

Index

- absolute returns 4, 9–11
achieving purity, illusions concepts
48–9
acquisitions *see* merger . . .
active hedge fund indices 2–3, 4, 45–68
AIMA 31, 59
alpha 34, 63, 65, 66, 75–6, 144–5
alternative funds 1–5
see also hedge funds
alternative investment styles
BCIM 182–6
concepts 13–14, 19–20, 26–7, 33–4,
76–8, 85–92, 114–17, 129–37,
182–6
Altvest 32, 41
annual style distributions of the testing
periods in percent statistics 13–14,
32–3
annualization issues
concepts 155–78
Cornish–Fisher Value-at-Risk 167–9,
171–2
EVT 171–2, 175–8, 196–8
GARCH Value-at-Risk 172–4, 177–8,
227–8
historical Value-at-Risk 169–71
leptokurtic distributions 159–62,
164–7
main statistical indicators 157–62
Value-at-Risk 161–78
approximation errors 157–78
arbitrage 13–14, 19, 33, 34–5, 41–3, 49,
52–3, 56–9, 76–8, 88–9, 102–17,
129–37, 183–6, 229–31
see also relative-value strategies
arbitrage on the underlying, derivatives
57
asset classes, concepts 69–70, 101–3,
184
asset flow statistics 11–13
asset-backed securities 224
asymmetry of returns 2, 64, 94–5,
58–62
see also skewness
auto-regressive approach, hedge funds
62
autocorrelation, concepts 131–6,
184
automated selection approaches 3–4,
181–205
see also Best Choice . . .
average silhouette
concepts 38–41
definition 38
Baa/treasury spread 200, 229–30
back office developments 14–15
backtesting, Value-at-Risk 104–17,
144–5, 147–50, 196–8
Barclay . . . 10, 41
Basel Committee 115–16, 155
BB rated bonds 58–9
BCIM *see* Best Choice Implicit Model
bear markets 25–30
‘before and after’ risk attribution, risk
decomposition 30, 211–12
benchmark/relative performance bubble
9–11
benchmarks 9–30, 46, 64–5, 66–8,
219–21

- Best Choice Implicit Model (BCIM)
see also Implicit . . .
alternative style analysis 182–6
automatic selection 192–3
backtesting 196–8
clones 199–205
coefficient of determination 190–205
concepts 3–4, 5, 30, 181–205, 207–14
empirical tests 195–8
implicit factors 187–90, 196–8
independent variables 190–2
non-linear model 202–5
quality issues 196–8
risk budgeting 207–14
steadiness considerations 198
ten-factor model 199–202
theoretical framework 186–93
betas 18, 26–7, 32, 34, 56, 61, 63, 65,
75–6, 101–2, 182–4, 194–8,
210–14, 230–1
biases 33, 34–5, 41–3, 67–8, 76–8,
85–6, 102, 105–17, 119–20
bibliography 233–8
Billion Dollar Club 12–13
binomial distribution 115–16, 128
bisection method 150–1
Bivariate Extreme Value Theory 139–42
boards of directors 14–15
bonds 19, 33, 34–5, 41–3, 52, 56–8,
76–8, 88–90, 94–5, 102–17,
129–37, 161–78, 183–6, 200–5,
224
convertible arb style 13–14, 33, 34–5,
41–3, 52, 56–8, 76–8, 88–9,
102–17, 129–37, 183–6, 229–31
credit ratings 58–9, 224
fixed income style 13–14, 33, 34–5,
41–3, 52, 76–8, 89–90, 94–5,
129–37, 183–6, 230–1
square root of time rule 161–78
Bretton Woods 223
bull markets 25–30
business cycle risk (BUS), risk matrix 77
business processes
see also structural risk
concepts 71–5
call options 94, 202–5
capitalism 22–3
capitalization issues 21–2, 55–6, 57–8,
86–7
Cash-Flow-at-Risk 224–5
catastrophe risks 54, 107
CDOs *see* collateral debt obligations
CESR 46
Chapter 11 bankruptcy protection 20
chi-squared tests 25–6
CISDM 41, 60, 62–3
City World GVT AM 162–78
classifications of hedge funds, concepts
31–43, 49–51, 59, 61, 182–4, 187,
221
Clayton copula 153–4
cliquet products 70–1
clones 2–3, 5, 11, 40–1, 47, 56–68,
199–205, 230–1
see also replication
BCIM 199–205
conclusions 64–8
funds of funds 62–3, 66–8
closed deals, merger arbitrage 57–8
closed form risk attribution, risk
decomposition 212–14
closed hedge funds 53–4
coefficient of determination 181–205
coefficients above the fourth order of
magnitude, annualization issues
160–2
collateral debt obligations (CDOs) 58–9,
224
commodities 20–1, 56–7, 63, 200–3
conditional distributions, unconditional
distributions 155
confidence levels, Style Value-at-Risk
Model 99–100, 119, 130, 184–6
contrarian strategies 82
convertible arb style 33, 34–5, 41–3, 52,
56–8, 76–8, 88–9, 102–17, 129–37,
183–6, 229–31
annual style distributions of the
testing periods in percent 13–14, 33
backtesting 106–17, 148–50
betas 183–6
EVT 129–37, 148–50
intra-correlations/inter-correlations
34–5
mechanical replication 56–8
risk management 76–7, 88–9,
114–17
copulas, concepts 136–45, 151–4
Cornish–Fisher expansion,
Value-at-Risk 167–9, 171–2

