Accruals, 64–72
  detecting earnings manipulation, 67–72
Activism and cloning, 176–179
Adjustment bias, 25
Alpha
  and adjusted performance, 137–138 sustainable, 188–191
Altman, Edward I., 83–84
Analysis legend, 230, 265–266
Anchoring, 25
Anderson, Keith, 147–148
Apple Inc., 107, 110
Availability bias, 25
Ayres, Ian, 27–28
Bachelier, Louis, 6
Bailey, Morris, 197–198
Bankruptcy prediction, 83–86
  history of, 83–85
  improving, 85–86
Batchelor, Roy, 205
Beat the Dealer (Thorp), 4–5
Beat the Market: A Scientific Stock Market System (Thorp & Kassouf), 33
Behavioral errors, quantitative investing’s protection against, 23–30
  cognitive biases, 23–26
  experts’ errors, 36–28
  value investors errors, 28–30
Behavioral Investing: A Practitioners Guide to Applying Behavioral Finance (Montier), 26–27, 28
Benchmarking, 201–203
Beneish, Messod, 72, 77
Berk, Jonathan, 189–190
Bogue, Marcus, 197–198
Bonaime, Alice, 171
Book value-to-market capitalization ratio, 132
  See’s Candies acquisition, 96–99, 105–106, 113
Buybacks, 169–172
Campbell, John, 147
Cash flow on assets (CFOA), 102–103
CGM Focus Fund, 23
Chava, Sudheer, 85–86
“The Checklist” (Gawande), 56–57
The Checklist Manifesto: How to Get Things Right (Gawande), 57, 59
Chuvakhin, Nikolai, 84
Cloning, 176–179
Cognitive biases, 23–26
  adjustment bias, 25
  anchoring, 25
  availability bias, 25
  hindsight bias, 24
  neglect of the base case, 24
  overconfidence, 24
  self-attribution bias, 24
Confirmation bias, 194
“Contrarian Investment, Extrapolation, and Risk” (Lakonishok, Schleifer, & Vishny), 13–14
Cowles, Alfred, III, 10
“The Cross-Section of Expected Stock Returns” (Fama & French), 13
Data mining, 188, 191–192
“Decoding Inside Information” (Cohen, Malloy, & Pomorski), 173–174
“Delisting Returns and Their Effect on Accounting-Based Market Anomalies” (Price, Beaver, & McNichols), 197
Dumb money, paradox of, 3–34
behavioral errors, quantitative investing’s protection against, 23–30
cognitive biases, 23–26
experts’ errors, 36–28
value investors’ errors, 28–30
quantitative value investing, power of, 30–32
value strategies, 9–23
Graham’s quantitative, 15–23

Earnings manipulators and frauds, eliminating, 63–79
accruals, 64–72
detecting earnings manipulation, 67–72
PROBM’s, predicting, 72–78
Enron, 74–78
Earnings yield, 130
Efficient market theory, 9, 12
Einhorn, David, 31
Enron, 74–78
Enterprise yield (EBITDA and EBIT variations), 130–131
Expert Political Judgment (Tetlock), 26

Fama, Eugene, 48–49, 129–130, 189
Financial distress, measuring risk of, 81–92
bankruptcy prediction, 83–86
history of, 83–85
improving, 85–86
calculating, 86–89
universe, scrubbing, 89–91
Financial strength, 113–126
case study: Lubrizol Corporation, 123–126
comparing performance of F_SCORE and FS_SCORE, 122–123
financial strength score (FS_SCORE), 119–122
current profitability, 120
formula and interpretation, 122
recent operational improvements, 121
stability, 120–121
Piotroski Fundamental Score (F_SCORE), 114–119
analyzing, 115–117
formula and interpretation, 117–119
Fooled by Randomness (Taleb), 29
Forward earnings estimate, 133
Franchises, 95–112
finding, 99–112
economic moats and excess returns, 99–101

