depending on the legal situation regarding depositary, fund, and manager, investors can either hold the liable party directly responsible, or indirectly via the management company. See AIFMD, art 21(15).

[972] See AIFMD, art 43.

that were traditionally primarily accessible to professional or sophisticated investors with a reduced need for protection vis-à-vis retail investors now needs a balanced approach to investor protection. The primary and more traditional approach to investor protection has been to supply the potential investor with information on the investment, so the investor can decide whether to invest based on this information and their own assessment of its risk-return profile. The AIFMD still mirrors this approach, where the fund manager provides an overview of the fund to facilitate the investment decision. It is important to mention, however, that in reality, the AIFMD frequently does not regulate the ultimate distribution channels for funds. It is therefore entirely possible, that the investor purchasing the financial product that represents investment in a fund is de facto treated differently due to the wider ruleset governing the distribution of financial products in the European Union to the final investor.[973] It is also interesting to note that the AIFMD does not in itself have a distinct document that provides the investor with information at a glance. There is no equivalent to the UCITS KIID for alternative investment funds.

5.4.3.1 Annual Report and Other Periodic Reporting Obligations

The annual report is the first and primary instrument with the objective of supplying information on a fund to investors and prospective investors. Each year an annual report must be made available at the latest until six months have passed since the conclusion of the financial year. The manager is responsible to release the report.[974] If the annual report must be accessible by the public, as is prescribed by the Transparency Directive,[975] the supplemental information described below, which would otherwise not need to be published according to that directive, must

973 Depending on the specific structure and contractual arrangement in question, an alternative investment fund might be in the scope of PRIIPs or similar. See PRIIPs and the discussion in Busch and Van Setten (n 370) 16–17.

974 AIFMD, art 22(1). Member states can impose a shorter period, see AIFMD, recital 48.

975 Directive 2013/50/EU of the European Parliament and of the Council of 22 October 2013 amending Directive 2004/109/EC of the European Parliament and of the Council on the harmonisation of transparency requirements in relation to information about issuers whose securities are admitted to trading on a regulated market, Directive 2003/71/EC of the European Parliament and of the Council on the prospectus to be published when securities are offered to the public or admitted to trading and Commission Directive 2007/14/EC laying down detailed rules for the implementation of certain provisions of Directive 2004/109/EC [2013] OJ L390/38 (Transparency Directive).

be supplied to the investor only where it is requested.[976] At the latest after four months have passed since the end of the financial year, the report must be available to the public.[977] The annual report must adhere to accounting standards in the home member state or third country where the fund is established and must have been properly audited.[978]

The content of the annual report is fairly generic and follows roughly the pattern of any 'standard' annual report of a listed company, with small adjustments regarding remuneration of the management company's employees and carried interest paid by the fund. The annual report must include at least the following items:

- A balance-sheet
- An income and expenditure account for the financial year
- A report on the activities of the financial year
- Any material changes to information that must be disclosed to investors during the year
- Total remuneration, both fixed and variable, paid to the management company's staff or beneficiaries
- Carried interest paid by the fund.[979]

5.4.3.2 Disclosure to Investors

Whereas the annual report is a document that provides regular information in an annual fashion, prior to investment, additional types of information must be disclosed to investors as well.[980] Material changes to any of this information must be disclosed as well.[981] In cases where a prospectus has to be published by the fund,

[976] This information is provided as part of the annual report or separately. See AIFMD, art 22(1) second subparagraph.

[977] ibid.

[978] The annual report must also comply with accounting rules in the fund rules or instruments of incorporation. The auditor's report must be included in its full form as part of the annual report. See AIFMD, art 22(3).

[979] AIFMD, art 22(2).

[980] AIFMD, art 23(1).

[981] ibid.

the information described below must only be published where it goes beyond what is already contained in the prospectus.[982]

The information that must be provided is extensive and frequently linked to other provisions of the AIFMD. The information that must be disclosed is related to one of the following categories:

1. Investment strategy and objectives
2. Identity of persons connected to fund
3. Legal aspects and compliance
4. Fees
5. General information
6. Periodic disclosure.[983]

General information in Table 5c below provides a complete overview of disclosure to investors.

5.4.3.3 Table 5c: Disclosure to Investors[984]

Type	Content	Provision
Investment strategy and objectives	• The investment strategy and objectives of the fund	Art 23(1)(a)
Assets	• Types and assets that can be invested in	Art 23(1)(a)
Techniques	• Investment techniques that may be employed	Art 23(1)(a)
Risks	• Risks, restrictions	Art 23(1)(a)
Change of strategy	• Procedures through which strategy or investment policy can be changed	Art 23(1)(b)

982 AIFMD, art 23(3). The prospectus can be mandated by the law of the member state or as part of the prospectus directive. The current prospectus directive (the text of the AIFMD makes reference to the predecessor, which is no longer in force) is the following directive: Directive 2010/73/EU of the European Parliament and of the Council of 24 November 2010 amending Directives 2003/71/EC on the prospectus to be published when securities are offered to the public or admitted to trading and 2004/109/EC on the harmonisation of transparency requirements in relation to information about issuers whose securities are admitted to trading on a regulated market [2010] OJ L327/1.

983 AIFMD, art 23(1)–(5). See also AIFMD Implementing Regulation, arts 108 and 109.

984 Author’s own, adapted from AIFMD, art 23(1)(a)–(p).

Type	Content	Provision
Valuation	• Description of fund's valuation procedure • Must include pricing methodology and methods to value hard-to-value assets (article 19 AIFMD)	Art 23(1)(g)
Liquidity	• Description of liquidity risk management of the fund • Redemption rights and arrangements with investors in normal and exceptional circumstances	Art 23(1)(h)
Leverage	• Use of leverage, leverage limits and restrictions, the types and sources of leverage as well as risks • Collateral and asset reuse arrangements	Art 23(1)(a)
Identity of persons connected to fund	• Where the master fund or underlying funds are established (in cases where the fund in question is a fund of fund)	Art 23(1)(a)
Manager, depositary, auditor and others	• Identity of the manager, depositary, auditor, and other service provider • Description of duties of these persons and investors' rights	Art 23(1)(d)
Prime broker	• Identity of the prime broker • (Material) arrangements of the fund with its prime broker • Conflicts of interest and management thereof • Contractual arrangements regarding: o Reuse and transfer of assets o Information on transfer of liability to the prime broker	Art 23(1)(o)
Legal aspects and compliance	• Main legal implications of contractual relationships related to investments • Any contractual relationships with the depositary that would exclude it from liability and any changes to liability arrangements	Art 23(1)(c) and Art 23(2)
Compliance with liability provisions	• Compliance of the manager with provisions related to liability (article 9 AIFMD)	Art 23(1)(e)

Type	Content	Provision
Delegation	• Descriptions of safekeeping and delegation functions and identities of delegates • Description of conflicts of interest	Art 23(1)(f)
Fair treatment of investors	• Description on fair treatment of investors • Description of preferential treatment of investors (including the type of investors receiving that treatment) • Legal or economic links with fund or manager of investors receiving preferential treatment	Art 23(1)(j)
Fees	• Description of the fund's fees, charges, and expenses • Maximum amounts borne by investors, directly and indirectly	Art 23(1)(i)
General information	• The current annual report	Art 23(1)(k)
Sale of units or shares	• Procedure and condition of issue and sale of units or shares	Art 23(1)(l)
Value of shares and performance	• Current NAV of the fund or current market price of shares • Historical performance of fund, where available	Art 23(1)(m), Art 23(1)(n)
Periodic disclosure	• Form and timeline of periodic disclosure of the following information: o The risk profile and risk management systems of the fund o New arrangements on liquidity management of the fund o Percentage of the fund's assets of an illiquid nature which are subject to special arrangements o If applicable, the maximum level of leverage that can be deployed o If applicable, the total amount of leverage employed by the fund o If applicable, the right to reuse collateral of guarantees existing under the leveraging arrangement	Art 23(1)(p) Art 23(4)(a)–(c) Art 23(5)(a)–(b)

5.4.3.4 Reporting Obligations to Competent Authorities

In addition to disclosing information to the investor, the manager must inform competent authorities periodically of certain activities and provide them with information. This mechanism has the objective to permit and facilitate effective supervision. These provisions are indirectly focused on mitigating systemic risk by aggregating and transferring the information and data necessary to monitor funds and management companies in aspects related to systemic risk.[985]

A manager must first report to its competent authorities in its home member state what assets it trades and on which exchanges it does this. It must inform the authorities which instruments it trades in and in which markets it actively trades. The manager will be trading on behalf of the funds it manages; therefore, the concentrations and exposures of each managed fund must also be relayed to the authorities.[986] Additional information must also be provided by a manager on each fund it manages or markets in the European Union. This information is specifically related to systemic risk issues, such as risk and liquidity management, and stress tests. The main categories of assets the fund invest in, the fund's risk profile, as well as risk management systems must form a part of the information provided by the manager. This must occur for every fund under management.[987] Results of stress tests which the manager has conducted are also reported. If assets of a fund are subject to 'special arrangements' due to them being illiquid, the management company must report this, as is the case for any new arrangements on fund liquidity management.[988] In addition to this information, the manager must provide further information, but only on request. At the end of each quarter, a manager must create a list with all the funds which are being managed. This list must be forwarded to authorities. Annual reports of all these funds must also be supplied to the authorities.[989]

For managers that manage leveraged funds on a 'substantial basis', the overall leverage in each fund, a breakdown of this leverage deployed through cash, secu-

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[985] This is implied throughout the provisions, and explicitly mentioned in article 24(5) of the AIFMD.

[986] AIFMD, art 24(1).

[987] The information provided on risk management systems must include procedures to manage market risk, liquidity risk, counterparty risk, operational risk, and other risks. See AIFMD, art 25(2)(c).

[988] AIFMD, art 24(2)(a)–(e).

[989] AIFMD, art 24(3)(a), (b).

rities borrowing, and derivatives constitute further information that the authorities must receive. If leveraged assets are reused by the fund, this fact and how the arrangements are structured must also be communicated to authorities. Finally, the five largest sources of leverage which result from borrowing cash or securities for each fund must be identified. The identity of these sources for each fund and the leverage resulting from this activity is to be provided to authorities.[990] Use of leverage is considered to be on a substantial basis if the leverage ratio is higher than 3 to 1, as calculated by the commitment method under the AIFMD Implementing Regulation.[991]

Where financial stability is at stake, authorities can require additional information. In a similar vein, ESMA itself can request that the authorities require the management companies to provide additional information.[992]

5.4.4 Leveraged Funds

As chapter 2 describes at length, liquidity risk is a danger that investment funds are confronted with. This risk is exacerbated in funds which employ leverage as part of their investment strategy. Accordingly, the AIFMD contains specific rules governing funds employing leverage. Unlike the UCITS framework, the AIFMD does not set a leverage limit itself, nor does it specify the composition of alternative investment funds' portfolios. It does, however, create a set of rules through which leverage limits are imposed by the manager and monitored by authorities in their respective member states. As part of the procedure governing leveraged funds, ESMA assists in facilitating and coordinating between competent authorities. ESMA must be notified of certain procedures related to leverage limits, and issues advice to the competent authorities. ESMA itself receives advice from the ESRB in cases where it determines measures which the competent authorities can take related to leverage limits. Finally, ESMA must inform the Commission as well as the ESRB if it determines that a threat to financial stability by a manager exists, and remedial action must be taken. Competent authorities can ignore the advice, but must notify ESMA and state their reasons. If this occurs, ESMA can

[990] AIFMD, art 24(4) See also AIFMD Implementing Regulation, art 111(2).

[991] AIFMD Implementing Regulation, art 111(1). See also AIFMD Implementing Regulation, art 8, which outlines how leverage is calculated under the commitment method.

[992] AIFMD, art 24(5). In cases where the competent authorities require additional information without ESMA's request, they must inform ESMA about these additional requirements.

subsequently publish these reasons provided, but not before having informed the competent authorities that publication will occur.[993]

On a macroprudential level, the competent authorities are tasked with utilizing the information that is provided to them by the management companies described above to gauge how leverage in funds contributes to systemic risk, potential market turbulence, and the long-term development of the economy. This information must be exchanged in order to make certain that competent authorities in the countries concerned are sufficiently informed. Information must also be supplied to ESMA and the ESRB, should they need it. The same information exchange must occur bilaterally and without delay if a manager in the jurisdiction of any competent authorities represents a substantial counterparty risk, regardless of whether this risk emerges vis-à-vis a credit institution or another institution of systemic relevance in other member states.[994]

It is the task of the manager to specify limits on leverage for its funds. The manager must show that the limits are reasonable and are being complied with. Leverage limits can only be imposed by authorities directly if it is determined that such a measure is necessary with regards to market integrity and financial stability. If limits are imposed by authorities, they must inform the ESRB, ESMA, and the specific fund's competent authorities.[995] This notification procedure must take place earlier than ten days before the measures taken become effective, except in exceptional circumstances.[996]

The specific calculation of a fund's leverage or exposure can be calculated in only two ways.[997] The first option is to calculate leverage according to the 'gross method', which is principally the 'sum of the absolute values of all positions'.[998] Alternatively, the commitment method can be used.[999] The regulation specifies

993 AIFMD, art 25(5)–(8).

994 AIFMD, art 25(1), (2).

995 AIFMD, art 25(3).

996 AIFMD, art 25(4).

997 AIFMD Implementing Regulation, art 6(2).

998 AIFMD Implementing Regulation, art 7 first paragraph . A few specific additional rules must be followed, see AIFMD Implementing Regulation, art 7 second paragraph (a)–(e).

999 AIFMD Implementing Regulation, arts 6(2) and 8. Similar to the gross method, the commitment method is the sum of absolute values, but the specific rules that must be

and describes in greater detail how this is to occur and how the methods differ from each other.[1000]

5.4.5 Private Equity and Control of Non-Listed Companies

5.4.5.1 Structural Aspects

The AIFMD, as the reader can observe by reading the passages above and below this one, is structured in a fairly conventional way with regards to governing alternative investment funds. It follows much the same pattern as the UCITS directives, containing provisions on authorization and operating conditions, supervision, mitigation of systemic risk, and also various specific provisions related to investor protection. One section of the AIFMD has no direct parallel in the UCITS directive and is quite specific to a subset of alternative investment funds. This subset consists primarily of the private equity industry and activist hedge funds.

The section in question regulates funds controlling private companies through voting rights. The section exists in its current form most likely due to the highly politicized process of drafting and implementation during the political 'forging' of what would eventually become the AIFMD. The directive contains this section, which is, in essence, specifically related to private equity transactions. These provisions attempt to guard against the worst practices (and clichés)[1001] of buyout funds and the excesses that took place in the 1980's. The section is more difficult to categorize, and from a systematic perspective, it appears somewhat disjointed from the rest of the framework. The section governs the narrow subcategory of funds engaging in private equity practices and leveraged buyouts, but is largely irrelevant to funds pursuing unrelated investment strategies. While the provisions are clearly aimed primarily at regulating private equity funds, the section also contains certain restrictions on voting, which impacts entities or institutions engaging in shareholder activism[1002] as well. This portion of the directive is also noteworthy

followed are of a more granular nature. See AIFMD Implementing Regulation, art 8(2)–(8).

1000 AIFMD Implementing Regulation, art 7 second paragraph.

1001 For a textbook example of a leveraged buyout containing all the elements of private equity practices from the 1980's see Burrough and Helyar (n 8). For a detailed description of the process of a leveraged buyout, including multiple case studies, see Lerner, Hardymon and Learmon (n 82).

1002 Activist strategies are described in chapter 2. One prominent example of such a fund would be William Ackman's Pershing Square. Though Pershing Square and Ackman

due to it being the sole part which directly utilizes the specific investment strategy of alternative investment funds as the determining factor for regulation in this specific area. Whereas the other parts of the AIFMD are largely generic and applicable to all alternative investment fund managers, without regard to the actual strategy pursued,[1003] these provisions in the following sections specifically target investment behaviors by funds and managers.

What causes a situation to become relevant for the provisions in this part of the directive is the acquisition of stakes in a company that lead to control. Acquiring control can be achieved through one fund, or activities of multiple funds managed by the same company, where an agreement between these funds has the goal of achieving control. Multiple management companies with an agreement to acquire control of a company through their funds also fall within the purview of the section.[1004] The target must be a non-listed company. Excluded from the provisions of the directive are situations where control is exercised over either small and medium-sized enterprises (SMEs), or special purpose vehicles (SPVs).[1005] Control in this context generally means the acquirer has more than 50% of voting rights, regardless of whether these votes are held directly or indirectly, and whether the voting rights are suspended or not.[1006] The rules are to be read as minimal standards, as member states are permitted to create stricter rules.[1007]

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primarily pursue activist strategies, this is combined with other strategies as well. Most recently, Ackman hedged against a market downturn due to the 'Coronavirus', which resulted in a profit of USD 2.6bn for Pershing Square. See Ortenca Alijai, 'Bill Ackman Makes $2.6bn in Credit Market Rout' *Financial Times* (London, 25 March 2020) <www.ft.com/content/6c3d3e18-2d6e-4c38-a82d-a0ac18d1eb8b> accessed 31 August 2020.

[1003] An exception being leveraged strategies, but this also constitutes an extremely large number of strategies that, apart from utilizing leverage, are almost wholly unrelated to each other, having vastly different risk profiles.

[1004] AIFMD, art 26(1)(a), (b).

[1005] AIFMD, art 26(2)(a), (b). What exactly qualifies as an SME is specified in the following document: Commission Recommendation of 6 May 2003 concerning the definition of micro, small and medium-sized enterprises [2003] OJ L 124/36.

[1006] AIFMD, art 26(5). In this context, 'indirectly' is defined as through an undertaking that is controlled by the fund, or a natural or legal person acting on behalf of the fund or undertaking controlled by it. See AIFMD, art 26(5)(a), (b).

[1007] AIFMD, art 16(7).

5.4.5.2 Notification Procedures

If a fund acquires control or purchases shares representing sufficient voting rights in a private company not listed on an exchange, it must notify its (the fund's) competent authorities. Within ten working days, all notification must have occurred.[1008] A fund must also notify competent authorities if it acquires, holds, or disposes of shares connected to voting rights around specific thresholds. The thresholds that trigger a notification are: 10%, 20%, 30%, 50%, and 75% of voting rights.[1009] In cases where a fund acquires control or passes one of the thresholds, it must notify not only the competent authorities, but also the target company and those shareholders that are known to the fund.[1010] The notification must include the date on which the limit was reached or surpassed, the resultant situation regarding voting rights, and under what conditions the threshold was touched. These conditions are further specified to include the shareholders involved in this action; which, if any, persons vote or are voting on behalf of the acquiring party; and the 'chain of undertakings' which link the fund to its voting rights.[1011] In this notification process, stakeholders in the company are also notified of the shift of power in the company. The board of the company (if the manager requests this) informs either the employees or their representatives on the resultant situation.[1012]

If control is acquired, the management company (or companies) which manage(s) the fund (or funds) in question must be disclosed.[1013] The manager's conflict-of-interest-policy is to be made available. This policy must describe how conflicts will be managed between the fund, the manager, and the company over which control has been acquired. Strategies to mitigate potential conflicts, such as safeguards and agreements to conduct business at arm's length must also be included. In addition, the internal and external communication policies, specifically toward employees of the company, must be included as part of the notification process.[1014]

[1008] AIFMD, art 27(5).

[1009] AIFMD, art 27(1).

[1010] AIFMD, arts 27(2)(a)–(c) and 28(1)(a)–(c). The fund must notify shareholders of which it knows the identities and addresses. In addition, shareholders whose address and identity can be provided by the company or found in a register to which the fund has access must also be notified.

[1011] AIFMD, art 27(3)(a)–(c).

[1012] AIFMD, arts 27(5) and 28(3).

[1013] AIFMD, art 28(2)(a).

[1014] AIFMD, art 27(2)(a)–(c).

The acquirer's intentions regarding the future of the company must be disclosed to both the shareholders and the company.[1015] Specifically, potential consequences for employment and conditions of employment must be disclosed. The manager must also verify that the board makes this information available to the company's employees or their representatives.[1016] Finally, the manager's competent authorities must receive information regarding the fund's sources of finance that underpin the acquisition.[1017]

5.4.5.3 Annual Report

A control transaction of the nature described above directly affects the annual reports of both the fund and the target company. Specific provisions mandate the inclusion of further information in the annual report resulting from this. The annual report must include information on the situation of the target company's business, important events that might have occurred since the end of the financial year, the likely future development of the company, and information regarding the purchase of own shares.[1018] The same aspects must also be disclosed, either through requesting this from the company's board of directors or directly, to company employees or their representatives. The fund's investors must also receive this information.[1019]

5.4.5.4 Asset Stripping

Provisions on 'asset stripping' seek to prevent funds from enriching themselves at the cost of the target company. The intent of these provisions is to offer a sufficient level of protection of the target company and prevent myopic funds from extracting value for themselves at the cost long-term health and profitability of the com-

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[1015] AIFMD, art 28(4) first subparagraph (a), (b). The fund must notify shareholders of which it knows the identities and addresses. In addition, shareholders whose address and identity can be provided by the company or found in a register to which the fund has access must also be notified.

[1016] AIFMD, art 28(4) second subparagraph.

[1017] AIFMD, art 28(5).

[1018] AIFMD, art 29(1), (2). The information on the purchase of own shares can be found in Directive (EU) 2017/1132 of the European Parliament and of the Council of 14 June 2017 relating to certain aspects of company law [2017] OJ L169/46.

[1019] AIFMD, art 29(3).

pany.[1020] Accordingly, distribution of company assets by the acquiring fund is prohibited in various forms within 24 months after the acquisition.[1021] A fund cannot facilitate, support, instruct, or vote for a distribution, reduction of capital, redemption of shares, and a share repurchase by the company, and it is to 'use its best efforts' in preventing such occurrences as are listed above.[1022]

The relevant provisions specify which distributions cannot be facilitated by a fund by setting a quantitative limit below which the assets of the company cannot be extracted. Included are distributions to shareholders that exceed the sum of the profits of the preceding financial year and any profits brought forward, as well as any sums drawn from reserves, minus losses and funds placed in reserve. Also included are distributions which would lead to net assets as described in the annual report becoming lower than subscribed capital, plus any reserves whose distribution is prohibited by the relevant law.[1023] Lastly, a fund is not permitted to facilitate a distribution by way of share buyback, if this would cause the net assets of the company in question to fall below the limit specified directly above.[1024]

5.4.6 Marketing and Management in the EU and Third Countries

As mentioned above,[1025] the rules related to marketing and management of alternative investment funds in the EU directly determine if an entity is within the scope of the framework. As one aim of the directive is to regulate management

[1020] For an overview of whether investment funds and shareholder activism are myopic or not, see Lucian A Bebchuk, Alon Brav and Wei Jiang, 'The Long-Term Effects of Hedge Fund Activism' 115 Columbia Law Review 1085. For an overview of studies related to the topic of shareholder activism, see Pollock (n 145).Both authors come to the conclusion that shareholder activism generally creates some additional shareholder value. For a non-quantitative counterargument, see eg Martin Lipton and William Savitt, 'The Many Myths of Lucian Bebchuk' (2007) 93 Virginia Law Review 733. It is important to note, however, that the provisions of the AIFMD are related to non-listed companies, whereas shareholder activism deals also with listed companies. The general arguments still stand for both forms of investment.

[1021] AIFMD, art 30(1) first subparagraph.

[1022] AIFMD, art 30(1)(a)–(c).

[1023] AIFMD, art 30(2)(a)–(c). If the uncalled part of subscribed capital is not included in the balance sheet, that amount is subtracted from the subscribed capital.

[1024] ibid.

[1025] See table 5.3.3.2.

companies directly and funds only indirectly, whether the act of marketing and managing of funds in the EU and in third countries is regulated by the AIFMD depends primarily on the location or activity of the manager. Both funds and management companies can be registered in a member state or in a third country, which leads to four possible combinations: a manager in a third country managing or marketing a fund in a third country, a manager in a third country managing or marketing a fund in the EU, a manager in the EU managing or marketing a fund in a third country, and lastly a manager in the EU managing or marketing a fund in the EU. Only managers that manage funds in third countries and do not market or distribute these funds in any member state are not subject to the AIFMD. In principle, as soon as an entity is incorporated or conducts marketing or management in the EU, it becomes subject to the AIFMD. This general rule excludes specific exceptions like small funds of funds and managers only active within a single member state and subject to that state's jurisdiction, which has been discussed in detail above.[1026]

5.4.7 Home, Host, and Member States of Reference

5.4.7.1 Marketing in Home Member States and Cross Border Marketing of EU Funds with EU Management Companies

Management companies that have been authorized in the EU are permitted to market their funds in their home member state. If the fund being managed is a feeder fund in a master-feeder fund structure, the master fund's manager must also have been authorized.[1027] Marketing activities in the home member state of the manager require that the competent authorities are notified for each fund that is to be marketed. The authorities must reach a decision within twenty days, after which the marketing can be initiated.[1028] Material changes related to this must be communicated to authorities at least one month before they are implemented in writing. If unplanned or unforeseeable changes have to be introduced, competent authorities must immediately be informed that this has occurred. The authorities must then, 'without undue delay', inform the manager whether the change can be implemented or not. Changes that are implemented and lead to the manager or fund no

[1026] See section 5.3.3.

[1027] AIFMD, art 31(1).

[1028] AIFMD, art 31(2), (3) first subparagraph.

longer fulfilling the requirements of the AIFMD results in competent authorities deciding to prohibit any further marketing or taking other appropriate action.[1029]

Cross border marketing follows a similar structure, albeit with adjustments to account for the fact that there are two competent authorities involved in the process, those of the home member state, and those in the state where the marketing efforts are to occur. The notification procedure is identical to the case above from the viewpoint of the management company. It must notify competent authorities in its home member state of the particulars connected to these marketing activities, and which shares or units would be marketed.[1030] The manager's competent authorities, however, must pass all the information they have received on to the competent authorities in the member state where the fund or funds will be marketed. This must occur within twenty days of receiving the information from the manager.[1031] Once the notification documents have been transmitted to the other competent authorities, the manager's authorities will notify the manager that the file has been passed on, and at this time, the manager may commence with marketing activity in the 'host' member state.[1032] If the fund is overseen by different competent authorities, the manager's home member state authorities must also notify the authorities in the fund's home member state that marketing is permitted in the host member state.[1033]

5.4.7.2 Managing of Funds Established in Other Member States

While the process of marketing in one state and cross-border activities have been described above, the AIFMD must also create rules for management companies in one member state managing funds established in another. Management companies managing funds in other member states have two options to do this: They can either manage the fund directly, or they can set up a branch in a different member state.[1034] If a manager has not previously managed funds in other member states, it must inform authorities in its home member state of its intentions. The manager must also indicate in which other member state it intends to manage a fund in, and supply a program of operations. The program of operations must identify the fund

[1029] AIFMD, art 31(4).
[1030] AIFMD, art 32(2).
[1031] AIFMD, art 32(3).
[1032] AIFMD, art 32(4) first subparagraph.
[1033] AIFMD, art 32(4) second subparagraph.
[1034] AIFMD, art 33(1).

or funds it intends to manage and state which services will be performed.[1035] If a manager chooses to establish a branch instead, there is certain further information that the authorities must receive: the branch's organizational structure, the address in the home member state of the fund where further information or documents can be obtained, and names and contact information of the persons managing the branch.[1036] The process from this point forward occurs in similar fashion to the case of cross-border marketing described above: The management company will communicate with its own competent authorities, and this information is passed on to the authorities in the state where a fund is to be managed or a branch is to be established. Where the manager will manage a fund directly, the competent authorities must transmit the information to their counterparts in the other member state in question within one month. Where a branch is to be established, the time limit is two months.[1037] Included in the transmission is a statement by the manager's home member state authorities that the company in question is authorized by them. The management company is allowed to begin with providing services in the other member state as soon as its authorities have informed it that the required documents and information have been transmitted to host member state authorities.[1038] The host member state competent authorities, which is the state in which the fund or the branch has been established, cannot create any further rules the manager must follow that are not already explicitly provided for in the AIFMD framework.[1039]

The manager must inform its member state authorities of any changes to the information it previously provided, regardless of whether the change is planned or unplanned. With planned changes, notification must occur at least one month in advance, whereas unplanned changes must be followed by an immediate notification. The competent authorities subsequently have three options. If planned or unplanned changes are acceptable and are compatible with the AIFMD, then the manager's competent authorities will communicate with authorities of the host member state that changes have taken place. This must occur without 'undue de-

[1035] AIFMD, art 33(2).