- correlation
 concepts 33–6, 77, 138–42, 146, 154, 184, 187–98
 critique 138–9
 risk matrix 77
 counter-party risk, concepts 93
 covariance 2, 103–4, 138–9, 189–90, 217–18
 cpr *see* cross-product ratio
 credit crunch 10–11, 20–1, 224–5
 see also liquidity . . .
 credit ratings, bonds 58–9, 224
 credit risk (CRT), concepts 1, 75–8, 88–9, 224
 credit spreads 88–9, 227–31
 cross-gamma effects 71
 cross-product ratio (cpr) 24–30
 CS/Tremont hedge fund indices 3, 13–14, 26–7, 32–6, 39–40, 42, 53–4, 55–6, 64–5, 76–7, 102–3, 105–17, 120, 128–36, 147–50, 162–78, 182–6, 219–21, 226–30
 CSFB 54
 CTAs 13–14, 56–7, 63, 76–8, 129–37, 183–6
 see also managed futures style
 CTs 56–7, 63

 data mining 4
 database exits, fund managers 13, 215–21
 de Picciotto, Edgar 223–4, 226–7
 dead funds 215–21
 dedicated short bias style 13–14, 33, 34–5, 41–3, 76–8, 85–6, 102, 106–17, 129–37, 141, 148–50, 183–6, 230–1
 annual style distributions of the testing periods in percent 13–14, 33
 backtesting 106–17, 148–50
 betas 183–6
 EVT 129–37, 148–50
 intra-correlations/inter-correlations 34–5
 risk matrix 76–7
 delegated index selections, institutional investors 65
 delegation risk
 see also credit . . . ; liquidity . . . ; market . . .
 concepts 70–1, 75–8, 83–5

 delta hedging 82–3
 derivatives 15–16, 19–20, 57, 60, 72–4
 Deutsche Borse 17
 Diez de los Rios and Garcia (2006) model 202–5
 direct investment risk, concepts 78–85
 direct lending, concepts 20–1, 73–4
 disclosures 79–81
 see also transparency issues
 dispersion products 70–1
 distressed securities 52, 72–3
 distributions, replication 63–4
 diversification levels 1, 26–8, 30, 36, 56–7, 61–2, 65, 79–80, 85–6, 184–6, 207–8
 diversified CTA, mechanical replication 56–7
 dot.com crisis 223–4
 Dow Jones Convertible Bond investable index 48, 64
 downside deviation, concepts 2
 Drost and Nijman theorem 172–4, 177–8
 due diligence, concepts 1–2, 66–7, 69–70, 72–3, 83–5
 dynamic trading strategies 76–83, 99–100

 EDHEC indices 42, 45–6, 51, 55–6, 62, 107–8
 elemental percentile method (EPM), concepts 122, 124–37, 150–1
 emerging markets style 13–14, 33, 35, 41–3, 76–8, 102, 106–17, 129–37, 203–5, 230–1
 annual style distributions of the testing periods in percent 13–14, 33
 backtesting 106–17, 148–50
 EVT 129–37, 148–50
 intra-correlations/inter-correlations 35
 risk matrix 76–7
 endowments 11–13
 EPM *see* elemental percentile method
 equities
 convertible arb style 13–14, 33, 34–5, 41–3, 52, 56–8, 76–8, 88–9, 102–17, 129–37, 183–6, 229–31
 square root of time rule 161–78
 equity market neutral style 9, 13–14, 27, 33–5, 41–3, 52, 76–8, 87–8, 102, 106–17, 129–37, 148–50, 230–1