Galbraith, John Kenneth, 63–64
Gawande, Atul, 56–57, 59, 222
Geometric return on assets, 103–105
Geometric return on capital, 103–105
Gerard, Ralph Waldo, 3–4
Gertmenia, L. Wayne, 84
Glamour stocks, 216–217
“Global Stock Markets in the Twentieth Century” (Jorion & Goetzman), 204
Goldberg, Lewis, 26–27
Goldstein, Robert, 35
“The Good News in Short Interest” (Boehmer, Huszar, & Jordan), 180–181
Gotham Capital, 35
Graham, Benjamin, 3, 10–12, 15–23, 28, 95–96, 113–114, 146, 147, 200, 262, 264
quantitative value strategy, 15–23
The Great Crash of 1929 (Galbraith), 63
Green, Richard, 189–190
Greenblatt, Joel, 32, 35–41, 45, 47, 54–56, 195–196
Gross profits yield, 132
Grubman, Jack, 82
Hastie, Reid, 193–194
Heebner, Ken, 23
Hindsight bias, 24
“In Search of Distress Risk” (Campbell, Hilscher, & Szilagyi), 86–87
Insider trading, 173–175
The Intelligent Investor (Graham), 10–11, 28
Jarrow, Robert, 85–86
“Judgment under Uncertainty: Heuristics and Biases” (Kahneman & Tversky), 25
Kahneman, Daniel, 24–25
Kassouf, Sheen, 5
Keynes, John Maynard, 229, 263
Klarman, Seth, 11–12, 29
Klayman, Joshua, 193–194
Klein, April, 177
Legg Mason Value Trust, 257–262
Leinweber, David J., 187–188, 191
The Little Book that Beats the Market (Greenblatt), 35–36
Logistic regression (logit model), 87–88
Look-ahead bias, 85, 197
Loughran, Tim, 134, 135
Lubrizol Corporation, 123–126
“Luck versus Skill in the Cross Section of Mutual Fund Returns” (Fama & French), 189
Magic Formula (Greenblatt), 32, 36–60, 195–196, 211–228, 231–232
bargain price, 37–38
examination of, 39–44
findings, 38–39
good business, 36
problems with, 211–228
glamour stocks, 216–217
quantitative value checklist, 222–228
quantitative value strategy, improving the structure of, 218–221
Margin of Safety (Klarman), 11–12
Martin, Andrew, 27
Martin, Jerry, 177, 179
Mauboussin, Michael, 101
McLean, Bethany, 74, 76
Miller, Bill, 257
Minnesota Multiphasic Personality Inventory (MMPI), 26
Montier, James, 26–27, 28, 29, 30
“Morningstar Ratings and Mutual Fund Performance” (Blake & Morey), 189
Munger, Charlie, 30, 227
“Mutual Fund Flows and Performance in Rational Markets” (Berk & Green), 190
Narrative fallacy, 192, 194
Neglect of the base case, 24
Nerds on Wall Street: Math, Machines and Wired Markets (Leinweber), 191
Normalized earning power, 146–150
long-term price ratio study, 148–150
Novy-Marx, Robert, 45–47
Ohlson, James, 85
O-score, 85
O’Shaughnessy, James, 150, 151, 172
Overconfidence, 24
PFD (probability of financial distress) model, 88–89
Piotroski Fundamental Score (F_SCORE), 114–119, 122–123, 218
analyzing, 115–117
leverage, liquidity, and source of funds, 116–117
operating efficiency, 117
profitability, 115–116
formula and interpretation, 117–119
and FS_SCORE, comparing performance, 122–123
Piotroski, Joseph, 114–119, 218
Point-in-time bias. See Look-ahead bias
analysis of compound annual growth rates, 134–140
alpha and adjusted performance, 137–138
risk-adjusted performance and absolute measures of risk, 138–140
value premium and spread, 135–137
book-to-market, 132
composite, 145–147, 150–163
formed from all metrics, 152–156
formed from the “best” price ratios, 156–158
top-performing, 159–163
earnings yield, 130
EBIT variation, outperformance by, 141–143
top-performing, 130
enterprise yield (EBITDA and EBIT variations), 130–131
forward earnings estimate, 133
free cash flow yield, 131–132
gross profits yield, 132
long-term study, 148–150
methods of studying, 133–134
Princeton-Newport Partners, 6–7
PROBM model, 72–78
Procter & Gamble, 108–110
Profit margins, 105–112
growth, 106–107
maximum, 109–112
stability, 107–109
Pronovost, Peter, 57
Puthenpurackal, John, 177, 179
Quality and Price, improving, 45–54
compared with Magic Formula, 49–54
finding Price, 48
finding Quality, 45–48
Quantitative value checklist, 222–228
Quantitative value strategy, 15–23, 35–60, 191–196, 229–264
examining, results of, 229–264
analysis legend, 230
beating the market, 262–264
black box, looking inside, 249–257
man versus machine, 257–262
risk and return, 231–239
robustness, 239–249
Greenblatt’s Magic Formula, 35–44
bargain price, 37–38
examination of, 39–44
findings, 38–39
good business, 36
Quality and Price, improving, 45–54
compared with Magic Formula, 49–54
finding Price, 48
finding Quality, 45–48
simplifying, 193–196
strategy implementation, 54–59
checklist, 56–59
tried-and-true value investing principles, 192–193
Quinn, Kevin, 27

