a priori probability 28
absolute advantage 85
accounting equation 18, 99–100, 101
accounting profit 58
accounting warning signs 154
accounts payable 121, 177
accounts receivable 121, 177
accruals 100, 110
activity ratio 124
ADR see American Depositary Receipts
affirmative covenant 227
after-tax cash flow (ATCF) 275
aggregate demand and supply 54, 70–1, 72
aggregate output 69–72
alternative hypothesis 41
alternative investments 273
benefits 276
categories 276
commodities 277
compared with traditional investments 275
hedge funds 277
overview 274
private equity 277
real estate 277
risk management 276
American Depositary Receipts (ADR) 216
American options 263, 264–5
amortization 137
annual interest rate 15–16
annual report 97
annuity 14, 16, 17
arbitrage 264–5
definition/role 253
arbitrage-free value 259
arithmetic mean 22
asset-based valuation models 223
assets 98, 115
allocation 46, 197
classes 197
current/non-current 116
leasing/purchasing 147
prices 36
tangible/intangible 136, 137–8
values 137–8
ATCF see after-tax cash flow
auctions
types 54
winning price 54
audits 97, 181
average cost 59
average product 59
average revenue 59
balance of payments (BOP) 87
balance sheet 96, 100, 114–17
assets 116
common-size 114–15
elements 115
formats 115–16
liabilities 116
limitations 115
liquidity/solvency ratios 115
sample question/answer 117
shareholder equity 116–17
balancing adjustment 100
bank discount yield 14, 20
bankruptcy 247–8
banks 231
barter transactions 110
Bayes’ formula 27–8
Bernoulli random variable 34, 36
beta calculation 167, 193
bias 39
binomial random variable 34
binomial trees 34
bond equivalent yield 14, 20–1, 177
Bond-Yield plus Risk Premium method 167
bonds
accrued interest 235
affirmative/negative covenants 227
call/refunding 229
conversion 229
corporate 247
domestic/foreign 227
duration 226, 241–3
embedded option 226, 244, 259
fixed-rate 235
flat price 235
forward rates 236–7
full price 235
indenture 229
interest rate risk 244
legal/regulatory requirements 227
market discount rate 232
maturity 244
price movement 244–5
price/market discount rate 233–4
primary market 231
put provision 229
risks 226
sample questions 238, 245
secondary market 231
semi-annual coupon-paying 232–3
spot rates 234–5, 236
valuing 226, 232–7
yield to maturity 226, 243
zero-coupon 233
book value of equity 217, 222
book value per share 172
BOP see balance of payments
borrowed costs 136
breakeven point of production 60
breakeven price of option 272
breakeven quantity of sales 171
budget constraint 56, 57
business cycles 73–5
sample question/answer 77
business risk 170
CAL see capital allocation line
calculators 17
call option 259
call risk 259
capital allocation line (CAL) 184, 189, 190, 192–3
capital asset pricing model (CAPM) 166, 184, 193–4
capital budgeting 161–4
calculating 161–2
evaluation/selection of projects/methods 163
NPV, company value, share price relations 164
principles 162–3
process/categories 162
sample question/answer 164
capital estimation 165–9
sample questions/answers 169
capital market line (CML) 192–3
capital rationing 163
CAPM see capital asset pricing model
cash dividend 173
cash flow 14, 17, 18
contingency provisions 228
effect on options 264–5
effects on net daily cash position 178
estimation 162–3
financial reporting and analysis (continued) sample questions/answers 102, 154 specific accounting issues 92–3 standards 103–6 techniques 124–7 financial reporting standards 103 company disclosures 106 comparison of concepts 105 framework characteristics 105–6 global convergence/barriers 104–5 importance 104 intangible assets 136 monitoring developments 106 requirements 105 roles/attributes 104 sample question/answer 106 financial risk 170 financial statement analysis 95–7, 156–8 accounting equation 99–100 accruals/adjustments 100 balance sheet statement 180–79 cash flows/owners’ equity link 101 comparisons with another company 157–8 credit quality of potential debt investment 157 five elements 98–9 future net income/cash flow 157 income/balance sheet link 101 intangible assets 138 inventories 134 past performance 156 pro forma income 180–79 sample questions/answers 97, 158 screening potential equity investments 157 financial system 201–2 the firm costs 59, 61 demand and supply 58–61 diminishing marginal returns 59 diseconomies of scale 60 exit/entry 66 labor 59 market structures 62–6 output 60 production 60 profit 58, 61 resources 60 revenue 59 sample questions/answers 61, 