

INDEX

Note: Italicized page locators refer to exhibits.

- Academic health centers, 33
- Acceleration of receipts, 603–4
- Accountable care organizations (ACOs), 24–25, 29; bundled payments and, 64; capitated payments to, 180; cost reduction and, 234; data analytics and, 27; forms of, 24; payment through, 24–25; shared savings program of, 51, 63
- Accounting, 10; accrual (basis), 86–87, 109–10; definition of, 8; inflation, 664; relationship to financial management, 8
- Accounting breakeven, 173, 175, 177, 189, 197, 249, 250; differentiated from economic breakeven, 172, 189
- Accounting entity, 82, 83, 109
- Accounting identity (or basic accounting equation), 121, 148
- Accounting income statements, *vs.* cash flow, 524
- Accounting methods, 85–87; accrual accounting, 86–87; cash accounting, 85–86
- Accounting period, 83, 109
- Accounting rate of return (ARR), 546
- Account(s): charts of, 88, 110; classification of, 88–89; contra, 128; definition of, 88; permanent, 88; primary, 88; subsidiary, 88; temporary, 89
- Accounts payable, 131, 140, 623–26; as costly trade credit, 625, 626, 632; finance charges on, 626; as free trade credit, 625, 632; payments of, 146–47
- Accounts receivable financing, 629–30, 631, 632
- Accreditation: of hospitals, 32
- Accrual (basis) accounting, 86–87, 109–10
- Accrual(s), 131; as short-term financing source, 623, 631
- Accrued expenses, 131
- Accumulated depreciation, 127–28
- Activity, relationship to cost, 161
- Activity-based costing (ABC) method, 255; definition of, 239; final aggregation of activity costs per visit, 242; illustration of, 239–40; implementing, steps in, 239; initial data and allocation rate calculation, 241
- Administrative costs, 264, 627
- Admission rates: decrease in, 32
- Adult day care, 36
- Adventist Health System/Sunbelt, 473
- Adverse opinions, of auditors, 80
- Adverse selection: health insurance and, 42, 65
- Advertising: accounts payable for, 146–47; purchased with credit, 145
- Aetna, 45
- Affordable Care Act. *See* Patient Protection and Affordable Care Act (ACA)

- Aging schedules, 616, 617, 619, 631
AICPA Audit and Accounting Guide
 (American Institute of Certified Public Accountants), 79
 Alachua County Health Facilities
 Authority (Florida): bond sales by, 401
Alice's Adventures in Wonderland
 (Carroll), 4
 Allocation rate, 205, 207; definition of, 204; equation, 207
 Allowable costs: cost-based reimbursement and, 52
 All patient case-mix index, 662
Almanac of Hospital Financial and Operating Indicators, 655
 Ambulatory care services, 13; overview of, 34–35; technology and, 34
 Ambulatory payment classifications (APCs), 69
 Ambulatory surgery centers (ASCs), 34, 35; Medicare reimbursement for, 69
 American College of Healthcare Executives (ACHE), 14
 American Heart Association, 9
 American Hospital Association: charity care guidelines of, 19; hospital service plans and, 45
 American Institute of Certified Public Accountants (AICPA), 79, 109
 American Red Cross, 9, 18
 Amortization schedule, 349
 Amortized loans, 348–49, 395–96
 Annual percentage rate (APR), 337
 Annual percentage yield (APY), 337
 Annual reports, 89
 Annuities: definition of, 320, 339; due, 320, 322–25, 339; future value (FV) of, 320–21, 322; ordinary (deferred), 320–22, 339; payment of, 320; as perpetuities, 325–26; present value (PV) of, 320, 321–22, 324
 Arguments: spreadsheet solutions, 312, 313
 Asset accounts: restricted, 136
 Asset management (activity) ratios, 652–55, 668, 679; average age of plant, 654–55; days in patient accounts receivables, 654; definition of, 652; fixed asset turnover ratio, 653; total asset turnover ratio, 653–54
 Assets: basic accounting equation of, 121; categories of, 123–29; conversion into cash, 123; definition of, 120, 148; infrastructure, 130; liquid, 407; maturity of, 120, 148; net, 133–36, 149; operating leverage and, 199; other, 129; right-to-use, 132; total, 121, 122, 133; written off, 128; zero-return, 128. *See also* Current assets; Financial assets; Fixed assets; Real assets
 Assets divestment: capital budgeting analysis of, 525
 Asset structure: debt financing and, 485, 486
 Asset utilization, 657
 Association for Health Care Philanthropy, 445–46
 Associations: professional, 16
 Assured Guaranty Corporation, 430
 Asymmetric information, 458; adverse-selection problem and, 42
 Auditors, 80; non-audit services of, 81
 Auditor's opinions, 80
 Automated Clearing House (ACH), 604
 Average age of plant, 654–56
 Average collection period (ACP), 614–16, 631, 654
 Average cost per test, 195
 Average daily billings (ADB), 614, 615, 616
 Average fixed costs, 195
 Average length of stay (ALOS), 662
 Bad debt losses: differentiated from charity care, 93; provision for, 94, 124, 125

- Balanced Budget Act of 1997, 71
- Balance sheets, 119, 122, 600;
 accounting identity of, 121; assets
 section of, 120, 122, 123–29;
 common size, 680, 681; defini-
 tion of, 120, 148; equity section
 of, 120, 122, 129, 133–35, 135;
 inflation effects and distortions
 in, 665; liabilities section of, 120,
 122, 129–33; overview of, 120–22;
 percentage change analysis in, 682;
 property and equipment value
 listed on, 127; relationship with
 income statements, 91, 120, 149;
 timing of, 121; transactions section
 of, 143–47, 149; use in financial
 statement analysis, 147–48, 645
- Banking: concentration, 604, 630;
 historical foundations of, 76;
 investment, 471–73
- Bank loans, 142, 628, 632; with
 three-year maturity, 132
- Bank of America Merrill Lynch, 401
- Bankruptcy, 78, 627; default-related,
 129–30
- Bar codes, 622
- Bartering, 76
- Base case: in sensitivity analysis, 567,
 571
- Base case analysis, 166, 181
- Basic accounting equation, 121, 143
- Bastiat, Frederic, 319
- Behavioral finance, 459
- Behaviors: impact of health insurance
 on, 43
- Benchmarking/benchmarks, 665–66,
 669; definition of, 665; of financial
 risks, 459; illustration of, 666
- Benefits: as income statement item, 96
- Beta (β) coefficients, 371–74, 385,
 494, 495; definition of, 371; illus-
 tration, 372
- Big data, 27
- “Bigger fool” theory of investment,
 450
- Billed charges (or charges), 52, 65
- Biotechnology firms: risk and, 352
- Biotechnology industry: subsectors
 in, 8
- Black swan event, 582
- Blue Cross and Blue Shield of Florida,
 86
- Blue Cross/Blue Shield, 44–45, 65
- Blue sky laws, 470
- Board of directors, 78; of investor-
 owned corporations, 17
- Board of trustees: for not-for-profit
 corporations, 19. *See also* Trustees
- Bond insurance, 430–31
- Bond issues, 396; trustees of, 402,
 423
- Bond pools, 400
- Bonds: after-tax yield on, 400; call
 provisions for, 399, 403, 423; call
 risk premiums on, 407–8; coupon
 (interest) rate of, 411; credit rat-
 ings of, 403–5, 423; debt service
 requirements of, 412; debt valua-
 tion of, 412–17; definition of, 316,
 396, 423; definitions related to,
 411–12; expected rate of return
 on, 418; floating-rate, 397, 399;
 going rates of, 411; indentures on,
 402, 423; interest (annual) yield
 on, 416; interest rate risk and,
 420–22; interest rates on, 397,
 415, 416, 417; investment grade,
 403; junk, 403; maturity date of,
 411; mortgage, 398, 423; new
 issues *vs.* outstanding, 411; 100-
 year, 316–17; outstanding, 411;
 par value of, 411; payment-in-kind
 (PIK), 398; price risk premiums
 on, 407; private *vs.* public place-
 ment on, 401; repayment of par
 on, 424; seasoned issue, 411; step-
 up provisions of, 398; unsecured
 (debentures), 398–99; yield to call
 on, 418; yield to maturity on, 418,
 424; zero-coupon, 397, 422. *See
 also* Corporate bonds; Municipal
 bonds; Treasury bonds

- Bond valuation: basic model of, 412–17; interest rate risk in, 420–22; over time, 416–17, 417; reinvestment rate risk in, 420; with semi-annual compounding, 418–20
- Bonuses: profitability and, 219
- Book depreciation, 98, 534
- Book value, 128, 133
- “Bottom line,” 102, 149
- Bottom-up (participatory) budgets, 279, 295
- Breakeven analysis, 171–75, 187; in capital budgeting, 537–39, 545; definition of, 171, 189; relationship between forecasted profit and loss (P&L) statement and, 174
- Breakeven point, 171, 173, 174, 196; under capitation, 184, 186, 187–88; in discounted fee-for-service environment, 176, 177, 178; operating leverage and, 199
- Breakeven volume, 171, 172, 182, 183
- Budgeting: definition of, 269, 276, 294, 295; middle-out, 278; value of, 276–77. *See also* Capital budgeting analysis
- Budgets: bottom-up, 278, 279, 295; conventional, 277–78, 295; definition of, 10, 269; expense, 281, 295; flexible, 287–88, 289, 295; master, 280; middle-out, 279; operating, 282–84, 283, 295; revenue, 281, 295; rolling, 286–87; static, 286, 287, 289, 295; statistics, 280–81, 295; timing of, 277; top-down, 278, 279, 295; zero-based, 278, 295. *See also* Capital budgets
- Build-up method, 505–7, 511
- Bundled (global) pricing, 57, 66
- Bundled payment plans: objective of, 64
- Bundled payments, 53
- Businesses: concept of, 9–10; definition of, 9; differentiated from pure charities, 9–10, 28. *See also* Corporations
- Business organizations: alternative legal forms of, 14–16
- Business (practice) managers, 13, 28
- Business risk, 508; definition of, 483
- Bylaws: of corporations, 16
- Calculator solutions: for amortized loans, 348; in annuities due calculations, 322–25; for bond valuation, 413, 414, 415; in compounding, 309–10; in discounting, 315–16; for effective annual rate, 336–37; financial risk on personal investments, 353; future value (FV) of annuities, 320–21; future value (FV) of an annuity due, 322–23; future value of a lump sum, 310; historical data *vs.* forecasted distributions and, 361; present value (PV) of annuities, 321–22; present value (PV) of an annuity due, 324; in return-on-investment (ROI) analysis, 331; semiannual bond valuation, 419; in semiannual compounding, 334, 335; solving for interest rate and time, 345, 346; uneven cash flow stream analysis, 327–30; yield to maturity on a bond, 418
- Call premiums, 403, 423
- Call provisions, 399, 403, 423
- Call risk premiums (CRPs), 407–8, 423
- Cannibalization, 252, 526
- Capital, 391; definition of, 11, 393; divisional cost of, 509, 585–86, 587, 591; forms of, 393, 422; historical cost of, 489; impairment of, 128–29; investors as sources of, 77; marginal cost of, 489; permanent, 488; project cost of, 508, 509, 562, 581, 587, 587, 590; total, 683. *See also* Corporate cost of capital
- Capital asset pricing model (CAPM), 405, 493–95, 498, 500, 510;

