Index

Absolute returns, 227–228
Acadian Asset Management, 4
Acadian Emerging Market Portfolio, 69, 71, 73
ACE curves, 280
Active investing:
  Efficient Market Hypothesis (EMH) versus, 6
  opposition to, 1, 2
  passive investing versus, 6–8
  S&P 500 and, 7–9
Active risk control:
  nature of, 39
  passive risk control versus, 38–49
Algorithmics, 6
Alpha models, 11–25. See also Graham model
  alpha Testing platforms, 161
  benchmarks and, 12–16
  beta factors versus, 16–18, 20–21, 23–24, 39–40, 43–44
  Capital Asset Pricing Model (CAPM), 1–2, 16–18
  characteristics of, 21–25
  considering alone, 19
  correlation with beta, 16–18, 39–40
  history and, 11–12
  holding period, 19–20, 24–25, 86
  interpreting, 17
  methods of alpha searching, 20–25
  modern era of, 16–18
  nature of, 6, 11, 20, 43, 237
  origins of, 11–12, 16
  studies based on, 114–122
  volatility in, 113–122
American Enterprise Institute, 286–287
American EuroPacific Growth, 72–73
American Fundamental Investors, 72–73
American Funds, 68, 70
American Washington Mutual, 73
Ameritrade, 25
APT, 253, 261, 277
Arithmetic return, 272
Asian Tigers, 299
Asness, Cliff, 146, 236, 295
Asset allocation, 152–153, 255–258
AT&T, 47–48
Avon, 9
Axioma, 6, 114, 253, 277
Back-tested results, in modeling, 138, 161–162
Baidu (BIDU), 45, 302
Bank of Communications, 288, 303
Barclays Global, 3
Barra, 32–33, 44, 114, 253, 277, 310
  MSCI-BARRA, 6, 277, 310
BarraGrowth, 32–33
BarraValue, 32–33
BASF, 301
Batterymarch, 4
Bear Stearns, 250, 293
Beat the Dealer (Thor), 278
Beebower, Gilbert L., 255–256
Behavioral finance, 8
Bell Labs, 235
Benchmarks, 12–16
  defining, 13–15
  hit rates, 166–168, 219–220
  market capitalization limits in, 247
  nature and uses of, 12, 163
  portfolio, 235–247
  problems with, 12–16
  in relative growth management, 154–157
  in relative value management, 153–154
Bernstein Research, 5
INDEX

