

# Index

- abnormal returns, 176
- accounting: balance sheets, risk capital
  - examples of, 136, 137, 141, 142, 148;
  - economic value v. performance in, 337–339; pension plan, 184, 185, 187, 190–194, 196–197; risk capital, profit calculation in, 147–152; value mismatch, 190–194. *See also* generally accepted accounting principles (GAAP)
- adverse development covers (ADCs), 219, 221, 222–223
- adverse selection, 150, 232, 290
- agency costs/risk, 150
- aggregation, risk, 339–341
- AGL Energy, 404–405
- Airgas, 425, 426, 427–429
- airlines: 1992–2003 stock price study of, 248, 250; background on sample, 301–304; fuel-price hedging of, 248, 250, 258, 299–322
- alternative risk transfer (ART), 33, 56, 208, 213; blending in, 228–229; distinguishing features of, 56–59
- American International Group (AIG), 205, 225
- annual VaR, 115
- anti-derivatives policies, 51
- Arthur Andersen, ERM defined by, 42
- asbestos liability, ADC for, 222
- asset insurance: economic equivalence with, 138–139, 140; risk capital and, 134–147
- asset management firms, 369
- asset return swap, 188–189
- asset-related principal activities, 131
- assets, 133–134, 147, 267; capital/CAPM model of, 251; pension, equities as, 188, 191
- ATA (formerly known as Amtran), 312
- audit, risk-taking, 105
- backwardation, 97–98
- balance sheets: accounting, risk capital
  - examples of, 136, 137, 141, 142, 148;
  - expanded, 196, 197; off-balance sheet derivatives, 243/111; pension plan, 185; risk capital, 137, 143, 145
- Bang for the Buck, Hydro One strategy as, 370–371
- bankruptcy costs (BC), 100–102
- banks, 22; Basel capital accord for, 49; derivatives use by, 247; ERM for, 395, 396; instruments not provided by, 29; interest rate risk for, 394–397; internal, 47; LIBOR and, 37, 52, 396–397; risk categories used by, 336
- Basel capital accord, 49
- bid-offer spread, 124–125
- binary options, 117/120
- blending, 228–229
- bond(s): CAT, 3, 81; consol, 31; cotton-indexed dual currency, 30; pension in, 199; treasury, 10
- bond market, 448
- Bretton Woods fixed-exchange rate regime, 6; breakdown of, 19–20
- bridge loan, risk capital examples using, 133–147
- British Petroleum (BP), 257–258, 422–426; insurance strategy for, 279–298; loss

- British Petroleum (*continued*)  
 exposures of, 291–293; operating firms  
 within, 291; underwriting shares for, 1986,  
 148. *See also* petroleum
- broad market risk, 152
- budget, capital, 153–158
- Buffet, Warren, 235, 384–385
- bundled operational risk, 61
- business plan: ERM, 358–368; protection of,  
 325
- capital, 200–201; budgeting, 153–158; cash,  
 133; contingent, 59–60; economic, 343–345;  
 imputed, 327–328; providers/functions of,  
 145; RAROC, 43, 50; regulatory v.  
 economic, 343–344; total risk requiring,  
 334–335; WACC for, 191–197; working, 133.  
*See also* risk capital
- capital allocation, 153–158, 176, 328; Hydro  
 One example for, 369; pension,  
 shareholders providing, 184–204
- capital assets pricing model (CAPM), 251
- capital markets: insurance companies v.,  
 35–38, 41; insurance convergence with, 43
- capital structure, 82, 106–108, 176, 381;  
 insurance and, 284; optimization,  
 convergence theme of, 43–44; pension  
 plan change impact on, 199–200;  
 shareholders and, 82, 111
- case studies, 350, 364–368; Boeing, 193–194;  
 Daimler-Benz, 98; derivatives disasters,  
 199–1995, 169–175; DuPont, 193–194;  
 Eastman Kodak, 193–194; Hydro One/  
 ERM, 259, 351, 352–378;  
 Metallgesellschaft, 97–98, 173–175; OCIP,  
 171–173, 177; pension plan, 193–194;  
 Procter & Gamble, 169–170; Textron,  
 193–194
- cash capital, 133
- cash compensation, equity v., 69–70
- cash flow, 47–48, 50, 329; investment, 325;  
 repatriated, 257
- cash flow at risk (CFaR), 48; value relation  
 to, 243–246; VaR replaced by, 176
- cash flow variability: diversification and,  
 100; reduction of, hedging for, 117
- catastrophe (CAT) bonds, 3, 81
- catastrophe insurance, 46, 61, 143, 145
- causality, 247–248
- cedant participation, in positive claims  
 experience, 212–213
- Chase Manhattan, 61, 392
- Chicago Board of Trade (CBOT), 6, 25;  
 futures contracts on, 24, 29; options  
 contracts on, 25
- Chicago Mercantile Exchange (CME), 6, 10,  
 22; futures contracts on, 24; options  
 contracts on, 25
- chief risk officer (CRO), 41–42, 351, 352, 375,  
 383–384, 434–436, 449, 450
- cho-ai-mai (rice trade on book), 29–30
- committed long-term capital solutions  
 (CLOCS™), 59–60
- Committee of Chief Risk Officers (CCRO),  
 413, 434–436, 450
