

Index

- abnormal return, 118, 119
- accounts payable, 21
- accounts receivable, 21
- actively managed funds, 46, 100, 114
- adjusted present value
 - and project values, 175, 176, 180
 - definition, 167
 - examples, 167
- adverse selection, 45
- agency costs
 - and capital structure, 341
 - empirical tests of, 342
 - nature of, 331
 - of debt, 336
 - of equity, 338
- agency problems
 - of debt, 335
 - of dual class stock, 343
 - of equity, 337
- agency relations
 - and cash holdings, 338, 344
 - and dividends, 336, 338, 343
 - and entrenchment, 338
 - and leverage, 335, 338, 342
 - contracts for, 333
 - definition, 330
 - firm-debtholder, 335
 - management-stockholder, 337
- algorithmic trading, 113
- American options, 186
- amortization factors, 15
- annuity
 - future value of, 15
 - present value of, 13
- arbitrage pricing theory
 - and factor analysis, 89
 - assumptions of, 89
 - derivation of, 84
 - tests of, 87
- arbitrage strategies, 83, 201
- arbitrage theorem, 202
- Arrow–Pratt risk aversion coefficients, 34
- asset substitution, 287, 313, 335
- asset-backed securities, 140
- assets
 - current, 21
 - fixed, 21
 - specificity, 152
- asymmetric information, *see* information asymmetry
- at the money options, 187
- autocorrelation
 - definition, 100
 - in stock returns, 103
- balance sheet, 20
- bankruptcy costs, *see* financial distress costs
- basis risk, 312, 321, 323
- beta
 - death of, 80
 - definition of, 58
 - estimation of, 80
 - in CAPM, 73
- bid–ask spread, 43, 109
- binomial option pricing
 - one-period model, 208
 - two-period model, 211
 - and dividends, 213
 - hedging portfolio, 212
 - of American options, 214
 - of put options, 215
 - setting of, 207
- bird-in-the-hand fallacy, 160
- Black and Scholes’ option pricing
 - and dividends, 238
 - derivation of, 230
 - determinants of, 233
 - example of, 235
 - implied volatility, 240
 - interpretation, 233
 - matching with discrete time, 239
 - necessary market conditions, 230
- Black’s result, 67
- book rate of return, 28
- book values, 23

- broker, 45
- broker market, *see* order-driven market
- brokerage account, 47
- Brownian motion
 - geometric, 225
 - standard, 224
- bull–bear bonds, 139
- bullet loan, 138
- business risk, 165
- buy-and-hold strategy, 107

- calendar effects, 129
- call option, 186
- callable bond, 139, 337
- called dealer market, *see* quote-driven market
- capital market intervention, 41
- capital market line, 69, 74, 228
- capital markets, 42, 137
- capital structure
 - and equity return, 144, 147
 - and financial distress costs, 149, 150
 - and taxes, 145, 150
 - definition, 136
 - empirical implications, 153
 - irrelevance, 143
 - pecking order theory, 152
 - tests of, 153
 - trade-off theory, 148
- CAPM
 - and (un)systematic risk, 73
 - and discount rates, 74
 - and Nasdaq-100 index, 7
 - and performance measures, 76
 - assumptions of, 78
 - certainty equivalent formulation, 75
 - derivation of, 71
 - testability of, 81
 - tests of, 79
 - use in practice, 181
- cash cows, 22
- cash flow rights, 347
- cash flow statement, 22
- cash markets, 42
- cash-and-carry relation
 - analysis of, 317
 - and dividends, 319
 - derivation of, 315
 - example of, 318
- catastrophe bond, 139
- certainty equivalent
 - formulation of CAPM, 4, 76
 - in utility theory, 33
- characteristic line, 80, 87, 119
- clearing house, 41, 185, 292, 309
- clientele effects, 159
- closed-end funds, 114
- commission, 46
- complete markets, *see* market completeness
- compound options, 258
- compounding
 - continuously, 12
 - discretely, 11, 52
- conglomerate merger, 299
- consol, 18, 139
- contrarian strategy, 108
- convenience yield, 320
- convertible bond, 139, 337
- corporate governance, *see* governance systems
- correlation coefficient, 58, 74
- cost-of-carry relation, 320
- counterparty risk, *see* credit risk
- coupon bond, 138
- covenants (in debt contract), 336
- covered interest arbitrage, 325
- credit default swaps, 140
- credit rating, 293
- credit risk
 - and bond prices, 296
 - and stock prices, 297
 - empirical tests, 298
 - insurance against, 292
 - measurement
 - direct, 293
 - indirect, 296
 - Merton model of, 297
- cross hedging, 321
- cumulative abnormal return, 118, 119