[1036] AIFMD, art 33(3).

[1037] AIFMD, art 33(4).

[1038] ibid. The member state where the fund is managed or a branch is established is called the 'host member state' in the AIFMD. The reader will recall similar constellations in the UCITS directive, where the term 'host member state' is used much more frequently to differentiate it from the 'home member state'.

[1039] AIFMD, art 33(5).

lay'. If the changes violate the AIFMD, whether these were planned or unplanned, the manager's competent authorities are given the competency to take 'appropriate measures', which allows them to use tools that are within their powers.[1040] Finally, where planned changes are concerned, if the changes would violate any provisions of the AIFMD framework, the authorities will instruct the management company immediately not to implement the changes.[1041]

5.4.7.3 Management of Non-EU Funds by EU Management Companies

5.4.7.3.1 Funds not Marketed in Member States

In the case of management companies established in the EU managing funds only marketed outside the Union, the AIFMD has a very small number of provisions for reasons that are evident: A fund not directly distributed within the European Union with a European management company has fewer dangers attached to it, as the funds arguably is the source of many of the difficulties that require regulation. Accordingly, there are two prerequisites that permit EU managers to be permitted to manage a fund without marketing it in the EU. The first is that it adheres to the rules of the AIFMD.[1042] The second requirement is that cooperation arrangements exist that make cooperation between the manager's competent authorities and the third country competent authorities possible. These cooperation agreements must permit an information exchange between authorities to a degree where the authorities in the EU can effectively exercise the tasks required of them by the AIFMD.[1043]

5.4.7.3.2 Funds Marketed in Member States

5.4.7.3.2.1 Marketing in the Management Company's Home Member State

Management companies established in a member state whose intention is to market non-EU funds to European investors have to be compliant with the relevant

[1040] Which powers are given to competent authorities ultimately depends on the exact setup of the authorities in their respective member states. The AIFMD does contain a catalogue of powers that can be given to competent authorities in article 46 of the directive. The powers of competent authorities are also described below in section 5.4.9.

[1041] AIFMD, art 33(6).

[1042] The directive formulates this slightly differently, as it requires compliance with the requirements of the directive, excluding article 21 and 22.

[1043] AIFMD, art 34(1), (2).

sections of the AIFMD.[1044] Apart from the general prerequisites dictated by the directive, three additional conditions, one related to the sufficiency of cooperation between the relevant authorities, and two related to tax issues and money laundering, must be satisfied before any marketing may take place. First, as is the case above, appropriate cooperation agreements with the third country where the fund in question is established and the home member state of the manager must be in place. Secondly, the third country in question cannot be a non-Cooperative Country and Territory as defined by the Financial Action Task Force. Lastly, an agreement between the two countries and each member state where the shares or units of the fund in question are to be marketed must exist. The agreement must ensure the exchange of information in tax matters and multilateral tax agreements. Additionally, the standards of the OECD's Model Tax Convention on Income and on Capital must be followed.[1045]

In the manager's home member state, the management company must notify their home country's competent authorities in order to market a non-EU fund.[1046] The notification must contain these points:

1. A notification letter with a program of operations that identifies the fund in question and where it is established.
2. In the case of master-feeder structures, where the master fund is incorporated.
3. Rules or instruments of incorporation of the fund.
4. The identity of the fund's depositary.
5. Information and descriptions of the fund that are available to investors.
6. Additional information referred to in the rules of the AIFMD related to disclosure to investors.[1047]

[1044] The only relevant rules that must **not** be complied with are contained in chapter VI of the AIFMD (articles 31–33). See AIFMD, art 35(2) first subparagraph.

[1045] See AIFMD, art 35(2)(a)–(c). See article 26 of the Model Tax Convention on Income and on Capital. Therein are contained provisions related to the exchange of information in tax matters. The full text of the document, including a commentary, can be found on the OECD's website: Organisation for Economic Cooperation and Development, *Model Tax Convention on Income and on Capital* (OECD 2017) <https://read.oecd-ilibrary.org/taxation/model-tax-convention-on-income-and-on-capital-condensed-version-2017_mtc_cond-2017-en#page47> accessed 10 July 2020.

[1046] The notification must contain the information listed in Annex III of the AIFMD. See AIFMD, art 35(3) second subparagraph.

[1047] See article 23 of the AIFMD and section 5.4.3.2.

7. Information on arrangements preventing the fund from being marketed to retail investors, if applicable.[1048]

The marketing of each fund requires separate notification.[1049] Within twenty days of receiving the notification, the competent authorities must inform the management company whether it can market the fund in its home member state. Noncompliance with the AIFMD framework leads to the prevention of marketing. If the decision is positive, the fund may be marketed starting on the date the authorities communicate their decision to the manager.

5.4.7.3.2.2 Marketing in Member States Other Than the Management Company's Home Member State

The procedure for marketing non-EU funds in member states other than the management company's home member state follows a similar pattern to the marketing in the home member state described directly above. In the same fashion as above, the procedure is begun by notifying the manager's competent authorities.[1050] The following must form a part of the notification file:

1. A notification letter with a program of operations that identifies the fund in question and where it is established.
2. In the case of master-feeder structures, where the master fund is incorporated.
3. Rules or instruments of incorporation of the fund.
4. The identity of the fund's depositary.
5. Information and descriptions of the fund that are available to investors.
6. Additional information referred to in the rules of the AIFMD related to disclosure to investors.[1051]
7. Information on arrangements preventing the fund from being marketed to retail investors, if applicable.
8. An indication of the member state in which shares or units are to be marketed to professional investors.[1052]

[1048] AIFMD, Annex III.

[1049] AIFMD, art 35(3) first subparagraph.

[1050] The notification must contain the information listed in Annex IV of the AIFMD. See AIFMD, art 35(5) second subparagraph.

[1051] See art 23 of the AIFMD and section 5.4.3.2.

[1052] AIFMD, Annex III.

As the reader may have noted, the two procedures and their contents are basically identical, but where marketing in member states other than the manager's home member state is concerned, the notification must include an indication of which other member state the fund marketing will occur in. The manager's competent authorities will transmit the documents to the competent authorities of the member state in which the fund's units or shares are to be marketed. The notification documents are only transmitted if the manager complies with the AIFMD. Transmission of the notification documents also includes a statement by the home member state authorities that the manager has been authorized by them to manage funds with specific investment strategies.[1053] In identical fashion to the cross-border marketing procedure of EU funds,[1054] after the information has been relayed to the other authorities, the manager's competent authorities must inform the manager without delay that the transmission has occurred. On the date the manager is informed that this has taken place, marketing can begin.

Changes to any of the information that was part of the notification process must be indicated to the manager's competent authorities. The procedure is identical to the procedure described in the context of cross-border marketing of EU funds by EU managers:[1055] Planned changes must be preceded by notification one month in advance or more. If unplanned changes occur, notification must take place immediately. The authorities can either allow or forbid the changes in advance. Changes that violate provisions of the AIFMD permit competent authorities to use any of the powers afforded to them to rectify the situation. A positive decision, on the other hand, is followed by the manager's authorities informing their counterparts in the host member state of the changes.

The process above constitutes the general rule. In certain specific circumstances, funds may be marketed, even if they do not fulfill all the requirements listed above. Member states can allow EU feeder funds and non-EU funds managed by EU management companies to be marketed, even if the requirements are not fulfilled. These funds may only be marketed to professional investors in their jurisdiction, however. If such marketing is permitted, three prerequisites must be present, however. The first is that the manager satisfies the prerequisites formulated by the AIFMD, with the exception of depositary rules. In addition, competent authorities of the manager's home member state and third country authorities must be bound

[1053] AIFMD, art 35(6) second subparagraph.

[1054] See section 5.4.7.

[1055] ibid.

by cooperation agreements which enable systemic risk monitoring and effective supervision as prescribed by the AIFMD. Lastly, the third country cannot be listed as a Non-Cooperative Country and Territory by the FATF. Member states are permitted to create rules stricter than the ones described regarding marketing of such funds by managers in their territory.[1056]

5.4.7.4 Management by Non-EU Management Companies: Member States of Reference

5.4.7.4.1 Determining the Member State of Reference

While EU management companies are usually established in their home member state, and their cross-border activities lead to them having a 'host member state' as well, non-EU management companies are by definition established in third countries. As a measure to designate which authorities are responsible for the supervision of these managers, a 'member state of reference' has to be selected by the third country company, which then determines the responsibilities of authorities. The 'member state of reference' corresponds roughly to an EU manager's home member state. Determining the member state of reference also serves a more fundamental purpose. The logic of the AIFMD is built primarily on a home member state and host member state-based system. Consequently, the member state of reference allows the lawmaker to apply various concepts and mechanisms already in place for EU-based managers to non-EU management companies.

As is the case with EU-based managers, non-EU managers must be authorized management of EU funds. EU managers, as has been mentioned,[1057] are authorized by the competent authorities in their home member state. In the case of non-EU managers, the competent authorities in the member state of reference are responsible for granting authorization.

Determining the member state of reference is not a straightforward process in every case and is connected to a number of rules, depending on what funds are to be managed in which member states. Accordingly, the conditions and exceptions are listed below.

[1056] AIFMD, art 36(1).

[1057] See section 5.4.1.

5.4.7.4.2 Managing Funds Without Marketing

The basic rule is applicable where a non-EU management company is intending to manage one or multiple funds in a single member state. If the management company will only market and distribute the fund in the member state of reference,[1058] the fund's (or funds') home member state is automatically designated as the manager's member state of reference.[1059]

If, on the other hand, the management company has the intention of managing multiple funds in multiple member states, and this occurs without any cross-border marketing activity,[1060] the member state of reference can either be in the country where the most funds are established, or in the member state where the largest amount of assets is managed.[1061]

5.4.7.4.3 Marketing Funds in One or More Member States

In cases where marketing of an EU fund occurs in only one member state, the member state of reference can either be the member state where the fund is to be marketed, or the member state where the fund is authorized or registered. In cases where a fund is not authorized or registered, the member state of reference is automatically the member state where the fund is to be marketed.[1062] If non-EU funds are marketed in a single member state, that member state becomes the member state of reference.[1063]

Marketing of an EU fund in multiple member states by a non-EU manager is a separate constellation. If the fund is not registered or authorized in a member state, then the member state of reference is the member state where 'effective marketing' will occur. If the fund is registered or authorized in a member state, the member state of reference can either be that member state, or the member state where 'effective marketing' will take place.[1064] In order to prove the intent to develop 'effective marketing' in a member state, the manager can disclose its marketing strat-

[1058] The rules for marketing of funds by non-EU managers are provided for in articles 39 and 40 of the AIFMD.

[1059] AIFMD, art 37(4)(a).

[1060] According to arts 39 and 40 of the AIFMD.

[1061] AIFMD, art 37(4)(b)(i), (ii).

[1062] AIFMD, art 37(4)(c)(i), (ii).

[1063] AIFMD, art 37(4)(d).

[1064] AIFMD, art 37(4)(e)(i), (ii).

egy to the authorities in the particular member state.[1065] Where non-EU funds are marketed in multiple member states, one of those member states becomes the member state of reference.[1066]

The third combination is the situation where multiple EU funds are marketed in multiple member states. In the case where all these funds are registered or authorized in the same member state, either that member state or the member state where 'effective marketing' is to be developed can become the member state of reference. If the EU funds are not authorized or registered in any member state, or in the case where non-EU funds are marketed, the member state where effective marketing is to be developed becomes the member state of reference for the management company.[1067]

5.4.7.4.4 Deciding on a Member State of Reference in Cases Where Multiple Possibilities Exist

As the two sections above show, in certain cases, multiple member states would qualify as a member state of reference. If such as situation occurs, the non-EU management company must submit a request to all the authorities of the member states that could potentially be or become the member state of reference. The competent authorities of all these member states have one month to decide among themselves which state will become the member state of reference. Once a member state is appointed member state of reference, that member state's competent authorities must inform the manager without 'undue delay'. If, within seven days of this decision or within the one month period mentioned above, the manager receives no information on which state has been chosen, the manager may choose any of the possible member states to become the member state of reference.[1068]

5.4.7.4.5 Authorization and Disputes Related to the Member State of Reference

Non-EU management companies with aspirations to manage EU funds without marketing them in the Union need to be authorized by competent authorities in the same way EU managers are. Non-EU managers submit their authorization request to the competent authorities of the member state of reference. The authorities that have received the request will first make an assessment on whether the manager's

[1065] AIFMD, art 37(4) third subparagraph.

[1066] AIFMD, art 37(4)(f).

[1067] AIFMD, art 37(4)(g), (h).

[1068] AIFMD, art 37(4) second subparagraph.

choice of member state of reference is permissible under the general criteria outlined above. If the authorities refuse the request, they must offer an explanation to the manager for doing so. If the competent authorities' assessment leads to the conclusion that the requirements are fulfilled, and the choice of the manager appears sound, they must notify ESMA. ESMA receives the manager's justification for its choice of member state of reference and information of the manager's marketing strategy. Following the transmission of this information, ESMA issues advice on the assessment within one month of having received the information from the competent authorities.[1069]

If authorities decide to authorize a manager despite ESMA having advised to the contrary, they must inform ESMA thereof and provide their reasons for acting against the advice. ESMA must then publish the fact that the authorities have made a decision that contradicts the advice given. In specific cases, ESMA can also publish the reasons the authorities have given them, but must make this known to the authorities beforehand.[1070] Where the competent authorities are not in agreement with a manager's assessment in choosing their member state of reference, they are permitted to forward the matter to ESMA, which then settles the disagreement.[1071]

Authorization may only be granted if several specific conditions are met. First, the member state of reference must have been chosen by the manger according to the criteria defined by the AIFMD. Furthermore, the decision must have been supported by documents disclosing the overall marketing strategy. Then, the competent authorities must have followed the authorization process as described in the paragraphs above.[1072] Moreover, the manager in question must have appointed a legal representative which is established in the member state of reference.[1073] The legal representative must act as the person of contact for investors, for competent

[1069] AIFMD, art 37(5) first, second, and third subparagraphs.

[1070] AIFMD, art 37(5) fifth and sixth subparagraphs.

[1071] ESMA can do so according to the rules described in article 19 of Reg (EU) 1095/2010, which consists of a dispute settlement tool given to ESMA to settle disagreements between authorities in the EU. See Regulation (EU) 1095/2010 of the European Parliament and of the Council of 24 November 2010 establishing a European Supervisory Authority (European Securities and Markets Authority), amending Decision No 716/2009/EC and repealing Commission Decision 2009/77/EC [2010] OJ L331/84. See also AIFMD, art 37(6).

[1072] AIFMD, art 37(7)(a).

[1073] AIFMD, art 37(7)(b).

authorities, and for ESMA. The legal representative must also be suitable[1074] to handle its compliance function as mandated by the AIFMD. In addition, cooperation agreements must exist between the authorities of the member state of reference, the authorities of the home member state(s) of the EU funds that are managed, and the third country authorities of the country in which the manager is established. This cooperation agreement must permit the competent authorities in the EU to perform the duties the AIFMD has levied upon them and must therefore at least ensure a process where information can be exchanged efficiently.[1075] The competent authorities cannot be hampered in the execution of their supervisory and monitoring tasks by any legislation or regulation in the third country, nor may the third country authorities' supervision of investigatory activities hinder the EU authorities in the execution of their duties.[1076] A further requirement is that the country in which the manager is established may not be a Non-Cooperative Country and Territory as listed by the FATF.[1077] Lastly, an agreement between the country and member state of reference must exist that ensures information exchange in tax matters.[1078] The agreement must comply with the OECD Model Tax Convention on Income and on Capital described above.[1079] If a competent authority is not in agreement with assessments in this context, with exception to those related to agreements in tax matters, it can refer this to ESMA. ESMA will act in the same fashion as above and settle the dispute.[1080] The same referral can occur where the competent authorities of a fund's home member state do not enter into cooperation agreements with the authorities in the member state of reference of the manager, as is required for authorization.[1081]

Authorization of non-EU managers then follows the same process as for EU funds, which is described in section 5.4.1.[1082] The information a non-EU manager must supply goes beyond that which EU management companies would provide. Non-EU managers must provide an additional four pieces of information. The first is

[1074] Or 'sufficiently equipped', as the AIFMD states. See AIFMD, art 37(7)(c).

[1075] AIFMD, art 37(7)(d).

[1076] AIFMD, art 37(7)(g).

[1077] AIFMD, art 37(7)(e).

[1078] This includes multilateral tax agreements. See AIFMD, art 37(7)(f).

[1079] See section 5.4.7.3.2.1.

[1080] AIFMD, art 37(7) second subparagraph.

[1081] See ibid and AIFMD, art 37(7)(d).

[1082] See also chapter II of the AIFMD. The specific requirements are listed in article 7(2) of the AIFMD.

the name and place of establishment of the legal representative of the management company. The second is a justification the manager must provide itself for its assessment or choice of member state of reference. Information on the manager's marketing strategy must be included as part of this justification. The third and fourth requirement relates to information on potential laws or regulation in the non-EU manager's home country which might disallow or hinder compliance with provisions of the AIFMD. The manager must provide a list of the provisions of the AIFMD with which it cannot comply due to third country provisions. This list must be supplemented by evidence that provisions in the third country exist which achieve the same objectives as the rules of the AIFMD and offer an equivalent level of investor protection. The evidence must be based on ESMA's regulatory technical standards, provided in writing, and supplemented by a legal opinion supporting the claims made.[1083] If competent authorities determine that a manager is exempted from provisions of the AIFMD due to this rule, then ESMA is notified of this, and the authorities will also provide the supporting information the manager has provided them.[1084] Within one month, ESMA provides advice on the issue.[1085] If the authorities decide to authorize a manager in contradiction to ESMA's advice, it must inform ESMA thereof. ESMA then publishes the fact that the authorities in question have acted contrary to their advice and can in specific cases also decide to publish their reasons for noncompliance with the advice.[1086] Where this occurs, and additionally where a manager's fund wants to engage in marketing in other member states, said authorities must inform their counterparts in the other member states that they are disregarding ESMA's advice and state their reasons for doing so.[1087] If a disagreement exists between competent authorities on how the rules on exemptions described directly above are to be applied, the matter can be forwarded to ESMA, who in turn resolves the matter with its usual dispute resolution tools.[1088]

The information on funds that a non-EU manager must compile and make available to authorities for authorization are the same as those an EU manager would have to disclose, and are limited to information on EU funds that are to be managed

[1083] AIFMD, art 37(8)(a)(i)–(iv).
[1084] AIFMD, art 37(9) first subparagraph.
[1085] AIFMD, art 37(9) second subparagraph.
[1086] AIFMD, art 37(9) fourth subparagraph.
[1087] AIFMD, art 37(9) fifth subparagraph.
[1088] AIFMD, art 37(9) sixth subparagraph.

and other funds that are to be marketed through the passporting system. Other funds the manager may be managing are excluded.[1089] If another competent authority from another member state disagrees with the authorities from the member state of reference which has granted authorization, the same dispute settlement mechanism through ESMA can be triggered in an identical fashion as with assessments and cooperation agreements mentioned above.[1090]

Following the authorization process, the competent authorities of what is or would have become the member state of reference must inform ESMA of the outcome, any changes, or the withdrawal of authorization. If authorities deny authorization, the data on the manager and the reasons for rejection are forwarded to ESMA as well.[1091]

If less than two years have passed since authorization, and a management company intends to make adjustments to its marketing strategy, and by doing so earlier this would have led to a different member state of reference to have been chosen, then the manager must notify competent authorities in the (original) member state of reference. The notification must indicate which is to become the new member state of reference and describe the new marketing strategy as a justification for the choice or change of member state. The identity of the new legal representative in the new member state of reference must also be disclosed to the authorities in the original member state of reference.[1092] Following this notification, the current competent authorities assess the situation and inform ESMA, and forward the documentation and justification they have received from the manager.[1093] ESMA will subsequently issue advice within one month of having been informed.[1094] The competent authorities will then make a decision which is disclosed to both the manager and to ESMA. If the decision corresponds to the advice given by ESMA, the competent authorities will transmit the authorization and supervision documents to the authorities of the new member state of reference, which, upon receipt of these documents, becomes responsible for supervision and authorization of the manager in question. If the decision by the authorities and the ESMA's advice diverge, the process is the same as above: ESMA must be informed with appro-

[1089] AIFMD, art 37(8)(b).

[1090] AIFMD, art 37(8) second subparagraph.

[1091] AIFMD, art 37(10).

[1092] AIFMD, art 37(11) first subparagraph.

[1093] AIFMD, art 37(11) second subparagraph.

[1094] AIFMD, art 37(11) third subparagraph.

priate reasoning. ESMA publishes this, and can decide to additionally publish the reasoning of the competent authorities. If ESMA decides to publish the reasoning, it must inform the authorities beforehand.[1095] The authorities who have disregarded ESMA's advice will also inform the authorities in the new member state of reference of this and state their reasons for doing so.[1096] Any change in marketing strategy where more than two years have passed since authorization follows the same procedure as above, once the manager has requested a change in the member state of reference from the authorities in the original member state of reference.[1097] The same procedure for changing the member state of reference is also applicable if the declared marketing strategy is not followed by the manager who has made false statements related to the strategy. Where this occurs, the authorities of the member state of reference can request the manager to indicate which member state should be the state of reference if the marketing activity that is actually occurring is taken into account. If the manager fails to comply, authorization is to be withdrawn.[1098] Disputes between the authorities of member states related to the change of the member state of reference are resolved by ESMA through the usual dispute resolution procedures.[1099] Disputes between the manager and its competent authorities are resolved according to the rules stipulated by the law of the member state of reference.[1100] Disputes between European investors and the manager or one of its funds are settled according to the law of a member state of the European Union.[1101]

5.4.7.4.6 ESMA's Peer Review of Authorization and Supervision Process

Under the AIFMD, ESMA analyzes peer reviews of authorities supervising non-EU authorities.[1102] The review includes how far the convergence of supervisory activities has progressed, whether the AIFMD's objectives are being achieved through their efforts, and how the AIFMD framework and technical standards are enforced.[1103] The conclusions of the review may result in guidelines and recom-

[1095] AIFMD, art 37(11)(a).
[1096] AIFMD, art 37(11)(b).
[1097] AIFMD, art 37(12) second subparagraph.
[1098] AIFMD, art 37(12) first subparagraph.
[1099] AIFMD, art 37(12) third subparagraph.
[1100] AIFMD, art 37(13) first subparagraph.
[1101] AIFMD, art 37(13) second subparagraph.
[1102] AIFMD, art 38(1).
[1103] AIFMD, art 38(3).

mendations that ESMA issues itself to enhance the supervision of non-EU managers.[1104] Before two months after publication, compliance with these measures must have been confirmed by the competent authorities. If an authority will not comply, it contacts ESMA and states its reasons for noncompliance.[1105] ESMA must then publish this fact and, on a case-by-case basis, can also publish the authorities' reasons for not complying. Publishing cannot be done unless the authority in question is informed of this in advance.[1106] When creating guidelines or recommendations, ESMA must inform the European Parliament, the Council, and the Commission. ESMA must also describe which authorities have not complied and how it will make certain that authorities will comply with guidelines and recommendations in the future.[1107]

5.4.7.5 Marketing of EU Funds by Non-EU Management Companies with a Passport

Non-EU management companies that have been granted authorization are permitted to market shares or units of EU funds to professional investors as part of the passporting system of the AIFMD. In doing this, however, they must satisfy certain requirements and remain in compliance with specific provisions. For each EU fund a manager intends to market in the member state of reference, the competent authorities in that member state must be notified of this. The contents of the notification are identical to those required of an EU manager marketing in its home member state,[1108] and must include:

1. A notification letter with a program of operations that identifies the fund in question and where it is established.
2. In the case of master-feeder structures, where the master fund is incorporated.
3. Rules or instruments of incorporation of the fund.
4. The identity of the fund's depositary.
5. Information and descriptions of the fund that are available to investors.

[1104] AIFMD, art 38(4).

[1105] AIFMD, art 38(5), (6).

[1106] AIFMD, art, 38(7).

[1107] AIFMD, art 38(8).

[1108] See section 5.4.7.3.2.1 and Annex III of the AIFMD.

6. Additional information referred to in the rules of the AIFMD related to disclosure to investors.[1109]
7. Information on arrangements preventing the fund from being marketed to retail investors, if applicable.[1110]

Within twenty days of receiving the notification, the competent authorities must inform the management company whether it can begin marketing or not.[1111] The authorities must also inform ESMA as well as the fund's home member state authorities that marketing has been permitted.[1112]

In cases where the management company intends to market one or multiple funds in another member state, it must notify the competent authorities in its member state of reference as well. In this case, the documentation must include:

1. A notification letter with a program of operations that identifies the fund in question and where it is established.
2. In the case of master-feeder structures, where the master fund is incorporated.
3. Rules or instruments of incorporation of the fund.
4. The identity of the fund's depositary.
5. Information and descriptions of the fund that are available to investors.
6. Additional information referred to in the rules of the AIFMD related to disclosure to investors.[1113]
7. Information on arrangements preventing the fund from being marketed to retail investors, if applicable.
8. An indication of the member state in which shares or units are to be marketed to professional investors.[1114]

The notification file is then transmitted to the competent authorities in the member state in which marketing is to occur. This must occur within twenty days. The competent authorities in the member state of reference of the management company also add to the file a statement that confirms the manager is authorized to

[1109] See art 23 of the AIFMD and section 5.4.3.2.

[1110] AIFMD, Annex III.

[1111] AIFMD, art 39(3) first subparagraph.

[1112] AIFMD, art 39(3) second subparagraph.

[1113] See article 23 of the AIFMD and section 5.4.3.2.

[1114] AIFMD, Annex IV. These are the same requirements as those of EU managers marketing in other member states. See section 5.4.7.3.2.2.

manage funds with specific investment strategies.[1115] Once the file has been forwarded to the other member state's authorities, the competent authorities of the member state of reference must inform the manager of the transmission without delay. The manager may begin marketing on the date it has been notified of the transmission. The competent authorities of the member state of reference must also inform ESMA and the authorities of the fund's home member state that the manager is permitted to market in another member state.[1116]

If any material change to the information part of the notification process has occurred or is planned, the manager must notify its authorities (in the member state of reference) one month before the change will be realized. If the change was unforeseen, this must occur immediately. The competent authorities then can either consent to the change or prohibit it where it interferes with compliance with the AIFMD framework. In cases where the change is implemented despite it having been forbidden, or in cases where the change was unplanned, the competent authorities of the member state of reference can take action within their powers, up to and including forbidding any marketing of the fund, as long as it is appropriate. If a change does not affect compliance and has been greenlighted by authorities, ESMA must be informed of any possible prohibition on marketing, as well as additional funds that are marketed. If cross-border marketing is occurring or has occurred, the competent authorities of other member states must also be made aware of the change.[1117]

5.4.7.6 Marketing of Non-EU Funds by Non-EU Management Companies with a Passport

Marketing to professional investors by non-EU management companies of non-EU funds is also permitted, if the manager has been granted authorization and complies with specific provisions regarding this activity.[1118] The process for marketing non-EU funds in the member state of reference is identical to that of marketing non-EU funds. The manager must transmit a notification file with the same requirements as described in section 5.4.6 and receives confirmation from the competent authorities within twenty days, after which marketing can commence. Marketing in member states other than the member state of reference is also iden-

[1115] AIFMD, art 39(5).

[1116] AIFMD, art 39(6).

[1117] AIFMD, art 39(9).