- Committee of Sponsoring Organizations  
 (COSO), 348–349
- commodities, hedging use of, airline  
 example of, 309
- Commodity Exchange (COMEX), 28
- Commodity Futures Trading Commission  
 (CFTC), 29
- commodity price risk, 25–29
- communication: internal, ERM benefiting,  
 403–405; investor, 405–408. *See also*  
 disclosure
- comparative advantage, 15, 94–95, 99,  
 103–104, 326; airline industry fuel cost  
 hedging and, 258; interest rate risk and,  
 393–397; risk assessment, BP example of,  
 296; search for, roundtable discussion on,  
 389–393; trading room/customer  
 business, 127
- compensation: cash v. equity-based, 69–70;  
 demand for higher, 102; hedging linked  
 to, 109; manager, incentives in, 108–113
- competitive advantage, 324
- competitive exposures, 264–265
- computers, 6–7, 15, 63–64; proprietary  
 information using models of, 123
- conditional variance models, 181
- consol bonds, 31
- contingent capital, 59–60
- contingent debt, 227
- contingent liabilities, fixed v., 134–139
- contracts, 211; fixed-price, 97; forward, 28,  
 80; futures, 2–3, 21–22, 24, 28, 29, 30;  
 guaranteed investment, 141–143;  
 insurance, 36–37; options, 22, 25; short-  
 term, 97. *See also* derivatives
- convergence, 32–33, 59, 62; 1990s decade of,  
 41–44; capital structure optimization

- theme of, 43–44; as organizational process, 42–43. *See also* blending
- copper, interest rate index for, 28–29
- core risks, non-core and, 39–40, 206, 326
- corporate insurance, evaluation framework for, 280–290
- corporate risk management center, 444–447
- corporations. *See* firms
- cost(s): agency, 150; bankruptcy, 100–102; economic, risk capital, 149–152; equity, 455–456; financial distress, 313–315, 330; spread, 36–37, 152
- cost of capital, 43, 44–45, 66–67, 117–118; finance theory, 99; principal financial firms and, 132. *See also* rate of return; weighted average cost of capital (WACC)
- cotton bonds, 30
- cotton-indexed dual currency bond, 30
- counterparty credit risk, 452–453
- covariance, 99
- crash of 1929, 7–8, 12
- crash of 1987, 12–13, 15–16
- credibility, adverse selection and, 232
- credit default swap (CDS), price tracking of, 452
- credit exposure, VaR for, 50
- credit rating(s), 448–452; financial distress threshold determined by, 330–333, 335; probability of default associated with, 332; ratings downgrade in, 342; transition matrix for, 331–332
- credit rating agencies, 349, 377, 450–452; current trends of, 448–449; positive response from, ERM benefit as, 373
- credit risk, 49, 211, 336, 397, 433–434, 439; counterparty, 452–453
- currency, 80; debt in foreign, 81; futures contracts, 22; loans in dual, 22, 22m10–23m10; U.S.–Japanese exchange rate, 19
- currency risk, 424; hedging of, 263–278
- currency swaps, 8–9; evolution of, 22
- customer business: comparative advantage from, 127; principal financial firm, 131; trading profit resulting from, 105, 125–129
- customer liabilities, contingent, 146–147
- daily VaR, 115
- Daimler-Benz Aerospace, fixed dollar order book of, 98
- deadweight wedge, equity-cash compensation, 69–70
- debt: contingent, 227; floating-rate v. fixed-rate, 424; foreign currency, 81; GAAP/adjusted, 427; hedging linked to level of, 106; low level of, 76, 82; pension liability as, 192; raising level of, 71; shareholders and, 82; undisclosed, 227–228
- debt financing, equity v., 108
- debt issuance, 19
- debt liabilities, 135
- debt-to-equity ratio, 70
- decentralization, risk-return tradeoff, 327–328
- default rate (DR), 49. *See also* probability of default
- default risk, liabilities with, 139–141
- defined-benefit (DB) plans, 89, 184, 185–186, 189; DC plan replacing, 186, 202–203
- defined-contribution (DC) plans, 89; DB plan moving to, 186, 202–203
- Delta Air Lines, 304
- demand volatility, 84–85
- Depression, 7–8
- deregulation, 8–9, 15, 394–395
- derivatives, 41, 43, 47, 49, 87, 164, 242–243; corporate use of, 93, 96; earnings underlying contracts of, reasons against, 326; ERM replacing, 51; experts in, assessment need for, 85; firm size in use of, 96, 247, 304; foreign currency, 247; list of, 79; off-balance sheet, 243m11; shareholder wealth link to, 236–237
- derivatives disasters, 32; 1993–1995, 32, 89, 162–163; case studies of, 169–175; VaR ex-ante use in, 170, 171, 172, 173, 175
- disclosure: FAS 133 and, 456–457; finite risk concerns of, 227–228; full, 71; GAAP and, 406, 426; Reg. FD, 386–387
- Disney, Walt, 77–78
- distributions, risk category, 340–341