- equities (*Continued*)
 - annual style distributions of the testing periods in percent 13–14, 33–4
 - backtesting 106–17, 148–50
 - EVT 129–37, 148–50
 - intra-correlations/inter-correlations 34–5
 - risk matrix 76–7
- ETFs 60
- Euro-Dollars 89
- European Central Bank (ECB) 17, 18, 20–1
- European options 82, 161–78
- event risk, concepts 77, 93–5
- event-driven style 13–14, 26–7, 33, 35, 41–3, 52, 76–8, 102, 106–17, 129–37, 148–50, 183–6, 230–1
 - annual style distributions of the testing periods in percent 13–14, 33
 - backtesting 106–17, 148–50
 - betas 183–6
 - EVT 129–37, 148–50
 - intra-correlations/inter-correlations 35
 - risk matrix 76–7
- EVT *see* Extreme Value Theory
- exceptions monitoring 5, 109–17, 197–8, 215–21, 229–31
- Expected Shortfall, concepts 99–100, 225–6
- exposure replication, passive hedge fund indices 59–63
- extremal dependence, tail dependence 139–41, 147–50
- extreme quantiles, Value-at-Risk 127–31
- Extreme Value Theory (EVT)
 - annualization issues 171–2, 175–8, 230–1
 - concepts 99, 119–54, 171–2, 175–8, 194–8, 230–1
 - CS/Tremont hedge fund indices 128–36, 147–50, 171–2
 - hybrid EVT approach 137–8
- factor analysis, concepts 37, 100, 186–98
- factorial models, concepts 37, 56, 59–63, 100, 186–98
- failures, hedge funds 69–70, 72, 215–21
- fair value, concepts 73–4
- Fama and French 19, 200–5
- FASB 73
- fat tail returns 2, 64, 119–54, 155–6, 159–78
 - see also* kurtosis
- fees 62, 72–4
- finance considerations, annualization issues 160–1
- Financial Times* 10
- financing crises 5, 10–11, 20–1, 223–31
 - see also* liquidity . . .
- fixed income style 13–14, 33, 34–5, 41–3, 52, 76–8, 89–90, 94–5, 102, 106–17, 129–37, 148–50, 183–6, 230–1
 - annual style distributions of the testing periods in percent 13–14, 33
 - backtesting 106–17, 148–50
 - betas 183–6
 - EVT 129–37, 148–50
 - intra-correlations/inter-correlations 34–5
 - risk management 76–7, 89–90, 94–5, 114–17
- forecasts 5, 109–17, 215–21, 223–31
- foreign exchange investments 94–5
- fraud risks 54
- Fréchet unit 140–2, 152–3
- FTSE 51, 55–6, 64, 76–8, 94
- fund managers
 - back office developments 14–15
 - boards of directors 14–15
 - database exits 13, 215–21
 - dead funds 215–21
 - geographic spread 14–15
 - independent administration 14–15
 - length of operating history 72, 74–5
 - listings 14–15
 - organizational size 72–4
 - portfolio management 1–2, 54–5, 61–2, 65, 73, 78–83, 90–1, 138–9, 207–14
 - probit model 216–21
 - quality issues 67–8, 79–80, 99–100, 106–7, 202–5, 207–14, 215–31
 - reputation problems 17–23
 - returns 1–2, 9–30, 31–6, 66, 207–8, 215–21
 - side pockets 14–17, 72–4
 - structural developments (2006–2007) 10, 14–17
 - transparency issues 12–13, 79–81