[1118] AIFMD, art 40(1).

tical to the process for EU funds. The notification file with the same contents as described in the previous section is submitted, after which the authorities forward this notification to the competent authorities of the other member state concerned. Included is also a confirmation by the authorities that the manager is authorized to manage funds with this specific strategy (or multiple strategies). The authorities of the member state of reference will confirm the notification file has been passed on by informing the management company, after which marketing may take place immediately. Finally, any changes to information that was contained in any of the notification documentation must either be reported one month in advance or before, or immediately if the change was unplanned. As is the case in the process described in the section directly above, the authorities can permit or disallow the change, and take action if the change is implemented despite it having been forbidden. ESMA must generally be notified if marketing is permitted, a change is forbidden, or additional funds that the manager will market are due to change. As above, the competent authorities of other member states concerned in cases of cross-border marketing need to be made aware of the change as well.[1119]

Specifically, in regards to non-EU funds, three additional conditions must be satisfied before marketing can be permitted. The third country where the non-EU fund is established must have cooperation agreements between the competent authorities of the member state of reference and the third country authorities, which enable the exchange of information and the efficient carrying out of the supervisory tasks mandated by the AIFMD. The third country must also have signed an agreement on tax matters which is compliant with the standards of the OECD Model Tax Convention on Income and on Capital. This agreement must exist between the third country and the member state of reference, as well as other member states where the fund's shares or units are to be marketed, and must enable an effective exchange of information in tax matters. Finally, the third country cannot be listed as a Non-Cooperative Country and Territory by the FATF.[1120] Disputes between competent authorities on assessments made regarding the third country are resolved by ESMA in the usual process described repeatedly above.[1121]

[1119] AIFMD, art 40(3)–(10). See also AIFMD, Annex III–IV.

[1120] AIFMD, art 40(2)(a)–(c).

[1121] AIFMD, art 40(2) second subparagraph.

5.4.7.7 Management of EU Funds by Non-EU Managers in Member States Other Than the Member State of Reference

An authorized non-EU management company can also manage EU funds that are established in member states that are not the member state of reference of the manager. To do this, two options exist: direct management and through a branch, which is established in that member state. In both cases, the manager must inform its authorities and supply specific information, which is listed below. If the manager intends to manage a fund directly, it must inform its authorities of the member state it intends to manage the fund in question, and provide a program of operations which specifies the services to be performed and containing the identity of the fund that is to be managed.[1122] If a branch will be established through which the manager will manage the fund, then the manager must first provide the same information as he would if he were managing a fund directly. In addition to providing this information, the manager must also inform the authorities in its member state of reference of the organizational structure of the branch, names and contact details of the people which will be responsible for managing the branch, and an address in the member state where the fund is established from which documentation can be obtained.[1123] The competent authorities that receive the information must transmit it to the competent authorities in the member state where the fund in question is established, which is the fund's home member state. This transmission must occur within two months, and only if the manager is compliant with the AIFMD. The authorities of the member state of reference will also supplement the information with a document that shows the manager is authorized in their member state. Following the transmission, the competent authorities in the member state of reference inform the manager that the transmission has occurred and also inform ESMA that the manager is permitted to manage funds in the member state or member states where the fund or funds are established.[1124]

Changes to any information communicated by the management company follow the same pattern as has been described in the authorization process of other management companies. Changes must be communicated a month before their implementation or immediately, depending on whether the change was planned or unplanned. If the change could lead to noncompliance with the AIFMD, the

[1122] AIFMD, art 41(2)(a), (b).

[1123] AIFMD, art 41(3)(a), (b).

[1124] AIFMD, art 41(4). The home member state of the fund in the terminology of the AIFMD corresponds to the host member state of the management company in this situation.

competent authorities must prohibit it. If the change has already occurred or been implemented despite the prohibition, the competent authorities are permitted to take appropriate action within their mandate and powers. If the competent authorities deem the changes acceptable and find they do not compromise compliance with the AIFMD framework, they must communicate to the manager that implementation of the changes is possible. This must occur without undue delay. The same authorities must also inform the authorities in member states where funds are managed of the changes or planned changes.[1125]

5.4.7.8 Marketing by Non-EU Managers Without a Passport in EU Member States

Marketing to professional investors without a passport is possible in member states that allow this. In addition to member states permitting marketing without a passport, three additional requirements must be met: With respect to the third country where the management company is established, this country may not be listed as a Non-Cooperative Country and Territory by the FATF, and cooperation agreements must be in place that enable systemic risk oversight. These cooperation agreements must exist between the member state authorities where funds are marketed, as well as with third countries in cases where a fund is established there but marketed in the European Union. To permit the authorities involved to fulfill their mandate, the agreements must ensure an efficient exchange of information. These two requirements related to the third country are supplemented by a third, concerning the management company. The management company must be in compliance with the relevant rules of the AIFMD related to information that must be provided to authorities and investors, and also with the rules on asset stripping.[1126] Member states which allow marketing without a passport are permitted to create stricter rules with regards to this activity.[1127]

[1125] AIFMD, art 41(6).

[1126] AIFMD, art 42(1). In cases where EU competent authorities do not enter into cooperation agreements within a reasonable time period, ESMA can be called upon to act within its dispute resolution powers. See AIFMD, art 41(1) second subparagraph.

[1127] AIFMD, art 42(2).

5.4.8 Marketing to Retail Investors

Under the AIFMD, member states can also allow alternative investment funds and their managers to market to retail investors. Member states can allow marketing in their jurisdiction by management companies to retail investors of all funds, whether these are local funds, funds in other member states marketed on a cross-border basis, or funds registered and domiciled in third countries.[1128] When a member state allows marketing to retail investors, it is permitted to create stricter requirements for funds and management companies that intend to do this, as long as these rules are equally strict for domestic entities and for non-domestic entities.[1129]

This aspect of the AIFMD is interesting for a number of reasons: Traditionally, alternative investments, especially hedge and private equity funds, are perceived as investment vehicles reserved for professional or high net-worth individuals. Access to hedge funds and private equity funds is frequently restricted, either directly by law, or though minimum investment clauses by the funds or managers themselves. The AIFMD broadly follows this logic, since the provisions described above are the only portion of the directive which creates an exception to the rule of permitting only professional investors to invest in alternative investment funds. Restricting access to hedge and private equity funds as well as funds that are functionally similar due to their inherent riskiness or the illiquidity of their assets is justified by a consumer protection argument. Retail investors are generally seen as having limited funds, limited investment expertise, or both. This makes them vulnerable and might lead them to unknowingly make investment decisions without fully understanding their underlying risk profiles. This consumer protection argument is at odds with the view of more libertarian, laissez-faire approaches to the sale of investment products to retail investors. The idea of prohibiting a class of investors from investing in certain products runs counter to this approach. *Caveat emptor,* or buyer-beware, would be the opposite interpretation, where any investor is permitted to invest in any product. The complexity and informational asymmetries inherent in certain asset classes do appear to justify the limitation of their sale to the retail investor, who would be at a distinct disadvantage regarding expertise and understanding of such products. A retail investor in a completely unrestricted marketplace might unknowingly become exposed to various risks, or even fall prey to predatory sales approaches and fraudulent behavior.

[1128] AIFMD, art 43(1) first subparagraph.

[1129] AIFMD, art 43(1) second subparagraph.

Enabling marketing to retail investors also fundamentally changes the character of the AIFMD, in the sense that it consequentially might mandate a harsher regulatory approach with higher levels of consumer protection. In direct contrast to the UCITS framework, for example, which is in essence a framework that attempts to create a fund market directly tailored to retail investors, the AIFMD is comparably light on traditional consumer protection measures. The directive also leaves quite a bit of freedom with funds and managers to define the leverage, composition, and liquidity of their portfolios. There are no direct rules defining upper limits in any of these categories, only the obligation to report to competent authorities, which in turn make a judgement call on whether the chosen parameters are permissible. This light-touch approach is optimal for the alternative investment fund market only if the purchasers of such products are sophisticated investors or investors which have sufficient capital to assume the associated risks. Relying on private expertise and the market mechanism to ensure the efficient allocation of capital in alternative investments is possible only in a market where the individual investor's level of information is sufficiently high for him or her to make at least somewhat of an informed decision with partial information. Opening such a market to retail investors is possible, but would mandate a fundamentally different design of the distribution channels of such products. Such a distribution channel might have to be designed in a fashion where middle men acting as advisors and custodians in the interests of the ultimate investors might need to be positioned between the product and the purchaser. The difficulties of such an approach are evident: Middle men create an additional layer of costs to the investor, and create a host of agency problems of their own, as the interests of what is essentially a broker might not be aligned with those of either the fund managers or the investors. The sale of complex products within the European Union to retail investors is restricted under the MiFID II and MiFIR regime for precisely the same reasons. Ultimately, this means that the protection of retail investors needs to be ensured by the national authorities in member states where marketing to them is permitted.

Finally, the AIFMD is associated with costs to fund managers and ultimately, to investors, as is any piece of regulation that generates compliance costs. At the same time, as has been mentioned, the directive creates an efficient mechanism of fund distribution throughout the European Union, supplanting national regimes and limitations. Opening fund distribution to retail investors as well would provide an additional influx of capital and represent an added benefit of the AIFMD. Due to the fact that marketing to retail investors is at the discretion of national authorities, more fragmented and variable levels of protection with various solutions are the consequence.

5.4.9 Competent Authorities

The AIFMD mandates that the competent authorities are designated and given the appropriate powers to fulfill their supervisory and monitoring functions described in the directive. The powers which competent authorities are given reflect the importance of their responsibilities. Competent authorities are given a wide range of tools to fulfill their mandate. National authorities are permitted to act according to the following measures:

- Access and copy documents
- Require the provision of information from any person related
- Conduct on-site inspections
- Data traffic and telephone records
- Cessation of activity
- Freezing and sequestration of assets
- Prohibition of professional activity
- Require information from management companies, depositaries, or auditors
- Any type of measure to ensure compliance with the AIFMD by depositaries and managers
- Suspension of the issue, repurchase, or redemption of units or shares of funds, in the interest of unit-holders or of the public
- Withdraw authorization of managers and depositaries
- Refer matters for criminal prosecution
- Investigations or verification requests to auditors or experts.[1130]

To safeguard the orderly function of markets, member states can confer upon the competent authorities the necessary powers. Exercising powers by competent authorities can occur in a direct fashion, in tandem, or in collaboration with other competent authorities, through delegation to other entities, or through competent judicial authorities.[1131]

[1130] AIFMD art 46(1)(a)–(d), (2)(a)–(m).

[1131] AIFMD art 46(1), (4).

5.4.10 The Role of ESMA

ESMA acts primarily as a coordinating body for the competent authorities in the member states. ESMA's powers are therefore limited to requesting that competent authorities take specific measures, which, however, it can only do if competent authorities have not taken appropriate measures themselves,[1132] and the functioning or stability of financial markets is at stake with cross-border implications.[1133] ESMA may request from authorities that marketing of shares be prohibited for non-EU funds with EU managers or EU funds managed by third country managers in cases where the rules on authorization, notification, or national provisions are not being followed.[1134] ESMA may also request that non-EU managers be restricted in their management activities of EU funds in cases where excessive risk concentrations have emerged in a specific market with implications across multiple member states.[1135] ESMA may also request that third country managers be restricted in managing EU funds if systemically important institutions or credit institutions in general are confronted with substantial counterparty risk stemming from the manager's activities.[1136]

5.5 The Context of the AIFMD: ELTIF, EuVECA, EuSEF, and the MMFR

The AIFMD's position as the equivalent of a 'catch-all' directive for non-UCITS funds, which has been described above, is a slight simplification of reality. Since the introduction of the AIFMD, the European framework for investment funds has undergone significant changes, which include the expansion of the types of funds that are provided for by European Union legislation. The aim of this change is to create a less bureaucratic and costly regime for smaller funds and funds that which

[1132] If measures have been taken by competent authorities, they must be effective in addressing the threat, not create the possibility of regulatory arbitrage, not substantively impact the efficiency of markets or reduce liquidity, not create uncertainty for market participants, and be implemented in a fashion that is proportionate to their intended objective. See AIFMD art 47(6)(a)–(c). In cases where these conditions are not satisfied, ESMA may request the specific measures listed in the text above.

[1133] AIFMD art 47(5)(a),(b). See also Busch and Van Setten (n 370) 121.

[1134] AIFMD art 17(4)(a). See also ibid.

[1135] AIFMD art 17(4)(b). See also ibid.

[1136] AIFMD art 17(4)(c). See also ibid.

might not fit the mold of either the AIFMD or UCITS frameworks. This is achieved through three main regulations, which in essence create three new categories for funds that formerly would have been subject to the AIFMD. The first regulation is the EuVECA Regulation, which brings smaller European venture capital funds into its scope. The second is the ELTIF Regulation. ELTIF are a new category of fund, which is comprised of European funds that invest principally in long-term projects. Finally, so-called EuSEF funds are the third category of funds with their corresponding regulation. EuSEF funds are European 'social entrepreneurship' funds, which should bridge the gap between purely profit-maximizing fund structures and funds whose objectives aim to have a positive impact on society. A fourth regulation which impacts the structure of European fund management regulation is the MMF regulation (MMFR). The MMFR creates discrete rules for money-market funds. While the first three categories are mainly an adjustment to the AIFMD framework, the MMFR does not create a lighter regime for money-market funds, but rather imposes additional compliance requirements on these funds. In addition, the MMFR would be more closely associated with the UCITS framework than the AIMFD, and can be seen as an amendment to that rule set. It is therefore most consistent to examine the first three regulations as logical complements to the AIFMD, and analyze the money-market fund regulation in a separate section.

5.5.1 Implementing Regulation

Before examining the ELTIF, EuVECA, and EuSEF regulations, it must be mentioned that the AIFMD has already been complemented by its own implementing regulation. Regulation 231/3013 is the document which creates rules directly applicable in member states.[1137] As is generally the case with implementing legislative acts, the rules in the AIFM regulation are more detailed and concrete than the more general provisions of the AIFMD. The main focus of the implementing regulation is on six subcategories, namely exemptions, general operating conditions for funds, depositaries, leverage, transparency rules, and the supervision of alternative investment funds.[1138] As the AIFM regulation is both directly applicable and hence leads to maximum harmonization, this chapter has incorporated the de-

[1137] See also Klebeck (n 827).

[1138] See AIFMD Implementing Regulation, recital 1.

scription of the directive's and the regulation's rules into the AIFMD framework section above.

5.5.2 EuVECA

EuVECA is a designation reserved for venture capital funds that are eligible to register as such under the corresponding European regulation.[1139] The general idea of the regulation and the creation of the EuVECA category of funds is to establish a brand for funds investing in small European companies in the early stages of their business life, to provide early financing for 'start-up' companies, and to foster innovation in the European Union.[1140] The raison d'être for EuVECA funds is the financing of small and medium-sized enterprises; to ensure this, the EuVECA regulation prescribes the types of investments qualifying venture capital funds may invest in, and sets an upper boundary for investments not belonging to the aforementioned category.[1141]

The EuVECA designation is reserved for funds that offer shares or units exclusively to professional investors and investors who invest a certain minimal amount and state in writing that they are aware of the investment risks.[1142] This places the EuVECA regulation much closer to the AIFMD. This essentially means that the EuVECA designation is attractive primarily to venture capital funds subject to the AIFMD who would prefer a tailor-made regime and who want to take advantage of the EuVECA designation as a bespoke title reserved only for certain venture capital funds.

From a systemic risk standpoint, the EuVECA designation only plays a role insofar as it prevents qualifying venture capital funds from engaging in large-scale investment activities outside of their core competency. The EuVECA regulation explicitly states that this is one of the regulation's objectives , namely to avoid 'that qualifying venture capital funds do not contribute to the development of sys-

[1139] See EuVECA Regulation, art 4.

[1140] See EuVECA Regulation, recital 1.

[1141] See EuVECA Regulation, recitals 20 and 22.

[1142] See EuVECA Regulation, art 6.

temic risks'.[1143] Directly in line with this objective is the prevention of the involvement of venture capital funds in systemically relevant banking activities.[1144]

5.5.3 ELTIF

ELTIF are European long-term investment funds which, much like EuVECA, are governed by their own specific regulation.[1145] In order to achieve the regulation's core objective, 70% of an ELTIF's assets must be invested in qualifying assets, which in essence are composed of either qualifying portfolio companies, so-called QPC, or of holdings of real assets.[1146] ELTIF attempts to enhance capital investment in projects with long investment horizons that might usually not be part of a portfolio of investments. In addition, the regulation seeks to create investment in the real economy that might traditionally not have been targeted by investors in financial assets. The regulation overall represents an attempt to unlock further capital in an effort to shift European investment from a bank-based system to a market based system.[1147]

5.5.4 EuSEF

The EuSEF regulation 346/2013 creates the label and category of the 'European Social Entrepreneurship Fund', which blends the return-focused nature of an investment funds with a social objective. EuSEF funds are intended to have an express ethical approach to investing and act as 'drivers of social change'.[1148] The priority of such funds is to provide funding to undertakings with a social objective and to enable positive social change, while profit-maximization is secondary.[1149] The EuSEF is interesting in that it attempts to bridge the gap between ethical in-

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[1143] EuVECA Regulation, recital 23. See also recital 22.

[1144] As stated expressly in recital 17 of the EuVECA Regulation.

[1145] See Regulation (EU) 2015/760 of the European Parliament and of the Council of 29 April 2015 on European long-term investment funds [2015] OJ L123/98 (ELTIF Regulation).

[1146] See also Dirk A Zetzsche and Christina D Preiner, 'ELTIFR versus AIFMD' in Dirk A Zetzsche (ed), *The Alternative Investment Fund Managers Directive* (2nd edn, Wolters Kluwer 2015).

[1147] ELTIF, recitals 2 and 4.

[1148] See Regulation (EU) 346/2013, recital 1.

[1149] ibid, recitals 1 and 13.

vesting and profit-oriented investing.[1150] The core difficulty with the framework is whether investors can be enticed to invest in such investments that usually would not be invested in, and whether indeed the market mechanism permits sufficient investment in assets that offer inferior returns.[1151]

5.5.5 MMFR

The MMFR, or Money Market Fund Regulation, is a further piece of legislation which can be interpreted as a strategy-based concretization of the existing asset management frameworks in the European Union. The MMFR creates a set of rules for European funds engaging in what could be termed 'money-market-fund activities', regardless of their legal structure and whether they fall within the scope of UCITS or the AIFMD.[1152] Essentially, money market funds provide short-term liquidity to capital markets by trading in money-market instruments. Money market instruments are comprised of a number of short-term loans, which mature in less than 365 days.[1153]

The MMF Regulation mandates that a fund is set up as one of three types of MMF in order to be authorized. Each type differs in how the NAV is calculated; accordingly, the three types are variable net asset value money market funds (VNAV MMF); public debt constant net asset value money market funds (CNAV); and finally, low volatility net asset value money markets funds (LNAV).[1154]

The MMFR fund structure is noteworthy, because its authorization process is possible as either part of the UCITS framework, or as part of the AIFMD framework.

[1150] EuSEF, recital 1 and 16.

[1151] Zetzsche and Preiner (n 1146) 165–166.

[1152] Recital 11 of the MMFR explicitly states this. See Regulation (EU) 2017/1131 of the European Parliament and of the Council of 14 June 2017 on money market funds [2017] OJ L169/8 (MMFR).

[1153] Frank J Fabozzi, *The Handbook of Fixed Income Securities* (8th edn, John Wiley and Sons 2012) 337. See also European Systemic Risk Board, 'EU Non-Bank Financial Intermediation Risk Monitor 2019' (ESRB NFBI Monitor No 4, July 2019) 20. See also Josephine M Smith, 'Money Market Instruments' in Pietro Veronesi (ed), *Handbook of Fixed-Income Securities* (John Wiley & Sons 2016) 25.

[1154] See MMFR, art 3(1)(a)–(c). See also Publications Office of the European Union, 'Money Market Funds; Summary of Regulation (EU) 2017/1131 on Money Market Funds' (*EUR-Lex,* 2017) <https://eur-lex.europa.eu/legal-content/EN/LSU/?uri=CELEX:32017R1131> accessed 13 August 2020.

A money market fund can become authorized according to the UCITS IV/V framework as a UCITS fund, but then it must fulfill the requirements set out by the provisions of that framework.[1155] Alternatively, a money market fund can be set up as an AIF, in which case the rules of the AIFMD framework are applicable.[1156] In both cases, the authorization of a fund additionally is followed by a separate authorization process under the MMFR.[1157]

The MMFR lists which types of assets are eligible for investment and lays down diversification rules. This is conceptually similar to the approach chosen in the UCITS framework, where both the types of assets and their concentrations are limited by the provisions. In addition to these rules, the MMFR also contains rules that mandate quality assessments for the assets that are to be invested in. Similar to the AIFMD, the MMFR also contains provisions on risk management and stress testing, as well as provisions that attempt to prevent overreliance on credit ratings. Additionally, the MMFR contains specific rules regarding valuation and the calculation of a fund's NAV. Finally, transparency and reporting requirements are also contained in the MMFR.

The MMFR can be understood to be a regulation that is focused on money market funds, because these funds constitute a subset of investment funds that are prone to liquidity shocks and can be effective transmitters of systemic risk in the event of a crisis. The MMFR therefore creates specific rules for these funds, but overall embeds these into the existing AIFMD/UCITS binary system. The MMFR offers a template of how future amendments to the collective investment scheme rulebook could be approached. Future amendments could address one or a limited number of fund types, while mandating their authorization as either a UCITS fund or an alternative investment fund.

5.5.6 Conclusion

In conclusion, the binary, one-size-fits-all approach of the European framework, which essentially limits the choice to retail UCITS or alternative investment funds, has been corrected somewhat with additional regulations. This new regulation cre-

[1155] MMFR, art 4(2).

[1156] MMFR, art 4(3).

[1157] MMFR, art 4(1). UCITS funds are authorized according to articles 4 and 5 of the MMFR, while alternative investment funds are authorized according to article 5 of the MMFR.

ates designations for certain fund types that fall outside of the strict retail-versus-professional or traditional-versus-alternative classification of investment funds. The approach has been taken only for specific fund types, such as smaller venture capital funds. Other fund types that might not be considered a very 'good' fit for the AIFMD, such as buyout or distressed debt funds, for example, are still subject to the directive. The conceptual approach of implementing a broad directive and creating exceptions and additional categories within the larger framework through regulations is one which might offer a solution to the rigid investment fund framework as it exists today. The core difficulty in reforming or reorganizing the regulatory system in this context is that the system is already bound to the UCITS-or-AIFMD-only paradigm and would require a complete overhaul if one were to attempt to create a wholly novel classification mechanism. Regulations that create new and additional designations within the existing framework, however, offer a more efficient and practical approach. As will be discussed in chapter 6, the feasibility of new regulation is, from a practical perspective, an essential element of any proposed policy. For European investment fund regulation, this approach may prove to be the most promising. Instead of a complete overhaul of a regulatory framework which itself is comparably young,[1158] smaller, directly applicable adjustments in the form of regulations would be far more efficient and much less disruptive to the industry.

5.6 Systemic Risk and the AIFMD

The AIFMD contains four main aspects which are directly related to systemic risk. Reporting requirements are the first and most important aspect. Mandatory risk management procedures are the second category. Depositary rules constitute the third and, finally, leverage and liquidity requirements the fourth category. It could be argued that other portions of the AIFMD have an effect on systemic risk as well, but this is mainly a secondary result of the design of the provisions. The authorization process and cross-border aspects, for example, create a unified European market for alternative investment funds, but are also related to supervision and regulation of these funds. As a consequence, this process might likely contrib-

[1158] The reader will recall that the AIFMD dates from 2011, and UCITS IV/V only came into its current form as recently as 2009 and 2014. If implementing and supplementary regulation such as the MMF Regulation is taken into account, the regulatory environment has been in near constant flux for the last ten years.

ute to increased stability and reduced risk taking overall through enforcing compliance according to a single ruleset, but it is not primarily designed as a risk mitigation tool. The same could be said of provisions related primarily to investor protection issues, such as information requirements versus investors, conflict of interest rules, provisions on the conduct of business, and rules on marketing. These provisions appear to be primarily designed with investor protection in mind, with a primary objective to reduce informational asymmetries and agency problems, as well as to reduce outright fraudulent behavior by fund managers. Indirectly, this might have a positive effect on financial stability, as investor confidence and willingness to invest in European funds presumably is increased, and behavior detrimental to the functioning of financial markets is incidentally reduced by the conduct rules. This dual function becomes even more apparent when examining the rules on remuneration. On the one hand, remuneration has a very direct effect on the ultimate costs and fees charged to investors, but it concurrently very directly impacts the incentives of the fund manager. As the activity of fund management can fundamentally be seen as a bet with an asymmetrical payoff structure, where each investment provides potential returns that far outweigh the possible losses to a manager, such a convex payoff structure incentivizes risk taking.[1159] A fund manager might be more prone to risk-taking when compensation structures limit personal losses, while a manager that is coinvested or personally liable for losses he or she causes could behave in a fashion more closely aligned with the interest of investors. As an offshoot of this, the behavior of a fund manager caused by compensation structures can have an impact not only on the investors, but the broader economy as well.

5.6.1 Reporting Requirements

Reporting requirements are the most important aspect of systemic risk mitigation for two distinct reasons: First, they allow effective monitoring to take place, which is primarily a microprudential measure when applied to the individual manager or fund; second, reporting requirements supply data and allow supervisors to assess systemic risks, as well as backtest and analyze the alternative investment industry, which are measures that arise from a macroprudential approach to supervision. Reporting requirements will also, over time, allow the quantity and quality of data that is available to improve. Due to this improvement, perhaps more accurate and

[1159] Adrian and Jones (n 781).

tailor-made systemic risk indicators and measurements can be developed and applied to the alternative investment industry.

Reporting also allows an aggregation of information on cross-border situations and the creation of a single market for alternative investment funds. The reporting requirements and the information-exchange procedures between authorities has the effect of creating a bird's eye view of the European industry beyond national jurisdictions. This reporting is also enhanced by the provisions that mandate ESMA be informed of developments, which creates a single body tasked with coordinating supervisory action. From a systemic risk perspective, this is essential, because systemic crises will, in the overwhelming majority of cases, take an international form. Due to the fact that European asset management will frequently have a cross-border component, the response will have to be on the European level with one body orchestrating the national authorities' measures.

5.6.2 Risk Management Procedures

Risk management procedures that are effective, specific to the risks of a fund, and independent are a further aspects fundamental risk mitigation. The AIFMD creates rules on the organizational aspects of risk management and specific approaches to managing a fund's risk. This is an essential baseline that must be put in place if the alternative investment fund management industry is to become systemically stable. One core difficulty that the AIFMD faces is how to implement risk management in an industry that is so heterogenous with regards to investments and the types of risk that individual funds are exposed to. This leads to comparably generic provisions, which are primarily related to the structure, organization, and procedures of the risk management process rather than specific and tangible thresholds related to risk. While such thresholds would render the AIFMD so inflexible and specific as to render it unimplementable, or so complex that might render it incomprehensible, the question must be asked whether the AIFMD in fact has had the effect of creating effective risk management where previously there was none. As chapter 6 will indicate, the risk management procedures in the industry appear not to have changed substantially, which means that, presumably, risk management was already implemented in an acceptable fashion, or the AIFMD's new provisions were not substantially different from the previous national law it supplanted.

While the risk management procedures are essential, they do appear to be somewhat limited in their effect. One would have to ask the question whether they could

be enhanced either by borrowing from the portfolio construction rules of UCITS (which, though not explicit risk management procedures, have the ultimate effect of limiting those risks which would result from investments in positions and gaining concentrations in assets that are effectively prohibited under the UCITS framework), or creating various specific and technical provisions more closely related to specific types of funds. By doing this, the specificities of various strategies could be brought into focus, and the provisions could reflect this. As an example, an equity fund or venture capital fund would likely handle risk management in a different manner from, say, a convertible-debt arbitrage fund or a fund heavily invested in commodities or derivatives. The challenges faced by a residential real estate fund differ fundamentally from those faced by an algorithmic multi-strategy hedge fund. While managers of such funds would presumably be sufficiently specialized to focus risk management on the categories relevant to them within the confines of the AIFMD, the stated objective of the AIFMD is systemic risk mitigation. Consequently, it would be advantageous if the AIFMD contained provisions designating which risk categories would be particularly critical for which funds, and, more importantly, what national authorities would need to monitor to ensure the funds in their jurisdiction are not systemically risky.