Beta, 55–78. See also Capital Asset Pricing Model (CAPM); Fama-French model; Risk
alpha factors versus, 16–18, 20–21, 23–24, 39–40, 43–44
defining, 16, 64
g-factor and, 67–75, 172, 195, 215–217, 218
Graham and, 55–56
misapplication of, 64–65
as risk measure, 29
tracking error and, 19, 75–77, 226
volatility and, 65–67, 170–175
BHP Billiton, 302
Bing, 312
Black, Fischer, 1, 37, 266, 270
Black Box, 251
Black Jack, 278
Black-Scholes option pricing model, 4–5, 270
Black Swan, The (Taleb), 34–38
Black Swan events, 34–38, 205, 236–237, 243, 294
Bloomberg, 5, 251–254
Bloomberg, Michael, 251
Bluefin Trading, 4–5
Bogle, John C., 1–2, 129
Book to price (B/P):
in Fama-French model, 81–88
in Graham model, 173, 174, 195, 197, 198
Bootstrap with replacement, in modeling, 135–136, 179–180
Boston Consulting Group, 296
Boundary-from-harm principle, 244–245
BP (British Petroleum), 304–305
Brazil, 307
Break-apart price, 9
BRIC countries, 310
Bridgewaters Associates, 313
Brinson, Gary P., 255–256
Brinson attribution, 220–228, 253–254, 255–256
British Petroleum (BP), 304–305
Brownian motion, 269–270
Buffett, Warren, 56, 83, 85–86, 130, 150, 151, 154, 236, 258, 265, 301
BYD Auto, 301–302
Canada, 294
Capital Asset Pricing Model (CAPM), 12, 23, 41, 80–81, 170, 266
basic equation for, 2
factors used in quant modeling, 90–96, 114, 120–121
origins of, 1–2, 16
risk factors other than alpha factors, 181–182
CapitalIQ, 252–254
Cauchy, 238
Cause-and-effect examples, in modeling, 146
CBOE Market Volatility Index (VIX), 30–33, 41, 132–133, 182, 183, 185, 205, 241, 244, 257
Chaotic systems, 259–260, 261–262, 263
Charter Oak Investment Systems, 124
Chicago Quantitative Alliance, 3
Chrysler, 155
Cisco, 85, 156, 302
Citadel Investment Group, 4–5, 250, 313
Citigroup, 277, 311
ClariFI, 5, 251–253
Cliffs Natural Resources, 303
Coca-Cola, 44
Coda Automotive, 303
Columbia, 307
Columbia, 307
Community Reinvestment Act, 293
Complex systems, 260, 261–262
Complicated systems, 260
Compstat, 252, 253
Consultants:
in modeling process, 39–40, 152–154, 236
in modeling process, 39–40, 152–154, 236
in modeling process, 39–40, 152–154, 236
in modeling process, 39–40, 152–154, 236
in modeling process, 39–40, 152–154, 236
in modeling process, 39–40, 152–154, 236
in modeling process, 39–40, 152–154, 236
CoolTrade, 251
Correlation, 16–19, 39–40, 46–49, 144–148, 195–197
Cotes, Roger, 159
Covariance:
defined, 43
Monte Carlo runs, 50, 51
risk and covariance matrix, 28, 39–49
C++ programming language, 251
Crash of 1929, 134
Credit crisis (2008-2009), 114, 155, 247, 289, 292–297, 294, 311
Credit default swaps (CDS), 314
CSFB, 5
Cult of performance, 83
Index

Current ratio, in Graham model, 82–83, 88–89, 163, 164, 175, 176, 200
C-VAR, 52

Dalio, Ray, 313
Data availability:
free data and, 127
in modeling, 124, 127
Data mining, in modeling, 136–138, 139
Data-provider quants, 5
Data snooping, in modeling, 139
D.E. Shaw, 4–5, 313
De Bondt, Werner, 21
Deming, William, 235
Derivative markets, 314
Derman, Emanuel, 4–5
Deterministic systems, 258–259, 260
DFA, 4
Diversification, 152–153, 255–258
Dividend yield, in Graham model, 83–85, 88–89, 173–175
Dodd, David, 20
Dow Jones Industrial Average (DJIA), 3, 7, 67, 72–73, 313
Dreman, David, 151, 265
Drift rate, 272
Dukas, Helen, 193

EAFE Growth Index, 72
EAFE Index, 15, 310
Earnings growth, in Graham model, 85, 88–89, 176–177
Earnings to price (E/P), in Graham model, 173, 174, 195, 197
Ebay, 85
Efficient Market Hypothesis (EMH), 265, 269
active management versus, 6
inefficient/semi-efficient markets and, 8
origins of, 2, 6
Type 1 quants and, 3–4
Wilshire 5000 and, 7
Einstein, Albert, 27, 36–37, 55, 123, 193, 255, 285–286
Einstein, Pauline, 285
El-Erian, Mohamed, 9, 309
Emerging Market Index, 310–311
Enron, 155, 283
Equity Ratings, 250
ETF Market Opportunity, 13
E*Trade, 25, 249–250, 251
Exchange traded funds (ETFs), 3, 8, 13
Exogenous factors, in quant modeling, 121
Expected tail loss (ETL), 52
Export-Import Bank of China, 302
Extinction-level events (ELE), 33–38, 205, 236–243
Black swan events, 34–38, 205, 236–237, 243, 294
Graham on, 34, 38
multiple possible causes, 35, 36
nature of, 33–34
portfolio development and, 236–243
quant meltdown of August 2007, 36, 40, 155, 194, 214, 237, 256
Exxon, 248, 267–268, 271, 278–280, 303–304
Factor exposures or loadings, 160–173, 197–200
Factor returns, 42–43
concept of, 90, 197
as regression coefficients, 197, 228–232
in sorting test of Graham factors, 161
Factor testing. See Testing Graham factors
FactSet, 5, 32–33, 44, 45, 46, 51, 60, 94–95, 97, 114, 177, 182, 251–254, 280–281
Northfield U.S. Fundamental Equity risk model, 225
services of, 252–253
FactSet Fundamentals, 161, 162
FactSet MC VAR, 51–52
Fama, Eugene, 2, 80–81, 236
Fama-French model, 23, 41–42, 64, 80–88, 175, 261, 266
factors used in quant modeling, 90–96, 114, 120–121
origins of, 2
regression equation, 81–88
risk factors other than alpha factors, 181–182
size effect in, 275
Fannie Mae, 283, 292–294
FARC, 307
Fernholz, Robert, 236, 265, 266, 275, 279, 295
Feynman, Richard, 146
INDEX