- funds of funds 11, 23–30, 32, 45–6, 54–6, 62–3, 66–8, 78–83, 104–17, 207–14
 - clones 62–3, 66–8
 - concepts 11, 23–30
 - fees 62
 - persistence characteristics 23–30
 - returns 24–30
 - risk management 29–30, 78–83, 114–17
 - strategy risk approach 79, 81–5
 - underlying risk approach 78–81, 83–5
- futures 33, 35, 41–3, 52–3, 63
- GAAP 73
- GARCH Value-at-Risk 172–4, 177–8, 227–8
- Geltner transformation 132–6
- General Equilibrium Theory 227
- Generalized Linear Latent Variable Models 186–7
- generalized Pareto distributions (GPD)
 - autocorrelation 131–6
 - concepts 119–36
 - CS/Tremont hedge fund indices 128–37
 - parameter estimation methods 122–7
 - geographic spread, fund managers 14–15
- GLC Gestalt Europe fund 49
- global macro style 13–14, 19–20, 33, 35, 41–3, 52, 76–8, 102, 106–17, 129–37, 148–50, 183–6, 230–1
 - annual style distributions of the testing periods in percent 13–14, 33
 - backtesting 106–17, 148–50
 - betas 183–6
 - EVT 129–37, 148–50
 - intra-correlations/inter-correlations 35
 - risk matrix 76–7
- GPD *see* generalized Pareto distributions
- graveyards' analysis 215–21
- Greenspan, Alan 20
- Greenwich Global 42
- gross exposures
 - see also* leverage . . .
 - concepts 92
- Grossman, Blake 10
- Guidant/Johnson & Johnson deal 148–9
- hedge fund indices 3, 4, 13–14, 32–7, 39–40, 41, 42, 45–68, 76–7, 102–3, 105–17, 120, 128–36, 195–8
 - see also* active . . . ; passive . . .
 - achieving purity illusion 48–9
 - benchmarks 9–30, 46, 64–5, 66–8, 219–21
 - CS/Tremont hedge fund indices 3, 13–14, 26–7, 32–6, 39–40, 42, 53–4, 55–6, 64–5, 76–7, 102–3, 105–17, 120, 128–36, 147–50, 162–78, 182–6, 219–21, 226–30
 - demands 45–6
 - exposure replication 59–63
 - historical background 9–14, 45–6
 - investable indices 10–11, 31, 42, 43, 48, 50–1, 53–4, 55–6, 64–8
 - list 41–3
 - mechanical replication 56–9
 - multi-index model 100–17
 - optimality illusion 54–6, 182–6
 - quality criteria 46–8
 - representativeness illusion 49–54, 52–3, 64–8, 105–6, 137, 182–6
 - risk factors 102–3
- hedge funds
 - alternative investment styles 13–14, 19–20, 26–7, 33–4, 76–8, 85–92, 114–17, 129–37, 182–6
 - annualization issues 155–6, 161–71
 - asset flow statistics 11–13
 - benefits 17–23
 - classifications 31–43, 49–51, 59, 221
 - clones 2–3, 5, 11, 40–1, 47, 56–68, 199–205, 230–1
 - concepts 1–5, 9–43, 45–6, 69–95, 231
 - critique 17–23, 81–2, 107–9, 130–7, 223–4
 - dead funds 215–21
 - definition 69
 - EVT 99, 119–54, 171–2, 175–8, 194–8
 - failures 69–70, 72, 215–21
 - graveyards' analysis 215–21
 - heterogeneity 2–3, 4, 28–30, 31–43, 45–6, 52–3, 59, 61–2, 182–6
 - historical background 1–2, 9–14, 45–6, 84, 104–17
 - homogeneity of hedge funds 11, 23–30, 33–6, 37–41

- hedge funds (*Continued*)
 institutional investors 1, 4, 9–30,
 45–6, 57, 59–60, 65, 66–7, 71,
 78–9, 81
 liquidity crisis (2007–2008) 224–5,
 231
 liquidity suppliers 20–1
 multi-index model 100–17
 new market structures 59
 ‘pasteurisation’ 28–9
 pricing issues 14–17, 72–3
 quality issues 67–8, 79–80, 106–7,
 202–5
 redemption restrictions 21–2
 regulations 17–23
 reputation problems 17–23
 risk assessments 76–8, 85–92,
 128–37, 155–78
 risk budgeting 5, 30, 71, 76–8, 106–7,
 119–54, 207–14
 risk management 1–5, 19–23, 29–30,
 60, 69–95, 99–100, 109, 114–17,
 231
 short-selling 17–23, 65, 77, 85–6,
 94–5, 129–37
 size of industry 11–13
 statistics 10–14, 29–30, 32–3, 55
 structural developments (2006–2007)
 10, 14–17
 time horizons 142–3, 155–78
 turnover statistics 10–14, 29–30, 55
 valuations 10–11, 14–17, 72–5
 Value-at-Risk monitoring 5, 109–17,
 197–8, 215–21
 HedgeFundIntelligence 32, 42
 HedgeFund.Net 42–3
 Hennessee 42
 heterogeneity of hedge funds 2–3, 4,
 28–30, 31–43, 45–6, 52–3, 59,
 61–2, 182–6
 concepts 2–3, 4, 28–30, 31–43, 45–6,
 52–3, 59, 61–2, 182–6
 modern cluster analysis 36–41, 187
 over-diversification problems 61–2,
 65, 184–6, 228–9
 smoothing effects of a restrictive
 classification 33–8, 182–6
 statistical implications 31–2
 Style Value-at-Risk Model 40–1
 testing sample 32–3, 39–40,
 105–17
 heteroscedasticity 172–4, 177–8
 see also GARCH . . .
 HFRI 42, 50–1, 53–4, 55–6, 64–5, 104
 Hill estimator 122, 140–1
 historical percentiles, annualization of
 Value-at-Risk 169–71
 historical Value-at-Risk 116–17,
 169–71
 homogeneity of hedge funds 11, 23–30,
 33–6, 37–41
 hostile takeover bids 58
 HRFX 54
 hybrid approaches 83–5, 137–8,
 148–50
 idiosyncratic risk,
 Value-at-Idiosyncratic-Risk
 103–17, 145, 147, 149–50, 195,
 208, 209–14
 i.i.d. *see* independently and identically
 distributed . . .
 implicit aspects, Style Value-at-Risk
 Model 3, 83, 181–205
 Implicit Value-at-Idiosyncratic-Risk,
 definition 195, 211
 Implicit Value-at-Risk Model
 see also Best Choice . . .
 concepts 3–4, 5, 30, 83, 181–205,
 207–14, 226–31
 risk budgeting 207–14
 Implicit Value-at-Strategy-Risk,
 definition 210–11
 implied volatility 58–9
 independent administration, fund
 managers 14–15
 independently and identically distributed
 (i.i.d) returns 156, 157–78
 indices of indices approaches 37
 indices means, location parameters
 142–5
 information systems
 see also structural risk
 concepts 71–5
 institutional investors
 delegated index selections 65
 hedge funds 1, 4, 9–30, 45–6, 57,
 59–60, 65, 66–7, 71, 78–9, 81
 types 11–12
 insurers 155–6
 inter-correlations, classifications 34–6
 interest rates 77, 88–90, 200–3