5.6.3 Depositary Rules

The depositary rules utilize the depositary as a monitor, which has the opportunity to monitor the fund and manager while safeguarding its assets. This is very useful, as the depositary will be informed of many of a fund's or a manager's activities as it has its assets and cash in custody. The shortcomings of the depositary in a systemic sense are that the depositary appears to be tasked with verification of ownership and the prevention of fraud as a primary measure. This is logical when examined in the context of the AIFMD's formation. The Madoff scandal, which has been mentioned previously,[1160] demonstrated shortcomings in preventing the sale of alleged 'black box'-type secretive hedge funds which were merely vehicles designed to defraud investors, rather than generate returns for them.

The core difficulty in promoting the depositary from a monitor used to detect fraud to a sentinel against systemic risk lies in the expertise a depositary would have and the resources it can use for the monitoring task. Monitoring exposures of various funds, let alone detecting exposures of a systemic nature, would presumably not

[1160] See chapters 4 and 6.

be possible for a depositary without it becoming a de-facto secondary risk management department for funds. Hence, the depositary could likely not become a guardian against systemic risk, but perhaps the information it has could be effectively used for monitoring purposes by authorities. The AIFMD already requires the depositary to forward relevant information the depositary has to competent authorities, but it might be possible to create more efficient communication channels and standardize the type of information and data the depositary might want to relay to authorities in order to facilitate supervision of funds and managers. The emergence of 'Fintech' solutions and various standardized software and modeling tools might act as a catalyst for this process, but it would likely be useful if the use of such tools was somewhat coordinated and harmonized at a European level.

5.6.4 Liquidity Requirements

Finally, liquidity requirements and liquidity risk management constitute a further essential tool to mitigate systemic risk. As chapter 3 discusses in detail, liquidity risk in all its facets is the primary risk that alternative investment funds face in a systemic context. The AIFMD thus has addressed the primary mechanism through which alternative investment funds are likely to act as catalysts in the creation of systemic risk in financial markets.

The fundamental difficulty in creating rules related to liquidity risk for alternative investment is related to the very nature of alternative investments. Alternative investments, in contrast to traditional investments, generally are less liquid and more difficult to value. This makes the management and estimation aspect of liquidity management more difficult. Additionally, active investment strategies in less liquid markets necessitate accurate dynamic modelling of risk exposures to gain an assumption of the risk one is exposing oneself to. This leads to a similar conclusion of the ideas expressed above as part of the discussion on general risk management procedures. Provisions on liquidity risk management and liquidity could be enhanced if a framework were more specific to the type of strategy and fund that is being dealt with. Consequently, it could be hoped that future amendments to the AIFMD would create more precise and more differentiated provisions related to liquidity risk.

A second aspect that needs to be discussed is the risk that investors withdraw their investments during market turbulence, which can put a further strain on the liquidity of investment funds. This phenomenon, including forced selling and the first-mover advantage, have been discussed extensively at the end of chapter 3. In this

context the relevant differentiating factor is whether a fund is structured as an open-ended or closed-ended investment scheme. As would be assumed, open-ended fund structures are at a much greater risk of seeing investors withdraw capital within a short time frame. The AIFMD, as has been seen, permits both fund types. In this area, the fundamental balance that must be struck is between the liquidity risk faced by the fund and the protection of the investors' investment. Whether the priority is to raise the likelihood that a fund will survive, or to permit an investor to salvage at least some of the initial investment, depends on whether the public good is placed above private interests. The UCITS framework, likely due to the fact that it mainly deals with retail investors, appears to prioritize the investors. Alternative investment funds differ from retail funds like UCITS funds in that they are primarily intended for professional investors. It would be conceivable that the survival of the fund would be seen as more important than providing investors with the option to redeem their investments quickly. The AIFMD has no provisions that impose limits on redemptions. From a systemic standpoint, an enhancement to the current regulatory regime would be to make it possible for both the manager and the authorities to impose redemption gates on certain funds if there is a distinct danger that the fund might face liquidity problems. Such restrictions on withdrawal of capital would prevent fire sales and allow a fund to potentially avoid exiting trading positions to satisfy withdrawal requests. In summary, amendments to the AIFMD could include either provisions governing which funds are permitted to take an open-ended or a closed-ended form, or provisions that permit ex-post restrictions on redemption requests that either authorities themselves or managers (potentially with prior permission from competent authorities) can impose to avoid liquidity shortfalls.

5.7 Conclusion

This chapter has provided a brief description of the history of the AIFMD, an overview and analysis of the rules of the framework, and a more detailed analysis of the provisions related to systemic risk. The AIFMD is a product of a political, post-crisis environment, which explains its current structure. Nonetheless, the measures intended to mitigate systemic risk provide a necessary baseline that addresses the most critical risks that alternative investment funds face. Furthermore, as chapter 6 will elaborate on, the AIFMD has been successful in creating a single market for alternative investment funds and in creating a comprehensive framework, for collective investment schemes or funds in the European Union. The following chapter

will analyze how effective the provisions of the AIFMD are and describe how the framework could be remodeled to create a truly efficient single framework, or single rulebook, [1161] for EU fund management and distribution.

[1161] Dell'Erba (n 834) 322.

6 Policy Suggestions

'Some things benefit from shocks; they thrive and grow when exposed to volatility, randomness, disorder, and stressors and love adventure, risk, and uncertainty.' – Nassim Nicholas Taleb[1162]

Table of Contents

6 Policy Suggestions ... 287

6.1 Introduction ... 288

6.2 Regulatory Rationale ... 288

6.3 Current Developments of the UCITS and AIFMD Frameworks ... 320

6.4 Policy Suggestions ... 330

6.5 Synthesis: An Effective Solution ... 353

6.6 Conclusion ... 354

[1162] Taleb, *Antifragile: Things That Gain from Disorder* (n 179) 18.

6.1 Introduction

This chapter contains current developments in the regulation of alternative investment funds, as well as policy suggestions. The groundwork for these proposals has been laid in the previous chapters. The ideas presented in the course of this chapter represent possible starting points for further developments of the UCITS and AIFMD frameworks. While the two frameworks do contain certain provisions related to systemic risk, the measures remain relatively limited and fairly basic. This chapter therefore examines additional measures that could be taken to ensure financial stability. The chapter is structured as follows: Initially, the regulatory rationale is examined, which provides the conceptual basis for the policy suggestions. In a second step, the current developments of the UCITS and AIFMD frameworks are described and analyzed. Finally, a number of policy suggestions are presented and evaluated. The final section of this chapter summarizes the main points and provides a concrete suggestion of which future developments of the frameworks would be optimal from a systemic perspective.

6.2 Regulatory Rationale

The regulatory rationale for any legal document provides the justification for any regulatory effort. In principle, if the regulatory rationale is not present or is insufficient, no regulation should take place. The rationale for regulation as presented in this chapter rests on three principal pillars: a description of the issue that requires a remedy, the weighing of the impact of the proposed measures, and an estimation of the effectiveness and efficiency of the measures. The rationale for regulation presented in this thesis relies primarily on an economic approach. The economic approach relies on a cost-benefit analysis, where the net benefit of a regulatory effort is evaluated. While intuitive in theory, a cost-benefit analysis in practice is difficult to achieve due to the absence of precise and reliable metrics. Such an analysis thus remains only an approximation of reality. Where available, surveys and economic analyses are presented as arguments for or against the specific provisions being discussed.

6.2.1 Regulatory Approaches

6.2.1.1 Precautionary Principle

The precautionary principle has a wide array of definitions,[1163] but most essentially describes a concept that permits prophylactic and preventive action to be taken, even when scientific evidence and technical data is inconclusive. The concept forms a part of law and policy aimed at protecting the environment and is enshrined in EU law, as it forms a core component of article 191 of the TFEU.[1164] This precautionary approach seeks to make it possible for policymakers to make timely decisions and take preventive measures, even when scientific or data-driven analysis is inconclusive. In the field of environmental protection, the concept is well established and has been an accepted approach since at least the 1970s.[1165] The precautionary principle is to be utilized only where serious or irreversible damage could be the result of inaction,[1166] though more expansive and radical definitions of the principle demand that in less severe cases, taking action should also be permitted.[1167]

The essential question is whether this precautionary principle could form a part of a regulatory approach in the regulation of financial markets. One proponent of this approach, Pesendorfer, elaborates on the idea of implementing the precautionary principle in the context of financial law, but highlights many of the difficulties involved in doing so.[1168] Pesendorfer questions the need for introducing new spec-

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1163 For a discussion of how to formulate the precautionary principle, see eg Per Sandin, 'Dimensions of the Precautionary Principle' (1999) 5 Human and Ecological Risk Assessment: An International Journal 889.

1164 Treaty on the Functioning of the European Union. See article 191(2) of the Consolidated Version of the Treaty on the Functioning of the European Union [2012] OJ C326/47. See also Treaty on European Union
Consolidated Version of the Treaty on European Union, OJ C326/13 [2012] art 5.

1165 Owen McIntyre and Thomas Mosedale, 'The Precautionary Principle as a Norm of Customary International Law' (1997) 9 Journal of Environmental Law 221, 221–223.

1166 Dieter Pesendorfer, 'Goodbye Neo-Liberalism? Contested Policy Responses to Uncertain Consequences of the 2007–09 Financial Crisis' in Kern Alexander and Rahul Dhumale (eds), *Research Handbook on International Financial Regulation* (Edward Elgar Publishing 2012) 430. See also Joseph Norman, Yaneer Bar-Yam and Nassim Nicholas Taleb, 'Systemic Risk of Pandemic via Novel Pathogens—Coronavirus: A Note' (New England Complex Systems Institute, 2020) 1 <https://necsi.edu/systemic-risk-of-pandemic-via-novel-pathogens-coronavirus-a-note> accessed 31 August 2020.

1167 Pesendorfer (n 1166) 430.

1168 ibid 430–431.

ulative financial products as well as authorizing high risk, hedge fund-style investment vehicles, and also raises the question of whether the precautionary principle might be applicable in this context. He argues that for financial products and investment vehicles of a more speculative nature, perhaps an approach more in line with 'better safe than sorry' might be more appropriate than the current one.[1169] While highly controversial, it is evident that the concept is appealing, especially in light of the last financial crisis.

The precautionary principle is only to be applied in cases where the potential damage so far outweighs the cost of the preventive measures to justify such an approach. When regulating alternative investment funds, the precautionary principle only fulfills this prerequisite with respect to systemic risk. In the case of a systemic crisis, if triggered by an alternative investment fund, the overall cost to both the fund and to society would result in a fallout of such a magnitude that preventive ex-ante regulation is justified.[1170] In the case of investor protection, which forms the second rationale for regulation discussed in depth in this chapter, the precautionary principle may not be applied. While this may appear harsh in light of the potential losses that investors may suffer, a balance must be struck between protecting investors and enabling them and fund managers to take risks. In addition, cases where losses are incurred that could have been avoided through more aggressive investor protection measures rarely have direct systemic consequences. Where systemic effects and externalities are not of a disruptive, ruinous magnitude, the precautionary principle should not be invoked to justify regulation.[1171] Investor protection should rather be structured in a manner that reflects both the capacity of investors to make informed decisions and so their appetite for risk corresponds to the losses they are capable of sustaining. Instead of restricting investments across the board, the risk-return profile of an investment, as well as the transparency of its functioning, should determine which investors are suited for and permitted to invest in which types of investment products.

[1169] ibid 431.

[1170] See Nassim Nicholas Taleb and others, 'The Precautionary Principle: Fragility and Black Swans from Policy Actions' (2014) NYU Extreme Risk Initiative Working Paper 1 <www.fooledbyrandomness.com/precautionary.pdf%3E> accessed 20 August 2020.

[1171] ibid 9. Classically, the EU has taken a more precautionary approach to investor protection, see eg Niamh Moloney, 'The Investor Model Underlying the EU's Investor Protection Regime: Consumers or Investors?' (2012) 13 European Business Organization Law Review 169, 174.

6.2.1.2 Behavioral Economics and Investor Protection

A recurring theme of this chapter is the interplay between designing provisions that address both systemic risk and investor protection. While systemic risk is the primary topic of this thesis, investor protection, due to its prominence in the UCITS framework, also has to be analyzed. Investor protection in the context of the sale of financial products is classically achieved by providing sufficient information to enable him or her to make an informed decision on whether to invest.[1172] More restrictive rules can prohibit the sale of certain products in more risky or opaque markets to less informed investors, which are usually referred to as 'retail', 'nonprofessional', or 'non-sophisticated' investors. These investors of the protected category are limited in their investment possibilities.[1173] By contrast, professional, institutional, or sophisticated investors will be unconstrained by investment limitations and the general level of their protection is reduced. This is justified by the fact that they are either better informed (as professionals or dedicated institutions) or more able to absorb losses (for example in the case of high-net-worth individuals, which can, depending on the rules, buy financial products other investor types are not allowed to invest in). Finally, investor protection can also be achieved by utilizing more specialized middlemen acting as advisors and brokers. These middlemen are typically bound by conduct-of-business rules and obligations to provide advice and investment services in the best interests of their clients.[1174]

These points lead to three essential questions: First, how well are investors actually able to analyze information and make investment decisions based on it? Second, what exactly constitutes a 'retail' investor, and which assets can be made available to this type? Third, do advisors effectively improve the selection of investment products, and are they sufficiently specialized to give specific advice on complex and alternative investment products?

The first question would, under a classical paradigm which assumed the rational investor to be akin to a pure analytical machine, be answered in the affirmative. In cases where the information might be insufficient under this paradigm, the solution would be to provide more comprehensive information, which would presumably lead to better investment decisions and reduce informational asymmetries between

[1172] Alexander and Madders (n 420) 1084–1085. See also Moloney (n 1171) 184.

[1173] Alexander and Madders (n 420) 1090–1091.

[1174] ibid 1091.

investor and originator, as well as the investor and the advisor.[1175] The comparably young fields of behavioral psychology and economics show, however, that investors exhibit so-called 'bounded rationality'[1176] and are subject to a number of biases and nonrational patterns of behavior.[1177] In this direct context, this obstacle cannot be removed simply by providing an ever-increasing amount of information to the investor. There is a point of diminishing returns, after which additional information does not aid in an investor's understanding, or it simply will not be read or absorbed at all. As a consequence, information to investors must find an effective medium and structure to present only the most relevant information in a format that can be absorbed easily. This format must account for the fact that the investor ultimately is a human with a limited capacity for understanding and a fleeting attention span. This necessarily means that certain information will be omitted in doing this, and the information presented will be simplified and nontechnical. The most prominent example of this in the context of alternative investment funds is the KIID, a template for which is included in the appendix of chapter 4.

The second question of differentiating between investor types is fairly simple on the surface, but has facets that are more difficult to reconcile with the underlying rationale for regulation. As described above, two categories are usually created, one for the 'average' investor with no specific expertise or outsized capital reserves, and one for professionals, high-net-worth individuals, or institutions. This is fairly straightforward at first glance, but the question becomes more complicated when it is actually examined more closely. It is relatively difficult to draw the line between the investor who should be able to bear the risk of certain investments,

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[1175] ibid 1085.

[1176] Bounded rationality can be defined as: 'The capacity of the human mind for formulating and solving complex problems is very small compared with the size of the problems whose solution is required for objectively rational behavior in the real world or even for a reasonable approximation to such objective rationality.' Herbert A Simson, *Models of Man. Social and Rational* (Wiley 1957) 198. See also Richard H Thaler, *Quasi Rational Economics* (Russell Sage Foundation 1994) 4. There appears to be a neurological component that limits rationality of investors as well, see N Gregory Mankiw and Mark P Taylor, *Economics* (3rd edn, Cengage Learning 2014) 129–131.

[1177] Alexander and Madders (n 420) 1086. A history of the emergence of behavioral economics can be found with Richard H Thaler, *Misbehaving: How Economics Became Behavioural* (Allen Lane 2015). The preceding development of behavioral psychology is described in Michael Lewis, *The Undoing Project: A Friendship That Changed the World* (Penguin UK 2016).

and the protection-worthy, mere 'consumer-type' investor in financial products.[1178] Retail, nonprofessional investors exhibit rather poor financial knowledge and literacy across the board,[1179] and appear to be prone to making uninformed and poorly though-out investment choices.[1180] Professional investors perform slightly better and are also capable of analyzing information provided to them.[1181] Yet, ultimately, one specific overarching objective that one would want to achieve in designing a financial system would be to unlock previously undeployed capital of retail investors that could be invested in various asset classes previously unavailable to them. Here the primary challenge would be to find a balance between making as many different investments available to retail investors as possible while restricting those where the retail investor cannot understand or assess the risk he or she is taking by investing.

A sort of 'remedy' to this difficulty that is frequently proposed is to incentivize retail investors to seek out investment advice from professionals. Whether this is an effective remedy also provides the answer to the third question of whether advisors actually cause retail investors to make better investment decisions. A large body of literature exists on this topic, and a meta-analysis shows that the evidence that investment advice leads to better investment by retail investors is mixed.[1182] On the positive side, it is estimated that between three-quarters and four-fifths of retail investors appear to seek out investment advice to make up for their limited

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[1178] Moloney (n 1171) 172–174.

[1179] G20 and OECD, 'G20/OECD INFE Report on Adult Financial Literacy in G20 Countries' (2017) 7–9 <www.oecd.org/daf/fin/financial-education/G20-OECD-INFE-report-adult-financial-literacy-in-G20-countries.pdf> accessed 1 September 2020. Globally, financial literacy appears also to be quite low, see Annamaria Lusardi and Olivia S Mitchell, 'Financial Literacy around the World: An Overview' (2011) National Bureau of Economic Research, Working Paper No 17107 13–14 <www.nber.org/papers/w17107.pdf> accessed 26 August 2020.

[1180] Hussein A Hassan Al-Tamimi, 'Financial Literacy and Investment Decisions of UAE Investors' [2009] The Journal of Risk Finance 514–515. See also Oscar A Stolper and Andreas Walter, 'Financial Literacy, Financial Advice, and Financial Behavior' (2017) 87 Journal of Business Economics 581, 616.

[1181] W Brooke Elliott, Frank D Hodge and Kevin E Jackson, 'The Association between Nonprofessional Investors' Information Choices and Their Portfolio Returns: The Importance of Investing Experience' (2008) 25 Contemporary Accounting Research 473, 474, 477–478.

[1182] Stolper and Walter (n 1180) 626.

knowledge.[1183] While certain more recent studies point toward investment advice being at least somewhat useful, especially when sought out as a complement to, rather than a substitute for, investment knowledge,[1184] the overall picture indicates that investment advice is only partially effective in compensating for a lack of financial literacy.[1185] This problem is compounded by a host of agency problems that are inherent in the provision of investment advice, which is why, as mentioned above, certain conduct-of-business rules are usually put in place to prevent advisors from taking advantage of informational asymmetries.[1186]

So, what does this all mean when applied to the design of investor protection? Unfortunately, it demonstrates that the retail, non-sophisticated, consumer-type investor cannot fully overcome the limits to his or her capacity to make investment decisions regarding certain types of investments. In addition, advisors are not the solution, as these cannot fully compensate for the deficiencies of their clients, and they also create an additional layer of costs for investors. Advisors also create agency problems, which regulation must address with additional rules. This ultimately leads to only one possible conclusion: The solution to such a problem must primarily be sought in investment products themselves. The product itself has to be classified according to its risk-return profile, as well as how easily investors can understand this profile. This classification must impact the fashion in which the product is regulated and which investors it may be marketed and sold to. In addition, as a secondary measure, the form in which information on investments is presented to retail investors must adhere to the principles of simplicity, coherence, and comprehensibility, and not provide information that is excessively complex, comprehensive, or overly technical.

The argument that supports this can be simply formulated in the following way: If the limitations of the retail investor cannot be overcome, products must be designed and regulated in such a way that they are sufficiently safe to be offered to such investments. Products that do not satisfy this requirement must be restricted to professional investors.

[1183] ibid 626, 630.

[1184] ibid 630. See also J Michael Collins, 'Financial Advice: A Substitute for Financial Literacy?' (2012) 21 Financial Services Review 307, 318–319. See also Riccardo Calcagno and Chiara Monticone, 'Financial Literacy and the Demand for Financial Advice' (2015) 50 Journal of Banking & Finance 363, 364–365, 372.

[1185] Stolper and Walter (n 1180) 626. See also Calcagno and Monticone (n 1184) 364–366.

[1186] Alexander and Madders (n 420) 1100.

6.2.2 UCITS VI

6.2.2.1 The UCITS Consultation from 2012

The next evolution of the UCITS framework would have begun with a consultation document, which was published on 26 July 2012. This consultation document contains a laundry list of possible areas of reform, including product rules, liquidity management, depositaries, money market funds, and long-term investments.[1187] The eight areas forming part of the study are included below as a table.

Following the consultation, no further action was taken by the Commission, hence, it can be assumed that the proposal likely will not mature into the next iteration of UCITS. It is interesting to note that a number of areas of potential reform that formed a part of the consultation have either been implemented in separate legislation or become part of the UCITS and AIFMD reforms without explicitly having been connected to this consultation from 2012. For example, both money market funds and long-term investments subsequently received their own regulations, but are seen as a part of the AIFMD framework, as these two types of funds became essentially AIF-variants subject to various exceptions and less-onerous rules. Also following the consultation, two new regulations that seek to create a level playing field across the board for the cross-border distribution of funds have been implemented. The proposals and implementation are described in section 6.3.1. As it appears that parts of the UCITS VI reform process have thus become implemented in different forms and other aspects never were addressed after 2012, it can be assumed that the UCITS VI process, as begun in 2012, is 'dead-in-the-water'. It is likely that instead of a comprehensive reform process under the UCITS banner, the reformation efforts will take the form of smaller regulations or will become part of the looming AIFMD reform, which, at the time of writing, could likely result in a proposal for a new directive sometime in late 2020 or early 2021.[1188]

[1187] Commission, 'Consultation Document on Undertakings for Collective Investment in Transferable Securities (UCITS) – Product Rules, Liquidity Management, Depositary, Money Market Funds, Long-Term Investments' (n 779) 1.

[1188] See the Commission, 'Report on the Operation of the Alternative Investment Fund Managers Directive (AIFMD) – Directive 2011/61/EU' (FISMA/2016/105(02)/C, European Commission, 2018), Commission, 'Commission Staff Working Document Assessing the Application and the Scope of Directive 2011/61/EU of the European Parliament and of the Council on Alternative Investment Fund Managers' SWD (2020) 110 final and the Commission, 'Report from the Commission to the European Parliament and the Council Assessing the Application and the Scope of Directive

One interesting aspect to note is that the Commission explicitly included a section asking respondents whether the UCITS and AIFMD frameworks were sufficiently aligned, and in what areas further harmonization might be necessary. The fact that this was already a central issue at the time the consultation document was released demonstrates that the two frameworks are likely going to become increasingly aligned as they are reformed and developed further. This also points to the fact that the two frameworks inevitably will need to become more similar and comprehensive to create a truly coherent set of rules for governing investment funds and their managers.[1189] The author argues that since this trend already leads to a convergence of the two frameworks, it would be most effective and efficient to ultimately pursue a unification and restructuring of the two frameworks to create one single system. This idea is explored further in section 6.4.5.1.[1190]

6.2.2.2 Table 6a: The Eight Areas of Review in the UCITS VI Consultation[1191]

1. Eligible assets and use of derivatives:	• Rules on portfolio management & composition (eligible assets) • Fund investment policies • Exposure limits and risk spreading rules
2. Efficient portfolio management techniques:	• Management of collateral • Counterparty risk
3. Over the counter (OTC) derivatives:	• Clearing of OTC derivatives • Operational risk and conflicts of interest • Frequency of calculation of counterparty risk exposures

2011/61/EU of the European Parliament and of the Council on Alternative Investment Fund Managers' (n 352). See also section 6.2.3.

1189 Commission, 'Consultation Document on Undertakings for Collective Investment in Transferable Securities (UCITS) – Product Rules, Liquidity Management, Depositary, Money Market Funds, Long-Term Investments' (n 779) 19.

1190 See section 6.4.5.1.

1191 See Commission, 'Consultation Document on Undertakings for Collective Investment in Transferable Securities (UCITS) – Product Rules, Liquidity Management, Depositary, Money Market Funds, Long-Term Investments' (n 779) 3–19.

4. Extraordinary liquidity management rules:	• Liquidity safeguards • Internal policies on liquidity constraints • Suspension of redemptions • Side-pockets
5. Depositary passport:	• Assessment on whether a depositary passport should be introduced for UCITS depositaries
6. Money Market Funds (MMF):	• Strengthening the resilience of the MMFs • Macroprudential risks posed by MMFs • Need to harmonize legislation on MMFs at the EU level • Valuation and capital buffers of MMFs • Liquidity bottlenecks • Redemption gates for investors and liquidity fees imposed on investors who redeem their investment
7. Long term investments:	• Appetite of retail investors to invest in funds invested in long term assets • Eligible assets for such funds • Investor protection and protection of retail investors • Whether UCITS funds should be permitted to invest in such long term funds
8. Addressing UCITS IV:	• Self-managed investment companies • Fund mergers • Notification procedure • Alignment with the AIFM Directive

6.2.3 The AIFMD Review Process

6.2.3.1 The Timeline and Content of the AIFMD Review Process

Article 69 of the AIFMD states that the European Commission must begin the directive's review process by 22 July 2017.[1192] The review takes into account inputs from both the industry and from regulatory authorities by conducting a public consultation, The report also includes an analysis of the effectiveness of the AIFMD in achieving its objectives and its impact on investors. Article 69 also

[1192] AIFMD, art 69.

prescribes some of the focuses of the review by naming specific rules that are to be examined and analyzed.[1193] The areas that are principally focused on include the passporting system, which is the AIFMD's marketing and management procedure and the impact of depository rules, as well as the transparency and reporting requirements, and their effect on the assessment of systemic risk. In addition, investments by professional investors and the impact on retail investors are mentioned, as well as the impact on investor access and investment in developing countries. Finally, the impact of the directive on the European private equity and venture capital market, as well as the impact and protection of small non-listed companies and issuers are mentioned as well.[1194]

6.2.3.2 The Report on the Operation of the AIFMD

As a direct consequence of the procedure described above, the European Commission has since published a report on the operation of the AIFMD. This analysis was submitted on 10 December 2018. The report gives an extensive overview of the impact the AIFMD has had on the European alternative investment market.[1195] The first part of the report utilized a general survey in order to evaluate the opinions of stakeholders, including asset managers, advisors, and other entities involved in the management of alternative investment funds. In addition, the opinions of national, European, and global industry representatives were sought.[1196] The second part of the report is an assessment of the impact the AIFMD has had. To assess the impact of the directive, the report uses several sources of infor-

[1193] ibid.

[1194] See AIFMD, art 69.

[1195] See Commission, 'Report on the Operation of the Alternative Investment Fund Managers Directive (AIFMD) – Directive 2011/61/EU' (n 1188).

[1196] ibid 19–20. The exact composition of the stakeholders questioned as part of the survey can be found on page 55 of the same document. 51% of stakeholders were alternative investment fund managers, 12% were investment managers or advisors to alternative investment funds, 9% were industry representatives, an additional 9% were fund administrators, 8% were depositaries, 7% institutional investors or counterparties investing on their own account, 6% external valuers, 5% entities that market, sell, or select funds for investors, 4% fund accountants, and the remaining 19% were other entities. The question was multiple choice, which means certain respondents belonged to multiple categories at once.

mation:[1197] first, research;[1198] second, interviews;[1199] third, results from general survey;[1200] fourth, interviews;[1201] and fifth, quantitative data[1202] from ESMA's database,[1203] NCA's data,[1204] trade association data from across Europe,[1205] and investor complaints data.[1206]

6.2.3.2.1 Issues Identified by the General Survey

The results of the survey highlight several key areas where the effects of the AIFMD might require optimization. The focus of the survey was on the following areas: reporting requirements, rules on leverage, valuation procedures, remuneration policies, the separation of risk management from other functions, depositary rules, disclosure to investors, private equity investments, the passporting system and its impact on the European market for funds, and how the AIFMD interfaces with other European frameworks.