- data snooping, 128
- dealers, 43
- debt
 - option value of, 288
- delta hedging, 237
- depreciation, 19
- designated market makers, 44
- discount rates
 - and capital structure, 166
 - and CAPM, 74
 - and financing rules, 169
 - and Miles–Ezzell formula, 175, 180
 - and MM formula, 176
 - stepwise adjusting, 174, 176, 179

Index

- diversification
 - and correlation, 58
 - effect of, 34, 56
- dividends
 - and bird-in-the-hand fallacy, 160
 - cash, 157
 - clienteles effects, 159
 - empirical studies of, 160
 - irrelevance, 157
 - sticky, 160
 - stock repurchases, 158
- Dow-Jones, 107, 110
- dual-class stock, 138, 343
- durables effect, 152, 333
- earnings announcements, 122
- economic depreciation, 29, 96
- effective annual rate, 11
- efficient frontier, 62, 69
- Efficient Market Hypothesis, *see* market efficiency
- efficient portfolios, 70, 73
- entrenchment, 338, 344
- equity
 - definition, 21
 - option value of, 288
 - value under insolvency, 291
- estimation window, 119
- European options, 186
- event studies
 - dividends, 124
 - earnings announcements, 122
 - example of, 119
 - merger announcements, 123
 - methodology, 118
 - stock issues, 124
 - stock splits, 121
- event window, 119
- excess return
 - definition, 98
 - distribution of, 98
- exchange, 43
- exchange rate risk
 - example of, 309
 - forward rate, 324
 - hedging, 323
 - parity relations, 326
 - terminology, 324
- exotic options, 186
- face value, 139
- factor analysis, 89
- factoring, 292
- fair game model
 - in factor returns, 85
 - in market efficiency, 98
- Fama–French three-factor model, 88
- filter rules, 106
- financial distress costs, 149, 151, 313
- financial engineering, 140
- financial risk, 144, 165
- financing rules
 - and discount rates, 169
 - predetermined debt, 167, 170, 175
 - rebalanced debt, 167, 171, 174
- first best contract, 333
- first pass regression, 80, 87
- Fisher effect, 327
- Fisher separation, 38
- flow to equity method, 181
- foreign exchange, *see* exchange rate risk
- forward contracts
 - and commodities, 320
 - and convenience yield, 320
 - and net convenience yield, 321
 - cash-and-carry pricing, 315
 - cost-of-carry pricing, 319
 - definition, 309
 - for currencies, 324
- forward currency rate, 324
- forwards, *see* forward contracts
- future contracts, 309
- future price, 309
- game theory, 279
- Girsanov's theorem, 227
- golden shares, 138
- Gordon growth model, 17
- governance systems
 - and banks' voting rights, 347
 - and ownership pyramids, 347
 - and performance
 - empirical, 349
 - theory, 348
 - Anglo-American, 345
 - as agency costs, 339
 - definition, 345
 - German, 346
- growth stocks, 81
- hedge funds, 115
- hedge ratio, 210, 233, 322
- hedging
 - and agency costs, 313, 333
 - and basis risk, 312
 - applications of