- internal controls
see also structural risk
 concepts 71–5, 76–8
- interquartile spreads, returns 28–30
- intra-correlations, classifications 34–6
- investable indices 10–11, 23, 31, 42, 43, 48, 50–1, 53–4, 55–6, 64–8
- InvestHedge* database 24–9, 117
- investment banks 69–70
- investment strategies
see also alternative . . .
 structural risk 72–4, 81–3, 99–100
- Jemmco fund 49
- Karlweis, Georges 28–9
- Kat, Harry M. 61–2
- Kolmogorov–Smirnov statistic
 135–6
- kurtosis coefficient
see also fat tail . . .
 annualization issues 159–78
- L*-moment conditions 123–4
- Lamont, Owen 18
- Laplace Approximated Maximum Likelihood Estimator 37, 39
- length of operating history, structural risk 72, 74–5
- leptokurtic distributions, concepts
 159–62, 164–7
- leverage, concepts 1, 19–20, 76–8, 88, 91–2, 102, 108–9, 223–4
- leverage risk, concepts 92, 109, 223–4
- Lhabitant, François-Serge 3, 30, 40, 46, 100–17
- LIFO 86
- likelihood ratio (LR) 37, 39, 116
- liquidity crisis (2007–2008) 10–11, 224–5, 231
- liquidity risk 20–1, 27–8, 54, 58, 62, 73–4, 75–8, 87–94, 108–9, 224–31
- liquidity suppliers, hedge funds 20–1
- liquidity-adjusted Value-at-Risk 226–31
- Liquidity-at-Risk *see* Cash-Flow-at-Risk
- listings, fund managers 14–15
- location parameters 142–5
- London Stock Exchange 17
- long term interest rate risk (LTIR) 77, 89–90
- long/short style 9, 13–14, 19–20, 26–7, 33, 35, 41–3, 52, 72–3, 79–82, 86–8, 102, 106–17, 141, 148–50, 156, 230–1
- annual style distributions of the testing periods in percent 13–14, 33
- backtesting 106–17, 148–50
- intra-correlations/inter-correlations 35
- risk management 76–7, 86–8, 114–17
- LTCM 17, 19–20, 22, 81–2, 107–9, 130–7, 223–4
- macro consolidation, risk management 79–80, 100, 114–17
- managed accounts 67, 79–80
- managed futures style 33, 35, 41–3, 52–3, 63, 102, 106–17, 130–7, 148–50, 230–1
- see also* CTAs
- annual style distributions of the testing periods in percent 33
- backtesting 106–17, 148–50
- intra-correlations/inter-correlations 35
- Manhattan distance 38–41
- margin calls 90
- market efficiency 17–18
- market risk
 concepts 1–5, 75–8, 81, 83, 86–7, 91–2, 99–100, 103–17
- types 99–100
- marketing forces 64–5
- maximum likelihood estimates (MLE)
 37, 39, 120–54, 217–18
- mean 142–5, 157–62, 191–8
- mechanical replication, passive hedge fund indices 56–9
- median 37–8, 151
- merger arbitrage 19, 26–7, 52–3, 56–8, 86, 90–2, 114–17, 148–50
- concepts 19, 52–3, 56–8, 86, 90–2, 148–50
- mechanical arbitrage 56–8
- risk management 90–2, 114–17
- stock lending 86
- method of moments (MoM), concepts 122, 123–37
- method of probability weighted moments (PWM), concepts 122, 123–37
- micro consolidation, risk management 79–83, 100