- diversification, 66, 99, 100, 111, 447; cash flow variability and, 100; incremental risk capital resulting from, 153; non-diversification, 67, 68–70; portfolio, 100, 387–389; principal financial firm multi business risk capital, 153–155; self-insuring and, 445–447
- Dolde, Walter, 96

- double triggers, ART form containing, 57–58
- dual currency bond, cotton-indexed, 30
- dual currency loans, 22, 22110–23110
- early termination, 230
- earnings: derivatives contracts with  
underlying, reasons against, 326;  
forecasts for, de-emphasizing, 406;  
foreign income generator, 277; GAAP not  
accurately reflecting, 387; earnings-  
protection insurance, 81; quality of,  
232–233; shortfalls in, 326; smoothing,  
212, 216, 226–227, 385, 388; taxable, 70;  
trade, 125; value v., hedging based on, 47
- earnings at risk (EaR), 407–408
- earnings before interest, taxes, depreciation,  
and amortization (EBITDA), 58
- earnings per share (ERS): multi-line  
programs covering, 53–54, 58; reporting,  
406–407
- earnings volatility, 125, 271, 385–389,  
419–422, 426
- economic capital, 344–345; regulatory v.,  
343–344
- economic cost, risk capital, 149–152
- economic equivalence, liability/asset  
insurance, 138–139, 140
- economic value, 432, 437–438; accounting  
performance v., 337–339; pension plans  
and, 186; performance evaluation  
including, 404; risk aggregation target of,  
341
- economic value added (EVA), 46
- economy, world, 7–8, 19–29
- electronic trading systems, 16
- employees: ERM and, 374, 400–402; pension  
plan decisions by, 203; reduced number  
of, 374; temporary, 73
- energy industry, 398, 404–405
- energy price risk, 390
- energy trading, future of, 410–412
- England, retail price index for, 19
- Enron, 227, 233
- enterprise-wide risk management (ERM),  
42–43, 46–47, 75; assessing risks for,  
360–362; banks needing to use, 395, 396;  
benefits/outcomes of, 371–374, 377;  
bottom-up, 337, 339; business context of,  
358–368; CCRO, 434–436; conceptual  
framework of, 335, 358; derivatives  
replaced by, 51; deterrent to, case study  
scarcity as, 350; goals of, 379–381;  
governance of, 346, 354–355; Hydro One  
ERM case study of, 259, 351, 352–378;  
implementation of, 335–346, 348–349,  
350; micro benefits of, 327–329;  
Nationwide Insurance use of, 258–259,  
326, 328–329, 330, 333, 337, 343; pilot  
study in, 357–358; risk monitoring/  
reviewing in, 363–364; roundtable on,  
379–457; shareholder value created by,  
324–329, 397–400; theory/practice of,  
323–347; top-down, 337, 338; trial period  
of, 352–358
- environmental liability, LPT ring-fencing  
of, 220–221
- equity: buffer stock of, 333; cost of,  
455–456; debt-to-equity ratio, 70;  
disadvantage of using, 82; financing,  
debt v., 108; manager ownership of, 112;  
operational risk loss, put of, 61; pension  
assets in, 188, 191; returns on, fixed-  
income v., 186–187; risk transfer with,  
51–55
- equity risk, pension plan, 191, 198, 199–200
- equity-based compensation, 69–70
- errors and omissions (E&O), 225
- Eurodollar market, 9
- excess-of-loss (XOL) coverage, 219
- exchanges, futures, 17, 25
- exchange-traded options, 7
- exotic risks. *See* tail outcomes
- expanded balance sheet approach, pension  
plan, 196, 197
- experience participation, 58–59
- exposure: competitive, 264–265; future  
revenue, 264; instruments used for  
hedging, Merck example of, 267–278; loss,  
291–293; natural, 39; opposite,  
transferring risk to firms with, 18; risk  
management not allowing unchanged,  
46; targeting risk, 67, 71, 72; translation,  
264; VaR for credit, 50
- extreme value theory, 48–49
- Exxon-Valdez incident, 34–35
- fair disclosure requirements (Reg. FD),  
386–387, 405
- FAS 133, 427, 456–457
- fat tails, 341
- federal government debt, 11

- Federal Reserve Board, 23
- finance: comprehensive approach to, 33;  
structured, advances in, 60–61; theory of  
modern, 99–103, 382
- finance risk, 55–57
- financial distress, 82; costs of, 313–315, 330;  
credit ratings determining threshold of,  
330–333, 335; information/comparative  
advantage and, 103–104; limiting v.  
minimizing, 330; lower-tail outcome, 94,  
114, 116–117
- financial instruments. *See* instruments,  
financial
- financial price risk, stock prices reflecting,  
236–242, 251–252
- financial risk: forms of, 34; non-financial v.,  
34–35
- financing: debt v. equity, 108; post-loss, 40,  
207–208, 216–218, 225, 227–228
- finite risk reinsurance, 205–234; abuse of,  
potential for, 226–230; example of,  
209–210; funded, 216–218; pre-loss v.  