66 firm ratio 121 fiscal balance 69–70 fiscal policy 78–82 arguments for/against size of deficit 81 implementation 81 interaction with monetary policy 82 sample question/answer 80 tools 81 Fisher effect 80 fixed income 225 overview 226 risk 226 risk and return 241–8 fixed income indices 208 fixed income markets 230–1 corporate debt 231 global classifications 230 interbank offered rates 231 primary markets 231 repurchase agreements 230 sample questions 231 secondary markets 231 securities 231 fixed income securities 227–9 affirmative/negative covenants 227 bond indenture 228 cash flows 229 contingency provisions 228 features 228 legal/regulatory requirements 227 sample questions 229 fixed rate bond 235, 243 fixed rate debt capital 166 flat price bond 235 float-adjusted market capitalization weighting 207 floating-rate bond 231 floating-rate notes 231 future net income 157 future value (FV) 14, 16 futures contract 252 delivery/settlement 254–5 equity forward contract 256 sample question/answer 257 fraud 153–4 free cash flow to the firm (FCFF) 121–2 free and clear equity 277 frequency distribution 24 frequency polygon 24 full employment 72 future net income 157 future value (FV) 14, 16 futures 250 characteristics 258 definition 252 margin 258, 259–60 sample question/answer 281 termination at or prior to expiration 259–60 futures contract 252 FV see future value GDP see gross domestic product GDR see Global Depositary Receipts geometric mean 20, 22, 23 sample question/answer 25 GIPS see Global Investment Performance Standards global bonds 227 Global Depositary Receipts (GDR) 216 global fixed-income markets 230 Global Investment Performance Standards (GIPS) basic idea 2 beneficiaries 2 benefitting from compliance 9 characteristics, scope, implementation 11 claiming compliance 8–9 composites 9 key elements 2 knowledge LOS 8–10 nine major sections 11 reasons for creation 8 sample questions/answers 10, 12 verification 9 good-till-cancelled (GTC) vs time limited orders 204 goodwill 136 Gordon’s Growth Model 167, 222 governance, corporate see corporate governance of listed companies government agencies 231 government regulation/intervention 54 gross domestic product (GDP) 50, 72, 86 gross national product (GNP) 86 gross profit 132–3 gross return 188 gross vs net reporting 110 gross vs net reporting 110 GTC see good-till-cancelled harmonic mean, median, mode 22, 23 head and shoulders reversal 46 Heckscher–Ohlin model 85 hedge funds 208, 277 hidden orders 204 high yield debt issuers/issues 247 histogram 24 historical simulation 36 holder-of-record 173–4 holding period 20, 36 holding period yield 14, 20 hypothesis testing 40–4 population means 42–3 relation with confidence interval 41 sample question/answer 44 IASB see International Accounting Standards Board IFRS see International Financial Reporting Standards impairment of assets 137–8 income effect 56 income elasticity of demand 53 income method 275 income statements 92, 109, 110–13 sample question/answer 113 income taxes 92, 140–3 calculation 141
mean absolute deviation (MAD) 23
mean of asset returns 188
meaningful result 43
measurement scales 24
measures of central tendency 22
measures of leverage 170–1
calculating/interpreting 171
definition/explanation 170
effect of financial leverage 170–1
sample question/answer 171
microeconomics 50
minimum-variance portfolio 189
modified duration 259
momentum oscillator indicators 45
ROC, RSI, MACD 45
monetary policy 78–82
functions/definitions of money 79–80
implementation 79
interaction with fiscal policy 82
limitations 81
money creation process 79
definitions 79–80
money, time value of
see money-market yield 14, 20
money-market securities 259
money-market instruments 235
money-weighted rate of return (MWRR) 14, 20
monopolist 66
monopolistic competition 64
pricing strategy 66
monopoly 65–6
pricing strategy 66
Monte Carlo simulation 36
mortgages 277
MTN see medium term notes
multi-factor models 194
multiplier model 222–3
multivariate distribution 34
municipal debt issuers/issues 247
mutual funds 186
mutually exclusive projects 163
MWRR see money-weighted rate of return
national income identity formula 86
NAV see net asset value
negative covenant 227
net asset value (NAV) 274
net operating cycle 176
net operating income (NOI) 275
net present value (NPV) 14, 19, 160, 161, 163, 164, 276
net realizable value 133
net return 188
new entrants 219
NOI see net operating income
nominal exchange rate 88