- advantages and disadvantages of, 383–84; definition of, 380, 386; security market line (SML) equation of, 381–82, 386, 493, 495
- Capital budgeting: definition of, 10–11, 519, 551
- Capital budgeting analysis: breakeven analysis in, 537–39, 545; cash flow estimation in, 523–29; decision process in, 519–20; effects on existing business lines, 526; financial analysis in, 521–22; merger analysis and, 551; net present social value (NPSV) model on, 546–48, 553; in not-for-profit businesses, 521–22, 545–49; overview of, steps in, 522, 551; post-audits in, 549–50, 553; project classifications in, 520–21; project scoring in, 548–49, 549, 553; return on investment (profitability) analysis in, 539–44, 552; of staff reduction, 551. *See also* Project risk analysis
- Capital budgeting decision process: certainty equivalent (CE) method in, 578–79, 590; overview of, 586–88; risk-adjusted discount rate (RADR) method in, 579–80, 590
- Capital budgeting decisions: definition of, 519
- Capital budgets: definition of, 586
- Capital costs: definition of, 92
- Capital gains, 394, 422, 438, 453; definition of, 356
- Capital gains yield, 416, 462
- Capital investments, 10, 28, 275, 508, 511, 518, 561. *See also* Capital budgeting
- Capitalization ratios: debt ratio, 649–50; debt-to-capitalization ratio, 650–51
- Capitalized expected earnings stream, 447
- Capital losses: definition of, 356
- Capital markets: access to, 136
- Capital rationing, 588–89, 591
- Capital structure, 98, 149; basics of, 476; definition of, 476; financial flexibility theory of, 484; of for-profit businesses, 480–85; industry averages of, 485; of not-for-profit businesses, 485–87; optimal (target), 476, 482–83, 485, 510; trade-off model of, 480–81, 481
- Capital structure theory, 480–83, 481, 486
- Capitation, 65; breakeven point under, 184, 186, 187–88; comparison with fee-for-service reimbursement, 54, 184, 189; contribution margin under, 184; definition of, 52, 66; fixed cost under, 181, 182, 183, 186; liquidity of current assets under, 126; membership (enrollees) under, 183–85; price setting under, 251, 251–55, 252, 254; profit and loss statement analysis of, 185, 185–87; provider incentives under, 54, 57; total variable cost under, 182; utilization under, 181–83, 182; variable cost rate under, 181, 182, 183, 184, 186; volume under, 181, 182, 183, 186
- Capitation contracts: as premium revenue source, 94
- Capitation premium rates: fee-for-service approach to, 184–85; setting of, 251–55
- CareDX, Inc., 468
- Carroll, Lewis, 4
- Carrying costs, 127
- Case mix: basis of, 662
- Case-mix groups (CMGs), 70
- Cash: cash equivalents *vs.*, 123; conversion from current assets, 123; definition of, 11; liquidity of, 125–26; as nonearning asset, 601; shorter-term investments *vs.*, 124; total, 125
- Cash (basis) accounting, 85–86, 109; advantages of, 86; definition of, 85; use by states and cities, 130

- Cash budgets, 605–10, 631; collections worksheet in, 606, 607; creating, 606; definition of, 606; expected values in, 610; liquidity planning and, 609; net cash gain (loss) of, 608; supplies worksheet of, 608; surplus/deficit summary component of, 608; target cash balance and, 608
- Cash equivalents, 124, 610; liquidity of, 123, 125–26
- Cash flow: cumulative, 537, 538; effect of taxes on, 105; of for-profit organizations, 105–6; net income conversion to, 103–4, 110. *See also* Cash flow estimation; Statement of cash flows
- Cash flow coverage (CFC) ratio, 651–52
- Cash flow estimation: *vs.* accounting income, 524; bias in, 530; in capital budgeting, 523–37; cash flow timing in, 524; changes in current accounts, 527; example of, 529–37; for for-profit businesses, 534–35; incremental cash flow, 523, 537, 551; inflation effects in, 527–28, 552; MRI system, 529–31, 531, 532, 536; nonincremental cash flow, 525; for not-for-profit businesses, 531, 533–34; opportunity costs in, 317–18, 525–26, 551; “principles” of, 523; project life factor in, 524–25; replacement analysis and, 537; salvage value in, 525; shipping, installation, and related costs, 526–27; strategic value and, 528–29, 552; sunk costs in, 525, 551; time value analysis of, 306
- Cash flow register, 328
- Cash flows: expected, discount and sum for, 410; nonnormal, 544; normal, 544; spreadsheet range of, 328
- Cash flow stream: assessing riskiness of, 410; in debt valuation, 409–10; setting required rate of return on, 410; uneven, 327–30
- Cash management, 601–5; acceleration of receipts, 603–4; costs and benefits of, 605; disbursement control in, 604–5; float management in, 602–3; goal of, 601, 630
- Cash managers: responsibilities of, 13
- Cash outflow: adjusting for risk, 582–84, 591; uncertainty in, 585
- Casualty insurance setting: moral hazard cases in, 42
- Catholic Health Initiatives, 18
- Centers for Medicare & Medicaid Services (CMS), 47; ambulatory payment classifications and, 69
- Certainty equivalent (CE) method, 578–79, 590
- Charge-based reimbursement, 55, 56; definition of, 52; discounted, 53; provider incentives under, 52
- Charge lag days metric: revenue cycle and, 618
- Chargemaster: definition of, 52; prices, 93, 94
- Charitable contributions: as equity capital source, 445, 446, 462; non-operating income as, 100
- Charitable organizations: definition of, 18; tax code definition of, 18. *See also* Charities
- Charities, pure, differentiated from businesses, 9–10, 28
- Charity care, 94, 124; differentiated from bad debt losses, 93; guidelines and requirements for, 94; of not-for-profit hospitals, 20; as qualification for tax-exempt status, 18
- Charters: of corporations, 16
- Chart of accounts, 88, 110
- Check Clearing for the 21st Century Act, 602–3
- Chief executive officers (CEOs): concerns of, 14; financial statement certification by, 81; responsibilities of, 12, 28

- Chief financial officers (CFOs): corporate cost of capital estimated by, 586; financial statement certification by, 81; responsibilities of, 12, 28
- Chronic care: Patient Protection and Affordable Care Act and focus on, 51
- Churning, 55–56
- Cities: financial status reporting by, 130
- Citigroup, 457, 471
- Classified stocks, 441–42
- Clinical integration: Patient Protection and Affordable Care Act and, 26–27
- Clinical laboratories, 34
- Closely held corporation, 461
- Coca-Cola: bonds issued by, 297
- Coding. *See* Medical coding (classification)
- Coefficient of variation (CV), 562, 571
- Coinsurance: Medicare supplement insurance (Medigap) and, 47; moral hazard problem and, 43–44
- Collateralized mortgage obligations, 430
- Collections float, 602
- Columbia/HCA. *See* HCA
- Commercial health insurance, 45, 65
- Commercial paper, 124
- Common size analysis, 659, 668, 680, 681, 682
- Common stockholders: rights and privileges of, 438, 440, 461
- Common stocks, 17; classified, 441–42; direct purchase plans for, 444, 461; dividend reinvestment plans, 444, 461; employee stock purchase plans for, 443, 461; market for, 467–68; new, selling of, 442–44; private placements of, 443, 461; public offerings of, 443, 461; residual earnings and, 438; rights offerings, 442, 461; types of, 441–42; unlisted, 467; valuation of, 447–55
- Community benefit, 19, 20
- Community Health Systems, 17, 34
- Comparative analysis, 654, 655, 666, 668
- Comparative data, 666, 669
- Compensating balances, 628, 632
- Compensation. *See* Salaries
- Component financing costs, 488
- Compounding: annual, 333–34; definition of, 307, 338; power of, 312; semiannual, 334–35; stated *vs.* effective interest rates in, 335–38
- Comptrollers: responsibilities of, 12–13, 28
- Computerized inventory control systems, 620–21
- Concentration banking, 604, 630
- Consolidation of healthcare organizations: Patient Protection and Affordable Care Act and, 26
- Constant growth dividend valuation model, 496
- Constant growth model, 450, 452, 453, 462
- Constant growth stock valuation, 450–55; equation, 451–52; expected rate of return in, 452–55, 495–96
- Consumption: time preferences for, 394, 422
- Continuous budgets, 286
- Continuous probability distributions, 573
- Contra accounts, definition of, 89
- Contra assets, 128
- Contract management, 11
- Contractual allowances, 93
- Contribution margin, 170–71, 173, 175, 251; under capitation, 184; definition of, 170, 189; marginal, 180; operating leverage and, 197; projected base case, 171, 171
- Contributions, as nonoperating income, 100

- Control, as finance activity, 11
- Controlled disbursement accounts, 605, 630
- Controllers. *See* Comptrollers
- Conventional budgeting, 277–78, 295
- Convergence, of financial accounting standards, 80
- Conversion factor, 61
- Copayments: Medicare supplement insurance (Medigap) and, 47; moral hazard problem and, 43
- Corporate beta (β), 374, 379, 385, 563
- Corporate bonds, 400, 401, 403, 423; definition of, 397; maturities of, 397
- Corporate cost of capital (CCC), 501–9, 511, 561, 584, 586, 683, 684; component cost estimation of, 488; definition of, 488; economic interpretation of, 507–9; estimation of, 502, 511; of for-profit businesses, 502–3; general formula for, 502; inflation effects and, 528; of not-for-profit businesses, 503; of small businesses, 504–7; tax effects, 488–89
- Corporate risk, 377, 379, 380, 590; comparison with market risk, 375–76; definition of, 374, 385, 563; of large investor-owned businesses, 378; of not-for-profit businesses, 379, 385; relationship to market and stand-alone risk, 564; of small investor-owned businesses, 378, 385
- Corporations, 15–16, 29; advantages of, 15–16; alternate ownership of, 17–20; bylaws of, 16; charters of, 16; closely held, 461; definition of, 15; disadvantages of, 16; limited liability of, 16; professional, 16; publicly owned, 462, 467
- Correlation, 366; definition of, 365
- Correlation coefficient, 365, 366
- Cost: allowable, 52; classification of, 161–62, 189; definition of, 11, 161
- Cost accounting: relationship to managerial and financial accounting, 160
- Cost allocation, 202–23; activity-based costing (ABC) method of, 239–40; basic principles of, 204–7, 222–23; “best” method of, 213; changing to more effective cost driver, 219–22, 220; cost drivers in indirect cost, 214; cost pools, 204; definition of, 202; departmental profitability and, 217–19; direct method of, 208, 209, 224; goal of, 203, 222, 223; of indirect costs in patient services illustration, 218, 218; methods of, 208, 208–17, 224; overhead ratio and, 222–23; process of, 206, 206–7; reciprocal method of, 208, 208, 209, 210, 224; step-down method of, 208, 208, 209, 210, 224, 230–32; traditional costing method of, 238–39
- Cost-based reimbursement, 55, 65; definition of, 52
- Cost behavior: managerial accounts basis, 162; in profit analysis, 162–65, 165–69; relevant range of, 161
- Cost behavior graphs, 165, 168
- Cost-benefit, 84–85, 109
- Cost centers, 210
- Cost containment, 12; charge-based reimbursement and, 56; cost allocation and, 203; cost driver incentives for, 205, 224; unbundling and, 57; value-based purchasing and, 56
- Cost control: cost drivers and, 205
- Cost drivers: characteristics of, 205; choosing, 222; cost control incentive, 205, 224; definition of, 204, 224; direct method illustration, 210, 211, 212, 212, 213, 214, 215; fairness of, 205, 224; for housekeeping costs, 204, 206–7; identifying, 204–5, 206; in indirect cost allocation, 214; more