post-loss, 216–218; principles for sound,  
230–233; risks in contracts of, 211; typical  
structures of, 210–218
- fire insurance, as vertical spread, 36–37
- firms: asset management, 369; BP  
operating, 291; industrial, 90; investors  
provided with information from, 260;  
IRM tailored to, 65; manager speculation  
creating profit for shareholders and, 118;  
multi-business, 134, 153–157; principal  
financial, 131, 132, 147–149, 150, 153–155;  
products use by, 87–120; risk transfer  
between, 18; size of, 73, 96, 247, 304;  
surveys of, 94, 95–97; three types of,  
106–107; value estimation of, 83, 339. *See*  
*also specific firms*
- First Data, 398–399, 401
- fixed dollars order book, 98
- fixed exchange rate, 6; breakdown of,  
19–20
- fixed liabilities, contingent v., 134–139
- fixed price contracts, Metallgesellschaft use  
of, 97
- fixed-income returns, equity returns v.,  
186–187
- floating-rate loans, 23
- floor trading, 16
- forecasts: earnings, de-emphasizing, 406;  
risk management determined by, 98
- foreign currency: derivatives of, 247;  
information about, FX rates not impacted  
by, 105
- foreign exchange (FX) rate, 80, 257–258;  
dynamics of, Merck example of, 277;  
foreign currency information not  
impacting, 105; hedging of, 96, 247, 248;  
swapping of, 8–9
- foreign exchange (FX) rate risk, 64, 84,  
90–91, 237–242, 424; increase in, evolution  
of, 19–22, 29; projecting, 268–269;  
reduction of, cash flow variability driving,  
100; sales related to, 84
- foreign income generator, Merck strategy of,  
277
- forward contracts: historical perspective on,  
28; IRM use of, 80; metals, 28
- forward market, 21, 24, 25
- forward rate agreements (FRAs), 25, 29
- freight transportation fuel price, 300
- Fresh Samantha fruit juices, 78
- Friedman, Milton, 6, 15
- Frontier Insurance Company, 222–223
- fuel price: airline industry hedging of, 248,  
250, 258, 299–322; freight transportation,  
airline v., 300; jet, 308, 310–311
- fuel price volatility, 1992–2003, 300–301,  
435
- functional approach, IRM, 73–77
- funding: finite risk, pre-loss v. post-loss,  
216–218; internal, 72–73
- future(s), 7; exchanges, 17, 25; inventory-  
hedging use of, 10; liquidity of oil, 97;  
market capture by, 17; treasury bond, 10
- future price movement, 98
- future revenue exposures, 264
- futures contracts, 2–3, 21–22, 29; historical  
perspective on, 30; progression of, 24, 28
- General Motors (GM), 188
- generally accepted accounting principles  
(GAAP), 192, 343–344, 420, 425, 426; debt  
and, 427; disclosure and, 406; earnings  
not accurately reflected by, 387; finite risk  
concerns of, 227
- Global Derivatives Study Group of the  
Group of Thirty, 164
- Globex, 17
- gold price volatility, 109–112
- Great Derivatives Disasters. *See* derivatives  
disasters, 1993–1995

- gross domestic product (GDP), CLOCS  
based on, 60
- Group of Thirty, 41, 349
- guaranteed investment contracts (GICs),  
141–143
- hedging, 421; airline industry use of, 248,  
250, 258, 299–322; cash flow variability  
reduced by, 117; commodities used in,  
airline example of, 309; compensation  
linked to, 109; currency risk, 263–278;  
earnings-based v. value-based, 47; firm  
size and, 96, 304; fuel price, 248, 250,  
258, 299–322; FX rate, 96, 247, 248; gold  
price volatility and, 110; instruments  
for, 40, 267–278, 307; investment and,  
312, 316, 318; IRM v. separate risk, 80;  
level of, appropriate, 390–391; low-debt  
firms not benefiting from, 106; Merck  
assessment/strategy for, 267–278, 389;  
NPV projects protected by, 389; oil,  
34–35, 250–251; operational, 242;  
partial, 80; program construction,  
275–278; risk capital decisions about,  
152; selective, 87, 94, 104, 391;  
successful, airline example of, 306–308;  
beyond usual definition of, 85; value  
added by, 47, 299, 304, 305, 308, 310–311,  
312–318
- hedging premium, over time, 318–321
- Homestake mining, 109
- hybrid securities, 22, 28, 29; historical  
perspective on, 30
- Hydro One, company overview of, 351–352
- Hydro One ERM, 259; benefits/outcomes  
for, 371–374, 377; case study of, 351,  
352–378; current status of, 374–375; initial  
stages of, 352–358; risk monitoring/  
reviewing at, 363–364; risk profile of,  
364–368
- illiquidity, avoiding underinvestment and,  
282–284
- implied volatility, 181–182
- imputed capital, 327–328
- incentives, 362; manager, 108–113, 312–313,  
400, 441–444; ownership limit, 400
- income swaps, 56
- incurred but not reported (IBNR), 219, 221
- index arbitrage, 12, 13–14
- index products, crash of 1987 and, 12–13
- industrial firms, FX rate risk for, 90–91,  
237–242
- industry: airline, 248, 250, 258, 299–322;  
energy, 398, 404–405; IRM for specific,  
72, 78; pharmaceutical, 264, 272, 273–274;  
retail, 68
- information: computer models for  
proprietary, 123; demand volatility,  
marketing providing, 84–85; to investors,  
260; proprietary, 71, 231, 406; specialized,  
103–104
- information risk, 150
- information technology, 6–7, 15, 16
- innovation: case against, 11–14; causes of,  
5–9; during Depression, 7–8; as  
discovered v. new, 29–30; influential, 7;  
new, 14–17; pace of, 5; regulation-  
propelled, 8–9; results of, 9–10; tax-  
induced, 9; world economy and, 7–8
- instruments, financial: debt issuance with,  
19; foreign exchange rate risk giving rise  
to, 19–22; hedging, 40, 267–268, 307;  
Merck exposures hedged using, 267–278;  
not using, 51; price volatility creating new,  
27–29; risk management without, 51;  
selecting appropriate, 274–275; simple v.  
complex, 31; targeted, 79–81
- insurable interest, optional interest v., 38
- insurance, 323; adverse selection in, 290;  
asset, risk capital and, 134–147; BP  
strategy for, 279–298; capital structure  
and, 284; catastrophe, 46, 61, 143, 145;  
corporate, evaluating, 280–290; demand  
side of, 257–258, 279–280; earnings-  
protection, 81; fire, vertical spread in,  
36–37; GAAP for, 226; individual v.  