6.2.3.2.2 Macroprudential Aspects

6.2.3.2.2.1 Reporting Requirements

Reporting requirements are a foundational element of the AIFMD. It could even be argued that were there no reporting of data by alternative investment fund managers to regulators, many, if not most, provisions of the AIFMD would become ineffective. A regulator would not be able to monitor effectively, nor could compliance be assured. Without the mandatory periodic disclosure of information, su-

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[1197] ibid 19.

[1198] ibid.

[1199] ibid.

[1200] ibid.

[1201] ibid.

[1202] ibid.

[1203] ibid 125–126.

[1204] ibid 126. National competent authority or NCA is a general term used to refer to the various competent supervisory authorities within member states. The abbreviation NCA appears frequently in official European Union documentation. See, for example, European Securities and Markets Authority, 'Board of Supervisors and NCAs' (2019) <www.esma.europa.eu/about-esma/governance/board-supervisors-and-ncas> accessed 31 August 2020.

[1205] Commission, 'Report on the Operation of the Alternative Investment Fund Managers Directive (AIFMD) – Directive 2011/61/EU' (n 1188) 127.

[1206] ibid.

pervisory bodies would likely find it extremely difficult, if not impossible, to regulate alternative investment fund managers.

The results of the survey were divided into two parts: responses given by national competent authorities[1207] and responses given by fund managers. An overwhelming majority of respondents agreed that accurate, timely, and complete reports on all managed alternative investment funds were provided by managers and received by the competent authorities. There was a broad consensus that the flow of information from fund manager to authorities functions in principle. Responses to the question of whether a consistent understanding existed on what must be reported according to the reporting template were less positive. Only a third of the national competent authorities and around a quarter of managers felt that a 'consistent understanding' exists. The number of fund managers responding that consistent understanding is present within their member state was more than half, while only a quarter felt this understanding existed across the EU. Additionally, fund managers were not in agreement on whether the data covered was essential and without duplicates. Only around a third of the fund managers that participated in the survey agreed that data was essential. The same ratio agreed that data is not duplicated, meaning it has to be reported in other sections of the reporting template.[1208]

The results of the survey indicate that the reporting mechanism functions relatively well, and that both mangers and authorities see the implementation of the AIFMD as successful. Interestingly, slightly more than half of respondents felt that reporting requirements have not changed significantly since the introduction of the AIFMD, and that reporting requirements prior to the directive were similar.[1209] While at first glance this may seem disheartening, in the sense that the AIFMD's rule set might have proved superfluous in cases where robust data reporting requirements already existed, it also means that the directive provides some continuity for authorities and management companies familiar with the mechanics of reporting. The fact that both the competent authorities and fund managers felt that understanding of reporting templates was not consistent highlights an issue with the fundamental reporting mechanism. It appears that in certain jurisdictions, the implementation of the AIFMD framework has not been conducted in a clear manner. It will be interesting to follow how the situation develops in the future and

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[1207] As mentioned above, national competent authority or NCA refers to the various competent supervisory authorities within member states. See fn 1204.

[1208] Commission, 'Report on the Operation of the Alternative Investment Fund Managers Directive (AIFMD) – Directive 2011/61/EU' (n 1188) 82–84.

[1209] ibid 83.

whether these difficulties are mere teething problems of a young directive, or whether detailed additional rules and mechanisms will be needed to create transparent and clear reporting processes.

6.2.3.2.2.2 Leverage in Alternative Investment Funds[1210]

Leverage in alternative investment funds that are subject to the AIFMD is relatively low and rare, with the exception of hedge funds, which are primarily synthetically leveraged through the use of derivatives.[1211] The results of the survey confirm this. Almost nine in ten respondents reported a leverage ratio of less than two to one, while almost half of the respondents reported a leverage ratio below even 1.1. National competent authorities that were questioned indicated that the effect of alternative investment funds on the buildup of leverage, and by extension on systemic risk, was ‘quite moderate’.[1212] Less than 10% felt that alternative investment funds had a significant effect.[1213]

Despite leverage being low, the respondents to the survey pushed for clarification on the rules on calculating leverage, some calling for a change to the rules. The reason for this, as stated by respondents, was a discrepancy between the rules of the AIFMD and industry practice, and the poor fit of these rules with closed-ended funds.[1214]

The results of this survey are quite telling, as they demonstrate a fundamental structural deficit of the AIFMD that results from creating a single set of rules for all alternative investment funds. Leverage is very low for most alternative investment funds. Consequently, the assessment of NCAs is likely correct, in that the alternative investment fund industry as a whole is not particularly systemically relevant. This bird’s-eye view masks one fundamental fact, however: Within the world of all alternative investment funds, hedge funds stand out as comparably prolific users of leverage, even if this occurs through the use of derivatives. Hence, the heterogeneous nature of the industry as a whole obscures the focus on hedge funds and also does not exclude categories of funds that, through the nature of

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1210 ibid 86–88.

1211 European Securities and Markets Authority, ‘ESMA Annual Statistical Report on EU Alternative Investment Funds 2019’ (ESMA, 2019) 5 <www.esma.europa.eu/sites/default/files/library/esma50-165-748_aif_report_2019.pdf> accessed 31 August 2020.

1212 Commission, ‘Report on the Operation of the Alternative Investment Fund Managers Directive (AIFMD) – Directive 2011/61/EU’ (n 1188) 86.

1213 ibid 87.

1214 ibid.

their investment strategy, are not suited to or interested in using leverage. Optimally, provisions related to leverage would need to be tailored to fund types and strongly focused on funds trading in derivatives. In addition, reporting and measuring requirements could potentially be lightened for funds which, by design, do not benefit from high degrees of leverage. As requested by respondents, rules on the calculation of leverage need to be optimized, for example by designing them with industry practices in mind, provided this does not limit supervisory efficiency.

6.2.3.2.2.3 Valuation[1215]

While survey respondents generally felt that valuation requirements of the AIFMD were appropriate, most agreed that NAV calculations are not carried out more frequently post-AIFMD than before.[1216] Slightly less than half of respondents felt the AIFMD has led to an overall improvement in valuation processes. Additionally, when asked whether the liability of external valuers has had an influence on their ability or willingness to carry out their function, the responses were nearly evenly split between agreement, disagreement, and neutral responses.[1217] Further interviews generally agreed with these assessments. Generally, it was found that much of the external valuation carried out prior to the introduction of the AIFMD is now done internally. The requirement of professional indemnity insurance has led to a higher cost base, and many external valuers are unwilling to value complex assets due to the expansion of potential liability.[1218]

The respondents in the survey identified several interesting points. Fundamentally, alternative investment funds will be dealing with the challenge of valuing assets that are less liquid and whose fundamental value might be more difficult to determine than traditional assets. From a regulatory perspective, this situation leads to several fundamental dangers. Firstly, this makes any assessment of alternative investment funds with the objective of ensuring financial stability exceptionally dif-

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[1215] ibid 90–93.

[1216] ibid 91.

[1217] ibid. 30% agreed, 25% disagreed, and 20% were neutral (the remaining respondents had no opinion) on the issue of whether valuers were *not* hampered or unwilling to carry out their functions. Interestingly, as the report points out, French and German respondents were more inclined to agree than respondents from the United Kingdom and Luxembourg (the United Kingdom and Luxembourg are two of the larger hubs for alternative investment and hedge funds).

[1218] ibid.

ficult. The difficulty of valuing alternative investments will be compounded when funds are invested in a multitude of such assets, particularly if the task is to be carried out by a regulator one step removed from the process. Consequently, it is disappointing that the AIFMD has not, according to respondents, led to substantial increases in the frequency and accuracy of the valuation process. In fact, it is concerning that external valuation has been reduced through the creation of expanded liability resulting from external valuation. While the design of valuation rules remains a challenge and is limited in its effectiveness by the fact that illiquid investments are by design more difficult to value accurately, the balance between utilizing liability as a tool to prevent fraudulent behavior and the existence of a sufficient number of external valuers must be reexamined. While internal valuation appears to function reasonably well as an alternative, the drop in the number of external valuers due to changed liability rules and the increased cost caused by professional indemnity insurance merits a recalibration of the existing rules.

6.2.3.2.2.4 Remuneration

The results of the survey indicate that the rules on remuneration are applied proportionally, though this was self-reported by authorities. Almost half of respondents reported that no change in the compensation of persons engaged in risk taking has taken place due to the introduction of the AIFMD. The composition of total compensation, however, has changed due to the AIFMD. Half of the respondents indicated that the fixed components of their remuneration packages had increased and variable remuneration had decreased.[1219]

Compensation arrangements have also changed due to the AIFMD. A shift away from variable compensation to fixed compensation has taken place. The effects of this change in focus on the incentives of fund managers will likely be mixed, leading to reduced risk-taking, but likely also reducing overall returns generated. How remuneration should be structured and what effects it has on the behavior of managers with regard to risk management and the pursuit of absolute returns is discussed extensively in section 6.4.7.

[1219] ibid 88.

6.2.3.2.3 Microprudential Measures and Investor Protection

6.2.3.2.3.1 Functional and Hierarchical Separation of Risk Management Functions[1220]

The provisions of the AIFMD led to an overwhelming majority[1221] of management companies to review risk management procedures and structures, though only slightly over forty percent[1222] of respondents made significant adjustments. Accordingly, the AIFMD has led to only minor adjustments to risk management processes.[1223] Though a majority of respondents reviewed their liquidity management processes, few made substantial adjustments to them.[1224]

Private equity fund managers were more critical of the risk management provisions contained in the AIFMD. The provisions of the AIFMD are structurally closely related[1225] to the risk management provisions of the UCITS framework and consequently are primarily derived from rules for managers of funds investing in specific types of securities that differ substantially from private equity investments. Due to their design and intended regulatory function, the provisions in question are more difficult to implement in the relatively distinct private equity business. The same applies when strategies are pursued that involve non-listed or illiquid investments, such as real estate. It is therefore unsurprising that respondents felt that separating risk management from portfolio management functions is a sensible solution for hedge fund strategies, but were more critical when asked to assess the rule's suitability for managers managing other types of funds. Separating risk and portfolio management was reported to be quite difficult for smaller managers as well, as smaller companies might not have sufficient staff to fully divide the two functions.[1226]

An assessment of the risk management measures cannot be purely positive. On a conceptual level, as respondents correctly indicated, effective, unbiased, and accurate risk management is an essential element of any portfolio management operation. It is also one of the aspects of the AIFMD where, in principle, the interests of the management companies and the regulators are fairly closely aligned. Meas-

[1220] ibid 89.

[1221] 94% of respondents. ibid.

[1222] 42%. ibid.

[1223] ibid.

[1224] ibid 90.

[1225] ibid 89.

[1226] ibid.

uring and mitigating risk, whether systemic in nature or otherwise, is in the interest of both the authorities and the portfolio manager in question. While discrepancies and slight deviations from fully aligned incentives will inevitably still exist, generally the interests of both will be similar. More critical to assess are the internal interests within and across functions. The asset management division or individual trader might not necessarily be interested primarily in the mitigation of risk for the fund or funds in question. Moreover, risk management as a function must by design limit risks, but will necessarily thereby frequently limit potential returns as well. This might very well lead to friction within a company. Such issues are what the functional and hierarchical separation of risk and portfolio management functions seeks to address. In the case of the AIFMD, apparently only minor changes have been necessary, which presumably means compliance by managers has been comparably cost-effective and uncomplicated. In addition, the fact that respondents generally see the provisions as sensible is also positive. For a subset of respondents, and hence, presumably for a subset of alternative investment fund managers, the provisions appear to have been difficult to implement. Certain strategies are sufficiently different that the provisions designed around more conventional investment funds are a poor fit. These difficulties are a direct consequence of the extremely broad scope of the AIFMD directive. The reader will recall that the AIFMD directive is similar to a catch-all clause, in that, with only a small number of exceptions, *all* managers *not* subject to the UCITS framework are subject to the AIFMD. It is therefore unsurprising that some provisions simply cannot account for the specificities of various more exotic investment strategies of certain funds and their managers. This fundamental problem would therefore need to be addressed at a fundamental legislative level. To create additional rules and appendices governing each edge case and peculiarity that might emerge due to the scope of the directive would run counter to the objective of creating a coherent, efficient, effective, and comprehensible framework. Hence, as this thesis argues,[1227] a comprehensive European framework governing collective asset management in the European Union would need to be created which would ideally divide funds and managers into discrete categories according to the risk profiles of their strategies, while preserving a minimal amount of flexibility and simplicity for each rule in order to be able to either incorporate or exclude exotic fund types. This risk-based approach would avoid the danger of prescribing rules to managers engaged in low-risk investment strategies purely due to the scope of a directive.

[1227] See section 6.4.5.1.

6.2.3.2.3.2 Depositary Rules[1228]

Generally, the results of the survey indicate that the AIFMD has had almost no impact on managers' choice of depositary. Respondents also agreed, though not overwhelmingly, that monitoring responsibilities of depositaries, including cash monitoring requirements, were appropriate and sufficiently detailed. A few difficulties were highlighted by respondents, however. The implementation of depositary rules differs across the Union or the rules adopted are not sufficiently clear, and asset segregation rules are seen as costly without providing much of a benefit. Reporting requirements under the AIFMD to the depositary by US prime brokers is also difficult, as they are subject to different rules.[1229]

The depositary rules serve the function of protecting assets of managers and their funds, but also to protect investors. Additionally, there is a systemic risk component to the provisions, as counterparty risks to funds are limited to a single depositary. The results of the survey indicate that depositary rules appear to function fairly well, with some limited exceptions. Asset segregation rules are seen as expensive but not useful. The level of harmonization and the interplay between EU depositaries and brokers in third countries appear to be less successful. A fundamental difficulty of creating rules governing relationships with institutions in third countries is accounting for vastly different rules and practices, but represents the reality of a globalized and interconnected world of finance. Optimally, depositary rules could be maintained, but would need to be successively adjusted to the challenges and practices that are experienced within the industry. This might be an obvious statement, but reflects a less apparent argument. Where a discrepancy exists between the behavior prescribed by a high-level rule set like a directive and the actual situation, the rules must exhibit sufficient flexibility to permit compliance, even if the reality might not adhere to the exact letter of the law. Alternatively, the law can delegate rulemaking authority to lower level technical bodies to achieve more precise and practical solutions. In the case of depositary rules under the AIFMD, the review of the directive might spawn amendments to depositary rules. The true litmus test for these provisions might be the next financial crisis, where the effectiveness of the AIFMD as a whole will likely be tested, together with those provisions aimed at mitigating systemic risk.

[1228] Commission, 'Report on the Operation of the Alternative Investment Fund Managers Directive (AIFMD) – Directive 2011/61/EU' (n 1188) 94.

[1229] ibid 94, 95.

6.2.3.2.3.3 Disclosure to Investors[1230]

Disclosure to investors both prior and after investment in an alternative investment fund has increased, as respondents indicated in the survey. Most respondents felt that disclosure to investors had expanded in scope, but the quality of the information disclosed has not necessarily increased. The main problem with the provisions on disclosure, according to respondents, were the duplication of information that needs to be provided and inconsistent application of rules across member states. The duplication of information is mainly a result of earlier legislation demanding disclosure of the same information as is now required by the AIFMD.[1231] As an example, for closed-ended funds, the prospectus directive[1232] is also applicable[1233] if the fund's units are sold to the public or traded as securities on an exchange.[1234] Inconsistencies in fee disclosures, and calculations of fund performances, and disclosure under MiFID II were mentioned. The existence of similar inconsistencies between disclosure rules under the AIFMD and those of the PRIIP KID were also brought up, as were inconsistent forms and document formatting in various different member states.[1235]

While disclosure rules to investors are primarily an investor protection tool and do not serve primarily as systemic risk mitigants, indirectly, the confidence of investors in markets is an essential concern. Disclosure rules are also in the collective interest of the alternative investment fund industry, as investors are provided with more information and presumably should be able to make informed decisions in choosing the funds to invest in, which, to a point, should drive at least some of the underperforming or outright fraudulent managers out of the market.[1236] The survey

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1230 ibid 96.

1231 ibid.

1232 See Regulation (EU) 2017/1129 of the European Parliament and of the Council of 14 June 2017 on the prospectus to be published when securities are offered to the public or admitted to trading on a regulated market, and repealing Directive 2003/71/EC [2017] OJ L168/12. (Prospectus Regulation).

1233 Prospectus Regulation, art 1(2)(a).

1234 See Prospectus Regulation, art 3(1).

1235 Commission, 'Report on the Operation of the Alternative Investment Fund Managers Directive (AIFMD) – Directive 2011/61/EU' (n 1188) 96.

1236 In principle, this mirrors the adverse selection problem, where asymmetric information leads to underperforming or lower-quality offerings in a market to drive out the higher-quality or superior offerings. The proposed solution to the problem is to remove informational asymmetries, which makes identification of lower-quality offerings, or 'lemons', possible and mitigates or removes the adverse selection problem. See generally

shows, however, that the AIFMD has not been calibrated properly to avoid redundancies and duplicated reporting, as well as inconsistencies regarding disclosure rules. This can primarily be traced back to the comparably recent introduction of the AIFMD and the ever-evolving nature of financial regulation. As the AIFMD could arguably be seen as a niche regulation when compared to legislative efforts related to banking and financial market regulation in both scope and frequency of its evolution,[1237] friction and overlaps with other legislative documents are unavoidable. It is nonetheless imperative that the reform process eventually addresses such duplicated disclosure requirements in order to achieve consistency and efficiency in the regulation of financial markets as a whole, rather than maintaining an opaque and overlapping amalgamation of directives and regulations in the EU system.

6.2.3.2.3.4 Private Equity Investments[1238]

As has been stated in the previous chapter,[1239] the provisions of the AIFMD related to buyouts and asset stripping are thematically somewhat disjointed from the rest

Akerlof's seminal paper: George A Akerlof, 'The Market for "Lemons": Quality Uncertainty and the Market Mechanism' (1970) 84 The Quarterly Journal of Economics 488. For an explanation of the same mechanisms in the context of hedge funds, see Baker and Filbeck (n 40) 25–27.

1237 The regulation of collective asset management in the EU also only forms a small subset of the overall Capital Markets Union that is the overarching objective of European regulatory reforms in the area of financial markets law. For an overview of the objectives of the Capital Markets Union, see Danny Busch, Emilios Avgouleas and Guido Ferrarini, 'Capital Markets Union after Brexit' in Danny Busch, Emilios Avgouleas and Guido Ferrarini (eds), *Capital Markets Union in Europe* (Oxford University Press 2018) ss 1.01-1.09. Post-crisis adjustments to the project are described in Diego Valiante, 'CMU and the Deepening of Financial Integration' in Danny Busch, Emilios Avgouleas and Guido Ferrarini (eds), *Capital Markets Union in Europe* (Oxford University Press 2018) ss 2.09-2.12. For the position of UCITS and the AIFMD in the context of the reform efforts, see Matteo Gargantini, Carmine Di Noia and Georgios Dimitropoulos, 'Cross-Border Distribution of Collective Investment Products in the EU' in Danny Busch, Emilios Avgouleas and Guido Ferrarini (eds), *Capital Markets Union in Europe* (Oxford University Press 2018) ss 19.01-19.05.

1238 Commission, 'Report on the Operation of the Alternative Investment Fund Managers Directive (AIFMD) – Directive 2011/61/EU' (n 1188) 98–100.

1239 See chapter 5.

of the directive and do not appear wholly coherent with the directive's stated objective of mitigating systemic risk and maintaining financial stability.[1240]

Nonetheless, there is a necessity for minimum standards in this area, as the survey showed that a majority of alternative investment funds are or were previously invested in non-listed entities in one form or another. Only a small portion of these investments were part of a larger objective to acquire control of non-listed companies, however.[1241] The overwhelming majority of respondents disagreed with the statement that the notification requirements to national authorities were useful, essential, and not overly burdensome. This reveals that the overwhelming majority of interviewees appear to see notification requirements as a burden and of limited value. The responses related to provisions on asset stripping were less negative. A third of the responses gave no opinion on the usefulness of the provisions aimed at preventing asset stripping, while the remainder was evenly split between agreement, neutral, or disagreement with the statement that the provisions provide an appropriate level of protection.[1242]

The responses to the survey demonstrate that the provisions on private equity and asset stripping have not been well received by the industry, and that they are seen as a tedious requirement without a clear benefit. Whether this view rings true would need to be examined in greater detail as part of a holistic analysis, but it is nonetheless alarming that the respondents were at best neutral and at worst strongly disagreed that the provisions in question provide a benefit while not being overly burdensome. These provisions, therefore, might need to be simplified and moved into a separate or related piece of legislation, which would also enable their integration into the European regulation on issues more closely related to issues of corporate control. Perhaps future legislation on the private equity industry could be integrated with existing rules to create an overarching set of rules governing questions of corporate governance, mergers and acquisitions by funds and other entities, and finally comprehensive rules on the liquidation of company assets and shareholder dividend payments, of which the existing rules on asset stripping would form a part.

[1240] See AIFMD, recital 2.

[1241] Commission, 'Report on the Operation of the Alternative Investment Fund Managers Directive (AIFMD) – Directive 2011/61/EU' (n 1188) 98.

[1242] ibid 98, 99.

6.2.3.2.3.5 Passport Regime and Marketing[1243]

As has been mentioned, cross-border marketing and distribution, which constitutes the passporting system for fund managers and, by consequence, their funds, is a second core objective of the AIFMD.[1244] Principally, the system aims at facilitating the flow of capital throughout the European Union, in this case through the sale and distribution of alternative investment funds.[1245] To achieve this, the provisions of the AIFMD need to be structured to simplify distribution across the European Union while concurrently creating a set of rules that do not undermine the other objective of maintaining financial stability.[1246]

The responses to the survey on the AIFMD indicate that this objective has, in part, been achieved. Almost two thirds of management companies surveyed market their funds in different EU or EEA countries. More than half also market to non-EU/EEA countries. Regarding investor types, almost forty percent of respondents market funds to retail or semi-professional investors. Within this category, 38% of these marketed to retail and semi-professional investors in other member states or EEA members on a cross-border basis, while 58% concentrated on investors in their home country. Slightly more than half of the respondents do not manage non-EU or non-EEA funds. Among the minority that does manage non-EU/EEA funds, only 43% of this subset marketed these non-European funds in the European Union. A third of surveyed management companies managed alternative investment funds domiciled in other member states. A larger percentage of management companies with their domicile in France or the United Kingdom managed funds on a cross-border basis. 60% and 55% of British and French management companies managed funds domiciled in other member states. The two European States with the largest number of European alternative investment funds incorporated are Luxembourg and the Cayman Islands, with 26% and 21%, respectively.[1247]

Slightly over a quarter of respondents saw an increase in their willingness or ability to manage and market alternative investment funds jurisdictions that differ from their own, while the desire of 45% of all respondents remained unchanged. A little over half the management companies surveyed indicated that the access to

[1243] ibid 100–103.

[1244] AIFMD, recital 4.

[1245] AIFMD, recital 6ff.

[1246] Commission, 'Report on the Operation of the Alternative Investment Fund Managers Directive (AIFMD) – Directive 2011/61/EU' (n 1188) 100.

[1247] ibid.

national markets has increased due to the introduction of the AIFMD. At the same time, a slight majority of respondents indicated that the complexity of procedures related to authorizing or registering has increased. In addition, the results of the survey indicate that marketing and distribution of funds and their units or shares to retail and semi-professional investors had become more difficult. More than half of respondents that were not indifferent to the issue noted that access to retail and semi-professional investors has become more restrictive following the introduction of the AIFMD framework.[1248] Notable is that investment in private equity and venture capital has become considerably more complicated and onerous as a result of the AIMFD. Furthermore, overall, compliance costs have risen across the board, especially for private equity and venture capital funds. Finally, for non-EU funds, access to the European market has become more difficult both due to higher costs and regulatory burdens.[1249]

The results of the survey illustrate that the objective of creating a single market for alternative investment funds has been achieved in a general sense. It also shows that fund managers are effectively operating and marketing their funds on a cross-border basis. Nevertheless, the survey does demonstrate that the process remains fairly complex, and the overall level of harmonization is still too low across member states to eradicate complicated and specific national rules in some member states. While it is important to strike a balance between permitting member states to find solutions that best fit the specificities of their respective countries, it appears the AIFMD would require a higher level of obligatory harmonization in its rules to create a relatively frictionless process of management, distribution, and marketing of alternative investment funds across European borders.

6.2.3.2.3.6 Market and Commercial Impact[1250]

The impact of the AIFMD on the operations of management companies and the funds they manage has been substantial in some areas, but less impactful in others. The view of respondents regarding the authorization process was mixed, as some felt the process did not enhance access to investors or improve their internal organizational structures. Respondents were more positive on the impact of the AIFMD on the reputation of authorized funds with investors, their access to a wider range of professional investors, the management of funds in other member states, the creation of a level playing field with regards to the unified set of rules

[1248] ibid 101.

[1249] ibid 102.

[1250] ibid 104–111.

within the European Union, and risk management processes. Marketing rules in the AIFMD which enable cross-border marketing of alternative investment funds were also seen in a more positive light. The AIFMD did not, however, cause the majority of respondents to change the range of alternative investment funds they manage or market. Almost a fifth of respondents had expanded the range of funds, while slightly less than a tenth of respondents had reduced or limited their range.[1251]

A large majority (75%) of respondents agreed in the survey that compliance costs have increased, although no clear consensus exists on which factors exactly have contributed to this rise in costs.[1252] For slightly less than a third of respondents, portfolio management costs have increased, while for a slight majority (53%), they have remained unchanged. Slightly over forty percent have seen a rise in distribution costs. The three areas where costs have clearly increased for a majority of respondents are fund administration costs (58%), disclosure to investors and risk management (62%), and especially reporting requirements to authorities (88%). Costs for depositary services appear to have increased as well, with 68% of depositaries and fund accountants surveyed indicating an increase.[1253] In general, this increase in costs is not passed on to investors, and has not had a significant decrease in the volume and variety of investment opportunities offered to investors. Over half of respondents (62%) have made no adjustments to the fees they charge their investors, while only 18% have increased investment management fees. Service offerings have not been reduced substantially as a result of the AIMFD. Offerings of alternative investment funds overall have been restricted according to 23% of respondents, with private equity and hedge fund offerings having been restricted the most. Leverage in funds has reportedly also been reduced.[1254]

From an investor standpoint, the AIFMD appears to have had almost no impact on the decision of whether to invest in alternative investment funds. An overwhelming majority (84%) of respondents representing institutional investors indicated that the AIFMD had no bearing on investment decisions regarding alternative investment funds. The same holds true for the decision of whether to invest in a European or EEA fund versus investing in a fund registered in a third country. A

[1251] Commission, 'Report on the Operation of the Alternative Investment Fund Managers Directive (AIFMD) – Directive 2011/61/EU' (n 1188).

[1252] ibid 105.

[1253] ibid 106.

[1254] ibid 108–109.

similar majority (83%) indicated that the AIFMD framework does not influence the decision.[1255] The effect of the AIFMD on retail investment is less clear, as 44% of respondents noted an increase in the level of retail investment, 22% a strong decrease, and 22% see no change. According to the results of the survey, the main impediments to retail investment are higher costs, local private placement regimes, and smaller management companies not being able to comply with all requirements.[1256]

6.2.3.2.3.7 Interplay with other Legislation[1257]

As the AIFMD is embedded in an extensive framework of existing regulation, the interplay of its provisions with other legislation is a central issue. Optimally, the AIFMD's regulatory effects would be distinct and complementary to other legislation, while creating a clearly defined boundary between each piece of legislation and each specific regulatory objective. Overlapping portions would need to either conform to a stated hierarchy, or be structured in such a way as to run parallel without contradictory or duplicated rules. The results of the survey show that this objective has only partially been achieved.

The interplay of the AIFMD and UCITS was praised, as the rules are similar and complementary. Fund managers that manage or market both types of funds benefit from similar rules and standardized procedures, and neither framework contains provisions which contradict the rules of the other framework.[1258] The PRIIPs KID[1259] is also seen as positive, as it permits increased disclosure to investors, but was also criticized as it contains duplicate information.[1260] The exemption of central securities depositaries from the scope of the AIFMD is also viewed as positive,

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[1255] ibid 110.