- effective, changing to, 219–22;
two tests to be met by, 222–23,
224
- Costly trade credit, 625, 626, 632
- Cost of capital: divisional, 509, 585–
86, 587, 591; project, 508, 509,
562, 581, 587, 591. *See also* Cost
of equity capital
- Cost of debt, 489–91
- Cost of equity capital: definition of,
492, 510
- Cost of equity capital estimation,
492–501; capital asset pricing model
(CAPM) method, 493–95, 498,
510; choices related to, 500; debt
cost plus risk premium approach,
497–98, 510; discounted cash flow
(DCF) method, 495–97, 498, 510;
for for-profit businesses, 492–98; for
not-for-profit businesses, 498–501
- Cost pools, 204, 205, 222, 224; defi-
nition of, 204; direct method illus-
tration, 210, 211, 214, 215; for
housekeeping costs, 206, 206–7
- Cost reimbursement: effect on finance
function, 12
- Cost structure: contract analysis and,
267–68; effect on financial risk,
187–88; graph, 165; illustration:
fixed and variable costs, 163;
matching revenue structure and,
188; relationship to economies of
scale, 198–99
- Cost-to-charge ratio (CCR) method,
255; assumptions related to, 235;
charges *vs.* revenues in, 236–37,
238; definition of, 235; differenti-
ated from relative value unit (RVU)
method, 237; equation, 235–36
- Cost-to-collect metric: revenue cycle
and, 617
- Cost variance, 290, 291, 292
- Cost-volume-profit (CVP) analysis,
166, 168, 168, 169, 171, 181, 182,
189, 196
- Coupon (interest) rate, 411
- Coupon payment, 411, 412
- Coupon rate bonds: long- and short-
term, at different market interest
rates, 421
- Coverage ratios: cash flow cover-
age ratio, 651–52; times interest
earned ratio, 651
- Credit: advertising purchased with,
145; lines of, 628–29, 632; ser-
vices rendered for, 144–45; sup-
plies purchased with, 144; terms
of, 624
- Credit cards: true cost rate for, 337;
value of float and, 603
- Credit enhancement, 430–31
- Creditors, 77, 393; financial risk of,
352; liability claims of, 129
- Credit policy, 624
- Credit ratings, 403–5, 423; changes
in, 405; criticisms of, 404–5; debt
financing limits set by, 484; Fitch
Ratings, 403; importance of, 404–
5; Moody's Investors Service, 403;
profitability measures and, 499;
rating criteria of, 404; Standard &
Poor's (S&P), 403
- Credits: in double entry accounts, 89
- Credit spreads, 405
- Credit terms, 131
- Critical access hospitals (CAHs), 52;
Medicare reimbursement, 71
- Cross-subsidization (price shifting),
247–48, 256
- Cumulative cash flow, 537, 538
- Current accounts: capital budgeting
and changes in, 527, 552
- Current accounts management, 11,
28, 599; overview of, 600–601;
primary goal of, 600
- Current asset management, 599; pru-
dent, benefits of, 126–27
- Current assets, 123–26, 599; conver-
sion into cash, 123; definition of,
123, 148; liquidity of, 123; mini-
mization of, 125; other, 125
- Current cost accounting, 664

- Current liabilities, 130–31, 132, 148
- Current liability management, 527, 623–30; accounts payable (trade credit), 623–26; accruals, 623; short-term financing, 627–30
- Current portion of long-term debt, 132
- Current Procedural Terminology (CPT) codes, 58–59, 66
- Current ratio, 647–48; definition of, 402
- Dashboards, 667, 669
- Data, comparative, 666, 669
- Data analytics, 27
- Data security, 27
- Days-cash-on-hand ratio, 648–49
- Days in patient accounts receivable, 615, 654
- Days' sales outstanding (DSO), 654
- Debentures, 398–99, 423
- Debits: in double entry accounts, 89
- Debt: after-tax cost of, 489, 491, 510; before-tax cost of, 488, 490, 491, 498, 502, 510; as capital, 393, 422; component cost of, 488; cost of, 481, 482, 489–91, 497; tax-exempt, 489, 490, 491; use in healthcare sector, 486. *See also* Long-term debt; Short-term debt
- Debt capacity, 485, 510, 585
- Debt contracts, 402–3; restrictive covenants of, 402
- Debt-cost-plus-risk-premium approach, 497–98, 500, 504–5, 510
- Debt financing, 9, 391, 393; actual financing costs and, 504; *vs.* all-equity financing, 486; asset structure and, 485, 486; business risk in, 476, 508; effect on accounting risk and return, 476–80; limits on, 484; by overleveraged businesses, 485, 487; relationship to assets, 485; relationship to business risk, 478, 481, 482, 483–84, 486; reserve borrowing capacity and, 484; return on equity under, 479–80; tax benefits of, 478, 480, 488–89; trade-off model of, 480–81, 481, 510; by underleveraged businesses, 486, 487
- Debtholders: financial risk of, 352
- Debt management (capital structure) ratios, 649–52, 668, 679; capitalization ratios, 649–51; coverage ratios, 651–52
- Debt maturities: yield curve information and, 431–33, 432
- Debt rating agencies, 484
- Debt ratio, 69–650, 147, 148
- Debt securities: credit ratings of, 403–5, 423; interest rate risk and, 420; required rate of return on, 408
- Debt service requirements, 399, 412
- Debt-to-assets ratio, 147
- Debt-to-capitalization ratio, 650–51
- Debt utilization, 657
- Debt valuation, 409–22; basic bond valuation model, 412–17; general model of, 409–11; interest rate risk in, 420–22; with semiannual compounding, 418–20
- Decision making: financial risk and, 352; managerial accounting and, 160
- Decision tree analysis, 565
- Deductibles: Medicare supplement insurance (Medigap) and, 47
- Default: definition of, 129, 398; technical, 402
- Default risk premium (DRP), 406, 423
- Deferred call, 403
- Degree of operating leverage (DOL), 187; calculating, 198; high, double-edged sword of, 198–99
- Departmental costs, 201; cost allocation and, 202–3; direct *vs.* indirect (overhead) costs, 201–2; intrasupport department relationships and, 208, 209, 213–14; other support

- departments and cost allocation methods, 208
- Departmental profitability: cost allocation and, 217–19
- Depreciation: accumulated, 127–28; definition of, 97; funded, 127; on net income and cash flow for for-profit businesses, 105–6
- Depreciation cash flow, 104
- Depreciation expense, 97–98, 110, 127–29
- Depreciation shield, 106, 110, 111
- Derivative contracts, 430
- Diagnoses: case mix values assigned to, 662; up coding of, 56
- Diagnosis codes, 58
- Diagnosis-related group (DRG) system, 53
- Diagnostic imaging centers, 34
- Direct costs: in activity-based costing (ABC) method, 240; definition of, 202, 223; direct method illustration, 215, 216; *vs.* indirect (overhead) costs, 201–2, 223; profit analysis of, 218, 218, 219
- Direct format, statement of cash flows, 138
- Direct method, of cost allocation, 208, 209, 224; illustration of, 210–17, 211, 212, 214, 216, 219
- Direct purchase plans, 444, 461
- Disbursement control, 604–5
- Disbursement float, 602
- Discounted cash flow (DCF) measures, 493, 498, 500, 510; internal rate of return (IRR), 541–42; net present value (NPV), 539–40, 542
- Discounted charge reimbursement, 56
- Discounted charges, 53
- Discounted expected earnings stream, 447, 462
- Discounted fee-for-service environment: evaluating alternative strategies: short- and long-term, 178–79; impact of accepting proposal, 177–78; impact of rejecting proposal, 176–77; marginal analysis in, 179–80; profit analysis in, 175–80
- Discounted payback, 538
- Discounted rate schedules, 53
- Discounting: definition of, 314, 339; at work, 316–17
- Discount rate, risk-adjusted (RADR), 579–80, 581
- Discounts: financial statement notes on, 93; on Treasury bills (T-bills), 353
- “Discounts lost,” 624
- Disney: bonds issued by, 297
- Diversifiable risk, 385; definition of, 368; portfolio risk *vs.*, 368–70
- Diversification: portfolio, 368, 369
- Dividend reinvestment plans (DRIPs), 444, 461
- Dividends, 394, 422, 438–40; annual, 438; definition of, 18; expected, as basis of stock values, 496–97; expected, as sale basis for stock value, 449–50, 452, 462; payment of, illustration for, 438–40, 439; probability of, 356; social, 547
- Dividend valuation model, 496; definitions for, 448–49
- Dividend yield, 449, 454
- Divisional costs of capital, 509, 585–86, 587, 591
- Dollar: as basic monetary unit, 83
- Dollar cost analysis, 683–84
- Dollar return, 330–31
- Donations. *See* Charitable contributions
- “Dot-com bubble,” 458
- Double apportionment, 230
- Double entry system, 89, 110
- Du Pont analysis/equation, 656–59, 668, 682
- Early intervention programs, 37
- Earnings before interest and taxes (EBIT), 651, 683
- Earnings per share (EPS), 452

- eCom, 622
- Economic breakeven, 171, 175, 189; pricing for, 249, 250
- Economic income of business: measuring, 102
- Economic value added (EVA), 640, 682–85; formula for, 683; improving, 685
- Economies of scale: relationship to high degree of operating leverage, 198–99
- Effective annual rate (EAR), 336–38, 339
- Efficiency variance, 292
- Efficient markets hypothesis (EMH), 456–59, 462; forms of, 456–57; managerial decisions and, 458
- Elderly population: increase in, 36; as long-term care users, 36
- Electronic check clearing, 603
- Electronic claims processing, 603
- Emeritus Senior Living, 17
- Employee groups: group policies and, 45
- Employee stock purchase plans, 443, 461
- EPCglobal, 622
- Equipment: cash purchase of, 144; as fixed asset, 97; shipping and installation costs of, 526–27
- Equity, 488; as balance sheet item, 120, 129, 133–35, 135; basic accounting equation of, 121; definition of, 120, 149; as net assets, 133–36; as nonliability capital, 393; statement of changes in, 107, 108, 111; terms for, 133
- Equity capital, 393, 422, 684; cost of, 481, 482, 492–501, 498; *vs.* debt financing, 486, 487
- Equity financing, 391, 437; of for-profit businesses, 438–41; of investor-owned corporations, 445, 446; of not-for-profit corporations, 445–46, 462
- Equity multiplier, 657
- Equity ratio, 650
- Essential health benefits, 50
- Excel: time value analysis with, 312
- Expected capital gains yield, 449, 462
- Expected constant growth rate, in dividends, 452
- Expected dividend return, 448
- Expected dividend yield, 449, 462
- Expected earnings stream, 447, 462
- Expected rate of return: on bonds, 418; calculating, 359; in constant growth stock valuation, 452–55; definition of, 358; on portfolios, 362–63, 363; security market line and, 381; on stocks, 380, 455–56, 462, 495–96
- Expected values, 385, 610; of a probability distribution, 359; in sensitivity analysis, 567
- Expense budgets, 281, 295
- Expense control, 657
- Expense-matching principle, 84, 97, 109
- Expenses, 95–99, 110; accrued (accruals), 87; definition of, 95, 110; functional classification of, 95; as income statement component, 91, 92, 96–97; natural classification of, 95; operating, 92; operating budget and, 284; payment of, 145
- External audits, 80
- Facebook, 461
- Face value, 353, 397, 411
- Factoring: or selling, accounts receivable, 629
- Factors: definition of, 629
- Fair market value (fair value): of long-term securities investments, 126
- FASB Accounting Standards Codification, 79
- Federal government: budgetary policy of, 434; fiscal year of, 83. *See also specific agencies and departments*
- Federal hospital mortgage insurance, 430

- Federal hospitals, 33
- Federal Housing Administration (FHA), 430
- Federal Reserve Board, 396, 434, 435, 468, 469, 493
- Fedwire, 604
- Fee-for-service equivalent revenue, 254
- Fee-for-service prices, on individual services, 249–50
- Fee-for-service reimbursement, 65;
 - accountable care organizations and, 24; comparison with capitation reimbursement, 54, 184, 189; definition of, 52; in inpatient capitation rate setting, 251–55; medical coding and, 57–59; provider incentives under, 57
- Fidelity Investments, 457
- Finance: definition of, 8; role in health services organizations, 10–12, 28
- Finance departments: structure of, 12–13
- Finance function: effect of cost reimbursement on, 12; healthcare providers and, 22
- Financial accounting: art and science of, 80; conceptual framework of, 82–85; definition of, 75; differentiated from managerial accounting, 159–60; goal of, 82, 109; historical foundations of, 75–77; as “language of business,” 75; regulation and standards in, 78–81, 109; transparency in, 81; users of, 77–78, 109
- Financial accounting information and data: recording and compiling, 88–90
- Financial Accounting Standards Board (FASB), 79, 80, 109, 665
- Financial accounting systems: goal of, 88
- Financial analysis: in capital budgeting, 521–22. *See also* Financial condition analysis; Financial ratio analysis
- Financial assets: definition of, 126, 305; general valuation model of, 410
- Financial condition analysis, 639–69;
 - benchmarking in, 665–66; dashboards, 667; economic value added (EVA) measure in, 682–85; financial ratio analysis, 643–59; limitations of, 664–65, 669; operating indicator analysis, 660–63; performance indicators in, 667
- Financial crisis of 2008, 430
- Financial decision making: risk aversion and, 355–56
- Financial flexibility, 484
- Financial implications, 14, 28
- Financial Industry Regulatory Authority (FINRA), 470
- Financial interests, 77
- Financial intermediaries, 395
- Financial leverage, 649, 657; definition of, 478
- Financial management, 10; definition of, 8. *See also* Short-term financial management
- Financial performance: organizational goals for, 270; variance analysis–based control of, 285–87
- Financial plan: definition of, 275; sections of, 295
- Financial planning, 269, 274–75; schedule, 276
- Financial ratio analysis, 108–9, 111, 643–59; asset management (activity) ratios, 652–55; average age of plant ratio, 654–55; debt management (capital structure) ratios, 649–52; Du Pont analysis, 656–59; limitations to, 664–65; liquidity ratios, 647–49; market/book ratio, 679–80; price/earnings (PE) ratio, 679; profitability ratios, 644–47
- Financial reporting: as finance activity, 10, 28
- Financial risk, 351, 385; cost structure effects on, 187–88; definition of, 355, 483; expected and realized