corporate, 280–282; liability/asset,  
economic equivalence of, 138–139; loss  
coverage, 293–297; moral hazard in, 290;  
public companies' typical strategy for,  
279; real benefits of, 282–288; regulatory  
requirements for, 288; retroactive  
liabilities not qualifying as, 226; rogue  
trader, 61; service efficiencies and,  
285–287; structured, 208; supply side of,  
257–258, 280, 288–290; tax benefits from,  
287–288; timing risk not qualifying as,  
224. *See also* self-insuring
- insurance companies, 68; capital markets  
converging with, 43; capital markets v.,  
35–38, 41; earnings shortfalls not

- provided by, 326; reinsurance for, 206;  
risk language of, 35
- insurance contracts, 36–37
- integrated risk management (IRM), 63–86;  
challenges in creating, 85–86; failures  
in, 54; functional approach to, 73–77;  
goal of, 63; implementation of, 82–85;  
industries benefiting from, 72, 78; multi-  
line, 53–55; performance evaluation and,  
71–72; tactical v. strategic, 64, 85; tax  
reduction through, 70–71; tools for,  
77–82
- integration: definitions of, 74; risk/risk  
management process, 74, 75; across risks,  
50
- Intel, 68
- interest rate risk, 23–25, 393–397, 426
- interest rates: copper, 28–29; foreign  
currencies with high, 118; Treasury bill, 23
- interest-rate swaps, 25
- internal bank, 47
- internal funding, 72–73
- international accounting standard (IAS)  
rule, 188
- International Business Machines (IBM), 22
- International Monetary Market (IMM),  
21–22
- International Swaps and Derivatives  
Association (ISDA), 41, 49, 235–236
- inventory hedging, 10
- inventory, risk, 83, 336–337
- investment: asset, for zero risk capital, 147;  
cash flow for, 325; hedging and, 312, 316,  
318; partial insurance on, 142; planning,  
369
- investment risk, 211
- investors, 436–441; communication with,  
405–408; firm information to, 260; non-  
diversified, 67, 68–70; principal financial  
firm customers v., 131; risk management  
by CFOs and, 383–384
- Jaguar, 78–80
- Japan–U.S. exchange rate, 19
- jet fuel prices, 308, 310–311
- jobbing, 121, 125
- JP Morgan & Co., Inc., 166
- liabilities: ADCs for, 222; contingent  
customer, 146–147; debt as, 192; default  
risk with, 139–141; discontinued  
business, 222; fixed v. contingent, risk  
capital examples for, 134–139; pension,  
192–193, 196–197; reinsurance for  
limited, 213–214; retroactive, 226;  
tax, 45
- liability guarantee/insurance, risk capital  
examples of, 137–139, 140
- liability-related principal activities, 131
- limited liability reinsurance, 213–214
- liquidity, 449; oil futures, 97
- loans, 241; bank management of, past v.  
present, 393; bridge, hypothetical, 133–147;  
dual currency, 22, 22110–23110; floating-  
rate, 23
- London interbank offered rate (LIBOR), 37,  
52, 396–397
- London Metal Exchange (LME), 28
- loss corridors, 228–229
- loss exposures, BP, 291–293
- loss portfolio transfers (LPTs), 56–57,  
218–219, 221, 223
- losses, pre-funded, 56
- low-claims bonus feature, abuse of, 230
- lower-tail outcomes, 94, 114, 116–117
- Lufthansa Airlines, 309–310
- managers: equity ownership for, 112; ERM  
benefit to, 400–402; forecasts  
determining risk management by, 98;  
incentives for, 108–113, 312–313, 400,  
441–444; information collection by,  
84–85; investment incentive for, 312–313;  
IRM overview for, 63–86; ownership by,  
112, 327–328; risks to, higher returns  
leading to more, 99; selling ERM to,  
335–336; senior, 77, 85, 125–126;  
speculation by, 118; VaR-based risk  
controls and, 167–168
- mandatory reinstatement provisions,  
228–229
- marginal risk capital, combined/stand-  
alone relationship to, 159–161
- market(s): bond, 448; capital, 35–38, 41, 43;  
customer side of, 129; derivatives, 87;  
Eurodollar, 9; forward, 21, 24; futures  
exchanges capturing, 17; liquid, oil  
futures, 97
- market efficiency: definition of, 99; manager  
lesson from, 99; modern finance theory  
tenet of, 99; speculative positioning  
profitability myth and, 122



- market model, rate of return calculations using, 236–237
- market power, 123, 124
- market risk, 336; risk management  
 revolution response to, 48–49; VaR for, 341
- marketing, information contributed by, 84–85
- Markowitz, Harry, 15
- material risk transfer, 211–212
- MBA student, total risk viewed by, 324
- Mean-Variance Portfolio, 15
- Merck & Co., Inc.: company overview for, 263–264; currency risk hedging at, 264–278; dividend policy of, 273; exchange rate assessment of, 269–270; foreign exchange rate risk of, 257–258; hedging program of, 267–278, 389; resource allocation at, 267; sales/assets geography of, 267
- metal price volatility, 27–28
- Metallgesellschaft, 97–98, 173–175
- mezzanine debt-holders, 145
- MG Refining & Marketing, Inc. (MGRM), 97–98, 173–175
- Microsoft, 73–74, 76, 80
- Mirant, 398, 401
- M&M. *See* Modigliani and Miller (M&M) propositions
- Mobil Oil, 54
- modern finance theory, 99–103, 382
- Modigliani and Miller (M&M) propositions, 381, 383–384, 417, 418
- Monte Carlo simulation techniques, 116, 440
- Moody's, 349, 377