non-callable/non-convertible preferred stock 166, 224
non-current (long-term) liabilities 92, 144
debt 147
defined contribution/benefit pension plans 148–9
interest rate of bonds 145–6
leasing assets 147–8
leverage/coverage ratios 146
measurement of bonds 145
sample question/answer 149
non-domestic equity securities 216
non-equilibrium price 52
non-recurring items 112
non-sovereign government 231
normal distribution 34
normal goods 57
normal profit 58
notching 248
NPV see net present value
null hypothesis 41
OAS see option-adjusted spread
oligopoly 64–5
pricing strategy 66
one-tailed tests of hypothesis 41
open position 259
open-end fund 274
operating leverage 171
operating profit (or EBIT) 112
operating risk 170
operating/non-operating income statement 112
opportunity cost 17
opportunity sets 57
optimal portfolio 190
optimal price and output 63
options 250, 253
definition 252
European and American 263, 264–5
exchange-traded cf. over-the-counter 265
interest rate 263
moneyness 263
put–call 262, 263
risk management application of strategies 271–2
sample questions/answers 267
synthetic 264–5
value estimates 262
order, types of 203–4
outcome 28
over-the-counter (OTC) derivatives 251
over-the-counter (OTC) options 265
p-value 43
par curve 237
parameter 24
parametric/non-parametric tests 44
past financial performance 156
payback period 162
payment date 173–4
payoff 255
peer group 220
pensions 93, 148, 149
percentiles 24
perfect competition 63
pricing strategy 66
performance ratio 121
permutation notation 29
perpetual/periodic systems 132
PI see profitability index
plain vanilla interest rate swap 268
point estimate 37
polarity, change in 46
population 23, 24
population mean 22, 43–4
population variances 42–3
portfolio
performance 20
rates of return 20, 22
standard deviation 189
portfolio duration 242
portfolio management 183
investment approach 185
investors 185–6
mutual funds 186
overview 184, 185–6
passive 210
planning and construction 196–8
process 186
risk and return 184, 187–95
sample question/answer 186
portfolio planning and construction asset allocation 197
investment constraints 197
IPS 196
principles 197
risk/return objectives 197
sample question/answer 198
power of a test 41
preference stock 215
prepayable security 17
present value (PV) 14, 16
price 69–72
bond 244–5
discrimination 66
levels 75
return 206
role of arbitrage 253
strategy 66
target 46
price earnings model (P/E ratio) 222
price elasticity of demand 53
price floor or ceiling 52–3
price-based indicators 45
Bollinger Bands 45
moving averages 45
price-weighted indices 207
primary market 204, 231
private equity 277
probability concepts 26–9
sample question/answer 29
probability distribution 33–6
sample question/answer 36
product of labor 59
product markets 50
production 60
production function 73
profit 58
profit metrics 112
profit-maximization
the firm 63, 64, 65
level of output 35
short-run/long-run 61
profitability index (PI) 162
profitability ratio 124
project sequencing 163
protective put 271–2
psychological behaviour 211
public/private equity 215–16
purchased intangible assets 136
put–call parity 262, 264–5
PVBP see price value of a basic point
quantitative methods 187–8, 189
application 31, 33–47
basic concepts 13–29
discounted cash flow applications 19–21
market returns 22–5
overview 13–14
probability concepts 6–9
sample questions/answers 25
statistical concepts 14, 22–5
technical analysis 14
time value of money 15–18
quantiles 24
quintiles 24
random variable 28, 34
rate of return 14, 17
discrete/continuous compound 36
rates of exchange see currency exchange
rates
rating agency 248
ratios
activity 124, 125
classify, calculate, interpret 124–6
equity 121
financial 92, 111
firm 121
gross profit margin 133
inventory 133
leverage/coverage 146
liquidity 124, 125, 175–6
model/forecast earnings 126
performance 121
price/earnings (P/E) 222
profitability 124, 125
relationship among 125
Roy’s safety-first ratio 35
Sharpe ratio 23, 189
solvency 124, 125
valuation 124, 125
real estate 208
investment 277
real exchange rate 88
regulatory requirements 227
reinvestment rate risk 259
relative frequency 24
reported cash flow statement 122
repurchase agreements (repos) 230
resistance lines 46
resources 60
return on equity (RoE) 170–1
return-generating models 194
revaluation model 137
revenue 59, 98, 100
revenue recognition 110
Ricardian model 85
risk
credit 243, 247
definitions 170
fixed income 226, 243
premium 17