- rates of return and, 357–59; illustration of, 353–55; interpretation of risk measures in, 378–80; management of, 11; many faces of, 352; portfolio risk and return, 361–71; probability distribution in, 356–57; relevance of risk measures for, 377–79; size of investment relationship in, 360; stand-alone risk, 359–61. *See also* Corporate risk
- Financial services department: direct method illustration, 212, 212, 214, 216; more effective cost drivers and, 219–22, 220; step-down method illustration, 230–32, 231
- Financial statement analysis: common size analysis, 659; comparative and trend analysis, 655; definition of, 639, 668; financial ratio analysis, 643–55; percentage change analysis, 659. *See also* Generally accepted accounting principles (GAAP)
- Financial statements, 75; accounting methods for, 85–87; assumptions related to, 82–83, 109; constraints related to, 84–85, 109; under debt financing, 476–78, 477; definition of, 10; fraudulent, 81; leasing and, 132; managers' creation and use of, 78; need for, 76; notes section of, 89; preparation costs related to, 84–85; preparation of, 82; principles related to, 83–84, 109; quarterly, 83; semiannual, 83. *See also* Balance sheets; Income statements; Statement of cash flow; Statement of changes in equity
- Financing decisions, 11
- Fiscal year, 83
- Fitch Ratings, 403
- 501(c)(3) or (4) corporations, 18
- Five-period time line, 306
- Five Prime Therapeutics, Inc., 468
- Five-year plans, 271, 295
- Fixed assets: definition of, 127; depreciation expense of, 97, 127–29
- Fixed asset turnover (utilization) ratio, 653
- Fixed costs, 166, 166, 195, 196; under capitation, 181, 182, 183, 186; cost structure illustration, 163; definition of, 161, 189; in operating budget, 284; profit and loss (P&L) statement, 169, 170, 171, 171; relationship to volume, 161–62, 164, 165, 199; relevant range of, 161
- Fixed cost variance, 292, 293
- Flexible budgets, 286, 287–88, 289, 295
- Float: credit cards and, 603; definition of, 602, 630
- Floating (variable) interest rate, 396, 397
- Float management, 602–3, 630
- Florida Blue, 45, 46
- Flotation costs, 471, 490
- Ford, 17
- Foreclosure: on bond issues, 402
- Form 990, 19, 29
- For-profit businesses and corporations, 17; cash flow estimation for, 534–35; corporate cost of capital for, 502–3; cost of equity for, 492–98; effective cost of debt for, 491; equity financing for, 438–41; income tax filing by, 19; taxes and depreciation on net income and cash flow for, 105–6. *See also* Investor-owned businesses and corporations
- Founders' shares, 442
- "Four Cs," 11, 28
- Fraud, 81
- Free trade credit, 625, 632
- Full cost pricing, 246, 256
- Full costs, 210
- Full-disclosure principle, 84, 109
- Functional classification: expense reporting and, 95
- Functions: spreadsheet software, 312
- Function wizard, 312

- Fund accounting, 136–37, 137, 149
Fund capital, 393, 422, 499, 500, 501, 510; definition of, 437
Funded depreciation, 127
Funds: definition of, 136
Future cash flows: time lines and analyses involving, 307
Future value (FV): of annuities, 320–21; of an annuity due, 322–23; of lump sum compounding, 307–8, 309, 310, 338; of uneven cash flow streams, 329–30

Gambler's fallacy, 364
Gatekeeper role: of primary care physicians, 37
General acute hospitals, 33
General administration: direct method illustration, 212, 212, 214, 216
General creditors: debenture holders as, 398
General ledgers, 88, 110
Generally accepted accounting principles (GAAP), applications of, 119, 122, 169, 280, 524; accrual accounting, 85, 110; auditor's opinions, 80; definition of, 79, 109; depreciation expense calculation, 97; economic activity as defined by, 142; economic income measurements, 102; expense reporting, 95; financial accounting assumptions, principles, and constraints, 82–85; financial statements and, 640; fund accounting, 137; guidance given under, 80; lease reporting, 132; operating income definition, 100; supplementary information, 90
General obligation bonds, 399
General valuation model, 409–11
Genetic Research, Inc., 442
Glazier's fallacy, 319
Global Data Synchronization, 622
Global payments, 54
Goals: organizational, 21–23, 272–74, 275; qualitative, 273

Going concerns, 82, 109
Going public, 468
Going rate, on bonds, 411
Government: as healthcare provider, 46; as health insurance provider, 46. *See also* Federal government
Government Accounting Standards Board (GASB), 79, 130
Government agencies: differentiated from businesses, 10. *See also specific agencies*
Governmental entities: financial status reporting by, 130
Governmental hospitals, 17, 33
Government bonds. *See* Treasury bonds (T-bonds)
Government grants, 486; as equity capital source, 445, 462
Graham, Benjamin, 459
Grants: as equity capital source, 445, 462
Great Depression, 78, 664
Green Bay Packers, 445
Gross prices, 93
Gross property and equipment, 127, 141
Group policies: commercial health insurance and, 45
GS1 standards, 622

HCA, 17, 34; bonds issued by, 297
Healthcare Common Procedure Coding System (HCPCS), 59, 69
Health Care Entities (American Institute of Certified Public Accountants), 79
Healthcare finance: definition of, 7–8, 28; introduction to, 3–29
Healthcare Financial Management Association, 14, 79; Principles and Practices Board of, 79
Healthcare managers. *See* Managers
Healthcare providers: definition of, 7; finance function of, 22; matching cost structure to revenue structure by, 188; as price setters, 245,

- 246, 256; as price takers, 244–45, 256; receivables management and, unique problems for, 618–20. *See also* Physicians
- Healthcare reform, 23–27; adverse selection and, 42; definition of, 29; health insurance and, 49–51; impact on integrated delivery systems, 24; reimbursement methods and, 62–64, 66. *See also* Patient Protection and Affordable Care Act (ACA)
- Healthcare sector: debt use in, 486; major subsectors within, 7–8
- Healthcare services: responsibility for payment issue and, 43
- Health information technology, 26–27
- Health insurance: adverse selection and, 42; commercial, 45; healthcare reform and, 49–51; managed care plans, 48; origin of, 44; private insurers, 44–46; public insurers, 46–47
- Health insurance exchanges (HIEs), 23, 24; types of, 50
- Health insurance industry: components of, 7; not-for-profit ownership in, 17
- Health maintenance organizations (HMOs), 48, 65
- Health services: settings of, 13, 29, 32–37
- Health services industry: components of, 7
- HealthSouth, 17, 81
- Hedging, 369
- High-deductible health plans (HDHPs), 51
- Historical cost, 83, 109; of capital, 489; of fixed assets, 127
- Historical cost accounting: disadvantages with, 664
- Holding period, 422
- Home equity loans, 55
- Home health care services, 34, 36; Medicare reimbursement for, 71
- Horizontally integrated systems, 13
- Hospice industry: not-for-profit ownership in, 17
- Hospice programs, 36
- Hospital-acquired conditions: Medicare penalties for, 64
- Hospital industry: aggregate aging schedule, 619; receivables mix, 619
- Hospitals, 13; accreditation of, 32; captive health plans, price setting, and, 247–48; critical access, 52, 71; decline in number of, 32; for-profit, 17; housekeeping cost drivers and, 206; licensure of, 32; ownership of, 17, 33; risk and, 352; size of, 33; types and functions of, 32–33
- Hospital service plans, 45
- Hospital Value-Based Purchasing program, 56
- Hostile takeovers, 440, 441
- Housekeeping cost allocation: cost drivers for, 204, 206–7, 212–13; cost pools for, 206–7; direct method illustration, 211, 212, 213, 214, 215, 216; process of, 206–7
- Humana, 45
- Human resources: direct method illustration, 212, 212, 214, 215
- Hurdle rate, 488, 504, 508, 511
- Ibbotson Associates, 494
- IBM, 17
- Illinois Supreme Court, 20
- Illiquid securities, 407
- Impairment of capital, 128–29
- Income statements, 90–92, 119; common size, 680, 681; costs reported on, 91–92, 110; under debt financing, 477, 478–79, 479; definition of, 91; differentiated from profit and loss (P&L) statements, 169; expenses section of, 91, 92, 96–97, 110; inflation effects and distortions in, 665; of investor-owned

- businesses, 105, 105–6; percentage change analysis in, 682; profitability section of, 91, 92, 110; relationship with balance sheets, 91, 120, 149; relationship with statement of cash flows, 138, 142; revenue section of, 91, 92–95, 110; title section of, 91; use in financial statement analysis, 108–9
- Income taxes: exemption from, 18, 19
- Incremental cash flow, 523, 537, 551
- Incremental cost, 180
- Indemnification: insurance and, 42, 65
- Indentures, 402, 423
- Indigent patients, 93. *See also* Charity care
- Indirect cost allocation: cost drivers in, 214, 215; cost pools in, 214, 214
- Indirect costs: cost-to-charge ratio and, 235–37; definition of, 202; *vs.* direct costs, 201–2, 223; profit analysis of, 218, 218, 219. *See also* Cost allocation
- Indirect format, statement of cash flows, 138
- Individual mandate: Patient Protection and Affordable Care Act and, 50
- Industry committees, 79
- Inflation, 422; as capital budgeting consideration, 527–28, 530, 552; earnings per share and, 452; effect on interest rates, 334, 395, 434, 435; investment risk and, 353–54; prime rate changes and, 396; strategic value of, 528
- Inflation accounting, 664–65
- Inflation premium (IP), 406, 423, 431
- Inflow terminal value, 543
- Informational efficiency: of securities markets, 456–60
- Infrastructure assets, 130
- Initial denial rate metric: revenue cycle and, 617
- Initial public offering (IPO), 468
- Innovation, market for, 461
- Inogen, Inc., 468
- Inpatient full-time equivalents (FTEs) per occupied bed, 663
- Inpatient prospective payment system (IPPS), 59–61, 66, 69
- Inpatient rehabilitation facilities: Medicare reimbursement, 70
- Insiders, 457, 469, 470
- Installation costs: for new equipment, 526–27
- Institutional investors, 467
- Insurance: characteristics of, 41–42, 65; concepts of, 40–41; as income statement component, 96; moral hazard and, 42–44. *See also* Health insurance
- Integrated delivery systems (IDSs), 12; accountable care organizations and, 24; benefits of, 36–37; definition of, 36; managed care contracts with, 37
- Interest (current) yield: on bond, 416
- Interest expenses, 98
- Interest rate: on bonds, 397, 415, 416, 417; bond valuation over time, 416–17, 417; cash management and, 605; components of, 405–9; on credit lines, 629; on debt securities, 408–9, 423, 431–33, 432; default risk premium and, 406, 423; definition of, 394; economic factors influencing, 434–35; fixed, 396, 397; forecasting, 433, 458; inflation premium and, 406, 423; inverted (or abnormal) yield curve of, 431; liquidity premium and, 407, 423; on long-term loans, 395; on mutual funds, 611; nominal (stated), 336, 339; periodic, 337, 339; private *vs.* public placement, 401; real risk-free, 406; risk-free, 406, 423; Rule of 72 and, 347; on short-term debt, 627, 631; term structure of, 431–33; and time, solving for, 345–47;