[1256] ibid 111.

[1257] ibid 111–113.

[1258] ibid 113.

[1259] As mentioned in chapter 4, the KID is the Key Information Document prescribed by the PRIIPs framework, which governs packaged retail and insurance-based investment products. The reader will recall from chapter 4 that UCITS funds do not have to publish a KID for now, but are still obligated to publish a KIID. Alternative investment funds may be required to publish a KID, however, if they make shares or units available to retail investors.

[1260] Commission, 'Report on the Operation of the Alternative Investment Fund Managers Directive (AIFMD) – Directive 2011/61/EU' (n 1188) 112, 113.

as the corresponding regulation is clearly separate from rules governing alternative investment funds and managers.[1261]

The interplay between the AIFMD and a number of other EU legislation or regulations were seen as negative. The first is the impact that MiFID II has on the AIFMD. The scope of MiFID II and the AIFMD is seen as unclear, as is the definition of a professional investor. The fact that alternative investment funds are classified as complex products by ESMA makes these funds less attractive for retail investors and leads to difficulties related to product governance rules. The AIFMD also appears to clash with EMIR[1262] and the SFTR[1263], as the regulation imposes operational and reporting requirements on alternative investment funds, and classification issues exist. Furthermore, prospectus requirements lead to a duplication of information disclosure for closed-ended, publicly offered funds. Finally, the disclosure requirements under the PRIIPs framework mandate measures based on past performance, which hinders the comparability of data.[1264]

A further core issue with the AIFMD and other EU legislation and regulations is friction related to reporting requirements.[1265] The main difficulty is the lack of coherence or consistency in data collection and aggregation. Data standards and technical formats, as well as various diverging reporting channels and data repositories are not consistent across the board and lead to an overall lack of clarity of reporting requirements. This leads to duplication and higher costs when reporting to authorities under the various overlapping frameworks.[1266] On the national level,

[1261] ibid 112. The regulation in question is Regulation (EU) 909/2014 of the European Parliament and of the Council of 23 July 2014 on improving securities settlement in the European Union and on central securities depositories and amending Directives 98/26/EC and 2014/65/EU and Regulation (EU) No 236/2012 [2014] OJ L257/1 (CSDR).

[1262] Regulation (EU) 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories [2012] OJ L201/1 (EMIR).

[1263] Regulation (EU) 2015/2365 of the European Parliament and of the Council of 25 November 2015 on transparency of securities financing transactions and of reuse and amending Regulation (EU) No 648/2012 [2015] OJ L337/1 (SFTR).

[1264] Commission, 'Report on the Operation of the Alternative Investment Fund Managers Directive (AIFMD) – Directive 2011/61/EU' (n 1188) 111–112.

[1265] And in some cases, the same issues related to disclosure requirements to investors. See ibid 112–113.

[1266] Commission, 'Report on the Operation of the Alternative Investment Fund Managers Directive (AIFMD) – Directive 2011/61/EU' (n 1188).

a lack of consistency, coherence, and convergence was noted by respondents. Duplication of rules exists here as well.[1267] This all leads to regulatory arbitrage, an increase in costs, and complexity. Finally, the sheer amount of regulation, which in part is overlapping, additionally creates barriers to entry.[1268]

6.2.3.2.4 Study on the Achievement of AIFMD Objectives.[1269]

Five overall questions must be answered to estimate whether the main objectives of the AIFMD have been achieved:

1. 'Has AIFMD provided an effective legal framework for monitoring and managing the risks associated with the activities of AIFMs?'[1270]
2. 'Are the macro- and micro-prudential risks adequately addressed by the provisions of AIFMD?'[1271]
3. 'Is the information provided to the investors and employees of non-listed companies sufficient to safeguard their interests?'[1272]
4. 'Is the AIFMD passport working efficiently?'[1273]
5. Finally, the assessment of the value added by AIFMD to the EU in the review answers the following question: 'What changes has the AIFM and AIF market structure undergone since the adoption of AIFMD?'[1274]

The first two objectives, which seek to ensure risks are addressed, monitored, and managed have broadly been achieved, setting aside various weaknesses that are listed below in greater detail.[1275] The results on whether the rules on information that must be provided when non-listed companies are invested in are sufficient to safeguard interests of investors and employees are inconclusive, partly because these measures have rarely needed to be applied.[1276] These provisions, however, exhibit a number of shortcomings, which are discussed further below. The answer

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[1267] ibid.

[1268] ibid.

[1269] ibid.

[1270] ibid 263.

[1271] ibid.

[1272] ibid.

[1273] ibid.

[1274] ibid.

[1275] ibid 264.

[1276] ibid.

to the fourth question, which relates to the functioning of the EU management and marketing passports is also not wholly positive. The management passport is fairly functional, but the marketing passport is impacted in a substantial way by divergent national requirements.[1277] The final question on whether market structures have changed since the introduction of the AIFMD also leads to a mixed conclusion. The AIFMD has had little to no impact on net assets of alternative investment funds, has not had any substantial influence on the attractiveness of alternative investment funds, and has not had a positive effect on investments that could benefit developing countries.[1278] Competition between managers has only slightly increased.[1279] Mixed responses were also given on 'operational set-up and processes',[1280] and on whether the AIFMD has expanded product offerings due to its implementation.[1281] The AIFMD has, however, lead to the introduction of several national rulesets that govern unlisted and unauthorized types of alternative investment funds.[1282] Finally, national law that gives access to alternative investment funds for retail investors has been implemented extensively and can be seen as very important, but responses were mixed on whether retail clients' investment activity has been impacted positively or negatively.[1283]

Overall, the AIFMD achieves its overall objective of addressing risks emanating from alternative investment funds, and has been reasonably successful in introducing a passporting system, although the management passport has been more successful than the marketing passport. The AIFMD has had an impact on market structures, but has not led to a complete change when compared to the situation prior to its introduction. This can be seen as positive in the sense that the European market has not been thrown into turmoil, but one would have hoped the AIFMD might have had a more substantial impact. Finally, the rules on investment in non-listed companies have been least successful and, as the sections below demonstrate, might need to be reevaluated.

[1277] ibid.

[1278] ibid 264–265.

[1279] ibid 265.

[1280] ibid.

[1281] ibid.

[1282] ibid.

[1283] ibid 264–265.

The following sections will examine in greater detail which areas still exhibit weaknesses with regards to their effectiveness, efficiency, coherence, EU added value, and relevance.

6.2.3.2.4.1 Effectiveness

The report identified several areas where the AIFMD is not effective and exhibits weaknesses. Certain member states impose requirements on alternative investment funds that are below the threshold and not subject to its rules, which makes it difficult to assess how well the threshold provisions are implemented and how effective they are.[1284] The information that is supplied to competent authorities is seen as incomplete by authorities. At the same time, funds and managers transmit large data volumes to authorities which can also include irrelevant or redundant information, encumbering the processing and analysis thereof.[1285] Furthermore, as the valuation rules only allow external or internal valuers, this restriction on the choices is overly limiting and may have had an impact on the effectiveness of valuation rules.[1286] Depositary rules of the AIFMD also appear to be interpreted in different ways in various member states, which impacts their effectiveness.[1287] The marketing passport, which allows cross-border marketing of funds, is seen as largely successful, but various member states appear to diverge from the original intent of the directive by applying the rules in an inconsistent fashion and varying in their requirements.[1288]

The rules on investing in private, non-listed companies, which consist mainly of the provisions guarding against 'asset stripping' in private equity deals, were widely criticized and their effectiveness severely questioned. Authorities feel that the information they are provided is not relevant, and they are unsure how to utilize this information. Additionally, the information requirements are seen as burdensome. Furthermore, the precise definition of a non-listed company is still seen as unclear, as certain investment vehicles might fall under this definition in addition to the more traditional types of private companies.[1289]

[1284] ibid 265.

[1285] ibid.

[1286] ibid.

[1287] ibid 266.

[1288] ibid.

[1289] ibid.

6.2.3.2.4.2 Efficiency

Particular weaknesses that persist are seen in the reporting requirements, the appointment of external valuers, separating risk and portfolio management, and asset segregation rules. Moreover, the rules on investments in non-listed companies and the marketing passport are mentioned again, as they are still seen as neither sufficiently effective, nor efficient.[1290]

Reporting requirements, as has been previously mentioned, are not well coordinated with other rules from related EU law, and therefore the same information must be supplied multiple times under various requirements. Some of the information that is required is also seen as unnecessary, and some is insufficient.[1291] This is a fundamental inefficiency that creates redundancies and unnecessary costs, which would need to be addressed in the AIFMD reform process.

External valuers have decreased in number due to the AIFMD in some member states, which creates inefficiencies and higher costs to funds and managers.[1292] Smaller funds and managers struggle to cope with the costs associated with separating risk and portfolio management in both hierarchical and functional respects. Private equity and real estate funds also question if this is necessary for their investment strategies.[1293] The AIFMD has provisions that are too coarse and inadequately detailed, as it does not differentiate according to size of strategy in this regard. The rules on asset segregation, where the depositary must keep accounts strictly separate from its own and from those of other funds, are seen as complicated, costly, and operationally demanding to implement consistently.[1294]

The frequency of disclosures that the rules on investment in private, non-listed companies require are also seen as too high, which increases costs and the administrative burden. This is compounded by the fact that many venture capital and private equity firms and funds in the European Union are comparably small and, therefore, struggle disproportionately to comply with these rules.[1295] As is the case with the effectiveness of the marketing passport, its efficiency has also been called into question. The marketing passport is perceived as being inefficient due to the

[1290] ibid 266–267.

[1291] ibid 266.

[1292] ibid.

[1293] ibid.

[1294] ibid 267.

[1295] ibid.

fact that various member states vary widely in the specific requirements they impose and the non-transparent nature of all the specific national provisions on marketing.[1296] It appears that the precision of the provisions of the marketing passport has to be improved to achieve a level of harmonization that permits efficient cross-border marketing under the passporting system.

6.2.3.2.4.3 Coherence

AIFMD remuneration rules, disclosure to investors rules, and rules on investments in non-listed companies are seen as lacking coherence with other EU legislation. These three categories are poorly optimized and not embedded in the wider European framework, which leads to an inconsistent overall framework and reduces legal certainty. Additionally, as various calculation methodologies are permitted and utilized to calculate fund leverage, these provisions lack coherence and are inconsistent with other legislation. Consequently, these rules would need to be harmonized.[1297]

6.2.3.2.4.4 Relevance

Only one one weakness with regards to relevance has emerged from the report, which again is related to provisions on investments in non-listed companies. While the report describes these provisions as relevant, it recognizes they might need to be revalued in the light of the CMU's objective to promote startups, non-listed companies, and innovation financing.[1298]

6.2.3.2.4.5 EU Added Value

Generally, the four aspects above, effectiveness, efficiency, coherence, and relevance, convey where value is added and where weaknesses persist. Nonetheless, four additional aspects are addressed under this heading. Reporting requirements, which are extensive, are connected to substantial cost increases, which might necessitate their streamlining.[1299] As has been mentioned, asset segregation requirements should also be amended and simplified to avoid unnecessary administrative burdens and costs.[1300] The depositary rules regarding the appointment of deposi-

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[1296] ibid.

[1297] ibid.

[1298] ibid.

[1299] ibid 268.

[1300] ibid.

taries could also be slightly adjusted to enhance the overall framework.[1301] Finally, as non-EU funds and managers can market shares or units in member states that allow this under national law, and since at the time of writing, the marketing passport has not been extended to third countries, these national rules are seen as useful and regarded as a mechanism that adds value.[1302]

6.2.3.2.4.6 Summary

The five main objectives of the AIFMD have generally been achieved, but several areas require optimization, as the sections above emphasize. How much information is provided, and in what form it is provided must be adjusted, so duplication as well as increased costs and bureaucracy for all parties involved can be avoided. Funds and managers must be able to provide the necessary data, so authorities can process this information better. Furthermore, the passporting system for marketing needs to be amended to prevent various fragmented national regimes and requirements from impeding cross-border marketing. Finally, the rules on investing in non-listed companies need to be reexamined thoroughly, as the results of the report indicate that they exhibit weaknesses with regards to their effectiveness, efficiency, coherence, and relevance, all of which clearly show that these mechanisms need to be restructured in an elemental way.

6.3 Current Developments of the UCITS and AIFMD Frameworks

As a follow-up to the report on the AIFMD's operation,[1303] the commission published its own report, which reiterates the main points of the initial report.[1304] The

[1301] ibid. This would mainly be related to the exception under article 61(5) of the AIFMD, where some member states can permit the appointment of credit insitutions in other member states as depositaries. This point shows that the depositary rules could also benefit from some adjustments that would slightly extend the type and number of eligible institutions.

[1302] ibid. This national law is referred to as a National Private Placement Regime, or NPPR. This is governed by articles 36 and 42 of the AIFMD, which has been discussed in chapter 5.

[1303] Commission, 'Report on the Operation of the Alternative Investment Fund Managers Directive (AIFMD) – Directive 2011/61/EU' (n 1188).

[1304] Commission, 'Report from the Commission to the European Parliament and the Council Assessing the Application and the Scope of Directive 2011/61/EU of the

Commission estimated that the passporting system is working relatively well, though it did concede that certain ‘gold-plating’ of the rules in certain member states somewhat hampers its efficacy.[1305] The Commission also saw the implementation of rules on disclosure to investors as largely successful, despite the increase in costs the industry must bear as a consequence of their introduction.[1306] The Commission highlighted some of the provisions related to monitoring and assessing systemic risk, but did not come to a final conclusion on how effective these measures are overall.[1307] Finally, the Commission mentioned the provisions on asset stripping of the AIFMD, which, as the reader will recall, were criticized in the report on the AIFMD’s operation. The Commission estimated these rules to be not overly burdensome, although it did concede that some private equity and venture capital managers are still faced with barriers that impede cross-border marketing activities.[1308] The Commission’s report and its new activity regarding the review of the AIFMD point to the fact that the directive will likely be amended to remedy some or all of the deficiencies identified by both reports sometime later this year.[1309]

ESMA has since responded to the Commission’s report[1310] with its own proposed amendments to the AIFMD. Reflecting the coordinating role ESMA plays in the context of the AIFMD, the proposed changes have a strong focus on reporting and data aggregation, cross-border coordination between authorities, and harmoniza-

European Parliament and of the Council on Alternative Investment Fund Managers’ (n 352) 5ff.

1305 ibid 5.

1306 ibid 7.

1307 ibid 7–9.

1308 ibid 9.

1309 Commission, ‘Commission Staff Working Document Assessing the Application and the Scope of Directive 2011/61/EU of the European Parliament and of the Council on Alternative Investment Fund Managers’ (n 1188) 50. See also European Securities and Markets Authority, ‘Ref: Review of the Alternative Investment Fund Managers Directive’ (Letter by ESMA to the Commission, ESMA34-32-550, 2020) 1 <www.esma.europa.eu/sites/default/files/library/esma34-32-551_esma_letter_on_aifmd_review.pdf> accessed 31 August 2020.

1310 Commission, ‘Report from the Commission to the European Parliament and the Council Assessing the Application and the Scope of Directive 2011/61/EU of the European Parliament and of the Council on Alternative Investment Fund Managers’ (n 352).

tion between the AIFMD and other regimes.[1311] The main proposals related to harmonization were: to increase general harmonization of the UCITS and AIFMD regimes, specifically to adjust the reporting requirements for UCITS funds and other supervision as well as data collection processes, and to reexamine how MiFID II rules on additional services, ie activities not related to collective asset management, are applied to UCITS and AIFMD funds.[1312] ESMA also proposed changes to depositary and valuation rules, including the introduction of a depositary passport and the reduction of the liability of external valuers to cases of gross negligence.[1313] Furthermore, ESMA recommended adjustments to the calculation of leverage methods permitted by the AIFMD, the introduction of additional liquidity management tools, and clarification on the rules for sub-threshold alternative investment funds.[1314] Finally, ESMA also recommended to introduce a new category of investor, the 'semi-professional' investor, a clarification on how the proportionality principle is to be applied in the context of remuneration rules of the AIFMD,[1315] and a number of technical adjustments on how information and data are to be reported and processed under the AIFMD.[1316]

These recent developments reveal the direction that the AIFMD is likely to take in its next, amended iteration. The existing frameworks will be adjusted according to some of the results of the review of the directive and will likely incorporate the inputs that ESMA has supplied. It is also probable that the amendment of the AIFMD will also be used as an opportunity to amend the UCITS framework, possibly with the same directive and/or regulation. This would reflect the ongoing tendency to gradually align the UCITS and AIFMD frameworks to create a level playing field for funds across the board. What the most recent documents do not reflect, however, is the fact that a complete, structural overhaul may be in order, which would simplify and revise the fundamental principles of European fund regulation. While political barriers and the more general frictions associated with complete regulatory reconstruction render this option much less attractive and less feasible than the current path of gradual amendment, eventually the total convergence or rebuilding of the framework will need to be evaluated. The section below

[1311] European Securities and Markets Authority, 'Ref: Review of the Alternative Investment Fund Managers Directive' (n 1309) 3–5, 15–26.

[1312] ibid 3–5, 9–10.

[1313] ibid 11, 12, 14.

[1314] ibid 8–9, 12.

[1315] ibid 10–12.

[1316] These adjustments are contained in Annex II of ESMA's letter. See ibid 15ff.

on strategy-based regulation offers a template for a more apt structure of European fund regulation. This new structure could be implemented through a complete restructuring, or, eventually, through gradual amendment.[1317]

6.3.1 Cross-Border Fund Distribution Proposal

A second development has run in parallel to the impact assessment. This development has its roots in the plans to accelerate the establishment of the Capital Markets Union by 2019. The Commission proposed a new directive and an accompanying regulation on 12 March 2018, which would amend both the AIFMD and the UCITS directives. It seeks to create a level playing field for collective investment funds, regardless of their specific type and whether the composition of their portfolio favors traditional or alternative investments.[1318] Accordingly, the distribution rules for funds under both the UCITS and AIFMD directive are to be amended by this new directive. The directive's primary objective is the reduction of barriers to the cross-border distribution of investment funds.[1319]

The result of this proposal as of writing has been the adoption by the Commission, which corresponds to its proposal on 12 March 2018, the publication of an opinion by the European Economic and Social Committee, and finally, no fewer than eight separate deliberations in the European Council, the most recent of these having

[1317] See section 6.4.5.

[1318] See Commission, 'Proposal for a Directive of the European Parliament and of the Council Amending Directive 2009/65/EC of the European Parliament and of the Council and Directive 2011/61/EU of the European Parliament and of the Council with Regard to Cross-Border Distribution of Collective Investment Funds' COM (2018) 092 final. See also Commission, 'Proposal for a Regulation of the European Parliament and of the Council on Facilitating Cross-Border Distribution of Collective Investment Funds and Amending Regulations (EU) No 345/2013 and (EU) No 346/2013' (2018) COM 110 final.

[1319] Commission, 'Proposal for a Directive of the European Parliament and of the Council Amending Directive 2009/65/EC of the European Parliament and of the Council and Directive 2011/61/EU of the European Parliament and of the Council with Regard to Cross-Border Distribut' (n 414) 2. See also Commission, 'Proposal for a Regulation of the European Parliament and of the Council on Facilitating Cross-Border Distribution of Collective Investment Funds and Amending Regulations (EU) No 345/2013 and (EU) No 346/2013' (n 1318) 1.

taken place in February 2019.[1320] The European Parliament subsequently adopted a number of proposals related to the establishment of the Capital Markets Union on 18 April 2019, among them the Commission's proposal on cross-border distribution of collective investment funds.[1321] These processes meant that the adoption of the proposal was imminent, and the directive would likely come into force sometime in 2019.[1322] Both proposals ultimately were adopted on 20 June 2019 as a directive and a regulation.[1323] The directive amends the AIFMD and UCITS directives, whereas the regulation amends the EuVECA regulation. The regulation has been applicable since 1 August 2019, excepting a small number of provisions, which will apply from 2 August 2021 onward.[1324] The directive on the other hand, entered into force on 1 August 2019, but member states have until 2 August 2021 to publish national legislation implementing the directive.[1325]

These two pieces of legislation aim to facilitate the cross-border distribution of both alternative investments and UCITS funds. They also address some of the weaknesses present in the AIFMD, where the distinction between marketing and pre-marketing was not clearly defined and therefore interpreted differently in various member states. The directive and regulation also point to the fact that the

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[1320] See Publications Office of the European Union, 'Procedure 2018/0041/COD' (2020) <https://eur-lex.europa.eu/legal-content/EN/HIS/?uri=COM:2018:0092:FIN> accessed 31 August 2020.

[1321] Commission, 'Capital Markets Union: European Parliament Backs Key Measures to Boost Jobs and Growth' (Press release, Commission, April 2019) <https://ec.europa.eu/commission/presscorner/detail/en/IP_19_2130> accessed 23 August 2020.

[1322] The reader can check the current status of all amendments to the AIFMD under the following address: Publications Office of the European Union, 'Consolidated Text: Directive 2011/61/EU' (2020) <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:02011L0061-20190113> accessed 31 August 2020. Should the site have been changed or moved, then generally the European Union law website (EUR Lex, currently <eur-lex.europa.eu>) provides an overview of amendments for each directive under the 'document information' section.

[1323] Directive (EU) 2019/1160 of the European Parliament and of the Council of 20 June 2019 amending Directives 2009/65/EC and 2011/61/EU with regard to cross-border distribution of collective investment undertakings [2019] OJ L188/106; Regulation (EU) 2019/1156 of the European Parliament and of the Council of 20 June 2019 on facilitating cross-border distribution of collective investment undertakings and amending Regulations (EU) No 345/2013, (EU) No 346/2013 and (EU) No 1286/2014 [2019] OJ L188/55.

[1324] Regulation 2019/1156, art 19.

[1325] Directive 2019/1160, art 3.

current approach to developing the collective investment framework in the European Union appears to be the improvement of the existing framework through revision and amendment, rather than a complete overhaul and redesign of the fundamental structures currently in place. This approach enhances legal certainty and also allows the industry and authorities to implement the existing framework fully without disrupting the *courant normal,* or daily business. Gradual amendments to the existing framework also allow adjustments to changes to be implemented incrementally, permitting for specificities of individual member states and the differences in general market conditions across the European Union. The disadvantage to the current approach is that any fundamental weaknesses and structural deficiencies in the basic design of the existing frameworks are not amended. In addition, partial revisions and amendments can lead to fragmented and sometimes even contradictory frameworks divided into an ever-growing number of individual documents.[1326] Furthermore, each additional amendment in the form of a directive or regulation also leads to increased complexity and necessitates the constant monitoring of regulatory processes by entities subject to the particular legal acts in question to ensure compliance. A comprehensive overhaul, on the other hand, would enable simplification, streamlining, and the establishment of a fundamentally systematic approach to all aspects of a particular framework. The complete overhaul is, however, politically more difficult to implement. A revolutionary regulatory schism of this sort will also usually lead to large disruptions, increased compliance costs during the implementation process, and typically a transition period to fully integrate the new ruleset into the larger legal system. In summary, the approach to amend and revise rather than restructure is appropriate, given that many aspects of the regulation of fund management in the EU are still fairly recent, and a complete overhaul would likely disrupt the ongoing implementation and calibration of the existing rules.

[1326] This problem is somewhat mitigated by the fact that the EU will publish consolidated versions of legislation, where each change is visibly marked in the document. This does not change the fact that additional implementing regulation causes a fragmented framework where it becomes increasingly difficult to gain an overarching understanding of the system.

6.3.2 The Single Market for Alternative Investment Funds and Brexit

The alternative investment fund market is likely to experience a departure from a single European alternative investment framework when the UK leaves the European Union, and definitive rules on how it will regulate its fund management industry have been decided on. This development will likely have an effect both on the European investment fund market and on the UK's approach to distributing funds within the EU. While at the time of writing no fixed path for the future of the UK fund management market has been decided on, a preliminary discussion of possible options offers clues to possible consequences for Europe that any of the proposed solutions may have.

6.3.2.1 The UK as a Third Country: Seeking Equivalence

The UK is currently debating whether or not to create a national ruleset that is equivalent to the UCITS and the AIFMD framework. If the ruleset is designed to be similar or almost identical to the EU rules, then this, should equivalence be granted, would allow the continuation of fund distribution under the familiar frameworks, albeit with the UK as a third country rather than as a member state. This move would ultimately have a limited effect on the development of the European framework, unless the UK would diverge at a later date and attempt to 'gold-plate' its industry through specific rules only applicable to UK funds.[1327]

[1327] There is precedent for such a strategy, as Switzerland, which, in this context, is in a comparable position, where its financial industry has a strong interest in maintaining access to European markets and investors, but concurrently deploys various tactics to cultivate a distinct quality standard or 'Swissness'-branding. While in some areas Switzerland has been successful, it is a perilous and delicate balance that a third country must maintain to remain simultaneously equivalent but distinct. See, for example Ralph Atkins and Laura Noonan, 'Swiss Bankers' Hopes for EU Access Dashed by Brexit' *Financial Times* (London, 2 April 2018) <www.ft.com/content/ed11507c-334e-11e8-ac48-10c6fdc22f03> accessed 23 August 2020. See also William Wright, 'The Potential Impact of Brexit on European Capital Markets' (survey of market participants, New Financial, 2016) <https://newfinancial.org/wp-content/uploads/2016/04/The-potential-impact-of-Brexit-on-European-capital-markets-New-Financial-April-2016-v11.pdf> accessed 31 August 2020.

6.3.2.2 A British Alternative to UCITS and the AIFMD

A second approach the UK could take would be to create a distinct and fundamentally different framework for retail and other funds in the UK. As the reader will recall from chapter 2, the UK is the largest hedge fund domicile in the EU,[1328] but can only boast of the third-largest European UCITS fund industry.[1329] Consequently, a solution would have to be found for both the alternative investment industry and for UCITS funds.

One suggestion has been to create a new British brand for retail funds, which would take advantage of opportunities for simplification of the UCITS framework and other forms of regulatory arbitrage[1330] to distinguish itself from EU retail funds.[1331] As UCITS funds are a recognized brand and enjoy great popularity in Asia and even in the Americas, this approach would depend on successfully establishing a competitive British alternative that could reach the same level of brand recognition while surviving and gaining market share with the same potential investors in UCITS funds.[1332] How specifically this would be achieved is currently

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[1328] Sophia Grene and Chris Newlands, 'On the Cusp of a New Gold Standard for Regulated Funds' *Financial Times* (London, 27 July 2014) <www.ft.com/content/64e6fb1c-1286-11e4-a6d4-00144feabdc0> accessed 31 August 2020. It is interesting to note that although Luxembourg had been on course to become the main European hedge fund manager hub, the UK ultimately assumed this role in 2014. Simultaneously, Dublin is a European hub for alternative investment funds, many of which are managed from the UK. However, it is interesting to note that since Brexit, Luxembourg is again jostling for position and likely on course to becoming the largest post-Brexit centre for alternative investment funds governed by the AIFMD. See Mariia Domina Repiquet, 'Report from Luxembourg: New Alternative Investment Funds Regulation in Luxembourg–Basis for an Attractive Domicile in the Post-Brexit Era?' (2018) 15 European Company Law 25.

[1329] The largest is Luxembourg, followed by Ireland with the United Kingdom in third place. See Statista, 'Net Assets of UCITS Industry in Western Europe as of the 3rd Quarter 2019, by Country' (2020) <www.statista.com/statistics/578512/net-assets-by-country-ucits-western-europe/> accessed 22 August 2020.

[1330] Siobhan Riding, 'EU Fund Groups Call for Exemption from Maligned Performance Forecasts' *Financial Times* (London, 5 August 2020) <www.ft.com/content/ea62d049-c364-4df9-ba22-3ded1d8cd248> accessed 24 August 2020.

[1331] Siobhan Riding, 'Keith Skeoch Backs New UK Fund Regime Post-Brexit' *Financial Times* (London, 26 July 2020) <www.ft.com/content/fdb0e82c-7251-4fab-8bc8-549b807a864f> accessed 30 August 2020.