- Microbia Inc. 20
MLE *see* maximum likelihood estimates
model risks, concepts 87–90
modern cluster analysis, heterogeneity
 of hedge funds 36–41, 61, 187
modern portfolio theory 18
monitoring, Value-at-Risk 5, 109–17,
 197–8, 215–21
Monte Carlo simulation 136
Moody's 200, 229–30
mortgages 30, 224
MSCI 31, 43, 53–4, 55–6, 64–5, 148–9,
 162–78, 203–5
multi-asset structures 70–1
multi-index model, concepts 100–17
multi-managers' portfolios 71, 79–80,
 106–7, 207–14
multi-strategy style 11–30, 33, 35, 41–3,
 78–9, 105–17, 129–37, 230–1
 see also funds of funds
 annual style distributions of the
 testing periods in percent 13–14, 33
 backtesting 105–17, 148–50
 intra-correlations/inter-correlations 35
Müntefering, Franz 17
mutual funds 9–10, 100, 202–5
- Net Asset Values 99–100
net exposures
 see also leverage . . .
 concepts 86–8, 92
new market structures, hedge funds 59
new Style Value-at-Risk Model 119–20,
 145–54, 156–78, 197–8, 208–14,
 226, 230–1
non-linear model, BCIM 202–5
non-listed securities, structural risk
 73–4
non-myopic risk measures 227–39
normal distributions 2, 119, 138–9,
 152–4, 155–62, 216–21
Northern Rock 224
- OLS *see* ordinary least squares
operational risk, concepts 1–2, 30,
 69–70, 71–5, 85
optimality illusion, concepts 54–6,
 182–6
options 61–2, 82, 94–5
ordinary least squares (OLS) 191–8
organizational size, structural risk 72–4
original Style Value-at-Risk Model
 20–1, 99–117, 147–50, 174–5,
 196–8, 213, 228–9
out-of-the-money European put options
 82
over-diversification problems,
 heterogeneity of hedge funds 61–2,
 65, 184–6, 228–9
over-the-counter derivatives 15–16,
 73–4
overview 1–5
- parameterization, Style Value-at-Risk
 Model 5, 99–100
Pareto distributions 119–36
passive hedge fund indices 4, 32, 36–7,
 46–68, 82–3, 100
 clones illusion 56–68
 concepts 32, 46–68, 82–3, 100
 conclusions 64–8
 creation methods 56, 59
 delegated index selections 65
 exposure replication 59–63
 failures 32
 illusions 56–68
 mechanical replication 56–9
 replication 56–68
 systematic hedge funds 63, 68
'pasteurisation', hedge funds 28–9
PCA *see* Principal Component Analysis
peaks over threshold approach,
 CS/Tremont hedge fund indices
 128–37
pension funds 11–13
persistence characteristics, funds of
 funds 23–30
PIPEs 16, 74
Platinum sample 32
platykurtic distributions 159–62
portfolio Implicit Value-at-Risk,
 definition 211
portfolio management 1–2, 10–11, 54–5,
 61–2, 65, 73, 78–83, 90–1, 138–9,
 207–14
 see also fund managers
portfolio Synthetic Implicit
 Value-at-Risk, definition 211
portfolio Synthetic
 Value-at-Strategy-Risk 209–14
portfolio Value-at-Risk 209–14
portfolio Value-at-Strategy-Risk 209–14

- pricing issues 14–17, 72–3
see also valuations
- primitive trend-following strategies, ten factor model 199–202
- Principal Component Analysis (PCA) 187–98, 199–205
- private equity, concepts 20–1, 73–4
- private placements 16–17, 72–4
- probit model, hedge funds demise 216–21
- pure quantitative analysis, risk management 83–5
- put options 82, 94, 202–5
- quadratic form, critique 136–45
- qualitative analysis 1–5, 70–1, 78–9, 83–5
- quality issues
 BCIM 196–8
 fund managers 67–8, 79–80, 99–100, 106–7, 202–5, 207–14, 215–31
 hedge fund indices 46–8
- quantiles, extreme quantiles 127–31
- quantitative risk measures
 concepts 1–5, 78–85, 215–21
 historical background 1–2
 hybrid approach 83–5
 qualitative analysis 1–2, 78–9, 83–5
- R-square 181–205, 217–21
- redemption restrictions, hedge funds 21–2
- Refco bankruptcy 65
- regression models 60–1, 101, 117, 181–205, 216–21
- regulations, hedge funds 17–23
- relative error
 definition 143–4
 distributions at December 2006 173–5
- relative-value strategies 58
see also convertible . . . ; equity market neutral . . . ; fixed income . . . ; merger arbitrage
- replication 56–68
see also clones
- representative hedge fund samples 57, 62–3, 64–8, 105–6, 137, 182–6
- representativeness illusion, concepts 49–54, 62–3, 64–8, 105–6, 137, 182–6
- reputation problems, hedge funds 17–23
- restrictive classifications, concepts 33–8, 182–6
- returns
 asymmetry of returns 2, 64, 94–5, 158–62
 concepts 1–3, 4, 9–30, 31–43, 45–6, 52–3, 59, 61–4, 100–1, 207–8, 218–21
 dead funds 218–21
 fund managers 1–2, 9–30, 31–6, 66, 207–8, 215–21
 funds of funds 24–30
 heterogeneity of hedge funds 2–3, 4, 28–30, 31–43, 45–6, 52–3, 59, 61–2, 182–6
 interquartile spreads 28–30
 intra-correlations/inter-correlations 34–6
 replication of distributions 63–4
 volatility 2, 4, 33–4
- reverse swing cliquet products 70–1
- RICI 203–5
- risk allocations, concepts 207–14
- risk assessments, hedge funds 76–8, 85–92, 128–37, 155–78
- risk attribution
see also risk budgeting
 BCIM attribution 213–14
 ‘before and after’ attribution 30, 211–12
 closed form attribution 212–14
 concepts 30, 207–14
 New Style attribution 213
- risk budgeting 5, 30, 71, 76–8, 106–7, 119–54, 207–14
 concepts 30, 207–14
 risk decomposition 211–14
 uses 30, 207–8
- risk consolidation, tail dependence 138–42, 194–5, 213
- risk controls, concepts 19–20, 28–30, 75, 76–8, 109
- risk decomposition
see also risk budgeting
 concepts 211–14
- risk management
 alternative investment styles 13–14, 19–23, 33–4, 76–8, 85–92, 114–17, 129–37, 182–6