- variable (floating), 396, 397; yield curve of, 431–33, 432, 433
- Interest rate risk, 420–22, 424; components of, 420; definition of, 420
- Intermediate care facilities (ICFs), 35
- Internal rate of return (IRR), 332–33, 552; comparison with net present value, 542; definition of, 541; for evaluating corporate merger opportunities, 551; modified, 542–44, 553; in scenario analysis, 571; in sensitivity analysis, 567; of stand-alone risk, 562
- Internal Revenue Service (IRS), 50; Form 990, 19, 29; Tax Code Section 501(c)(3) or (4) of, 18; tax depreciation regulations, 98
- International Accounting Standards Board (IASB), 80
- International Classification of Diseases (ICD), 58, 66
- International Financial Reporting Standards (IFRS), 80
- Interstate offerings, of new securities, 469
- Inventory: as current asset, 125, 126; stockless, 621
- Inventory management, 620. *See also* Supply chain management
- Investment bankers, 471–72
- Investment banking process, 471–73
- Investment grade bonds, 403
- Investment horizon, 352, 422, 424
- Investment income: sources of, 100–101
- Investment opportunities, 317, 394, 422
- Investments: expected rate of return on, 358, 362–63, 363; multiple, 366–68; by owners, 143–44; portfolio of, 361; realized rate of return on, 358; risk and return as separate attributes of, 360; risk free (or riskless), 353; single, 367, 370; stand-alone risk of, 359–61; volatility of, 371–74, 373
- Investor-owned businesses and corporations: capital structure of, 480–85; corporate cost of capital for, 502–3; cost of equity for, 492–98; differentiated from not-for-profit corporations, 18; equity financing sources for, 445, 446; income statements of, 105, 105–6, 110; large, financial risk of, 378; link between economic value added (EVA) and business value of, 684; long-term investments of, 127; net income of, 102; overview of, 17–18, 34; privately held, 33; publicly held, 33; shareholder wealth maximization goal of, 21, 22, 29; small, financial risk of, 378–79; stakeholders of, 77; stockholders of, 17, 29; tax laws and, 534–35, 552
- Investor-owned hospitals, 17; as percentage of all hospitals, 34
- Investors: categories of, 77; as financial accounting information users, 77, 78; financial interests of, 77; institutional, 467; risk tolerance of, 355; sophisticated, 443
- Issuance expenses, 471
- Joint Commission: hospital accreditation by, 32; nursing home accreditation by, 36
- Joint venture decisions, 12
- Journal entries, 89
- JPMorgan Chase & Co., 471
- Junior liens, 398
- Junior mortgages, 398
- Junk bonds, 403
- Just-in-time (JIT) supply chain management, 621, 631
- Kaiser Foundation, 18
- Key performance indicators (KPIs), 667, 669
- Kindred Healthcare, 17, 54
- Laboratory: direct method illustration, 210, 211, 216
- Labor unions: group policies and, 45
- Labor variance, 292, 293

- Law of large numbers, 65; pooling of losses and, 41
- Lead underwriter, 472
- Lease liabilities, 132
- Lease payment expenses: as income statement component, 96–97
- Leasing: financial statements and, 132
- Lenders, 77, 129
- Length of stay (LOS), 662
- Leverage, 198
- Liabilities: as balance sheet item, 120, 122, 129–33, 148; basic accounting equation of, 121; professional, 15, 16; total, 121, 132–33
- Licensure: of ambulatory care facilities, 35; of hospitals, 32; of nursing homes, 36
- Liens: junior, 398
- Life care centers, 36
- Limited liability companies (LLCs), 16
- Limited liability partnerships (LLPs), 16
- Lines of credit, 628–29, 632
- Liquid assets, 407
- Liquidation, 129–30; not-for-profit corporations and, 18
- Liquidation value, 524
- Liquidity: of current assets, 123, 125–26; current ratio and measure of, 402; payback as measure of, 538–39
- Liquidity premium (LP), 407, 423, 506, 511
- Liquidity ratios, 647–49, 668, 679; current ratio, 647–48; days cash on hand, 648–49
- Loan agreements, 402
- Loans, 393; amortized, 348–49; historical foundations of, 76; long-term (or term), 395–96; mechanics of, 131–32
- Lockboxes, 603, 604, 630
- Long-term care: overview of, 35–36
- Long-term care facilities, 13
- Long-term debt, 131–32, 148, 393–427, 424, 431, 433, 434, 488; advantages of short-term debt over, 627; common types of, 395–401; current portion of, 132; debt contracts for, 402–3
- Long-term-debt-to-capitalization ratio, 650
- Long-term investments, 126–27
- Long-term liabilities, 131–32, 148
- Long-term loans, 395–96
- Losses: pooling of, insurance and, 41
- Lottery winnings: payment choices, 322
- Lump sum, future value of: *See* Compounding; present value of: *See* Discounting
- Magellan Health, 352
- Maintenance margins, 470
- Malpractice insurance expenses, 66
- Malpractice liability: limited, 16
- Managed care organizations (MCOs): contracts with integrated delivery systems, 37
- Managed care plans, 53, 65; definition of, 48; overview of, 48; “prompt” payment laws and, 620
- Managed fee-for-service plans, 48
- Management accounting, 160
- Management variance, 292, 292, 293
- Managerial accounting, 159–90; basics of, 159–61; cost behavior component of, 162; definition of, 159; differentiated from financial accounting, 159–60. *See also* Profit analysis
- Managerial control process: variance analysis essential to, 285
- Managers: concerns of, 14, 22, 29; operating leverage and influence of, 199; patient accounts, 13, 619; responsibilities of, 159
- Managing underwriter, 472
- Marginal analysis, 179–80, 189
- Marginal contribution margin, 180
- Marginal cost, 179; of capital, 489
- Marginal cost pricing, 246–48, 249–50

- Margin calls, 470
- Margin requirements: for purchase of securities, 469–70
- Marketable securities, 124, 630–31; holding, primary reasons for, 610; management of, 610–11; safety of, 611
- Market beta (β), 375, 380, 385, 451, 452, 493
- Market/book ratio, 679–80
- Market portfolio, 380, 493; definition of, 368
- Market risk, 377, 590; comparison with corporate risk, 375; definition of, 375, 385, 563; of large investor-owned businesses, 378; not-for-profit businesses and, 379; relationship to stand-alone and corporate risks, 564; of small investor-owned businesses, 379
- Market risk premium, 381; estimating, 494
- Market value ratios, 679–80
- Master budgets, 280
- Materiality constraint, 84, 109, 125
- Mature businesses: valuation of common stocks and, 447–48
- Maturity, of assets, 120, 149
- Maturity date: definition of, 411
- Mayo Clinic, 18, 445
- Median values, 645
- Medicaid: definition of, 47; marginal costs and, 247; overview of, 47; Patient Protection and Affordable Care Act and expansion of, 50–51; price shifting and, 247
- Medicaid patient group: price setting under capitation and, 253
- Medicaid reimbursement: as financial concern, 14; set amount of, 93
- Medical coding (classification): definition of, 57, 66; diagnosis codes, 58; procedure codes, 58–59
- Medical equipment and supplies industry, 8
- Medical Group Management Association (MGMA), 61
- Medical home, 51; definition of, 25, 29; key characteristics of, 25–26
- Medical technology: impact on ambulatory care, 34
- Medicare, 50; case-mix index, 662; cost-based reimbursement and, 52; definition of, 46; marginal costs and, 247; overview of, 46–47; Part A, 46; Part B, 46; Part C (Medicare Advantage Plans), 46; Part D, 46; readmission reduction program, 64
- Medicare Administrative Contractor (MAC) jurisdictions, 47
- Medicare Advantage Plans, 46
- Medicare patient group: price setting under capitation and, 251
- Medicare payment percentage measure, 662
- Medicare reimbursement, 244; for ambulance services, 78; ambulatory surgery centers, 69; charge-master prices and, 93; critical access hospitals, 71; as financial concern, 14; for home health care, 36, 71; for hospice services, 72; for hospital inpatient services, 59–61, 60; inpatient rehabilitation facilities, 70; for outpatient hospital services, 69, 70; for physician services, 61–62, 62; prospective payment system of, 53; provider incentives under, 54; for psychiatric hospital services, 70; set amount of, 93; for skilled nursing facility services, 71; step-down method and, 232; value-based purchasing and, 56, 63
- Medicare severity diagnosis-related groups (MS-DRGs), 60, 66
- Medicare supplement insurance (Medigap), 47
- MEDNAX, 17
- Membership: in capitated plans, 183–84, 184, 186–87

- Merger analysis: valuation of target company and, 551
 Mergers: capital budgeting analysis of, 551
 Merrill Lynch, 471
 Metrics: good, characteristics of, 618; for monitoring specific revenue cycle activities, 617–18; primary purpose of, 614, 631
 Micro-level costs, 233
 Microsoft, 17
 Middle-out budgeting, 279
 Military personnel: health insurance for, 46
 Minnesota Health Systems, Inc., 450, 451, 453, 455
 Missed payments, 402
 Mission statements, 270–71, 295; of not-for-profit corporations, 22–23
 Modified Accelerated Cost Recovery System (MACRS): tax depreciation and, 534–35
 Modified cash basis accounting, 86
 Modified internal rate of return (MIRR), 542–44, 543, 553; in scenario analysis, 571; in sensitivity analysis, 567; of stand-alone risk, 562
 Monetary units, basic, 83, 109
 Money: cost of, 394–95, 422
 Money market mutual funds, 124
 Montana Medical Center: price setting under capitation, 251–55
 Monte Carlo fallacy, 364
 Monte Carlo simulation, 565, 572, 573–76, 590; advantages of, over scenario analysis, 576; definition of, 573
 Moody's Investors Service, 403
 Moral hazard: insurance and, 42–44, 65
 Mortgage bonds, 398, 423
 Mortgages: junior, 398
 Muni bonds. *See* Municipal bonds
 Municipal bonds, 397, 403, 423; credit enhancement of, 430; definition of, 399–401; serial form of, 399; tax-exempt status of, 400; types of, 399
 Mutual benefit societies, 44
 Mutual funds, 467; interest rates on, 611
 NASDAQ, 467
 National Medical Enterprises, 473
 Natural classification: expense reporting and, 95
 Negative variance, 290
 Negotiated charges, 65, 53
 Net assets, 133–36, 149; definition of, 133; permanently restricted, 137, 137, 149; restricted, 136; temporarily restricted, 137, 137, 149; unrestricted, 137, 137, 149. *See also* Equity
 Net cash gain, cash budget, 608
 Net float, 602
 Net income, 119; as “bottom line,” 102, 149; cash flow *vs.*, 103–4, 110; definition of, 101, 110; as income statement item, 101–2
 Net income to cash flow conversion, 103–4
 Net operating income, 99
 Net operating profit after taxes (NOPAT), 683, 684, 685
 Net patient accounts receivable, 124, 140
 Net patient service revenue, 93, 110
 Net present social value (NPSV): in capital budgeting, 546–48, 552, 553; definition of, 546; equation, 547
 Net present value (NPV): in bond valuation, 413; comparison with internal rate of return, 542; definition of, 539; differential risk-adjusted, 579; for evaluating corporate merger opportunities, 551; in Monte Carlo simulation, 573–74, 575, 590; project cost