- moral hazard, 37, 150, 290
- Morgan Stanley roundtable, ERM, 413–457
- multi-business firms, 134, 153–157
- multi-line policies, 25, 53–55
- multi-risk policies, 76
- Nationwide Insurance: ERM of, 258–259, 326, 328–329, 330, 333, 337, 343; risk-return tradeoff of, 345
- net assets, 133
- net assets risk, risk capital based on, 133–134
- net present value (NVP), 325, 329, 418; hedging to protect projects of, 389
- Netherlands, 30
- New York Mercantile Exchange (NYME), 28
- New York Stock Exchange (NYSE), 14
- Nixon, Richard, 6
- non-financial risk, financial v., 34–35
- non-variance VaR calculation methods, 182–183
- off-balance sheet derivatives, 243<sup>n11</sup>
- oil, 25, 97–98, 418–419; hedging, 34–35, 250–251
- oil futures, liquid market, 97
- oil price risk, 419, 435
- oil spill, Exxon-Valdez, 34–35
- Ontario, Canada, 351
- op risk loss equity put, 61
- operational hedging, 242
- operational risk, 49–50, 77–79, 336, 340–341, 404; bundled, 61
- option(s): binary, 117<sup>n20</sup>; exchange-traded, 7; real, 431–433
- option contracts, 22, 25
- optional interest, insurable interest v., 38
- Orange County Investment Pool (OCIP), 171–173, 177
- ownership, 362, 400; managers given, 112, 327–328
- partial insurance, investments with, 142
- Pension Benefit Guaranty Corporation (U.S.), 189
- pension plans, 184–204, 197–199; accounting in, 184, 185, 187, 190–194, 196–197; case studies of, 193–194; DB, 89, 184, 185–186, 189, 202–203; equity risk in, 191, 198, 199–200; implementing, 202; risk mismatch in, 187–189, 196–197, 200–201; shortfall funding in, 186–190; strategic analysis/development of, 194–201; underinvestment/overfunding in, 202; voluntary retirement package, 376–377; WACC incorporation of, 192–193
- Pension Protection Fund (U.K.), 189
- performance evaluation, 71–72, 328, 335–336, 337–339, 400–402, 404
- personal computers (PCs), 15
- personal wealth volatility, 69–70
- petroleum: futures contracts on, 28; price of, 25
- Philadelphia Stock Exchange, 22



- physiocracy, 11
- pilot study, ERM, 357–358
- policies: anti-derivatives, 51; dividend, 273; multi-line, 25, 53–55; multi-risk, 76
- policy trigger date, 215
- portfolio diversification, 100, 387–389
- portfolio insurance, 12–13
- positions: tracking trader, 128; unwanted, 127–128
- position-taking, 105; profitability of, conditions for, 122–123; risk of, 121. *See also* speculative positioning profitability myth
- positive claims experience, cedant participation in, 212–213
- post-loss financing, 40, 207–208, 216–218, 225, 227–228
- premium loading, 280
- price, 98; CDS, 452; transfer, senior managers setting, 125–126. *See also* fuel price; stock price
- price index, retail, 19
- price risk: energy, 390; oil, 419, 435
- price volatility, 18; fuel, 1992–2003, 300–301, 435; gold, 109–112; instruments created in response to, 27–29; metals, 27–28. *See also* commodity price risk
- pricing models: CAPM, 251; security, 276
- principal activities, 131, 157
- principal financial firms, 131, 132; customers of, investors v., 131; insurers/capital providers of, risks born by, 150; risk capital/diversification/multiple business within, example of, 153–155; securities underwriting subsidiary of, 147–149
- privileges, 7
- probability analysis, VaR, 164
- probability of bankruptcy (pBU), 101
- probability of default, 332, 333–334, 335, 337–338; VaR estimation of, 342
- process: integration of risk with management, 74, 75; products v., 38–40
- Procter & Gamble (P&G), 69; case study, 169–170
- products: advances in, 51–62; ART, 33, 56–59; corporate uses of, 87–119; equitized risk transfer, 51–55; evolution of, 18–31; finite risk, 218–219; insurance v. finance, 36–38; IRM, 53–55; process v., 38–40
- profit margin, foreign exchange rate influence on, 20–21
- profit/profitability: calculation of, risk capital accounting in, 147–152; customer business, trading room, 105, 125–129; manager speculation for shareholder/firm, 118; speculative positioning profitability myth, 121–123; position-taking, conditions for, 122–123; principal financial firm, 132; trading room, 105, 121–130
- progressive tax, 70
- proprietary information, 71, 231, 406
- prospective finite risk, retrospective v., 214
- rate of return: equity v. fixed-income, 186–187; high interest-rate foreign currencies for high, 118; market model calculations of, 236–237; required, 102–103, 110; risks from attempting to earn higher, 99; theory v. practice, 99. *See also* abnormal returns; profit/profitability; risk-return tradeoffs
- ratings downgrade, 342
- real options, 431–433
- Reg. FD. *See* fair disclosure requirements
- regulation: ERM and, 366; fair disclosure, 386–387; innovation propelled by, 8–9; insurance coverage, 288. *See also* deregulation
- regulatory capital, 133; economic v., 343–344
- regulatory risk, 399, 400
- reinsurance, 206; limited liability, 213–214. *See also* finite risk reinsurance
- Reliance Group, 81
- reporting, EPS, 406–407
- representations and warranties (R&Ws), 56–57
- research and development (R&D), 389; pharmaceutical industry, 273–274
- residual insurance, 143–144
- retail industry, 68