[1332] See Riding, 'What Does the Post-Brexit Future Hold for City of London Fund Managers?' (n 781).

unclear. A second option that has been presented is to allow British retail funds to gain access to European markets by distributing them as alternative investment funds governed by the AIFMD. While possible, this would essentially mean that UK retail funds would have to comply with the comparably onerous and costly AIFMD provisions and would be distributed under the rules for non-EU funds managed by EU or non-EU managers, depending on where the manager would be located. Alternatively, UK-based managers could distribute funds established in EU member states, in which case the rules for non-EU managers managing EU funds would have to be followed. In both cases, the regulatory burden would be higher for UK-based funds and/or managers in cases where they would need to comply with the AIFMD, and they could not use the advantages of the UCITS brand to market their funds, but would be classified as alternative investment funds, which are perceived to be much riskier. A further problem that would be added to this is that a fund governed by the AIFMD could only be marketed and sold to professional investors, unless sale to retail investors would be permitted by the specific member state. As a consequence, UK retail managers would be severely restricted in the potential investors that they could market and sell their funds to.

The British hedge fund industry would likewise either be confronted with a radical change, or could continue relatively undisturbed if equivalency is achieved and granted by the EU. If UK legislation were to stay sufficiently closely aligned with EU collective investment scheme legislation, then UK hedge funds and their managers could incorporate and/or base their operations in the UK, but would, in the same fashion as described directly above, have to follow the rules on third country funds and managers accessing the EU market through the passporting system or through permission in specific member states. If this were to occur, the UK would be in the same position as a group of six jurisdictions for whom in the near future equivalency might eventually be granted, which consists of: Guernsey, Hong Kong, Jersey, Singapore, Switzerland, and the United States of America.[1333]

[1333] European Securities and Markets Authority, 'ESMA Advises on Extension of AIFMD Passport to Non-EU Jurisdictions' (ESMA Press Release, 30 July 2015) <www.esma.europa.eu/sites/default/files/library/2015/11/2015-1238_esma_advises_on_extension_of_aifmd_passport_to_non-eu_jurisdictions_0.pdf> accessed 31 August 2020. See also Lizzie Meager, 'Brexit Delay Vexes AIFMD Third Countries' [2017] International Financial Law Review <www.iflr.com/article/b1lv03y096z4l0/brexit-delay-vexes-aifmd-third-countries> accessed 14 August 2020.This process has stalled as a consequence of the ongoing Brexit negotiations. As the UK would have a good case

If equivalency is not granted, the UK would need to forge its own path and create its own national law on alternative investment funds. While select jurisdictions, specifically Luxembourg and Ireland, have decided to create provisions in the case of a Brexit where no equivalency exists, UK fund managers und funds could find it difficult to access the EU market.[1334] The options in this case would be similar for alternative investment funds as those for UCITS funds, where a new category of UK alternative investment fund (or hedge fund) would need to be created that would compete for market share with (continental) European hedge funds governed by the AIFMD.[1335] While in this case creating brand recognition would be a lesser hurdle for UK alternative investment funds,[1336] UK funds would likely have to rely mainly on global distribution channels outside of Europe to make up for the difficulties in accessing EU markets.[1337]

6.3.2.3 Conclusion: A Tale of Two Jurisdictions

The effects of Brexit on the single market and rulebook for alternative investment funds remains to be seen. At this point the sheer amount of regulatory uncertainty complicates the matter substantially. Brexit will likely have one of two effects: Either European regulation will continue its development in the current direction and the UK is granted equivalency, or a regulatory 'race to the bottom' will occur due to the UK arbitraging its newfound freedom to reshape its fund regulation.[1338]

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for equivalency, the granting of such equivalency for other jurisdictions has been postponed until further notice. See Atkins and Noonan (n 1327).

[1334] See Siobhan Riding, 'How Will the EU Reshape Fund Managers' Regulations after Brexit?' *Financial Times* (London, 16 February 2020) <www.ft.com/content/1f034e4a-4e33-4ba9-bcfc-dedb44ed6703> accessed 20 August 2020.

[1335] The Editorial Board, 'UK Politicians Must Set out the Future for Finance' *Financial Times* (London, 18 November 2019) <www.ft.com/content/db4a0948-09f7-11ea-b2d6-9bf4d1957a67> accessed 28 August 2020.

[1336] Grene and Newlands (n 1328).While the AIFMD can be characterized as the 'gold standard', it is still less prominent than UCITS, possibly in part due to the fact that the AIFMD has only been effectively applicable since 2013 (with the deadline on authorization in the UK ending in 2014), whereas the UCITS framework is almost 35 years old.

[1337] Riding, 'What Does the Post-Brexit Future Hold for City of London Fund Managers?' (n 781).

[1338] First steps in this direction have already been initiated, where the UK will diverge from the European PRIIPs regulation. See HM Treasury, 'Amendments to the Packaged Retail Investment and Insurance-Based Products Regulation: July Update' (July 2020)

The second development could have a profound impact on the structure of the EU fund management framework; while it could have the positive effect of catalyzing the streamlining and simplification of the current regime,[1339] it also could impact the current structure in a very negative fashion by leading to the jettisoning of safeguards against systemic risk and investor protection provisions in the name of efficiency and competitiveness. The result of Brexit does not have to necessarily become a zero-sum game, however. If both the EU and the UK strike a balance between the regulatory autonomy of third countries and the granting of equivalence while preventing the erosion of regulation aimed at stabilizing markets and protecting investors, it would be possible to continue to have a pan-European fund management market with the UK as a third country with its own distinct 'flavor' of AIFMD-compliant alternative investment funds. This estimate excludes any analysis of underlying political factors and negotiation strategies that are inherent in the process of the UK leaving the European Union. While a political prognosis is beyond the scope of this thesis, the early tendencies of the UK to move toward an independent legal framework and the actions of lobbyists hoping to simplify existing rules described above point to a divergence and the subsequent coexistence of two competing frameworks in Europe, rather than an eventual reunion of the two systems.

6.4 Policy Suggestions

In formulating policy suggestions in the field of financial markets law, there is a constant balance that must be struck between restricting those to be regulated in their freedom and mitigating risks through the creation of rules. In addition, the policy suggestions need to be implementable and practical, rather than idealized and unrealistic fiction.

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2 <https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/905542/Policy_Statement_-_PRIIPs__July_2020__HMT_Template.pdf> accessed 31 August 2020. See also Riding, 'EU Fund Groups Call for Exemption from Maligned Performance Forecasts' (n 1330).

[1339] This is, to an extent, already taking place, as industry representatives have begun to lobby for certain exemptions and simplifications (in this case to ensure that UCITS funds stay exempt past 2022 for specific disclosure rules under the PRIIPs framework, which are seen as burdensome and potentially confusing). See Riding, 'EU Fund Groups Call for Exemption from Maligned Performance Forecasts' (n 1330).

While asset management has seen increased regulatory efforts in the European Union in recent years, the provisions directly related to systemic risk are limited, especially when compared to banking regulation. By direct comparison, banking law has a number of prime methods that attempt to limit or mitigate systemic risk arising from banking activities. The three principal methods relevant to the following sections are: capital requirements, insurance and guarantee schemes, and resolution plans. Banking regulation also provides a number of examples that might serve as blueprints if adapted and adjusted to the circumstances in asset management.

Capital requirements are an intuitive method for ensuring the stability of banks and by extension, the financial system. Banks are mandated to hold capital in the form of liquid assets that should correspond to the risk that stems from their activities. This allows a bank to remain solvent should it be confronted with unexpected losses resulting from said activities.

Insurance and guarantee schemes rely on the collectivization of losses through the establishment of a pool of capital which each participating institution pays in to. This pool can be drawn upon if one or more institutions are confronted with losses of a magnitude that endangers them or the financial system as a whole. This principle functions the same way as any insurance scheme; the statistical distribution of events ensures that the payout corresponds to a statistically rare event and thus regular (smaller) contributions to the pool can sustain such outliers. Insurance schemes in the context of banking regulation exist in two main forms. The first form insures a bank against losses to the institution itself, while the second form protects the depositors from losing their deposits should their bank run into financial trouble. The core problem in such a system is similar to any generic insurance scheme. The party that ultimately benefits from the scheme is the party that actually triggers a payout event, which creates both a moral hazard and principal agent problem. Due to the fact that a party is insured, it is incentivized to take on the maximum amount of risk it can tolerate, as long as it is certain that the realization of an adverse event is covered by the insurance scheme. Hence, the insurer would need to monitor, and, if possible, restrict such behavior in order for the scheme to work as intended, lest the contributors to the insurance scheme take on risks that cause a shift of the probability distribution away from the insurer's initial assumptions into unsustainable territory.

Finally, bank recovery and resolution is the third concept in banking regulation to be examined. While capital requirements and insurance schemes can be seen as precautionary measures aimed at staving off the realization of systemic risk ex-

ante, bank recovery and resolution plans and measures represent a final method of limiting and mitigating systemic risk. In cases where a bank actually becomes insolvent or illiquid, or is in the process of becoming so, recovery and resolution measures are an ex-post measure that is principally aimed at limiting the damage and potential contagion that has already been realized.

In order to adapt these three core tenets of banking regulation to the regulation of investment funds, their suitability needs to be examined. Currently, the AIFMD and UCITS frameworks only contain very basic forms of these methods. Both the AIFMD and UCITS, for instance, contain provisions related to initial capital requirements, but these are comparably low and presumably intended to facilitate the winding up of a fund in case of its failure, rather than ensuring its continued stability. The UCITS framework does contain rules prescribing portfolio composition for a fund, which de facto corresponds to a minimal standard with regards to liquidity of invested assets. The AIFMD, on the other hand, does not contain such provisions and only mandates leverage limits which are self-imposed and reviewed by the supervisor. An insurance or guarantee scheme of either form currently does not exist in either framework, nor are there discreet rules for recovering or resolving a fund that cannot continue to engage its normal business activities.

The section below, therefore, presents concepts for implementing such measures in the context of investment funds. As mentioned above, these must be practical and implementable. They must also be designed in such a way as not to restrict the core activities of investment funds in an excessive manner.

6.4.1 Capital Requirements

6.4.1.1 Direct Regulation and Initial Capital

As has been mentioned, the AIFMD and UCITS frameworks require initial capital and additional capital, but these amounts are not sufficiently high to mitigate systemic risk and address liquidity risk concerns. Capital requirements in the context of investment funds are difficult to implement, as the industry will usually deploy all the capital in the fund (minus expenses for operations and similar non-trading activities) in order to generate returns for investors. In theory, an investment fund could be required to hold capital or liquid assets in proportion to the total AuM. It would also be possible to require funds to hold capital in relation to certain types of investments, much akin to risk-weighted assets under the Basel III capital requirements. Capital requirements are at odds with investment fund regulation, primarily because they are a solution to a problem that has emerged in the banking

industry and is therefore a poor fit for fund regulation. Where capital requirements could be imposed, it would be far less complicated to mandate portfolio composition rules which define specifically which liquid assets must be held and what proportion they must have compared to the total AuM of a fund. Portfolio composition rules could also prescribe that assets of sufficient liquidity would need to be held where funds are invested in other risky assets classes. As such, the direct and most efficient solution would be to implement portfolio composition rules rather than implement capital requirements in an analogy to banking regulation. Finally, if such composition rules were to be imposed, this would have to be balanced with the competitiveness of the European fund management industry versus funds and managers established in jurisdictions where no such rules exist. As the UCITS framework has demonstrated and has been repeatedly mentioned, an established brand that represents prudent risk management and quality can offset certain regulatory burdens and resultant costs which will in large part be charged to the investor and reduce returns after fees. As portfolio composition rules will reduce returns due to a restriction in strategies and de facto prohibiting certain illiquid, risky, but potentially high-return strategies, it would be difficult for alternative investment funds in the EU to compete with global offerings on the merits of their funds' performance alone. A safe-AIF brand of sorts might not be able to compensate for this, especially as the EU alternative investment fund brand is younger and less widely recognized globally.

6.4.1.2 Indirect Regulation & Capital Requirements for Counterparties

A further possibility to reduce contagion through investment funds and mitigate counterparty risk could be through higher capital requirements for counterparties. For instance, lending activity to hedge funds with a certain strategy would have the requirement for the lender to put aside own capital reserves corresponding to an enhanced level of risk associated with such loans. This indirect regulation would make lending to risky investment funds costlier. In addition, through mitigating counterparty default risk, the spread of a potential failure or default of an investment fund could be reduced or avoided altogether, thus reducing the probability of triggering a systemic crisis.[1340]

[1340] Wulf A Kaal, 'Hedge Fund Regulation via Basel Iii' (2011) 44 Vanderbilt Journal of Transnational Law 389.

While this approach is promising and would likely be effective in reducing certain forms of counterparty credit risk those lending to investment funds, it is doubtful that this constitutes a complete solution to the systemic component of alternative investment fund's activities. While leverage is a core issue, many European investment funds are not particularly highly leveraged.[1341] US and offshore based funds are comparably more highly leveraged, but relative to peak leverage ratios of certain institutions and to LTCM right before its failure, not excessively so.[1342] These indirect regulation measures would, hence, need to be flanked by a comprehensive regulatory approach to mitigate systemic risk.

6.4.2 Insurance Schemes

6.4.2.1 Alternative Investment Fund Reserve Fund

One possibility to mitigate systemic risks posed by alternative investment funds would be to establish a reserve fund into which funds would pay. This fund could then be used to fend off liquidity mismatches of its contributors in cases where the failure of one or multiple funds might be imminent. Schwarcz has presented a similar idea of a 'systemic risk fund' to provide insurance and liquidity in the case of a systemic crisis. The systemic risk fund as described is not limited to investment funds but describes a mechanism in the context of banking regulation, but this does not make it less adaptable to alternative investment funds.[1343] It would be conceivable to create something along the lines of an 'alternative investment fund reserve fund' to limit the transmission of systemic risk from certain investment funds such as hedge funds. Funding the reserve fund would be mandatory for those investment funds or their managers when AuM reach a specific size. These funds would automatically be subject to the AIFMD and would contribute to the bailout fund.

As is the case with any investment scheme, an inherent risk of moral hazard would necessarily be present, in the sense that insured individuals tend to shift their appetite for risk, which affects the cost of coverage and raises the expenses for the

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[1341] See section 6.2.3.2.2.2.

[1342] David Barth, Laurel Hammond and Philip Monin, 'Leverage and Risk in Hedge Funds' (2020) Office of Financial Research Working Paper 20-02 37 <www.financialresearch.gov/working-papers/files/OFRwp-20-02_leverage-and-risk-in-hedge-funds.pdf> accessed 30 August 2020.

[1343] Schwarcz, 'Perspectives on Regulating Systemic Risk' (n 34) 10–11.

insuring party.[1344] These moral hazard problems might be counteracted by the participants in the reserve fund monitoring each other to prevent risky behavior.[1345] Whether the private actors would be capable of monitoring their peers, especially with many investment funds remaining relatively opaque and very protective of their strategies, is difficult to ascertain, but it remains doubtful. It is also unclear in a very practical sense which investment managers would be able to set aside the resources and create organizational structures to ensure monitoring of other fund participants. A different approach might be to charge funds and their managers according to the risk-return profile of their investment strategies and their specific portfolio composition. While this concept would be sound in theory and would better reflect the effective costs to the reserve fund in the case of a systemic crisis, the difficulty would be to determine which strategy concretely poses more risk relative to other strategies, and which fund is effectively more systemically relevant.[1346] An additional difficulty that is connected to insuring investment funds or collectivizing their losses is the fact that investment funds are highly dependent on maintaining an edge by offering higher risk-adjusted returns at a lower cost than their competition. Leveling the playing field in any way would erode the advantage of certain funds relative to others and would lead to certain strategies being effectively priced out of the market. On a collective level, a localized implementation of such rules only in the European Union would put the European asset management industry at a disadvantage vis-à-vis their counterparts in other jurisdictions.[1347]

[1344] For a description of the basic moral hazard problem in insurance, see, for example, Steven Shavell, 'On Moral Hazard and Insurance', *Foundations of Insurance Economics* (Springer 1979) 541.

[1345] Schwarcz, 'Perspectives on Regulating Systemic Risk' (n 34) 46–47.

[1346] As an example, a more conventional long-short equity or global macro fund might appear fairly benign at first glance and categorized accordingly, but the effective risk a fund exposes itself to is entirely dependent on the specific assets in its portfolio. Conversely, a relative value arbitrage fund may in fact be less exposed to certain market fluctuations if its arbitrage strategy deals primarily with low-beta, low-correlation investments. It is doubtful whether it would be feasible to measure and sort such a heterogeneous industry with the required precision to make risk- or strategy-based insurance premiums work as intended.

[1347] This disadvantage could only be counteracted if the 'brand' of European funds were to become a signal of excellence to such a degree that investors would be willing to accept lower returns net of fees relative to more lightly regulated funds in non-EU jurisdictions. The UCITS 'brand' has been able to achieve this to a degree, but it is doubtful

6.4.2.2 Central Bank Emergency Funding for Alternative Investment Funds

Providing emergency funding to alternative investment funds by central banks in the same fashion as bank bailout plans would be a further possibility that could be examined. The main obstacles to this concept would be the fact that unlike in the case where banks are close to failing, the failure of a single fund usually does not constitute a systemic event, except maybe as a catalyst or trigger for a systemic crisis. Loans or outright bail-outs would need to be spread out over multiple different funds and provided to those funds in particular that constitute neuralgic points within the financial system. While smaller liquidity or relief packages might make this concept more feasible, the political dimension of providing financial relief to alternative investment funds would likely make this scenario impossible. In addition, the selection of which funds required liquidity in order to avoid contagion would prove quite difficult, especially given the very high level of interconnectedness of our modern financial system.[1348] It is very likely that merely providing relief to a select number of funds would not prevent a systemic crisis from occurring. As described in chapter 3, the main danger to investment funds during market downturns and other forms of financial turbulence is composed of redemption requests, sharp declines in the value of fund assets, and fire-sales. Without an extremely flexible, timely, and comprehensive system of central bank funding to investment funds, a relief program would be largely ineffective in preventing fire-sales and the spread of a financial crisis.

The only successful implementation of emergency funding would have to follow the 'LTCM model'. As was the case during the failure of LTCM, a rapid provision of liquidity followed by some form of guarantee to investors would be the key to preventing redemptions and the triggering of a financial crisis. It is doubtful whether such measures could be implemented for multiple affected funds investing across multiple asset classes. In addition, it is also doubtful whether the public would tolerate what essentially would amount to the use of public funds, and/or a public institution primarily tasked with monetary policy to bail out funds invested in risky assets. Given the fact that alternative investment funds are usually poorly understood by the public and mainly associated with unscrupulous managers and

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whether a similar development would occur for the arguably more return-focused alternative investment industry.

[1348] See, for example, Jozef Baruník and Tomáš Křehlík, 'Measuring the Frequency Dynamics of Financial Connectedness and Systemic Risk' (2018) 16 Journal of Financial Econometrics 271, 286–289.

seen as investment vehicles reserved for the wealthy, it would require substantial political effort to justify and implement emergency funding plans for such fund structures.

Direct public intervention would therefore most likely not be politically feasible. Additionally, such measures would also create moral hazard and too-big-to-fail issues similar to those already present in the banking industry.[1349] This too-big-to-fail issue might prove to be even more pronounced in the case of investment funds, as the asset management industry is fundamentally built on what essentially amounts to a promise to be able to provide superior returns (net of fees) with minimal risk to investors. Shifting the risk-return profile of a fund's investment strategies by offering an implicit or even explicit guarantee and reducing the overall risk of default in the case of large losses would fundamentally alter the willingness of funds to take on risk and promote high-risk-high-return strategies. Offering a safety net to investment funds could even lead to an arms-race within the industry, with greater risk taking becoming prevalent, in order to satisfy investors' demand for low fees and high returns. Such measures could even result in a race for funds or connected fund structures to become ever larger in a quest to become truly too-big-to-fail, in the sense that the pure size and systemic relevance of a fund or manager of funds would force the public's hand toward a bailout in a systemic crisis.

6.4.3 Fund Resolution Plans (the LTCM Model)

Fund resolution is a further measure that could be implemented into law as part of regulatory efforts to mitigate systemic risks inherent in investment fund activity. Measures to create a systematic and structured methodology of fund resolution could be gradually implemented through the imposition of subsequent rules. Fund resolution could be realized through three basic methods: private resolution, public resolution, and a hybrid of the two. In a private resolution, potential buyers would be sought that could take over positions in a fund at the brink of failure. A public resolution would be similar to banking resolution methods: A public actor, usually a supervisory body or central bank, would step in and attempt to salvage the situation. Finally, a hybrid resolution model would enable both public and private actors to share the burden of bailing out an institution. In such a hybrid model, public bodies could take over and move toxic and illiquid assets present in a fund's portfolio, while private actors operating under time and liquidity constraints could as-

[1349] Alexander, Dhumale and Eatwell (n 32) 30–33.

sist by adding the residual positions of a failing fund to their balance sheet. The residual components of a failed fund's portfolio would be more attractive to private buyers and as such transferred to them. Public actors usually have a higher capacity to sustain such a burden and are not necessarily bound by shorter time-horizons when compared to private actors.

Fund resolution is one area of policy suggestions where actual precedent exists. The failure of LTCM, described in greater detail in chapter 3,[1350] provides a roadmap of one possible resolution method. In the specific case of LTCM, a consortium of banks ultimately divided up LTCM's positions, thus avoiding margin calls and defaults on those positions due to the fund's illiquidity. LTCM's positions ultimately turned out to be fundamentally sound, and the banks eventually did turn a profit on their positions. This procedure of a private resolution was orchestrated by public authorities in the case of LTCM. The case demonstrates that public coordination of private action can lead to an effective outcome if action is taken with sufficient speed and decisiveness. The size of individual funds, especially in Europe, where alternative investment funds are smaller and more numerous, makes a private resolution a possible and comparably cost-effective procedure to resolve fund failures. Externalities are kept to a minimum and contagion remains limited in such a case.

6.4.4 Monitoring through 'Gatekeepers'

6.4.4.1 A Problem of Incentives

In many instances of misaligned incentives and principle agent problems, one primary solution presented is the process of monitoring the behavior of the party which might place its own interests above the socially preferred outcome. In the specific case of investment funds, if the objective is the limitation of systemic risk, the desired outcome would be that no fund could generate externalities from its investment activities of a systemic nature. The core difficulty in achieving this is the informational asymmetry inherent in the system.[1351]

Passively managed funds are often transparent in the sense that their investment strategy, portfolio composition, and trading or rebalancing activities will be accessible to interested parties. The core difficulty of monitoring such funds lies in the

[1350] See chapter 3.

[1351] Laffont and Martimort (n 264) 54ff, 147ff.

sheer volume and variety of funds in existence. As has been highlighted in chapter 2, global demand is immense, and hence, the global market for such funds is almost unimaginably large, with all of its facets almost impossible to capture. In essence, this means that while monitoring is possible, the resources needed to do so by either private or public parties would exceed the threshold of what is possible and tolerable from a societal standpoint.

The activities of alternative investment funds, on the other hand, are not nearly as transparent, and in the case of certain hedge funds, deliberately so. This creates a fundamental difficulty in monitoring such funds, specifically actively managed funds. Actively managed funds' competitive edge is primarily dependent upon their ability to implement strategies that result in superior returns. The investment strategies and techniques, therefore, are the competitive advantage a fund possesses versus its peers, and the fund manager will therefore have a strong incentive to keep as many of these strategies and techniques as confidential as possible. In addition, active funds are faced with the constant danger of imitators which monitor their investment and trading activities in order to mimic their strategies. In liquid markets, this may pose less of a problem,[1352] but the ability to generate superior returns is usually not infinitely scalable, and its gradual erosion by copycats is a very real possibility. In addition, the cost of developing and implementing investment strategies might be substantially higher for the originating fund, which would allow competing funds focused on pure imitation to offer more attractive fee structures and undercut the more 'inventive' fund manager. Transparency and disclosure, hence, will frequently run perpendicular to the interests of many investment funds, creating an additional difficulty in achieving or enhancing transparency and monitoring.

6.4.4.2 The Fund of Funds Industry as a Private Monitor

The private method of monitoring funds exists as the funds of funds industry. This industry is focused on creating funds composed of the shares or units of other funds, thus providing a diversification and frequently a selection and monitoring benefit. This allows an investor to gain access to funds he might otherwise not have the purchasing power to invest in, and additionally benefit from the fund of fund manager's preceding analysis and selection of funds. Funds of funds can thus eliminate some of the concentration risk inherent in single-fund investments. In addition, the fund of funds manager engages in a monitoring function in the sense

[1352] Or it may simply be a question of scale. See eg Mallaby (n 7) 309ff.

that he steers the flow of capital into funds he considers superior and redeems his investments in funds that underperform. The manager also will be incentivized to gain information on the performance and activities of the funds in his fund's portfolio.

The funds of funds industry appears to be a private solution to the difficulty of monitoring investment funds. This industry does come with a number of caveats, though: primarily, the funds of funds industry is not cheap, since it layers an additional fee on top of the costs an investor would incur by investing directly in an investment fund. Also, the fund of funds manager only provides a benefit if he is capable of discerning the superior fund from the inferior fund. Additionally, a fund of funds manager will not generally monitor funds in his portfolio in a macroprudential sense. A fund of funds manager would not be incentivized to redeem investments if funds in his fund's portfolio could generate superior returns while generating externalities for society, as long as the net effect on his fund's performance were to remain positive. The fund of funds manager hence is also part of the moral hazard problem. He is not an agent behaving fully in the interest of society, since his incentives are not fully aligned with those of society.

6.4.4.3 The Regulator as a Monitor

As has been described in both chapters 4 and 5, the UCITS and AIFMD frameworks contain extensive provisions on the tasks and duties of both the supervisory authorities on a national level, and the activities of both ESMA and the ESRB. The objective of this is clear: Supervisory authorities are to work in tandem with institutions on the European level to achieve systemic stability. The supervisory authorities thus must monitor and report on the activities of funds in their respective jurisdictions. This aspect of the two frameworks does demonstrate that the legislative bodies of the European Union are concerned with systemic risk in investment funds and are utilizing monitoring as a tool to mitigate it.

The method of using public bodies to monitor agents is a classical solution to a problem of misaligned incentives, but it does have several drawbacks which warrant further examination: The use of public bodies is associated with higher costs. The operation and financing of public institutions is expensive, and should be replaced with private actors or a market mechanism, if this leads to lower costs and equal or greater efficiency. The use of public bodies can also lead to market distortions. The cost of reporting to competent authorities by funds must be taken into account.

Both the AIFMD and UCITS frameworks provide for oversight of funds and managers by a supervisory authority of some sort. Which authorities are responsible depends on the specifics of the member state in question, but at least one body is tasked with acting as a monitor of investment funds and their managers. The core difficulty, as the AIFMD review in particular has highlighted, lies in identifying and categorizing all the data that is reported to the regulator. While UCITS and the AIFMD in particular contain reporting requirements and mandate the provision of data for the purpose of systemic risk mitigation and general monitoring, the fundamental challenge is now not in the acquisition of information but rather in the effective interpretation of it. The difficulties inherent in measuring systemic risk extend to the less complex task of monitoring fund activity in general, as the specific trading activity and current overall positioning in the markets is very difficult to monitor in detail as an outside actor, regardless of access to data. Unlike the prevention of outright fraud akin to the Madoff scandal,[1353] which influenced, as has been mentioned previously, the creation of the AIFMD ruleset, monitoring for systemic risk exposures is a much more delicate and precise activity. Creating overly prescriptive rules and regulations cannot solve this fundamental problem. It is up to national authorities in concert with their peers in other member states to create coordinated and somewhat universal reporting standards to ensure the comparability and compatibility of models, information, reporting methods, and data provided to them by the managers and funds. This orchestra of regulators needs to be closely guided by ESMA, which needs to act as a high-level coordinator to achieve the ultimate objective of a well-monitored European asset management market. This amounts to what essentially is a bottom-up approach, where standards and development are driven by the national regulators and supervisors in cooperation with industry bodies and representatives, which, due to the highly technical nature of the challenges, is appropriate. ESMA in this scenario acts more as an arbiter and catalyst of those concepts that prove workable and implementable across member states. Creating ever more technical rulesets from a high-level viewpoint is, in the author's opinion, an ineffective approach in this context. What European legislative efforts in the form of directives and regulations excel at is creating a yardstick with left and right boundaries, within which each member state can position itself according to what is optimal from a national standpoint. Hence, it would be far more effective to preserve some legislative and supervisory leeway for member state authorities while putting clear coordinating measures in

[1353] See eg Mankiw and Taylor (n 1176) 544. For a description of the relevant provisions, see chapter 5 as well.

place to ensure a unified general direction. It remains to be seen whether this development will effectively take place and whether this will be the approach taken to regulate fund management in the EU, but, in the opinion of the author, this would be optimal.