- of capital and, 587; in return on investment (profitability) analysis, 331, 539–40; in scenario analysis, 570–71, 572; in sensitivity analysis, 567, 568, 569; of stand-alone risk, 562, 590; in uneven cash flow stream analysis, 328–29
- Net price per discharge measure, 661
- Net property and equipment, 127, 128. *See also* Fixed assets
- Net working capital, 599; definition of, 123
- Net worth, 133
- New York Stock Exchange (NYSE), 467
- Nominal (stated) interest rate, 336
- Noncash expense: depreciation as, 98
- Nonconstant growth stock valuation, 455
- Nonincremental cash flows, 525
- Nonoperating income: definition of, 100, 110; as income statement component, 100–1
- Nonprofit corporations, 18. *See also* Not-for-profit businesses and corporations
- Nonspontaneous funds, 628
- Notes payable, 130, 628
- Notes section, of financial statements, 89
- Not-for-profit businesses and corporations, 4, 29; capital budgeting analysis in, 521–22, 545–49; capital structure of, 485–87; cash flow estimation for, 531, 533–34; corporate cost of capital for, 503; cost of equity to, 498–501; definition of, 18; differentiated from investor-owned corporations, 18; Du Pont and ratio analyses applied to, 658; economic value added (EVA) and, 684; equity in, 445–46; financial information about, 19; financial risk of, 379; fund accounting and, 136; income statements of, 105, 110; Internal Revenue Service regulations regarding, 19; mission statements of, 22–23, 270–71; net assets (equity) of, 134–36; net income of, 102; organizational goals of, 21–23; overview of, 18–20; stakeholders of, 21, 29; tax-exempt status of, 18, 19
- Not-for-profit hospitals, 17; charitable mission of, 20, 33; equity capital for, 446; as percentage of all hospitals, 17, 33; tax subsidies for, 20
- Nursing home industry: not-for-profit ownership in, 17
- Nursing homes: levels of care offered by, 35; licensure of, 36; Medicaid-based revenues of, 47; types of, 36
- Objective risk, 582
- Occupancy rate (percentage) measure, 661–62
- Off-balance-sheet financing, 132
- Offering price, of stocks, 472
- Official statements, 400
- Ohio: charity care requirements in, 20
- Operating budgets: constructing, 282–84, 283; definition of, 282, 295; purpose of, 284
- Operating expenses: definition of, 92
- Operating income, 119; calculation of, 99–100; definition of, 99, 110; as income statement component, 99–100; as operating cash flow source, 139–40
- Operating indicator analysis, 660–65, 668; all patient case-mix index, 662; average length of stay (ALOS) measure in, 662; definition of, 639; inpatient full-time equivalents (FTEs) per occupied bed measure in, 663; limitations to, 664–65; net price per discharge measure in, 661; occupancy rate (percentage) measure in, 661–62; percentage measure in, 662; profit per discharge measure in, 660–61; salary per full-time equivalent (FTE) measure in, 663

- Operating indicators: categories and definition of, 660
- Operating leverage, 196–99
- Operating margin, 108, 646
- Operating plans: definition of, 271, 295; outline for, 272
- Operating revenues, 92, 110
- Operational planning, 271–74; organizational goals and, 272–74; organizational objectives and, 274
- Opportunity cost: definition of, 317
- Opportunity cost principle, 492
- Opportunity cost rate, 314, 318, 319, 325, 488
- Opportunity costs, 326, 507; in capital budgeting, 500, 501, 525–26, 551; in debt valuation, 410
- Optimal capital structure: definition of, 476, 510; identifying, in practice, 483–85
- Optimal range, identifying for business, 482
- Option pricing techniques, 447
- Ordinary (regular) annuity, 320, 339
- Organizational goals, 21–23, 272–74, 295
- Organizational objectives, 271, 274
- Other assets, reporting, 129
- Other current assets, value of inventories within, 125
- Other revenue, 110; examples of, 95
- Outcome and Assessment Information Set (OASIS), 71
- Outflows: definition of, 306
- Outlier payments, 61
- Outpatient care services. *See* Ambulatory care services
- Outpatient prospective payment system (OPPS), 69
- Outstanding bonds, 411
- Overhead costs, 202, 210; of hospitals *vs.* ambulatory care facilities, 34; allocation of, 203, 214, 214; better cost driver and reduction in, 219–22; step-down method illustration, 230, 231
- Overhead ratio, 222–23
- Over-the-counter (OTC) stock market, 467, 470
- Overutilization of healthcare services: coinsurance, copayments, and, 43–44
- Owner's net worth, 133
- Parable of the broken window (Bastiat), 319
- Participatory budgeting, 279, 295
- Partnerships, 29; definition of, 15; disadvantages of, 15; limited liability, 16; taxation of, 15
- Partners' worth, 133
- Par value (par), 353, 397; definition of, 411
- Patient accounts managers, 619; responsibilities of, 13
- Patient capture, 36
- Patient-centered medical home. *See* Medical home
- Patient Protection and Affordable Care Act (ACA): accountable care organizations and, 24–25; adverse selection and, 42; benefits of, 24; clinical integration and, 26–27; data analytics and, 27; focus on chronic care and, 51; health insurance exchanges and, 50; high-deductible health plans and, 51; individual mandate and, 50; industry consolidation and, 26; insurance standards specified in, 49–50; major aims of, 23–24; Medicaid expansion under, 50–51; medical home and, 25–26; new insurance markets and, 51; population health management and, 26; staffing shortages and, 27
- Patient safety: medical home model of, 25
- Patient service revenue, 93
- Patient services: direct method illustration, 213, 214, 214, 215; profitability projections, 217–18, 218

- Patient volume forecasting: revenue budgets and, 281; statistics budgets and, 280
- Payables centralization, 604, 630
- Payback: in capital budgeting, 537–39; definition of, 537; discounted, 538
- Payback period, 537, 552
- Payment-for-value methodologies: medical home and, 25–26
- Payments: accrual accounting concept of, 86–87; for amortized loans, 348; of annuities, 320; lottery winnings, 322; periodic interim payments (PIPs), 52
- Pennsylvania: hospitals' property tax exemptions in, 20
- Pension funds, 467
- Percentage change analysis, 659, 668, 682, 683
- Percentage return, 332–33
- Per diagnosis reimbursement, 53, 66
- Per diem overhead rate, 205
- Per diem payment, 53, 66
- Perfectly competitive market, 244
- Perfect negative correlation, 365
- Perfect positive correlation, 365
- Performance improvement: good metrics and, 618
- Periodic interest rate, 337, 339
- Periodic interim payments (PIPs), 52
- Periodicity, 83
- Permanent accounts, 88
- Permanent capital, 488
- Permanently restricted net assets, 137
- Per member per month (PMPM) premiums: for capitated rate setting, 254–55, 282; as contract analysis consideration, 264
- Perpetuities, 325–26; definition of, 325, 339
- Per procedure reimbursement, 53, 56, 65
- Pharmaceutical industry: subsectors in, 8
- Physical assets, 75, 76. *See also* Real assets
- Physician compensation: relative value units and, 61, 66
- Physicians: impact on hospital financial conditions, 34; medical home and, 25
- Physician services: Medicare payment rates, 61–62, 62
- PILOTS (payments in lieu of taxes), 20
- Planning: definition of, 269, 294; as finance activity, 10, 28. *See also* Operational planning; Strategic planning
- Pledging, of accounts receivable, 629
- Point-of-service collection rate metric: revenue cycle and, 617
- Point-of-service distribution, 622
- “Poison pill” provision, in company charter, 440–41
- Pooling of losses: insurance and, 41
- Pools, 469
- Population health management: definition of, 26
- Portfolio: required rate of return on, 380
- Portfolio beta (β): equation, 377; relationship between component betas and, 376–77
- Portfolio returns, 362–63
- Portfolio risk, 372; to business owners, 375–76; comparison with stand-alone risk, 363; definition of, 368, 385; diversifiable risk *vs.*, 368–70; implications for investors, 370; measurement of, 371–76; multiple, 366–68; of single investment, 365; size and, 367; of two investments, 363–66. *See also* Corporate risk; Market risk
- Portfolios, 385; definition of, 361; expected rate of return on, 362–63, 363; volatility of, 371, 372; well-diversified, 368, 370
- Positive variance, 290
- Post-audits, 549–50, 553; definition of, 550; purposes of, 550

- Posting, to accounts, 88, 110
- Preadmission certification, 48
- Precertification, 612
- Preemptive right: of common stockholders, 441, 442
- Preexisting conditions: Patient Protection and Affordable Care Act and, 42
- Preferred provider organizations (PPOs), 48
- Preferred stock, 438
- Premium revenue, 94–95, 110
- Premiums: adverse selection and increase in, 42; call, 402, 423; call risk, 407–8, 423; coinsurance, copayments, and, 43–44; default risk, 406, 423; high-deductible health plans and, 51; inflation, 406, 423, 431; liquidity, 407, 423, 506, 511; per member per month (PMPM), 254–55, 282; price risk, 407; size, 506, 511
- Prescription drug coverage: Medicare Part D and, 46
- Present value of a lump sum, 339; discounting, 313–16; equation, 314
- Present value (PV): of annuities, 321–22; of an annuity due, 324–25; in bond valuation, 412, 413, 414; of costs at discount rate, 583, 583–84; definition of, 307; of perpetuity, 325, 326; of uneven cash flow streams, 327–29
- Prevention, integrated delivery systems and, 37
- Preventive care: Patient Protection and Affordable Care Act and, 24
- Price breakeven: equation, 250
- Price/earnings ratio (P/E), 679
- Price risk, 420, 421, 423, 424
- Price risk premiums, 407
- Price setters: definition of, 245; healthcare providers as, 245, 246, 256
- Price setting: under capitation, 251, 251–55, 252, 254; hospitals, captive health plans, and, 247–48; on individual services, 249–50; with scenario analysis, 255
- Price shifting (cross-subsidization), 247–48, 256
- Price system, 394
- Price takers: definition of, 244; providers as, 244–45, 256
- Price transparency: types of, 50
- Price variance, 290, 291, 293, 293
- Pricing: cross-subsidization (price shifting), 247–48; full cost, 246; marginal cost, 246–48; strategies for, 246–48
- Pricing and service decisions, 256; activity-based costing (ABC) used in, 234, 239–40, 255; costing illustration, service level, 234–35; cost-to-charge ratio (CCR) used in, 234, 235–37, 255; importance of, 234; price setting strategies for, 246–48; regarding individual services, 249–50; relative value units (RVUs) used in, 234, 237–38, 255; setting managed care premium rates, 247–48; time-driven activity-based costing (TDABC) used in, 234, 240, 243, 256
- Pricing decisions: definition of, 233
- Primary accounts, 88
- Primary care physicians: gatekeeper role of, 37; increasing supply of, Patient Protection and Affordable Care Act and, 27
- Primary care services: as integrated care system focus, 37
- Primary market offering, 468
- Prime rate, 396
- Principal portion, of loan, 132
- Principles and Practices Board (Healthcare Financial Management Association), 79
- Privacy of patient information, 27
- Private health insurance exchanges, 50
- Private hospitals: investor-owned. *See* Investor-owned hospitals;

- Not-for-profit hospitals; Private not-for-profit hospitals
- Private insurers, 44–46, 65
- Private not-for-profit hospitals, 33
- Private placements: of common stocks, 443, 461; definition of, 401; term loans as, 395
- Probability, 356
- Probability distribution, 356–57; definition of, 356; expected value of, 359
- Probability of occurrence, 356, 357
- Procedure codes, 58–59
- Procedures: up coding of, 56
- Professional associations (PAs), 16; group policies and, 45. *See also specific associations*
- Professional corporations (PCs), 16
- Profitability: bonuses and, 219; of core operations, 99; as income statement component, 91, 92, 110; net income measures of, 101–2; operating income measures of, 99–100; relationship between risk analysis and, 572. *See also* Net income
- Profitability analysis: as managerial accounts basis, 160. *See also* Return on investment (ROI) analysis
- Profitability index (PI), 589
- Profitability ratios, 644–47, 668, 679; definition of, 644; operating margin, 646; return on assets, 646; return on equity, 647; total margin, 644–46
- Profit analysis, 165–71; for breakeven point estimation, 171; in a capitated environment, 180–87, 251–55; contribution margin of, 170–71; cost behavior in, 162–65; definition of, 165, 189; in a discounted fee-for-service environment, 175–80; operating leverage and, 196–99. *See also* Breakeven analysis; Profit and loss (P&L) statements
- Profit and loss (P&L) statements, 159–70; base case forecasted, 169, 170, 171; in a capitated environment, 185, 185–87, 251, 251, 252; definition of, 169; differentiated from income statements, 169; in a discounted fee-for-service environment, 176, 176–77, 177; four-variable model for, 170, 172; operating budgets and, 284; operating leverage and, 197, 198; projected, 169–70, 174, 189; relationship between breakeven analysis and, 174; volume levels of, 170
- Profit centers, 210
- Profit margins, 644; definition of, 217
- Profit-per-discharge measure, 660–61
- Profit variance, 289, 290
- Project cost of capital, 508, 509, 562, 581, 587, 587, 590
- Project risk analysis, 561–91; adjusting cash outflows for risk in, 582–84; divisional costs of capital in, 585–86, 591; incorporating risk into decision process, 577–80; making final decision in, 581–82; Monte Carlo simulation in, 565, 573–76, 590; qualitative risk assessment in, 576–77, 590; risk illustration of, 565, 566; scenario analysis in, 565, 570–73, 571, 590; sensitivity analysis in, 565, 567–70, 568, 590; types of risk in, 562–63, 589; ultimate goal in, 561
- Projects: corporate beta (β) of, 374
- Project scoring, 548–49, 549, 553
- Promissory notes, 402, 628, 632
- Property: as fixed asset, 97
- Property taxes: exemptions from, 19, 20, 33
- Proprietorships, 14–15, 29; definition of, 14; disadvantages of, 15; organizational goals of, 21
- Proprietor's net worth, 133, 149
- Prospective payment systems: definition of, 53, 65; provider incentives under, 56