- risk management (*Continued*)
 - concepts 1–5, 19–23, 29–30, 60, 69–95, 99–100, 109, 207–14, 224–31
 - delegation risk 70–1, 75–8, 83–5
 - direct investment risk 78–85
 - due diligence 1–2, 66–7, 69–70, 72–3, 83–5
 - financing crises 10–11, 20–1, 224
 - four dimensions 69–95, 231
 - funds of funds 29–30, 78–83, 114–17
 - good approaches 69–71
 - hybrid approach 83–5, 137–8
 - macro consolidation 79–80, 100
 - micro consolidation 79–83, 100
 - pure quantitative approach 83–5
 - software 78, 80–1
 - strategy risk approach 79, 81–5, 99–100, 103–17, 138–45
 - underestimations 112–17, 119–20, 196–8
 - underlying risk approach 78–81, 83–5, 99–100
- risk matrix, alternative investment styles 76–8
- risk measures
 - see also* quantitative . . . ; Value-at-Risk . . .
 - alternative investment styles 13–14, 33–4, 76–8, 85–92, 114–17, 129–37, 182–6
 - non-myopic risk measures 227–39
 - square root of time rule 155–6, 161–78
- risk premiums, concepts 19–20, 57–8, 90–2, 93–5
- risk transfers 19–20
- risk-free rates 94, 199–205
- risk–reward profiles, strategy comparisons 66
- RiskMetrics Group 62, 103–4
- Royal Bank of Canada 64
- Russian Default Crisis 107–9, 130–7, 227–8
- S&P . . . 48, 49, 53, 60, 64–5, 199–205
- samples
 - representative hedge fund samples 57, 62–3, 64–8, 105–6, 137, 182–6
 - testing sample 32–3, 39–40, 105–17
- SEC *see* Securities and Exchange Commission
- securities
 - distressed securities 52, 72–3
 - structural risk 72–5
 - valuations 10–11, 14–17, 72–3
- Securities and Exchange Commission (SEC) 17, 21
- Senior Supervisors Group 224
- Sharpe (1988) model 100–3
- short bias style *see* dedicated short bias style
- short positions, straddles 61, 202–5
- short term interest rate risk (STIR) 77, 89–90
- short-selling 17–23, 65, 77, 85–6, 94–5, 129–37
- side pockets 14–17, 72–4
- size of hedge fund industry 11–13
- skew-gamma effects 71
- skewness
 - see also* asymmetry . . .
 - annualization issues 158–78
- Sklar's theorem 151–4
 - see also* copulas
- software, risk management 78, 80–1
- specific event risk, concepts 77, 93–5
- square root of time rule 155–6, 161–78
- standard deviations 159–78, 184–6, 218–21
- start-up funds 12–13, 20–1, 74–5
- steadiness considerations, BCIM 198
- stock lending 86, 229–30
- stop-losses 1, 76–8, 81–2, 85–6
- straddles 61, 202–5
- strangles 94
- strategy risk approach, concepts 79, 81–5, 103–17, 138–45
- stress tests, concepts 107–9, 225–6
- structural developments (2006–2007), hedge funds 10, 14–17
- structural risk
 - concepts 1–2, 30, 71–5
 - definition 71–2
 - due diligence 1–2, 72–3
 - investment strategies 72–4, 81–3, 99–100
 - length of operating history 72, 74–5
 - organizational size 72–4
 - risk controls 75