- hedging (*cont.*)
 - cross hedging, 321
 - foreign exchange risk, 323
 - contracts used in, 309
 - definition, 309
 - example of, 310
 - motives for
 - empirical, 314
 - theoretical, 313
- hedging portfolio, 210, 212
- implied volatility, 240
- in the money options, 187
- income bonds, 138
- income statement, 18
- index bonds, 139
- index funds, 114
- index models
 - multi-index, 83
 - single index, 82, 119
- indifference curves
 - definition, 31
 - in portfolio selection, 62
- information aggregation, 41
- information asymmetry
 - and capital structure, 152
 - and dividends, 160
- information ratio, 77
- initial public offering, 42, 124
- insider trades, 126
- insolvency, 291
- intangible assets, 21, 24
- interest rate parity, 326
- internal rate of return, 28
- internalization, 48
- investment banks, 46
- investment frontier, 37
- investment opportunity set, *see* investment universe
- investment strategies
 - charting (technical analysis), 110
 - filter rules, 106
 - momentum and contrarian, 108
 - monkey strategy, 113
 - moving averages, 112
 - pairs trading, 112
 - statistical arbitrage, 113
 - tests of, 106
- investment universe, 61
- irrelevance theorem, 143
- January effect, 129
- Jensen's alpha, 77
- Jensen's inequality, 33
- joint hypothesis problem, 128
- junior debt, 137, 336
- junk bond, 139
- leverage, 103, 142
- limit order, 43, 47
- liquidity, 41
- logit analysis, 295
- long position, 47
- margin, 47, 188, 310
- market clearing prices, 68
- market completeness, 200
- market efficiency
 - and price discovery, 41
 - anomalies, 129
 - definition, 98
 - fair game model, 98
 - forms of, 99
 - martingale model, 98
 - misconceptions, 130
 - predictions of, 100
 - random walk model, 99
 - tests of
 - event studies, 117
 - fund performance, 114
 - investment strategies, 106
 - return correlation, 103
 - strong form, 125
- market equilibrium, 68
- market maker, 43
- market model, 118
- market neutral, 113
- market order, 47
- market portfolio, 70
- market price of risk, 70, 76, 200, 228
- marketability, 41
- marking to market, 309
- Markov property, 99, 221, 224
- martingale
 - definition, 99
 - method, 230
 - property, 99, 205, 229
- maturity, 186
- maximum return portfolio, 62
- merchant bank, 46
- merger announcements, 123
- mergers
 - and default probability, 299
 - call option valuation, 302
 - financial effects of, 299
 - put option valuation, 303

Index

- Merton model, 297
- Miles–Ezzell formula, 173, 175, 180
- minimum variance portfolio, 62, 66
- Modigliani–Miller
 - formula, 171, 176
 - proposition 1, 143, 147
 - proposition 2, 144, 147, 171, 172
- momentum strategy, 108, 130
- money markets, 42, 137
- moneyiness, 187
- monkey strategy, 113
- moral hazard, 45
- moving averages, 112
- mutual funds, *see* open-end funds

- Nasdaq
 - 100 index, 6, 7, 51, 81, 103, 110, 112
 - composite index, 117, 119
 - stock market, 6, 43, 51, 63, 107
- Nash equilibrium, 280
- net asset value, 114
- net convenience yield, 321
- net present value
 - as investment criterion, 28, 39
 - in examples, 27
- no-arbitrage condition, 203, 206
- normal return, 118

- open-end funds, 114
- opportunity cost of capital
 - and APV, 167
 - and Miles–Ezzell formula, 173
 - and MM formula, 171
 - and tax shields, 169, 172
 - definition, 165
 - in examples, 25, 168, 179
- option positions
 - combined
 - put–call parity, 192
 - spreads, 191
 - straddles, 191
 - simple, 188
- option pricing
 - American options, 214, 273
 - and dividends, 213, 238
 - binomial formula, 210
 - Black and Scholes formula, 232
 - put options, 215
 - relations between prices, 196
 - state-preference foundations, 197
 - upper–lower bounds on, 193
- options
 - compound, 258
 - corporate securities as, 285
 - delta, 210, 233, 234, 237
 - Greeks, 233
 - intrinsic value, 187
 - maturity, 186
 - moneyiness, 187
 - payoff diagrams, 188
 - premium, 186
 - profit diagrams, 188
 - rights and obligations, 186
 - style, 186
 - terminology, 186
 - time value of, 187
- order-driven market, 43
- out-of-the-money options, 187
- over the counter, 185
- over-the-counter market, 43
- overinvestment, 338
- overreaction, 101
- ownership pyramid, 347