- Prospectus, 469
- Provena Covenant Hospital, Urbana, Illinois, 20
- Provider incentives, 54, 56; under alternative reimbursement methodologies, 55–57
- Provider plan, 48
- Providers. *See* Healthcare providers
- Proxy, 440, 469
- Proxy ballots, 17
- Proxy fights, 440
- Prudential, 457
- Psychiatric hospital services: Medicare reimbursement for, 70
- Public health insurance exchanges, 50
- Public Health Service, 46
- Public hospitals, 33
- Public insurers, 46–47, 65
- Publicly held corporations, 467; definition of, 462; organizational goals of, 21
- Public offerings, of stocks, 395, 443, 461
- Pure play approach: to debt cost estimation, 505, 511
- Qualified opinions, of auditors, 80
- Qualitative risk assessment: in project risk analysis, 576–77, 590
- Quality, of healthcare: Hospital Value-Based Purchasing program for, 56; medical home model of, 25; as organizational goal, 272
- Quality-based clinician compensation, 63
- Quantitative risk assessment, 576, 577
- Radiology services: direct method illustration, 210, 211, 213, 215, 216
- Random events, effect on portfolio risk, 370
- Random losses: payment only for, 41
- Rate of return, 332; beta coefficient (β) illustration, 372; constant growth model estimation of, 450–52; effective annual rate (EAR), 336–38; expected, 358, 359; on investment, 354; realized, 358; required, 351; risk-free, 380; on stock, 455–56; true, 333–34; for two proposed projects, 357
- Rate variance, 292
- Rating agencies. *See* Credit ratings
- Ratio analysis: definition of, 643. *See also* Financial ratio analysis
- Readmission reduction program, 64
- Real assets: definition of, 126, 305; general valuation model of, 410
- Realized rate of return: definition of, 358
- Realized volume: flexible budget and, 287, 288
- Real risk-free rate (RRF), 406, 423
- Recapture, of excess tax benefit, 535
- Receipts: acceleration of, 603–4
- Receivables, 124; collection of, 603–4
- Receivables management, 613–20, 619
- Receivables quality: definition of, 614
- Recessions: interest rates during, 434–35
- Reciprocal method: of cost allocation, 208, 208, 209, 210, 224
- Redemption: calling bond for, 403
- Red herring prospectus, 469
- Reform. *See* Healthcare reform
- Registration quality score metric: revenue cycle and, 617
- Registration statement, 469
- Regular default, 402
- Regulatory issues: in financial accounting, 78–81, 109
- Rehabilitation/sports medicine centers, 34
- Reimbursement: alternative methods of, 55–57; as financial concern, 14; generic methodologies of, 52–54; healthcare reform and effect on, 62–64, 66; medical coding and, 57–59; specific methods of, 59–62. *See also* Capitation; Fee-for-service

- reimbursement; Medicare reimbursement; Prospective payment systems; Third-party payers
- Reinvestment of earnings, 102, 134
- Reinvestment rate risk, 420, 421, 424
- Relative value unit (RVU) method:
 - definition of, 237; differentiated from cost-to-charge ratio (CCR) method, 237; goal of, 238; service analysis, 239
- Relative value units (RVUs), 237, 238, 255; physician compensation and, 61, 62, 66
- Relevant range: definition of, 161; semi-fixed costs and, 195; underlying cost structure and, 170
- Remote disbursement, 605
- Replacement analysis: cash flow analysis for, 537
- Replacement cost accounting, 664
- Required rate of return, 351; on
 - bonds, 412; on debt securities, 408; estimating, 494; on portfolio, 380; relationship between risk and, 380–84; security market line and, 381; setting on cash flow stream, 410; on stocks, 380
- Required return, 351
- Reserve borrowing capacity, 484
- Residential care facilities (RCFs), 35–36
- Resident service revenue, 95
- Residual earnings: stockholders' claims on, 17, 29, 438–40, 461
- Resource-based relative value scale (RBRVS), 69, 237; physician services and, 61, 66
- Resource utilization groups (RUGs), 71
- Restricted asset and net asset accounts, 136
- Restrictive covenants, 402, 423
- Retailers, 473
- Retained earnings, 135
- Return on assets (ROA), 646, 657
- Return on equity (ROE), 647, 655;
 - business risk and, 483–84; under debt financing, 479–80, 511; debt rating and, 499–500; definition of, 478; Du Pont analysis of, 656–59; organizational objectives and, 274; standard deviation of, 483–84
- Return on investment (ROI): definition of, 539; dollar return, 330–31, 339; internal rate of return, 332–33; rate of return, 332, 339
- Return on investment (ROI) analysis:
 - internal rate of return in, 541–42, 552; modified internal rate of return in, 542–44; net present value in, 539–40, 542, 552; time value analysis in, 330–33
- Returns: standard deviation of, 360–61
- Revenue-based allocation schemes:
 - benefits of, 221
- Revenue bonds, 399, 401, 423
- Revenue budgets, 281, 295
- Revenue cycle: definition of, 611, 631
- Revenue cycle activities: after-service activities, 612–13, 631; at-service activities, 612, 631; before-service activities, 612, 631; continuous activities, 612, 631; phases in, 611–13, 631; specific, monitoring of, 617–18
- Revenue cycle management, 11, 28, 275, 611–20; goal of, 613; in medical practices, 613; monitoring performance in, 613–20
- Revenue recognition principle, 83
- Revenue reporting: in the past, 94
- Revenues, 94, 110; in cost-to-charge ratio (CCR) method, 236–37, 238; as income statement component, 91, 92–95; other, 95, 110; patient service, 93
- Revenue structure: matching cost structure and, 188
- Revenue variance, 290, 291
- Revolving credit agreement (or revolver), 628, 632
- Rights offerings, 442, 461

- Right-to-use assets, 132
- Risk, 422; adjusting cash flows for, 582–84, 591; generic definition of, 353; as interest rate determining factor, 394, 399; objective *vs.* subjective, 582–83; relationship between required return and, 380–84. *See also* Financial risk
- Risk-adjusted discount rate (RADR) method, 579–80, 590
- Risk analysis: relationship between profitability and, 572; three elements in, 561
- Risk aversion, 370, 382, 384; definition of, 355; implications of, for financial decision making, 355–56
- Risk-free investments, 353
- Risk-free rate (RF), 380, 383, 406, 423, 497; security market line and, 381
- Riskless investments, 353
- Risk neutral, 355
- Risk premium: on stock, 381
- Risk (profit) margin, 265
- Risk/return trade-off, 460–61, 462
- Risk seeker, 355
- Risk transfer: insurance plans and, 41, 65
- Rolling budgets, 286–87
- Routine care: direct method illustration, 210, 211, 216
- Rule of 72, 347
- Rural hospitals, 33
- Safety. *See* Patient safety
- Salaries: as income statement item, 96; salary per full-time equivalent (FTE), 663
- Salvage value, 97, 525, 534, 535, 568, 568, 574, 575
- Sarbanes-Oxley Act (SOX): provisions of, 81
- Scenario analysis, 255, 565, 570–73, 571, 590; definition of, 570; Monte Carlo simulation's advantage over, 576; number of scenarios in, 577
- Schedule H: definition of, 19
- Sebelius, Kathleen, 56
- Secondary market, 468
- Second surgical opinions, 48
- Securities: as cash flow source, 141; financial risk associated with, 352; general valuation model of, 410; illiquid, 407. *See also* Bonds; Common stocks; Portfolio risk; Stocks
- Securities and Exchange Commission (SEC), 396, 400; regulatory powers of, 78–79, 109, 443, 468–69, 470, 472; transparency definition of, 81
- Securities management: of marketable securities, 610–11
- Securities markets: equilibrium of, 455–56; informational efficiency of, 456–60; regulation of, 468–70
- Security market line (SML) equation, 382, 451, 493, 494, 495; definition of, 381, 386; graphical form of, 382–83, 384
- Select Medical, 17
- Self-employed population: health insurance exchanges and, 50
- Self-insurance, 41, 45–46, 65
- Selling groups, 472–73
- Semi-fixed costs, 162, 195–96, 196
- Semi-variable costs, 195
- Sensitivity analysis, 565, 590; advantages of, 569–70; definition of, 567; limitations, as risk assessment tool, 569; in project analysis, 567, 567–70, 568
- Service decisions: analyses of, 256, 264–68; definition of, 234. *See also* Pricing and service decisions
- Shared savings programs, 51, 63–64
- Shareholders: of investor-owned corporations, 17–18. *See also* Stockholders
- Shareholder wealth maximization, 21, 22, 29; implication for financial risk, 378
- Shipping costs: for new equipment, 526–27

- Short-term debt, 130, 393, 431, 433, 434, 488, 627–30; advantages and disadvantages of, 627–28, 631; advantages over long-term debt, 627; compensating balances and, 628, 632; lines of credit and, 628–29, 632; secured, 629–30, 632
- Short-term financial management:
 - cash budget in, 605–10; cash management in, 601–5; goal of, 601;
 - long-term securities management in, 627, 628; marketable securities management in, 610–11; revenue cycle management in, 611–20; supply chain management in, 620–23
- Short-term investments, 124, 610
- Size premiums, 506, 511
- Skilled nursing facilities (SNFs), 35; Medicare reimbursement for, 71
- Small businesses: corporate cost of capital for, 504–7; organizational goals of, 21
- Social dividends, 547
- Social Security, 46
- Sole proprietorships: definition of, 14. *See also* Proprietorships
- Sophisticated investors: definition of, 443
- SOX. *See* Sarbanes-Oxley Act
- Space utilization costs: as cost drivers, 212, 213
- Special tax bonds, 399
- Specialty hospitals, 33
- S&P 500 Index, 380
- Spreadsheet programs: for amortized loans, 348; for annuities due calculations, 323, 324; for bond valuation, 413–14, 415; constant growth model, 451; for effective annual rate, 336; for expected rate of return on constant growth stock, 453; financial risk of Treasury (T-)bill, 353; for future value (FV) of annuities, 321; future value (FV) of an annuity due, 323–24; historical data *vs.* forecasted distributions and, 361; internal rate of return (IRR), 541; modified internal rate of return (MIRR), 544; Monte Carlo simulation, 574, 575; net present value (NPV), 540; for present value (PV) of annuities, 322; present value (PV) of an annuity due, 324; rate of return on investment, 354; for return on investment analysis, 331–32; semiannual bond valuation, 419; for semiannual compounding, 334, 335; solving for interest rate and time, 346, 347; for time value analysis, 311–13; uneven cash flow stream analysis, 328, 330; yield to maturity on a bond, 418
- Spreadsheet range, 328
- Square footage costs: as cost drivers, 204, 205
- Staffing: capital budgeting analysis of, 551; shortages in, Patient Protection and Affordable Care Act and, 27
- Stakeholders: definition of, 77; of not-for-profit organizations, 21, 29. *See also* Stockholders
- Stand-alone risk, 359–61, 372, 377, 380, 385, 589–90; definition of, 359, 562; as diversifiable risk, 369; investors and, 370; of large investor-owned businesses, 378; measuring, 562; of not-for-profit businesses, 379; relationship to corporate and market risks, 564; relationship with portfolio risk, 363; scenario analysis of, 570, 572; sensitivity analysis and, 569; of small investor-owned businesses, 378–79; standard deviation of, 360–61
- Standard deviation, 385; calculation of, steps in, 360–61; in Monte