systematic/non-systematic 193
risk management 250
alternative investments 276
option strategies 271–2
sample question/answer 272
risk and return 187–90, 192–4
equity securities 216–17
objectives 197
overview 184
sample questions/answers 190–1, 195
risk-averse 188, 188–9, 193
risk-free assets 192–3
risk-free rate 17
risk-neutral 188
risk-seeking 188
rivalry 219
Roy’s safety-first ratio 35
safety-first ratio 35
sample 23, 24
mean 22
selection bias 39
skewness 24
statistic 24
variance 23
sampling 37–9
distribution 39
error 39
question/answer 39
saving 69–70
SEC see Securities and Exchange Commission
secondary market 204, 231
Securities and Exchange Commission (SEC) 104, 105
security analysis 102, 104
overvalued, fairly valued, undervalued 223
security market index
choices/issues in construction/
management 206–7
rebalancing/reconstitution 207
sample question/answer 208
types 208
uses 208
value, price return, total return 206
weighting methods 207
security market line (SML) 184, 193–4
segment analysis 125–6
semi-annual coupon-paying bond 232–3
sentiment indicators 45
margin debt 45
options volatility index (VIX) 45
put/call ratio 45
shorting interest 45
share price 164
share repurchases see dividends/share repurchases
shareholders’ equity 116
shareholders’ wealth 173
Sharpe ratio 23, 189
short position 203, 254–5
short run macroeconomic equilibrium 72
short-term borrowing 230
short-term funding 178, 231
shortfall risk 35
shutdown point of production 60
significance level 41
simple random sampling 39
skewness 24, 188
sample question/answer 25
SML see security market line
solvency ratio 115
sovereign debt issuers/issues 247
sovereign government 231
spot curve 237
spot exchange rate 88
spot rates 226, 234–5, 236, 259
spread changes 247
standard deviation 23
standard error of the mean 37
Standards of Professional Conduct 3–5, 8
difference with Code of Ethics 2
ethical responsibilities 5
fundamental to values of CFA Institute 3
key points 2
reciting/understanding 1–2
sample questions/answers 5
seven components 4
violations/sanctions 3
see also Code of Ethics; ethics
statistical concepts 14, 22–5
sample question/answer 25
statistical result 43
stock price 164
stocks 190, 193
stop 204
strategic analysis
external factors 220
internal factors 219
structure of yield volatility 245
Student’s t-distribution 38–9
subjective probability 28
substitution effect 56, 219
supplier bargaining power 219
support 46
supranational entities 231
survivor bias 39
swaps 250
characteristics 252, 268
currency swap 268–9
definition 252
equity swap 269
interest rate swaps 268–9
sample question/answer 270
termination 268
synthetic options 264–5
T-accounts 101
T-bills 190
tangible/intangible assets 136, 137
tax requirements 227
tax/es 93, 197
cost of capital 167
payable 142
real estate 276
technical analysis 13, 14, 45–6
cycles 46
indicators 45
intermarket analysis 46
principles 45
sample question/answer 47
test statistic 41
time deposit market 256
time horizon 197
time value 266
time value of money 14, 15–18
annual rate 15–17
frequencies of compounding 16
sample questions/answers 18
timeline 18
time-period bias 39
time-series data 39
time-weighted rate of return (TWRR) 14, 20
TIPS see Treasury inflation protected securities
total cost 59
total factor productivity 73
total leverage 171
total probability rule 28
total product 59
total return 206
total revenue 59
trade balance 69–70
trading blocs 87
transparency 202
tree diagram 27
trend 46
trial balance 101
two-tailed tests of hypothesis 41
TWRR see time-weighted rate of return
Type I and Type II errors 41
uncertainty 13
unemployment 75
unimodal, nonsymmetrical distribution 24
univariate distribution 34
unweighted indices 207
US GAAP (US generally accepted accounting standards) 92, 102, 104, 111, 122, 133, 136, 137, 139, 143
utility 188–9
analysis 57
theory 56
valuation 13
allowance 142–3
ratio 124
value 259
variable cost 59
variance 23
population means 42–3
variance of asset returns 188
variation margin 259
Veblen goods 57
venture capital investment 276
verification 9
voting rights 215
WACC see weighted average cost
weighted average cost (WACC) 132, 134, 166, 168
weighted average or mean 22, 23
working capital management 175–8
sample question/answer 179
World Bank 87
World Trade Organization (WTO) 87
yield 14, 259
yield curve 237
yield spread level/volatility 248
yield spread measures 237
yield-to-maturity (YTM) 166, 243, 259
YTM see yield-to-maturity
zero-coupon bond 234, 256