- pairs trading, 112
- parity relations, 326
- passively managed funds, *see* index funds
- payback period, 28, 182
- payout ratio, 153, 160, 215
- pecking order theory
 - explanation of, 152
 - tests of, 155
- penny stocks, 109
- perfect market, 35
- perfect markets, 78, 142
- perpetuities, 17
- pig cycles, 3
- portfolio return, 55
- portfolio risk (variance)
 - and correlation, 60
 - contribution to, 57
 - definition of, 55
 - systematic, 57, 73
 - unsystematic, 57
- preferred shares, 138
- price discovery, 41
- price-driven market, *see* quote-driven market
- pricing kernel, 206
- primary markets, 42
- principal components analysis, *see* factor analysis
- prisoners’ dilemma, 279
- probability measure, 206
- probit analysis, 295
- property rights, 137

- proxy rules, 347
- pure discount bond, *see* zero-coupon bond
- pure factor portfolio, 86
- pure play method, 177, 261
- put option, 186
- put–call parity, 191, 236, 272, 304
- puttable bond, 139, 337
- quote-driven market, 43
- random walk, 99, 221
- rating agencies, 293, 337
- rating migration, *see* credit rating
- real options
 - and game theory, 279
 - interaction, 272, 276
 - proprietary, 259
 - shared, 259
 - to abandon, 266
 - to default, 269
 - to defer, 261
 - to extend, 273
 - to follow-up investments, 265
 - to phase investments, 268
 - to terminate, 273
- real options analysis
 - analogy with stock options, 257
 - compared with DCF analysis, 263
 - of mergers, 301
 - sources of option value, 258
- rebalanced debt, 171
- recovery rate, 293, 296
- redundant securities, 200
- replicating portfolio, 209
- retained earnings
 - definition, 21
 - statement of, 22
- return generating process, 83
- returns
 - continuously compounded, 12, 220
 - correlation, 103
 - discretely compounded, 11, 52
- reverse stock splits, 121
- risk aversion coefficient, 34
- risk incentive, 287, 313
- risk measures, 51
- risk neutral probabilities, 204, 206, 210
- risk neutral valuation
 - and return equalization, 205
 - and risk-neutral probabilities, 203
 - and state prices, 206
 - and the pricing kernel, 206
 - conditional nature of, 204
 - martingale property of, 205
- Roll's critique, 81
- runs test, 106
- sample selection bias, 120
- seasoned public offering, 42, 124
- second best contract, 335
- second pass regression, 80, 87
- secondary markets, 42
- secured debt
 - description, 137
 - in agency theory, 336
- Securities and Exchange Commission, 125
- securitization, 138, 140
- security market line, 73, 74, 228
- semi-strong market efficiency, 99
- semi-variance, 54
- senior debt, 137, 336
- Sharpe ratio, 76, 115, 228
- short position, 47
- short selling, 60
- sinking fund, 15
- small firm effect, 129
- special purpose entity, 140, 294
- spot contract, 309
- spot markets, 42
- spot price, 309
- spreads, 191
- Standard and Poor's, 81
- state prices, 200, 206, 210
- state securities, 200
- statistical arbitrage, 113
- step function, 231
- stochastic differential equation, 225
- stochastic process
 - Brownian motion, 224
 - diffusion term of, 225
 - drift term of, 225
- stock picking, 114, 116
- stock repurchases, 158
- stock split, 121
- stop-loss order, 47
- straddles, 190
- straight line depreciation, 25
- strong form market efficiency, 99
- structured products, 140
- sunk costs, 24, 269
- survivorship bias, 116
- swap, 140, 323
- synthetic forward, 316
- tangible assets, 21
- tax shield, 146

Index

- technical analysis, 110
- third market makers, 48
- time value
 - of money, 10
 - of options, 187
- timing, 114
- trade-off theory
 - explanation of, 148
 - tests of, 154
 - use of, 182
- transforming probabilities
 - gambling analogy, 222
 - necessity of, 227
 - technique of, 227
- Treynor ratio, 77
- two fund separation, 69
- two-pass regression, 80, 87
- underinvestment problem, 313, 335, 336
- underreaction, 101
- underwriting, 46
- unlevering
 - betas, 177
 - discount rates, 171, 173, 174, 176
- utility, 30
- utility functions
 - and CAPM, 79
 - definition, 30
- value at risk (VaR), 54
- value stocks, 80
- variance-covariance matrix, 56, 81
- voting rights, 347
- WACC, 144
- Walrasian auctioneer, 69
- weak form market efficiency, 99
- zero-coupon bond
 - definition, 139
 - example of, 285, 301