Fidelity, 4, 25, 162, 241, 249
Fidelity Magellan, 13–15, 68, 70, 73–74
Fidelity Nasdaq Comp. Index, 13
Fidelity Small Value, 13
Fidelity Value Fund, 68, 70
FinAnalytica, 6, 114, 277
Financial engineering, 5, 8, 313–314
First Quadrant, 4
Fisher, Ken, 151
Flash traders, 4–5
Fokker-Planck equation, 265–266, 270–271
Forbes, Steve, 86
Ford Motor, 235
Forsythe, Greg, 250
Fortescue Metals Group Ltd., 302
FPA, 4
Fractals, 266–267
Frank, Barney, 283
Frechet distribution, 61–64, 67, 73–74
Freddie Mac, 283, 292–294
Freeport-McMoran, 303
French, Ken, 2, 81
Fundamental factors, in quant modeling, 120
Gabelle Equity Income, 12
GARCH (generalized autoregressive conditional heteroskedasticity), 262–263
Garvy, Robert, 275
Gauss, Carl, 57
Gaussian copula (Li), 238
Gaussian function. See Normal (Gaussian) statistics
Gaussian statistics. See Normal (Gaussian) statistics
GEICO, 258
General Electric (GE), 44, 303
Generalized autoregressive conditional heteroskedasticity (GARCH), 262–263
General Motors (GM), 155, 301–302, 305
Geode Capital, 4
Germany, 298–299
Global contagion, 292–297
Global Industry Classification Standard (GICS), 44, 45, 87, 98
Global Wealth Report, 296
GlobeFlex, 4
GMO, 9, 86, 129, 149–150
Google, 20, 51, 85, 93, 127, 137, 240, 270, 297, 312, 315
Google Finance, 269
Graham factor modeling, 193–232. See also Testing Graham factors
art versus science of modeling, 200–210
Brinson attribution, 220–228, 253–254, 255–256
compilation of data from, 201–205
correlation matrix between factors, 195–197
criteria for accepting factors, 194–195
g-Factors, 195, 215–217, 218
hit rates, 219–220
low-volatility model, 217–220
online broker services, 25, 249–251
other conditional information, 215–217
professional investment systems and, 251–254
quintile excess returns, 202–205, 208–209
regression with forward returns, 228–232
relative performance of models, 205–207
risk decomposition, 220–228, 253–254
Sharpe ratio, 216–217
standard deviation of cross-scenario returns, 207–209
surviving factors, 194–197
time-series of returns, 173–182, 210–216
weighting factors, 197–200
Graham model, 82–89. See also Graham factor modeling; Modeling; Testing Graham factors
absolute value and, 151
art versus science of modeling, 200–210
asset allocation, 152–153
basic formula, 89–90, 180
basis in economic theory, 139, 163
book to price (B/P), 173, 174, 195, 197, 198
current ratio in, 82–83, 88–89, 163, 164, 175, 176, 200
dividend yield, 83–85, 89–90, 173–175
earnings growth, 83, 89–90, 176–177
earnings to price (E/P), 173, 174, 195, 197
INDEX