- Carlo simulation, 574; of one-investment portfolio risk, 365, 367; of return on equity with and without debt financing, 483–84; of stand-alone risk, 360–61, 370, 562; of three-investment portfolio risk, 367; of two-investment portfolio risk, 365–66, 367
- Standard & Poor's (S&P) credit ratings, 403, 404, 420
- Standards: budgeted values as, 285; in variance analysis, 289, 295
- Start-up businesses: valuation of common stocks and, 447
- Stated interest rate, 336, 339
- Statement of activities, 91. *See also* Income statements
- Statement of cash flows, 138–42, 139; cash flows from financing activities section of, 139, 141–42, 149; cash flows from investing activities section of, 139, 141, 149; cash flows from operating activities section of, 139, 139–41, 149; comparison with income statements, 138, 142; definition of, 138, 149; example of, 640–42, 641; formats for, 138; net increase (decrease) in cash components of, 142, 149
- Statement of changes in equity, 107, 108, 111
- Statement of changes in net assets, 107, 108
- Statement of financial position, 120. *See also* Balance sheets
- Statement of operations, 91, 91, 644. *See also* Income statements
- Statement of revenues and expenses, 91. *See also* Income statements
- States: financial status reporting by, 130; minimum amount of charity care legislation in, 19–20. *See also* names of specific states
- Static budgets, 286, 287, 289, 295
- Statistics budgets, 280–81, 295
- Step-down method: of cost allocation, 208, 208, 209, 210, 224; illustration of, 230–32, 231; Medicare reimbursement and, 232
- Step-fixed (or step-variable) costs, 195
- Step-up provisions: of bonds, 398
- Stock companies, 17
- Stock exchanges, 467
- Stockholders: common, 438, 440; control of the firm and, 440–41, 461; financial risk of, 352, 378; implied, 352; of investor-owned corporations, 17–18, 29; preemptive right, 441, 442, 461; rights of, 17, 438, 440, 441, 461
- Stockholders' equity, 133, 135, 149
- Stock investors: portfolio risk and implications for, 370. *See also* Stockholders
- Stock markets: beating, 459–60; efficiency of, 456–60; New York Stock Exchange (NYSE), 467; over-the-counter (OTC), 467, 470
- Stock market transactions: categories of, 467–68
- Stock option plans, 443
- Stock-out, 621
- Stock purchase plans, 443
- Stock purchase right certificate, 442
- Stock repurchases, 438
- Stocks: capital gains on, 438; diversifiable risk and, 368; expected rate of return on, 380, 452–55, 455–56, 462, 495–96; future volatility of, 383; offering price of, 472; preferred, 438; required rate of return on, 380; risk premium on, 381; sale of, 438. *See also* Common stocks
- Straight-line method, of depreciation expense calculation, 97–98
- Strategic planning, 270–71; mission statement and, 270–71; values statement and, 270; vision statement and, 271

- Strategic plans: definition and purpose of, 270, 294
- Strategic value, 528–29, 552
- Stratified per diem rates, 53
- Stretching, 625
- Subjective risk, 582
- Subprime mortgages, 430
- Subsidiary accounts, 88
- Sunk costs, 525, 551
- Supplemental Security Income (SSI), 47
- Supplies: accounts payable from, 146–47; expense in operating budget, 284; as income statement item, 96; purchased on credit, 144; use of, 145–46
- Supplies variance, 293, 293
- Supplies worksheet, 608
- Supply chain management, 620–23, 631; base inventory level in, 621; definition of, 620; GS1 Standards for, 622; just-in-time, 621, 631; point-of-service distribution in, 622; safety stock in, 621; stockless inventory in, 621
- Support departments: step-down method illustration, 230–32, 231
- Surplus/deficit summary, cash budget, 608

- T accounts, 89, 110
- Take-downs: of credit lines, 628
- Target capital structure, 501–2, 511; definition of, 482, 510; using, 487
- Target costing, 248, 256
- Taxable component cost of debt: equation, 491
- Tax book value, 535
- Tax depreciation, 98, 534
- Taxes: corporate form of organization, 16; debt financing and, 478, 480; on net income and cash flow for for-profit businesses, 105–6. *See also* Income taxes; Property taxes
- Tax-exempt corporations, 18, 19. *See also* Not-for-profit businesses and corporations
- Tax-exempt debt, 489, 491
- Tax-exempt status: of municipal bonds, 400; of not-for-profit corporations, 18–20; of not-for-profit hospitals, 33
- Tax laws: investor-owned businesses and, 534–35, 552
- Tax subsidies: for not-for-profit hospitals, 19, 33
- Technical defaults, 402
- Technology: ambulatory care services and, 34
- Temporarily restricted net assets, 137
- Temporary accounts, 89
- Tenet Healthcare, 34, 396, 468
- Terminal value, 524–25
- Term loans: advantages of, 396; amortization of, 395; definition of, 395, 423
- Term structure of interest rates, 431–33
- Tertiary care, 33
- Texas: charity care requirements in, 20
- Texas Health Plans, Inc., 443
- Third-party payers: cash received from, 147; classification of, 44–47, 65; contract negotiations, 12; definition of, 4, 44; outpatient care and, 35; overview of, 44–47
- Time-driven activity-based costing (TDABC) method, 234, 240, 243, 256; definition of, 243; steps in, 243
- Time interest earned (TIE) ratio, 651
- Time lines, 412
- Time preferences for consumption, 394, 422
- Time value analysis, 305–44; of annuities, 320–25; definition of, 305; with different compounding periods, 333–34; financial calculator use in, 309–11; lump sum

- compounding illustration, 307–8; perpetuities, 325–26; of return on investment, 330–33; of semiannual compounding, 334–35; solving for interest rate in, 335–38; time line creation in, 306–7; uneven cash flow streams, 327–30, 339
- Top-down budgets, 279, 295
- Total assets, 133
- Total asset turnover (utilization) ratio, 653–54, 657, 658
- Total capital, 683
- Total contribution margins, 170, 171, 251
- Total costs: direct method illustration, 215, 216; profit analysis of, 166, 166–69, 168, 168, 218, 218; relationship to volume, 164, 165
- Total fixed costs, 195
- Total liabilities, 132–33
- Total margin (or profit margin), 644, 645, 646
- Total (profit) margin: definition of, 108
- Total variable costs, 166, 167; under capitation, 182; relationship to volume, 163–64, 165, 165
- Total variance, 289
- Trade credit, 131; approximate cost of, 626. *See also* Accounts payable
- Trade-off model, 510; of capital structure, 480–81, 491; definition of, 480
- Traditional costing: definition of, 238; as top-down allocation, 239
- Transaction costs, 407
- Transactions, 88, 110; in balance sheets, 143–47, 149
- Transparency: in charity care, 19; in financial accounting, 81
- Treasurers: responsibilities of, 13
- Treasury bills (T-bills), 124; cost of equity and, 493; financial risk of, 353–55, 493; maturities of, 397
- Treasury bonds (T-bonds), 401, 423; cost of equity and, 493, 494; definition of, 397; informational efficiency and, 456; interest rates on, 407; liquidity of, 407; maturities of, 397; price risk premiums on, 407; as safe investment, 420–29
- Treasury notes (T-notes): maturities of, 397
- Treasury securities: interest rates of different maturities, 431–33, 432
- Trend analysis, 655, 668
- TRICARE, 46
- Trustees: of bond issues, 402, 423
- Unbundled payments, 53
- Unbundling, 57
- Underlying cost structure, 162–65; definition of, 162, 189; equation for, 167; fixed and variable costs example, 163; relevant range and, 170; volume relationship to, 163
- Understanding Healthcare Financial Management*, 7th ed. (Gapenski & Pink), 565
- Underwriting syndicates, 472, 473
- Underwritten offerings, 471
- Uninsured patients, charity care for. *See* Charity care
- Uninsured population: Patient Protection and Affordable Care Act and, 27
- Unique-risk premiums, 506, 511
- United Auto Workers, 45
- UnitedHealth Group, 45
- Unqualified opinions, of auditors, 80
- Unrestricted net assets, 137
- Unsecured creditors' claims, 129
- Up coding: of procedures and diagnoses, 56
- Urgent care centers, 34
- Usage variance, 293
- US Department of Defense (DOD), 46
- US Department of Health and Human Services (HHS), 46, 47;

- Hospital Value-Based Purchasing program of, 56
- US Department of Housing and Urban Development (HUD), 430–31
- US Department of Veterans Affairs (VA), 46
- US Treasury, 397
- Utilization: cost relationship of, 161; risk analysis illustration, 565
- Utilization management, 264–68, 265
- Utilization review, 48
- Utilization variable costs: relationship to cost, 186
- Value-based purchasing (VBP), 56; definition of, 63
- Values statements, 270, 294
- Variable cost rate, 189; under capitation, 181, 182, 183, 184, 186, 253
- Variable costs, 195, 196; cost structure illustration, 163; definition of, 162, 189, 295; profit and loss (P&L) statement, 169, 170, 171, 171; profit analysis and, 166, 166, 167; relationship to volume, 162, 163–64, 165
- Variance, 360; definition of, 285, 295
- Variance analysis, 277; conducting, 289–93; definition of, 285, 295; flexible and static budgets in, 286, 295; illustration of, 286–87, 288; primary focus of, 285; process of, 285; purpose of, 294
- Vertically integrated systems, 13
- Vesting, 443
- Virtual bundling, 64
- Vision statement, 271, 295
- Volatility: beta measures of, 371; corporate beta measures of, 374, 375, 376, 385; future, 383; of investments, 371–74, 373, 493; market beta measures of, 375, 376, 385
- Volume: under capitation, 181, 182, 183, 186; cost relationship of, 161; Monte Carlo simulation and, 574, 575, 576; operating leverage and, 197–99; price relationship of, 250; profit analysis of, 165–66; relationship to fixed costs, 161–62, 164, 165, 199; scenario analysis and, 572; semi-fixed costs relationship and, 195–96; semi-variable costs and, 195; sensitivity analysis, 567; total cost relationship with, 164, 165; total variable costs relationship with, 163–64, 165, 165; underlying cost structure equation, 167; variable costs relationship with, 162, 163–64, 165
- Volume-based allocation schemes: bias in, 221
- Volume breakeven, 172, 173; definition of, 171; equation, 172–73
- Volume projections, 282
- Volume variance, 290, 291, 291, 292
- Wages: accrued expenses and, 131
- Walk-in care services. *See* Ambulatory care services
- Wall Street Journal*, 54, 431, 494
- Wash sales, 469
- Wellness programs, 37
- Wholesalers, 473
- Workers' compensation, 46
- Working capital: definition of, 599
- World Health Organization (WHO), 58
- Written-off assets, 128
- Yield curve, 397, 431, 432, 433, 434
- Yield to call (YTC), 418
- Yield to maturity (YTM), 418, 424; annual, 420; periodic (semiannual), 419–20
- Young businesses: valuation of common stocks and, 447
- Zero-balance accounts (ZBAs), 604–5, 630
- Zero-based budgeting, 278, 295
- Zero-coupon bonds, 397, 422
- Zuckerberg, Mark, 461

ABOUT THE AUTHORS

Louis C. Gapenski, PhD, is a professor of health services administration at the University of Florida. He is the author or coauthor of more than 20 textbooks on corporate and healthcare finance. Dr. Gapenski's books are used worldwide; his work has been published in Canadian and international editions as well as translated into Bulgarian, Chinese, French, Indonesian, Italian, Polish, Portuguese, Russian, and Spanish. In addition, he has published more than 40 journal articles related to corporate and healthcare finance.

Dr. Gapenski is an active member of the Association of University Programs in Health Administration, the American College of Healthcare Executives, and the Healthcare Financial Management Association. He has acted as academic adviser, chaired sessions, and presented papers at numerous national meetings. Additionally, Dr. Gapenski has been an editorial board member and reviewer for 12 academic and professional journals.

Kristin L. Reiter, PhD, is an associate professor in the Department of Health Policy and Management, Gillings School of Global Public Health, and a research fellow in the Cecil G. Sheps Center for Health Services Research, both at the University of North Carolina at Chapel Hill.

She received a BS degree in accounting from Northern Illinois University and a master of applied economics and PhD in health services organization and policy, with a concentration in corporate finance, from the University of Michigan. Prior to joining academia, she worked in public accounting serving not-for-profits and clients in the insurance industry.

Dr. Reiter teaches undergraduate- and graduate-level courses in healthcare accounting and financial management and is involved in research projects examining hospital financial performance and the business case for quality. In the past ten years, she has served on audit, finance, and advisory committees of several healthcare professional associations. She is an author or coauthor of more than 40 peer-reviewed articles, and she has presented to academic or professional audiences in the United States, France, and Canada.