- retail price index, England, 19
- retirement plans, 69, 376–377
- retroactive liabilities, 226
- retrospective aggregate loss covers (RAL), 221, 223
- retrospective excess of loss cover (RXL), 219
- retrospective finite risk, 215–216; prospective v., 214

- rice trade on book, 29–30
- risk(s): aggregating, 339–341; assessing/estimating, 66–67, 80, 88–89, 269–270, 296, 360–362, 405; broad market, 152; capital structure and, 106–108, 176; categories of, 336, 340–341; core/non-core, 39–40, 206, 326; determining right amount of, 329–335; distributions according to type of, 340–341; equity, pension plan, 191, 198, 199–200; exposure targeting of, 67, 71, 72; individuals bearing, types of, 79; inventory of, 83, 336–337; monitoring/reviewing, 363–364; net assets, risk capital based on, 133–134; non-financial v. financial, 34–35; pension plan, 187–189, 195, 196–197, 198, 199–201; profile of, case study example, 364–368; regulatory, 399, 400; shortfall, 186–190; targeting, 67, 71, 72; tolerability of, Hydro One example of, 362–363; transfer of, 40; underwriting, 211; weather, 61, 77; world economy rise in, 19–29. *See also* exposure; risk management; risk management revolution; total risk; volatility
- risk capital, 131–161; accounting balance sheet examples for, 136, 137, 141, 142, 148; asset insurance and, 134–147; balance sheet examples of, 137, 143, 145; bridge loan examples of, 133–147; calculation of, 158–159; definition of, 133–134; economic cost of, 149–152; GICs with, 141–143; hedging decisions with, 152; incremental, diversification and, 153; liability guarantee examples of, 137–139; marginal/combined/stand-alone, 159–161; measuring, 134–147; multi-business, 134, 153–157; profit calculation accounting for, 147–152; stand-alone basis of, 134
- risk finance: appeal of, 55–57; hybrid of risk transfer and, 205–206; post-loss, 40, 207–208, 216–218, 225; pre-loss, 55, 207–208
- risk horizon, VaR, 163, 165
- risk management: 1980s version of, 323; advances in, 44–51; concerns in, range of, 34; development stages of, 39–40; forecasts determining managerial, 98; fragmented approach to, 348; goals/objectives of, 94, 167; integration of risk/process in, 74, 75; investors/CFOs dividing, 383–384; macro benefits of, 324–327; methodology consistency in, 48–50; practice of, 95–98; pre-revolution, 34–40; process v. products in, 38–40; products v., 38–40; reason for as determining, 47–48; roundtable on importance of, 381–385; theory v. actual use of, 93–120; unchanged exposure allowed by, 46; value added by, 235–261, 381–385, 416–419; value maximization in, 44–47, 65–66; VaR and, 167. *See also* integrated risk management
- Risk Management Association, 49
- risk management revolution, 32–62; major byproduct of, 48–49; market risk strategies arising during, 48–49; pre-, 34–40; risk transfer development resulting from, 61
- risk management unit: internal bank, 47; service bureau as, 46
- risk measurement, 264–267, 341–343; VaR as, 88–89, 94. *See also* volatility
- risk mismatch, pension plans with, 187–189, 196–197, 200–201
- risk neutralization, 208, 258
- risk retention, 39–40, 206–207, 362–363; funded, 207; partially funded high, 224; spread, 125
- risk sharing efficiency, 10
- risk shifting, 284–285
- risk taking, 116–119
- risk transfer, 61, 208, 214–216, 363; alternative, 33, 56, 208, 213; equitized, 51–55; material, 211–212; opposite exposures in, 18
- risk-adjusted return on capital (RAROC), 43, 50
- risk-return tradeoffs, 99, 258–259, 345; decentralization of, 327–328
- risk-taking audit, 105
- rogue trader insurance, 61
- roundtable, ERM, 379–457; Morgan Stanley, 413–457
- sales: exchange rate risk related to, 84; Merck geography of assets and, 267; stable profit from, 125–126, 128–129, 130
- sales index, strong dollar impact measurement in, 265–267

- salespeople, oversupply of, 129
- Salomon Brothers, 74–75
- savings and loans institutions (S&Ls), 23, 241
- screen-based trading, 16
- Securities and Exchange Commission (SEC), 6, 6*n*3, 205, 405
- securitization, 147–149, 276, 393; hybrid, 22, 28, 29, 30; synthetic, 60–61
- security pricing models, 276
- selective hedging, 87, 94, 104, 391
- self-insuring, 105, 257, 279, 444; diversification and, 445–447
- senior managers, 77, 85; transfer price setting by, 125–126
- service bureau, risk management unit as, 46
- service efficiencies, insurance issue of, 285–287
- shareholder value, ERM creating, 324–329, 397–400
- shareholder wealth, derivatives link to, 236–237
- shareholders, 66–67, 77, 400; capital structure and, 82, 111; diversified, 100, 111; insurance concerns for, 282–284; lower debt in capital structure for, 82; manager speculation profiting, 118; payments to, reduction of, 102–103; pension plans and, 184–204
- shortfall risk, 176–177, 326; pension plan, 186–190
- short-term contracts, 97
- short-term trading, 11
- Shultz, George P., 6*n*2
- simulation, Monte Carlo techniques of, 116
- smoothing. *See* earnings
- Southwest Airlines, 306–308, 312
- speculation, 63, 118, 122, 124–125
- speculative positioning profitability myth, 121–123
- spread costs, 36–37; risk capital, 152