Lakonishok, Josef, 128–129, 236
Laplace, Pierre, 57, 79
Law of large numbers, 13, 201
Legg Mason, 4
Lehman Aggregate, 72
Leptokurtosis, 60, 238
Leuthold Group, 5
Levy-Stable distributions, 37
Li, David X., 238
Lightspeed Financial, 251
Lipper, 12, 15, 17
Litterman, 1
Long Term Capital Management (LTCM), 48, 238–239, 241
Look-ahead bias in modeling, 125–126
Lorentz, H. A., 285–286
Low quality stocks, nature of, 8
LSV, 4
LTCM (Long-Term Capital Management), 48, 238–239, 241
Lucent Technologies, 47–48
Lynch, Peter, 4, 13, 130, 236, 265, 311
MACD (Moving Average Convergence), 90, 92
Maistre, Joseph de, 2
Malanga, Steven, 307
Mandelbrot, Benoit, 58, 266
Manning & Napier Fund, Inc., 69, 71, 72–73
Margin-of-safety concept, 160, 201, 243–244, 247, 264–265, 294
Market capitalization, 274–275
in Fama-French model, 81–88
in Graham model, 82, 89–90, 175, 176, 195, 230
limits in benchmarks, 247
Markov random walk, 269, 271–272
Markowitz, Harry, 1, 16–17, 27–28, 37, 40, 55–56, 79–80, 222, 225, 276
Martin, R. Douglas, 58–60
Marx, Karl, 295–296
Matlab, 136, 252
Maxwell, J. C., 27
MB Trading, 249, 251
Mean, 57–58
Merrill Lynch, 293, 311
Merton, Robert, 1, 37, 266, 270
Mexico, 305, 307
Mezrich, Joe, 94
Microsoft, 85, 156, 302
Miller, Bill, 4
Modeling, 123–137. See also Alpha models;
Capital Asset Pricing Model (CAPM);
Fama-French model; Graham factor
modeling; Graham model
art versus science of modeling, 200–210
asset allocation, 152–153
back-tested results, 138, 161–162
bootstrapping with replacement, 135–136, 179–180
building portfolios from models, 233–254
cause-and-effect examples, 146
consultants in, 39–40, 152–154, 236
correlation in, 144–148
data availability, 124
data mining, 136–138, 139
data snooping, 139
growth investing, 133, 150–151, 154–157
hindsight bias, 128–129
holding periods, 132–134
home bias, 123–124
in-sample testing, 134–135, 136–137, 138
investment consultants, 39–40, 152–154, 236
investment philosophy in, 129, 148–151, 153–157
look-ahead bias, 125–126
multifactor models, 138
out-of-sample testing, 134–135, 136–138
principal component analysis (PCA), 39, 145–146, 197
quality investing, 149–150, 155–156
relative growth managers, 154–157
relative value managers, 153–154
risk, 39–44
scenario testing, 131–134, 182–191
shocking models, 138
statistical significance, 140–144, 170–173
survivorship bias, 126–127
systematic measures in, 130–131
transparency in, 129–130
trust in models, 127–131
value investing, 133, 151, 153–154, 156–157
Modern Portfolio Theory (MPT), 266, 272–274, 286
behavioral finance and, 8
benchmarks used in regression, 13
erroroneous conclusions and, 29
origins of, 1, 6
Moivre, Abraham de, 57
Moly Mines Ltd., 302
Momentum strategies, 21, 40, 44–45, 90–113, 161
common themes in literature, 93–94
defensive, 87
tenterprising, 87
dexamples of momentum measures, 91–92
factors used in quant modeling, 121
holding periods, 93, 97–113
increasing investor interest in, 96–113
profitability of, 92–93
relation between returns and price, 87
testing momentum and earnings
dispersion, 94–96
Morgan Stanley, 311
Morningstar, 12–16, 14–15, 17, 175
Motorcycle Safety Foundation, 77
Moving Average Convergence/Divergence
(MACD), 90, 92
MSCI, 58, 131
MSCI-BARRA, 6, 277, 310
MSCI-Risk Metrics, 6
Mueller, Peter, 236, 295
Multifactor models, in modeling, 138
My Life As a Quant (Derman), 4–5
NASDAQ, 45
Navier-Stokes mathematical models, 146, 259
Netherlands, tulipmania and, 11–12
Newmont Mining, 303
News Corporation, 47
Nigerian National Petroleum Corp., 303
Nixon, Richard, 298–300
Nomura Securities, 5, 94, 128–129
Normal (Gaussian) statistics, 1, 35, 36, 37, 56–78, 238–239
assumptions behind, 56–57
criticisms of, 57–60
error properties and, 57
Frechet distribution versus, 61–64, 67, 73–74
mean value in, 57–58
Q-Q plots, 58–60
time-series plots, 60–62
Northfield Information Systems, 44, 45, 114, 225, 253, 277
Numeric Investors, 4
Obama, Barack, 295, 304–305
Octave S+Plus, 136
One period return, 272
Online brokers, 25, 249–251
Open Application Programming Interfaces
(API), 251
Options, 4–5, 314
Oracle, 85, 156, 302
Organisation for Economic Cooperation and
Development (OECD), 297
Out-of-sample testing, in in modeling, 134–135, 136–138
Passive investing, active investing versus, 6–8
Passive risk control:
active risk control versus, 38–49
nature of, 38–39
Patterson, Scott, 213, 236–238, 278, 283
Penn West Energy Trust, 302–303
Pension-fund managers, 83
Petrobras, 307
Pick-Up Sticks, 35–36
PIMCO, 8, 162, 308, 309–310
PNC International, 72–73
PNC International Equity Fund, 69, 71
PNC Large Cap Value Fund, 12, 69, 71
PNC Multi-Factor SCValue, 13
Portfolios, 24–25, 233–254
asset allocation, 152–153, 255–258
benchmarking, 235–247
construction issues, 247–249
elements of, 6
extinction-level events (ELE) and, 236–243
online broker services and, 25, 249–251
portfolio optimization, 276–282
professional investment management
systems, 251–254
tax-efficient optimization, 282
PowerShares, 3
Price to book (P/B) ratio, in Graham model, 85–86, 89–90
Price to earnings (P/E) ratio, in Graham
model, 85–86, 89–90, 162
Principal component analysis (PCA), 39, 145–146, 197
Principia, The (Newton), 11, 79, 159, 233
INDEX