6.4.5 Strategy-Based Regulation

6.4.5.1 Creating a Tiered System for Funds According to Regulatory Objectives

One further fundamental shortfall of the current regulatory framework for fund management in the EU is that due to historical reasons, the core structure is split between retail funds and the rest, which conveniently are all placed into the alternative investment category. This results in a myriad of problems: On the one hand, a number of funds fall into the alternative investment fund category, meaning their managers are potentially subject to a directive intended primarily to curtail hedge and private equity fund activity. On the other hand, retail funds are grouped into the UCITS category, and there is no differentiation between low-risk 'vanilla' funds and alternative UCITS replicating certain hedge fund strategies. The fact that the AIFMD also creates the option for member states to potentially permit retail investors to invest in alternative investment funds further complicates the matter and fundamentally alters the dynamic between the two frameworks. While the convergence of the two systems, through the original adaptation of certain rules of UCITS by the AIFMD, the introduction of UCITS V, and subsequent amendments to both directives,[1354] at least has unified some of the rules and simplified the overall legal structure, the result is not satisfactory.

Given that three overarching objectives can be identified in the regulation of European asset management, namely the creation of a single market for funds, the mitigation of systemic risk, and investor protection, a fundamentally different structure for the frameworks would be far more effective. Fundamentally, the size and portfolio composition of a fund determines its risk-return profile as well as its systemic relevance. In addition, the same portfolio composition also determines which market and type of investor a fund's units can and should be marketed to. Consequently, creating two frameworks which both potentially permit the distribution of units of a fund to both professional and retail investors, which is the case with the UCITS and AIFMD frameworks, while prescribing portfolio composition

[1354] See chapters 4 and 5.

rules for one form of fund but not the other, is structurally illogical. This leads to two possible conclusions: Either a single rulebook would need to be created for all funds but with specific subcategories for different categories, or multiple frameworks for each 'fund type' would need to be drawn up.

Furthermore, the optimal structure of such a framework would regulate both the manager and the fund, as the UCITS framework does, rather than indirectly prescribing certain fund rules through the manager, as the AIFMD does. As the portfolio composition or strategy of each fund would serve as the basis for classifying each fund and how to regulate it, merely regulating the manager would be insufficient, unnecessarily complicated, and convoluted.

Strategy based regulation would therefore be focused on the types of assets in a portfolio and the resulting risk-return profile of each fund, as well as its systemic relevance. Following such a classification, a number of categories would need to be created, depending on how systemically relevant a fund might be, as well as how much risk an investor would be exposed to by investing in such a fund. Additionally, the liquidity and valuation of the assets in a fund's portfolio would need to be taken into account, both from an investor protection standpoint as well as from the standpoint of systemic relevance of a fund. Funds with portfolios composed of illiquid assets for which only limited, opaque markets exist would be difficult to value and monitor effectively. Their investments might also have low or no correlation to traditional markets, which would make their systemic classification either particularly relevant, or not relevant at all.

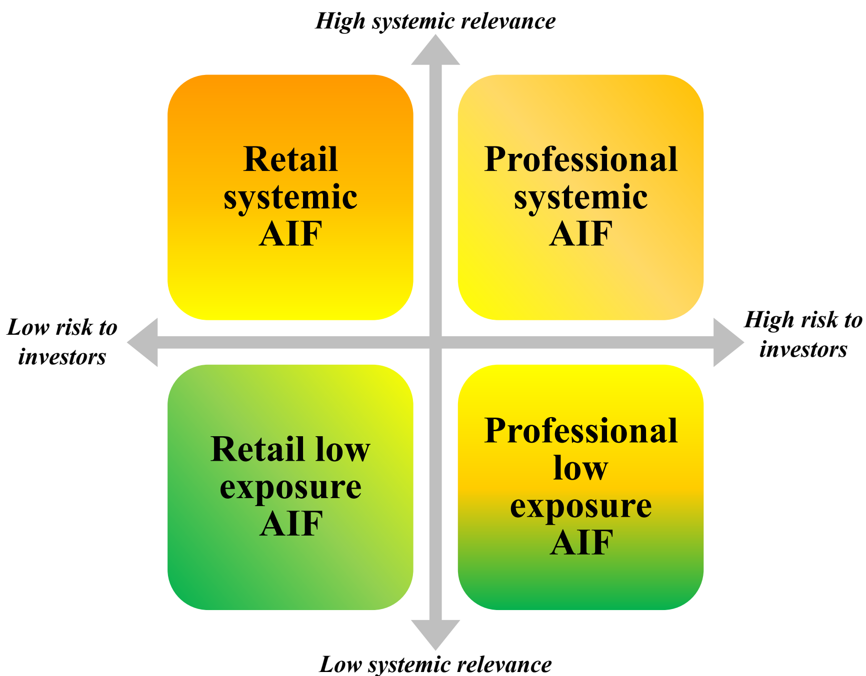
The classification of open-ended versus closed-ended funds would also need to be based on strategy and portfolio composition. Whether a fund is closed-ended or open-ended is highly relevant for both investor protection as well as systemic risk regulation. As an illustrative example, open-ended funds generally permit rapid withdrawal of one's investment by an investor and generally are valued at or close to the fund's NAV. From an investor standpoint, open-ended funds would mandate lower levels of investor protection, as the investor can withdraw at almost any time. At the same time, from the standpoint of the fund and its management company, an open-ended structure means the fund is in constant danger of losing investor capital and being forced to liquidate assets on short notice in order to be able to satisfy redemption requests. Such a fund might be more systemically relevant and more volatile from a systemic risk standpoint. The inverse of the situation described above would be true for a closed-ended fund. This would mean that effective regulation would need to take this into account, for example by permitting only professional investors to invest in illiquid private equity funds, but exempt

such funds from much of the hypothetical framework's systemic risk regulation due to the nature of the private equity industry.

A possible structure for a strategy-based framework would be to create multiple 'tiers' into which each fund would be sorted. Each tier would be more or less strict with regards to systemic risk regulation, investor protection rules, and fund distribution rules. Each component of the fund regulation framework would have its own 'tiers', meaning investor-protection-tiers would be separate from systemic-risk-tiers. Each fund and manager subject to the regulation would be sorted into multiple tiers within each of the three categories, which as a composite could create the specific ruleset for the fund or manager in question. As there would be three possible avenues, certain funds might be systemically relevant and subject to stricter rules regarding systemic risk prevention, for example by prescribing extensive risk management processes, while concurrently having only limited rules regarding investor protection and restrictions on fund distribution in the Union.[1355]

[1355] This would be possible for example with an open-ended long-short equity hedge fund. Such a fund would be highly liquid and due to its strategy, invest mainly in equities. It would engage in relatively simple hedging and shorting strategies, but would be relatively easy to monitor by authorities, and its strategies would be comparably easily understood by investors. At the same time, this fund might be very large, interconnected, and systemically relevant. As a consequence, the management company of such a fund might be permitted to sell units of such a fund to retail investors, but would require extensive safeguards related to its liquidity and risk management procedures, as it would be systemically relevant. In addition, this fund would be open to investors throughout the European Union and therefore would be subject to comparably lax distribution rules.

6.4.5.2 Figure 6b: Classification Matrix of Investor Protection and Systemic Relevance



6.4.6 Investor Protection Issues

Strategy-based regulation would be effective in the governance of the heterogenous alternative investment industry and could better address the risks and exposures of various types of funds, but investor protection would need to be calibrated to the new approach as well.

Fundamentally, as has been mentioned in section 6.2.1.2, the traditional approach to investor protection has been to provide the investor with sufficient (or comprehensive) information, which should allow him or her to reach a decision on whether an investment should be made. Certain riskier types of investments have, at the same time, not been made available to nonprofessional, less informed investors and those with a net worth below a capacity to absorb losses from such investments. Alternatively, the selling of such risky investments to non-sophisticated or nonprofessional investors has only been permitted if a professional and informed

middleman executes the sale only after having made the potential investor aware of its inherent riskiness. This approach has two weaknesses that have been mentioned above: First, all investors are subject to human biases, as behavioral psychology and economics show,[1356] and second, professional advisors do not appear to be able to compensate for the limited knowledge and bounded rationality of retail investors by providing investment advice.[1357] This difficulty is compounded by the fact that, unlike traditional investments, alternative investments are usually illiquid, opaque, and hard to value appropriately. From a standpoint of investor protection, this means that the degree of protection must correspond to the amount and quality of information that the investor can receive on a potential future investment. Such information, for instance, is far more accessible in retail funds and many UCITS funds, as indices and benchmarks allow a comparison of performance, and liquid markets permit the market mechanism to determine their value, which in essence is the equivalent of the market conducting a 'valuation' of the fundamental value of their assets. If a fund is also traded at its NAV and open-ended, the investor can frequently receive a fairly accurate assessment of what his or her investment might be worth. The opposite is true of funds investing in illiquid assets or funds that do not disclose their strategies. These funds, which will often be of the closed-ended type due to the illiquid nature of their investments, are more difficult to value, and their performance is almost impossible for an investor to assess ex-ante. Summarizing, the level of information, the precision and accuracy of valuation, and the open-ended or closed-ended nature of investment funds have a large impact on the degree of investor protection that must be put in place.

In the case of the systemic relevance of a fund and the degree of investor protection required, the solution is fairly straightforward. Systemically relevant and risky funds where society might suffer losses due to externalities are also risky for investors. Accordingly, the degree to which an investment fund manages tail-risk

[1356] Alexander and Madders (n 420) 1086, 1097. See also Alexander Puetz and Stefan Ruenzi, 'Overconfidence among Professional Investors: Evidence from Mutual Fund Managers' (2011) 38 Journal of Business Finance & Accounting 684, 708–709. See also Robert A Nagy and Robert W Obenberger, 'Factors Influencing Individual Investor Behavior' (1994) 50 Financial Analysts Journal 63, 63–64.

[1357] Some authors even find that certain investment advisor perform worse than non-professional investors, see Lukas Menkhoff, Maik Schmeling and Ulrich Schmidt, 'Are All Professional Investors Sophisticated?' (2010) 11 German Economic Review 418, 436–437. See also Puetz and Ruenzi (n 1356). See also Robert A Olsen, 'Prospect Theory as an Explanation of Risky Choice by Professional Investors: Some Evidence' (1997) 6 Review of Financial Economics 225.

and hedges against systemic events has a direct impact on the level of investor protection required. Funds which are exposed to such 'black swan' events should comply with stricter investor protection requirements and should make potential investors aware of which risks are off-model risks and therefore not being managed by the risk management function.[1358] The core difficulty here would be that the fundamental barrier of understanding or interest of the investor is not addressed. If the investor cannot comprehend or quantify such tail-risks, the information will not lead to a decision that reflects the underlying probabilities. Hence, a balance would need to be struck between permitting investors to engage in risky investments and protecting them from the bounds of their rationality and decision-making capacities. In essence, this would result in retail investors being permitted to invest in simpler, more transparent types of funds, prevented from investing in secretive, complex funds investing in illiquid markets, and only allowed to invest in categories somewhere in between if they were provided specific information on the types and levels of risks they were to assume by investing. These categories, types, and restrictions would need to become part of detailed implementing regulation, which could calibrate the general rules to reflect an appropriate balance between investor protection and financial integration.

6.4.7 Fee Structure and Remuneration

Remuneration of fund managers is another highly relevant issue that potentially would need to be incorporated into fund regulation in the European Union in the future. Remuneration can serve as a powerful incentive to shape the behavior of managers and employees of investment funds.

At its core, mandatory rules on remuneration in the context of fund management attempt to align more fully the incentives of a fund manager with those of his or her investors. One of the most basic forms of a remuneration rule is to mandate the re-investment of the compensation a manager receives into the fund he or she manages. By doing this, the manager has a strong financial incentive to maximize a fund's returns, as a fund's performance has a direct effect on a manager's wealth.

[1358] As many of these risks may not be known in advance, the fund or manager would have to show which parts of the probability distribution underlying the model lies outside of the risk that is being managed. In the case of VAR models for example, the 99% VAR would exclude certain losses beyond the defined probability. In cases where some tail risk is incorporated into a model, the manager or fund would have to disclose to the investor which other extreme events might lie outside of the model.

In addition, this disincentivizes pure rent-seeking behavior by the manager, where the primary focus is to extract fees from investors rather than maximize their wealth. What is created through a co-investment arrangement is that the manager has what is termed 'skin in the game', ie a situation where the outcome of investment decisions will directly benefit or harm the manager.[1359]

While mandating co-investment by law or regulation would be the most direct measure, it is important to note that the concept of having 'skin in the game' is already a well-known and somewhat established approach within the investment fund industry in general, and the hedge fund industry in particular.[1360] In that sense, there is already potential for either a form of self-regulation, or increased pressure from potential investors, which might eventually lead to 'skin in the game' becoming a de-facto industry standard.[1361] In this sense, a balance would need to be struck between the autonomous development of an industry standard and obligatory, prescriptive regulation in this area. One approach could be to utilize regulation as a catalyst for the establishment of industry standards, rather than outright forcing co-investment. One strategy that could be used in order to achieve this would be to create an opt-in system similar to the various fund 'brands' or 'labels' that already exist in the realm of alternative investment regulation, such as ELTIF and EuVECA funds. A fund with co-invested management compliant with rules for 'skin-in-the-game-funds' could, for example, benefit from less rigorous investor protection rules, and would potentially incentivize increased investment in the fund if this label were established as a signal of quality and safety for such funds.

The idea of tying a part of the manager's wealth to the performance of a fund is not without its pitfalls, however. Co-investment may also be less effective than expected, depending on the specific circumstances. There is some evidence that

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[1359] See Martijn Cremers and others, 'Does Skin in the Game Matter? Director Incentives and Governance in the Mutual Fund Industry' (2009) 44 Journal of Financial and Quantitative Analysis 1345, 1371–1372.

[1360] See AIFMD, Annex II. See also Lerner, Hardymon and Learmon (n 82) 72–74.

[1361] AIFMD, Annex II mandates that some of the total compensation lead to 'skin in the game'. The objective of industry standards would, however, be to incentivize managers to invest their own, personal capital alongside investors in the fund in excess of the mandatory portions of their compensation.

points to co-investment as being only of limited effect on fund performance and manager behavior.[1362]

A similar approach which is less direct but has comparable effects is performance-based compensation. This approach simply rewards managers that can achieve superior returns for their investors, much in the same fashion that co-investment does. As has been mentioned repeatedly,[1363] a fundamental characteristic of most hedge funds (and private equity funds as well) is the charging of a performance fee that is dependent on a fund's performance. Performance-based compensation partially compels managers to act in an investor's interest and avoid pure rent-seeking behavior; however, it is a double-edged sword. Without any clawback effects or similar punishment mechanisms for inferior performance, performance-based compensation essentially has an asymmetrical payoff structure with limited downside. That is, if returns are positive, both the manager and the investor benefit, but losses harm the investor far more than the manager.[1364] A skewed payoff structure of this fashion incentivizes aggressive risk taking by the manager, as the risk-return profile of the managed fund differs from the private risk-return profile of the manager. In essence, the manager can impose losses on investors when returns are negative, but can generate large positive returns for himself or herself when returns are positive. Consequently, the manager participates only in returns, but is essentially shielded from losses. A manager thus might be incentivized to take on risks he might otherwise not take, especially if his compensation is tied to a specific benchmark or threshold.[1365] The manager's incentives change and devi-

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1362 See Arpit Gupta and Kunal Sachdeva, 'Skin or Skim? Inside Investment and Hedge Fund Performance' (2019) NBER Working Paper No 26113 21–23 <www.nber.org/papers/w26113> accessed 30 August 2020. See also

1363 See eg chapters 2 and 3.

1364 Although the manager might be penalized indirectly, for example through reputational damage or by causing large investor withdrawals. This effect is far less pronounced than in cases where the manager's wealth is directly reduced together with that of the investor, as would be the case where a manager has invested some or all of his wealth in his fund. Add that many private equity managers, for example, are engaged professionally in a very risky business, and hence maintain very conservative private portfolios composed mainly of comparably safe fixed-income securities. See Ang (n 37) 583–586.

1365 Chris Brooks, Andrew Clare and Nick Motson, 'The Gross Truth about Hedge Fund Performance and Risk: The Impact of Incentive Fees' (2007) SSRN 1031096 <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1031096> accessed 31 August 2020. Other authors find that compensation may create this effect, but increased co-investment can mitigate, or even reverse this tendency. See Roy Kouwenberg and

ate from those of his investors in such a case, as the manager will be willing to take on additional risk to pass the compensation threshold, ie risk which might go beyond the investor's optimal risk-return preferences. This mechanism incentivizes increased risk taking beyond what is in the interest of the investor, which might not be socially or systemically optimal. Summarizing, pure performance-based compensation without punitive mechanisms are slightly preferable to fixed compensation for investment funds, but far less desirable than co-investment schemes.

One approach to rectify the dilemma outlined above would be to impose certain clawbacks and option-based compensation. While this approach might be an 'old hat' in the realm of banking regulation, it is not widely implemented in other industries.[1366] While from a political standpoint the implementation of such measures is difficult and a question of proportionality, the discussion of whether such a measure would be useful and applicable is nonetheless warranted. This thesis presents two variants that could be evaluated: 'systemic clawbacks' and 'systemic options.' Both these measures would fulfill a dual function of protecting investors and guarding against systemic risk, in that they would incentivize managers to both hedge against systemic risks and prevent excessive risk taking for the reasons outlined above. Traditionally, clawbacks act as a mechanism to retroactively 'claw back' variable or performance-based compensation, if the underlying reason for the payment of this compensation ultimately results in negative long-term development. 'Systemic clawbacks' would be put in place to enable repayment of performance-based compensation or of the performance fees charged to investors more generally if a fund generated negative returns beyond a specific threshold. This would directly incentivize managers to hedge against extreme tail risk and would offer some protection against extreme market fluctuations impacting the fund. It is important to note that similar arrangements already exist at certain hedge funds in the form of what is termed a 'high-water mark'.[1367] A high-water mark in the fee structure of a hedge fund usually has the effect of only permitting a fund to charge an incentive or performance fee when earning positive

William T Ziemba, 'Incentives and Risk Taking in Hedge Funds' (2007) 31 Journal of Banking & Finance 3291.

[1366] The AIFMD's Annex II mandates that some compensation is paid in options. Also, clawbacks are possible, but these are tied to ordinary fluctuations in fund performance, not specifically systemic events.

[1367] See also chapter 2.

returns for investors, unless previous negative returns have been made up for.[1368] What is generally not a component of such an arrangement is the personal repayment of managers' compensation, although the possibility would exist that managers voluntarily either re-invest or waive their compensation if investors have lost money as a sign of good faith.

The second possibility closely related to 'systemic clawbacks' would be to mandate that compensation must consist partially or wholly of options or option-like instruments on shares or units of a fund that could only be exercised under certain conditions. One such condition might be that they would only be released if certain returns are met, or losses over a specific time frame are not greater than a particular threshold. This concept would incentivize a shift of fund managers' outlook from a shorter-term view to the longer time frame. A manager would be promised participation rights in the fund, essentially creating long-term 'skin in the game', as well as creating the threat of losing the right to exercise these options, thus promoting prudent investing and the careful management of risk in the fund.[1369]

While the AIFMD contains provisions on variable, performance-based compensation,[1370] there is no risk-based component to compensation other than clawbacks and options-based compensation. This allows a partial focus on long-term performance, but does not address an essential aspect of investment or hedge fund compensation. The ultimate intent in prescribing remuneration for fund managers is not only to incentivize a maximization of returns for investors, but to promote the supply of excess returns *while managing risk.* As has been mentioned above, the payoff structure in remuneration agreements is asymmetrical and has option-like characteristics for the manager.[1371] To prevent excessive risk-taking to achieve returns, whether these are supplied short or long-term, remuneration agreements could reward managers that deliver excess returns relative to the amount of risk taken. One simple way to arrange this would be to compensate managers according to the Sharpe or Sortino ratio, rather than purely the amount of returns gener-

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[1368] William N Goetzmann, Jonathan E Ingersoll Jr and Stephen A Ross, 'High-Water Marks and Hedge Fund Management Contracts' (2003) 58 The Journal of Finance 1685.

[1369] In principle, this could be implemented in this form under the current AIFMD framework, which mandates that compensation is in line with fund objectives but allows the fund or manager to define the specifics of their remuneration policy. See AIFMD, Annex II.

[1370] See AIFMD Annex II.

[1371] Ang (n 37) 583–586.

ated.[1372] Alternatively, if the objective of investors were not purely to maximize profits, but reflected a more risk-averse investment philosophy, remuneration policies could also be tailored to promote lower correlation of a fund's portfolio with the broader market as well as prudent risk management. One way to achieve this would be to compensate managers according to the Treynor ratio, which reflects how well systematic risk is being managed and how closely correlated a portfolio is with the broader market.[1373] Remuneration policies that incorporate this aspect would reflect the desire of investors in alternative investments to achieve a diversification benefit and reduce their overall exposure to traditional market movements. Such agreements would also more closely reflect the 'hedged' aspect of hedge funds rather than the focus on absolute returns.[1374]

[1372] The Sharpe ratio, which has been previously mentioned in fn 369 on page 94, is expressed as the return of a portfolio minus the risk free rate divided by the standard deviation of the portfolio's excess returns. More formally, this is expressed as follows: Sharpe Ratio = $\frac{R_p - R_f}{\sigma_p}$, where R_p is the return of the portfolio, R_f the risk-free rate, and σ_p the standard deviation of the portfolio's excess return. The Sortino ratio is similar, but excludes positive standard deviations that aid returns. The Sortino ratio therefore differentiates volatility of a portfolio from the volatility that generates downside returns, as an investor presumably does not mind volatility that benefits the performance of the portfolio in question and reflects the risk-adjusted performance of a portfolio more accurately. The Sortino ratio is defined as: Sortino Ratio = $\frac{R_p - R_t}{\sigma_d}$. R_p and R_t correspond to the return of the portfolio and to either a minimal accepted return or a target return, whereas σ_d is the standard deviation of the downside, rather than the portfolio's excess return. In the context of remuneration agreements, compensating managers according to their performance while managing risk as reflected by either formula would be effective, but the Sortino ratio would be slightly more generous to the manager and reward him or her for beneficial volatility of the portfolio as well. The Sortino ratio also allows a minimal benchmark rate to be set to compare excess returns against rather than using the risk-free rate, which allows the calibration of the ratio according to the risk appetite of the investor. See ibid 58. See also Meredith Jones, 'Sortino Ratio' *Encyclopedia of alternative investments* (2008) 441. See also Chambers and others (n 41) 111, 115–116.

[1373] The Treynor ratio can be expressed as follows: Treynor Ratio = $\frac{R_p - R_f}{\beta_p}$. R_p and R_f correspond to the return of the portfolio and to the risk-free rate here as well, whereas β_p is the beta of the portfolio, rather than the standard deviation or the downside or the portfolio's return (ie systematic risk rather than total risk). See François-Serge Lhabitant, 'Treynor Ratio' *Encyclopedia of Alternative Investments* (2008) 486. Chambers and others (n 41) 114–115.

[1374] See chapters 2 and 3 for a discussion of whether hedge funds are hedged and what the core benefits of alternative investments should be.

Fund size also plays a role in compensation, which is a further dimension where an agency problem between the manager and the investor exists. As fees are directly tied to the AuM of a fund, the manager is incentivized to increase the size of the funds beyond the level that is optimal from a pure risk-return standpoint. Managers will generally be willing to increase the size of funds, even if this goes beyond what is economically optimal and reduces returns.[1375] This new dimension creates a difficult regulatory dilemma. Currently, there is no cap on the assets under management of a manager or a single fund. Intuitively, the strategies, operational challenges, and organizational obstacles should disincentivize growth beyond a certain size, particularly if certain return strategies are not infinitely scalable. While an absolute value of the permissible AuM of a fund or manager would not achieve the objective and would stunt further growth and innovation within the alternative investment fund universe, it would perhaps be advantageous to introduce an upper threshold beyond which specific reporting requirements to the national competent authorities would become mandatory. The authorities in the member states, which would have more intimate knowledge of managers and funds in their jurisdiction, would then have the option of deciding whether a fund needs to be split, or whether a manager would receive authorization to expand the total AuM. This, in turn, would depend on the specificities of the manager's skill, internal organization, and approach to risk management of large and small portfolios.[1376]

6.5 Synthesis: An Effective Solution

As is the case with many complex issues, one single approach is likely not sufficient to solve an existing problem. The same is true of the systemic risks posed by investment funds, and alternative investment funds in particular. An effective approach would therefore have to rest on multiple pillars. Of the multiple options presented above, one approach would be to combine three measures: Resolution plans, rules on remuneration of managers, and monitoring by public and private actors. To calibrate these approaches to the specificities of the various forms of funds in the industry, these three approaches would be embedded in the multi-tier

1375 Chengdong Yin, 'The Optimal Size of Hedge Funds: Conflict between Investors and Fund Managers' (2016) 71 The Journal of Finance 1857. See also the discussion in Lerner, Hardymon and Learmon (n 82) 67, 73–75.

1376 Ang (n 37) 568–570.

regulatory framework described above. By implementing these three measures and creating a risk/strategy-based regulatory structure, the number of funds that would need to be regulated to a higher degree would be limited, and presumably, the measures would become more effective. Ex-ante monitoring efforts could provide for corrective action at an early stage, remuneration agreements would align the incentives of managers and investors, and in the case of the failure of a systemically relevant fund, a cost-effective and timely resolution by public and private institutions acting in concert could limit contagion. Hence, both an ex-ante and ex-post approach would be combined, which would prevent, control, and resolve systemic crises at every stage of their development.

6.6 Conclusion

This chapter has presented and discussed a number of policies which could be implemented and has highlighted some of the shortcomings of the existing framework for alternative investment funds. Three measures, monitoring, resolution, and remuneration have emerged as the most feasible and implementable approaches to future fund regulation, as well as a conceptual adjustment to the form that regulation would have to take. This chapter has advocated the use of monitoring, remuneration, and resolution plans to mitigate systemic risks that might emerge from the activities of alternative investment funds. In addition, the future structure of the legal environment must evolve in one of two directions in order to become more effective: convergence or divergence. A convergent structure would create a single set of rules for all investment funds and divide them into various categories, while a divergent structure would lead to a fragmented framework with discrete rules for each specific type of fund. Both approaches would be feasible, but would need to necessarily be grouped according to risk-profile and portfolio composition rather than the current categorization according to investor type and other less tangible characteristics. In conclusion, the tiered approach described above would be the optimal approach, but would need to be supplemented by the three measures presented in this chapter to achieve a coherent and comprehensive approach to mitigating systemic risk emanating from alternative investment funds.

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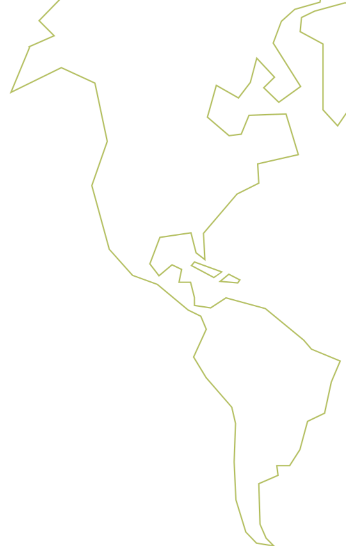

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