The Random Character of Stock Market Prices (Bachelier), 5–6
Random walk theory, 6
Regression analysis, 188
Representativeness heuristic, 24–25, 55
“Returns to Trading Strategies Based on Price-to-Earnings and Price-to-Sales Ratios” (Nathan, Sivakumar, & Vijayakumar), 150–151
Ridgeline Partners, 7
Risk-adjusted performance and absolute measures of risk, 138–140
R-squared, 188
Ruane, William, 257

Scaled net operating assets (SNOA), 68–72
Scaled total accruals (STA), 67–68, 70, 72
Schedule 13D, 176–177
Security Analysis (Graham & Dodd), 3, 10–11, 15, 115, 145, 146, 147
See’s Candies, 95, 96–99, 105–106
Self-attribution bias, 24
Sequoia Fund, 257–262
Sharpe, William, 138
Sharpe ratio, 138–140
Shiller, Robert, 146, 147
Short selling, 179–182
Shumway, Tyler, 85
Simons, Jim, 249
Singleton, Henry, 167–168
Sloan, Richard, 67–68, 70, 72
Small sample bias, 203
“Some Insiders Are Indeed Smart Investors” (Giamouridis, Liodakis, & Moniz), 174
Sortino ratio, 138–140
Stock buybacks, issuance, and announcements, 169–172
Stock market, predicting movements in, 187–210
sustainable alpha, 188–191
quantitative value strategy, 191–196
simplifying, 193–196
tried-and-true value investing principles, 192–193
model, testing, 196–206
benchmarking, 201–203
data errors, 196–199
historical data versus forward data, 205
size of portfolio and target stocks, 199–201
small sample bias, 203–204
transaction costs, 205–206
universe, parameters of, 206–208
Super Crunchers: Why Thinking-by-Numbers Is the New Way to Be Smart (Ayres), 27
“The Superinvestors of Graham-and-Doddsville” (Buffett), 9–10, 187, 257
Survivorship bias, 196–197
Sustainable alpha, 188–191
Taleb, Nassim, 29, 192
Teledyne, 167–168
Tetlock, Philip, 26
Theory of Investment Value (Williams), 96
Third Avenue Value Fund, 257–262
Thorp, Ed, 3–9
Total enterprise value (TEV), 37–38
Transaction costs, 205–206
Tsai, Claire, 193–194
Tversky, Amos, 24–25

Value investors’errors, 28–30
Value portfolio, 118
Value premium and spread, 135–137
Wellman, Jay, 134
What Works on Wall Street (O’Shaughnessy), 150, 151, 172
Whitman, Martin J., 257–258
Williams, John Burr, 96
WorldCom, 81–82

Z-score, 83–85
Zur, Emanuel, 177