Purposeful portfolio positioning (PPP), 149–150
Putnam Growth & Income Fund, 68, 71, 73

Q-Group, 5
Q-Q plots, 58–60
Quality investing, 149–150, 155–156
Quantitative Work Alliance for Applied Finance, Education, and Wisdom (QWAFAFEW), 3

Quant method:
characterizing, 3–6
computer technology and, 1, 20–21
criticisms of, 159–160, 236–237
data providers, 5–6, 251–254
defined, 3
factors in quant modeling, 120–121
future and, 311–315
origins of, 1–2, 3
types of quants, 3–6

Quants, The (Patterson), 213, 278

Rachev distributions, 37
Rand Corporation, 16
Random systems, 58, 259
Random walk hypothesis, 58
RA (risk-aversion) parameter, 277–279
Rattner, Steven, 283, 294–296
Ravenpack, 313
Real Estate Investment Trust (REIT), 244
Regression, 262–265
Regression:
regression coefficient, 17
of returns against variance, 12–15
Regulation FD, 94
Relative growth managers, 154–157
Relative value managers, 153–154
Relativity theory (Einstein), 27, 36–37
Renaissance Technologies, 4–5, 313
Return forecast (Alpha), 6
Reuters, 5, 45, 313
Rio Tinto, 302
Ripley moment, 264
Risk, 27–53. See also Beta
active versus passive, 38–49
alpha factors versus, 16–18, 20–21, 23–24, 39–40, 43–44
company versus market, 16, 18, 55–56, 168–170
covariance matrix, 28, 39–49