- spread retention, 125
- Standard and Poor's (S&P's), 10, 146, 349, 377
- Stauffer Management, 220–221
- stock market crash: 1929, 7–8, 12; 1987, 12–13
- stock price: airlines study of 1992–2003, 248, 250; financial price risk reflected in, 236–242, 251–252; pharmaceutical industry, 272
- strategy, tactics v., 64, 85
- structured finance, advances in, 60–61
- surveys: corporate use, 94, 95–97; Dolde 1992, 96; ISDA, 235–236; Wharton-CIBC Wood Gundy study as, 95, 96
- swaps, 8–9, 29; asset return, 188–189; currency, 8–9, 22; income, 56; interest-rate, 25; risk management revolution and, 43; total return (TRS), 52–53
- Swiss Re, 54, 55, 59, 350
- synthetic securitization, 60–61
- tactics, strategy v., 64, 85
- tail outcomes, 90, 113–115, 341; lower, 94, 114, 116–117
- targeted financial instruments, 79–81
- targeting, risk of, 67, 71, 72, 341
- tax benefits, 9, 70–71, 103; insurance provision of, 287–288; IRM, 70–71
- tax codes, U.S., 287
- tax liabilities, reduction of, 45
- tax shield, incremental, 70
- tear-up agreements, 230
- technology: information, 6–7, 15, 16; screen-trading, 16
- temporary employees, 73
- Textron, 193–194
- theory: extreme value, 48–49; finance, modern, 99–103, 382; risk management, actual use v., 93–120. *See also* enterprise-wide risk management
- Thinking Machines Corp., 67–68
- thrift institutions, 8
- time horizon, VaR, 164
- timing risk, 211
- Tobin's Q ratio, 304–305, 308, 321
- total return swaps (TRS), 52–53
- total risk, 67, 76; assessment of, 80, 88–89; capital for, 334–335; MBA student view of, 324; Microsoft strategy for reducing, 73–74, 76; selective v., 168–169
- trading: bank, 397; energy, future of, 410–412; floor/screen-based, 16; jobber style of, 121, 125; monitoring operations of, 114; position tracking in, 128
- trading dollars, 279
- trading room/operations, 453–455; New York example of, 122; profits in, 105, 121–130
- transfer price setting, 125–126
- transition matrix, credit rating, 331–332

- translation exposures, 264  
 transparency, 231–232  
 Treadway Commission, COSO of U.S., 348–349  
 Treasury bills (T-bills), 9–10, 23, 146  
 treasury bond futures, 10  
 Tufano, Peter, 109, 110, 112  
 turn (bid-offer spread), 124–125
- underinvestment, 55, 102, 202, 207, 325;  
   airline industry problem of, 301; avoiding illiquidity and, 282–284  
 underwriting, 133, 214; BP shares, 1986, 148; securities, principal financial firm subsidiary example of, 147–149  
 underwriting risk, 211  
 undiversified investors, 67, 68–70  
 United Grain Growers (UGG), 55, 402  
 United Kingdom (U.K.), 189  
 United States (U.S.): U.S.–Japanese exchange rate, 19; largest corporate pension fund in, 188; Metallgesellschaft AG oil subsidiary of, 97; savings and loans, 23; tax codes/rate in, 287; Treadway Commission in, COSO as, 348–349  
 U.S. dollar: strong, impact of, 265; strong/weak scenarios for, Merck, 269–270
- Valdez, 34–35  
 value, 46, 167–168; accounting performance v., 337–339; cash flow risk relation to, 243–246; estimating firm, 83, 339; EVA, 46; extreme value theory, 48–49; hedging for added, 47, 299, 304, 305, 308, 310–311, 312–318; questions to determine risk management, 90; risk management adding, 235–261, 381–385, 416–419; shareholder, ERM creating, 324–329, 397–400; turn/bid-offer spread, 124–125. *See also* economic value; net present value (NPV)  
 value maximization, 33, 44–47, 65–66, 231, 429  
 value mismatch, 190–194  
 value-at-risk (VaR), 41, 43, 48, 163, 342; alternatives to, 115–116, 175–177; calculating, 178–179; credit exposure reduction using, 50; daily, 115; definition of, 162, 163; derivatives disasters ex-ante application of, 170, 171, 172, 173, 175; development of, 163–164; implementing, 164–166; improving on, 113–116; limitations of, 342; market risk, 341; non-variance calculation methods for, 182–183; proper use advice for, 177–178; as risk measurement tool, 88–89, 94; uses of, 166–168, 333  
 value-based management (VBM), 46  
 VaR distribution, 164–165  
 variance: conditional, models of, 181; as risk measurement, 94  
 variance minimization, 87, 93, 119  
 vertical spread, fire insurance as, 36–37  
 volatility: acceptable levels of, 333; demand, 84–85; earnings, 125, 271, 385–389, 419–422, 426; implied, 181–182; index arbitrage and, 14; industry-specific, 68; interest rate, 23–25; measurement of, 11–12; personal wealth, 69–70; price, 27–28, 109–112, 300–301, 435; taxable earnings, 70; trade earnings, 125  
 volatility inputs, 179–182  
 Volcker, Paul, 23  
 voluntary retirement package, 376–377
- Wachovia, 402, 404  
 wartime, 19  
 wealth: oil, 25; volatility of personal, 69–70  
 weather, 61, 77  
 weighted average cost of capital (WACC), 191–192; case study examples of pension surpluses with, 193–194; conventional calculation of, 195; incorporating pension risk into, 192–193, 196–197  
 Wharton–CIBC Wood Gundy study, 95, 96  
 whipsawing, 14, 20  
 The Williams Companies, 260–261, 429–431, 438  
 working capital, 133  
 World Bank-International Business Machines currency swap, 22  
 world economy, 7–8, 19–29  
 zero risk capital, 147