- Student distribution 119, 152–4,
165–7
- style drift models 41, 184–6
- Style Value-at-Risk Model
- annualization issues 156–78
 - backtesting 104–17, 144–5, 147–50,
196–8
 - concepts 3–5, 30, 99–117, 119–54,
196–8, 207–14, 215–21
 - confidence levels 99–100, 119, 130,
184–6
 - critique 5, 107–17, 136–7, 181–6
 - heterogeneity 40–1
 - implicit aspects 3, 83, 181–205
 - limitations 5
 - monitoring benefits 215–21
 - new model 119–20, 149–54, 156–78,
197–8, 208–14, 226, 230–1
 - original model 99–117, 147–50,
174–5, 196–8, 213, 228–9,
230–1
 - parameterization 5, 99–100
 - risk budgeting 207–14
 - Synthetic Value-at-Strategy-Risk
138–45, 147–50, 194–5, 197–8,
209–14
 - underestimated risk sources 112–17,
119–20, 196–8
- subprime mortgages 30, 224
- swaps 89–90
- swing cliquet products 70–1
- Synthetic Implicit Value-at-Risk,
definition 195, 197–8
- Synthetic Value-at-Strategy-Risk
138–45, 147–50, 194–5, 197–8,
209–14
- systematic hedge funds, passive hedge
fund indices 63, 68
- systemic risk 17, 18, 20–1
- T-bills 89
- tail dependence
- concepts 138–42, 147–50, 154,
194–8, 213
 - correlation 138–9, 154
- tails 2, 64, 119–54, 155–6, 159–78
- Tass . . . 32, 37, 39, 104
- ten-factor model, concepts 199–202
- terrorist attacks 88
- testing sample, heterogeneity of hedge
funds 32–3, 39–40, 105–17
- time horizons 142–3, 155–78
- transparency issues 12–13, 79–81
- turnover statistics, hedge funds 10–14,
29–30, 55
- UBP 3, 32, 223–4
- UCITS III funds 23, 46, 64
- unconditional distributions, conditional
distributions 155
- underestimations, risk management
112–17, 119–20, 196–8
- underlying positions 1, 57, 78–85,
99–100
- underlying risk approach, funds of funds
78–81, 83–5, 99–100
- valuations 10–11, 14–17, 72–5
see also pricing . . .
- Value-at-Idiosyncratic Risk (ViR)
concepts 103–17, 145, 147, 149–50,
195, 208, 209–14
definition 103–4, 145, 147
- Value-at-Risk
see also Implicit . . . ; Style . . .
- annualization issues 155–6, 161–71
 - backtesting 104–17, 144–5, 147–50,
196–8
 - beyond Value-at-Risk 223–31
 - concepts 1–5, 30, 78–9, 83, 99–117,
162–78, 225–31
 - Cornish–Fisher expansion 167–9,
171–2
 - critique 2, 99–100, 107–17, 136–7,
181–6, 225–31
 - dead funds 215–21
 - difficulties 2
 - EVT 99, 119–54, 171–2, 175–8,
194–8
 - exceptions monitoring 5, 109–17,
147–50, 197–8, 215–21,
229–31
 - Expected Shortfall 99–100,
225–6
 - extreme quantiles 127–31, 230–1
 - GARCH 172–4, 177–8, 227–8
 - heterogeneity 40–1, 182–6
 - leptokurtic distributions 164–7
 - liquidity-adjusted Value-at-Risk
226–31
 - methods 2–5, 78–9, 83
 - multi-managers’ portfolios 208–14

Value-at-Risk (*Continued*)

Net Asset Values 99–100
square root of time rule 155–6,
161–78
time horizons 142–3, 155–78
underestimated risk sources 112–17,
119–20, 196–8
Value-at-Strategy-Risk (VsR)
concepts 103–17, 138–45, 194–5,
209–14, 229–31
definition 103–4, 145–7
vanilla cliquet products 70–1
variance 2, 103–4, 138–9, 142–7, 159,
172–4, 189–90
variance-covariance Value-at-Risk 2,
103–4, 189–90
ViR *see* Value-at-Idiosyncratic-Risk
VIX 203–5
vol-gamma effects 70–1

volatility

annualization issues 158–61
concepts 2, 4, 33–4, 58–9, 64, 77,
85–6, 92, 94–5, 158–61, 172–4,
177–8, 218–21, 225–6
dead funds 218–21
implied volatility 58–9
risk concepts 77, 92
VsR *see* Value-at-Strategy-Risk
Wald statistic 204
Wilshire small cap minus large cap
return (SC - LC) 199–203
Wilson, Neil 29
yield curve interest rate risk (YCIR) 77,
89–90
zero mean assumption 142–3

Index compiled by Terry Halliday

<http://www.pbookshop.com>