C-VAR, 52
eXected tail loss (ETL), 52
extinction-level events (ELE), 33–38, 236–243
Graham methodology and, 33–34, 41–42, 44, 55–56, 64
nature of, 16
real risk versus price fluctuations, 55–56
risk modeling, 39–44
systematic versus unsystematic, 16, 18, 55–56, 168–170
value at risk (VAR), 49–52
volatility and, 27–34
Risk budgeting, 281
Risk decomposition, 221–222, 253–254
Risk-management quants, 5–6
Risk Metrics Group, 58
Rodriguez, Robert, 4, 130, 265
Royal Astronomical Society, 286
R programming language, 135, 136
R-Squared Risk Management, 6
Ruby Tuesday, 88–89
Russell 1000 (R1K), 13–15, 40–41, 94–96, 131, 246
Russell 1000 Growth (R1KG), 13, 14, 94–96, 133
Russell 1000 Value (R1KV), 14, 133, 148–149
Russell 2000 Growth (R2KG), 182–183
Russell 2000 Value (R2KV), 15–16, 182–183
Russell 3000 (R3K), 67
Russell Mid Cap Growth index, 13, 15
Rydex, 3
Santa Fe Institute, 5
Sarbanes-Oxley, 283
SAS, 135
Scenario analysis, 182–191
average excess returns over S&P 500, 185–189
growth and value delineation, 183, 184–185
high versus low volatility markets, 183, 185, 187–188
information ratio (IR), 189–191
up and down market scenarios, 183–184, 187
### Index

| Scenario testing, in modeling, 131–134, 182–191 |
| Scholes, Myron, 37, 266, 270 |
| Schwab, 25, 250 |
| Security Analysis (Graham and Dodd), 20, 258 |
| Sell-side quants, 4 |
| Semi-efficient markets, 8 |
| Service Employees International Union, 307 |
| Sharpe, William, 1, 2, 12, 16–17, 37, 56, 81 |
| Sharpe ratio, 166, 216–217 |
| Shewhart, Walter, 235 |
| Shocking models, 138 |
| Siemens, 301 |
| Simmons, Jim, 236, 265, 279, 295, 313 |
| Simulink, 252 |
| Singapore, 306 |
| Sinopac (SNP), 304 |
| SIPDE (search, interpret, predict, decide, and execute), 77 |
| Six Sigma revolution, 235 |
| Society of Quantitative Analysis, 3 |
| Sornette, Didier, 287 |
| Soros, George, 262–265, 295 |
| Sorting test of Graham factors, 160–173 |
| S&P 100, 13, 124 |
| S&P 400, 161 |
| as actively managed portfolio, 7–9 |
| as benchmark, 7–9, 12, 13–15 |
| comparison with Wilshire 5000, 7–8 |
| as efficient markets and, 8–9 |
| volatility of, 65–75 |
| S&P500 Barra Growth, 32–33 |
| S&P500 Barra Value, 32–33 |
| S&P 600, 161 |
| S&P 1500, 149, 200, 202, 203, 231 |
| Speculating, investing versus, 34–35, 55, 86–87, 94, 281 |
| Spinoza, Baruch, 193 |
| S+Plus programming language, 60, 97, 114, 135, 136, 228 |
| SPY, 241 |
| Standard deviation: |
| defined, 56–58 |
| as risk measure, 29, 56 |
| Standard & Poor’s Depository Receipts (SPDR), 241 |
| State-owned enterprises (SOEs), 287–292, 301–310 |
| State Street Global Advisors, 3, 4, 132, 185 |
| State Street Global Advisors ETF, 46 |
| State Street Global Research, 131 |
| Statistical significance, in modeling, 140–144, 170–173 |
| Stein, Jeremy C., 21, 93 |
| Stern, Andy, 307 |
| STET, 13, 16, 269–270, 296–297, 307 |
| Stochastic Portfolio Theory (SPT), 24, 202–203, 263, 265, 266–268, 272–274 |
| Stock markets, 258–266 |
| as chaotic systems, 259–260, 261–262, 263 |
| as complex systems, 260, 261–262 |
| as complicated systems, 260 |
| as deterministic systems, 258–259, 260 |
| discontinuity of stock prices, 267–270 |
| market reflexivity, 262–265 |
| as random systems, 259 |
| SunGard-APT, 6 |
| Survivorship bias, in modeling, 126–127 |
| Systematic measures, in modeling, 130–131 |
| Systematic risk, 16, 18, 55–56, 168–170. See also Beta |
| Taleb, Nassim, 29, 34–38, 49, 58, 236–238, 240, 259, 283 |
| Tax efficient optimization, 282 |
| TD Ameritrade, 251 |
| t-distribution, 238 |
| Technology Select Sector SPDR Fund, 47, 48 |
| Templeton World Fund, 69, 71, 73 |
| Testing Graham factors, 159–191 |
| defining basic Graham factors, 162 |
| factor exposures or loadings, 160–173, 198–200 |
| factor statistics and Sharpe ratio, 166 |
| hit rates, 166–168 |
| scenario analysis, 182–191 |
| sorting stocks by factors, 160–173 |
| time-series plots, 173–182 |
| thinkorswim, 249 |
| Thorp, Ed, 278 |
| Tianjin Lishen Battery, 303 |
| TIBCO Spotfire S+ software, 228 |
INDEX

Titman, Sheridan, 21
Total Quality Management (TQM), 235
Tracking error (TE), 19, 75–77, 226
TradeStation, 249, 250
Trading, investing versus, 4
Trading costs, 22, 24–25, 279–280
Transparency in, in modeling, 129–130
Treynor, Jack, 16
Trust in models, 127–131
T-stat, 168, 170, 171
Tulipmania, 11–12
Turnover, 24–25
Two Sigma, 4–5
Type 1 quants:
characteristics of, 3
representatives of, 3
sell-side, 5
Type 2 quants:
characteristics of, 3–4
as Graham-type investors, 6
representatives of, 3–4
risk-management quants and, 6
sell-side, 5
Type 3 quants:
characteristics of, 4–5
representatives of, 4–5
sell-side, 5
UBS, 5, 311
U.S. Securities and Exchange Commission (SEC), 15, 73, 293
Universa Investments, 240
Unsystematic risk, 16, 18, 55–56, 168–170
Used car pricing, 146–147
Valley Forge Fund, 12
Valuation factors, in quant modeling, 120
Value at risk (VAR), 49–52
Value investing, 133, 151, 153–154, 156–157
Value traps, in Graham model, 85–86
Vanguard Funds, 1, 3, 129, 162
Vanguard Wellington, 68, 70, 73
Vanguard Windsor, 68, 70
Variance:
defined, 43, 56–57
in portfolios, 274, 275–276
as volatility measure, 29, 56, 65–67
Venezuela, 307
VIX. See CBOE Market Volatility Index (VIX)
Volatility. See also Beta
as factor in alpha models, 113–122
in Graham factor modeling, 201, 217–220
as proxy for earnings stability, 114
risk and, 27–34
as semipredictable, 263
variance as measure of, 29, 56, 65–67, 170–175
Volatility forecast, 6
Wal-Mart, 297
Weather-forecasting data, 146
Weighting factors, in Graham factor modeling, 197–200
Weinstein, Boas, 236
Whirlpool, 47
Wiener process, 270
Wilshire 5000, 84
description with S&P 500, 7–8
Wisdom Tree, 3
Wood, Robert, 312–313
Working capital, in Graham model, 82–83, 89–90
Worldcom, 155
Yahoo!, 302, 312
Yardeni, Ed, 309–310
Yield curve, inverted, 30–31
Zweig, Jason, 80
Zweig, Marty, 151