Subject Index

Active risk management, 523
Aggregate banking system risk, 157–61; time variation of, 168–71
Arrow-Debreu model, 346–54
Asset return covariance matrices, modeling, 523–27
Attrition rates, of hedge funds, 282–92

Bank concentration: diversification and, 219–22; ease of monitoring and, 222–23; market power and, 219; overview of, 193–99; risk of systemic failure and, 199–217; stabilization effects of, 217–23
Bank contagion risk: measure of, 138–39; results for, 148–57; time variation of, 161–68
Bank deposit change, 113–14
Bank holding companies (BHCs), 38–46; summary statistics for, 39, 40t, 41t; trading performance of, 54, 55t; trading revenues for, 46–48, 47f
Banking sector: capital regulation and systemic risk in, 356–66; hedge funds and, 309–18
Banking system fragility, overview of, 193–99
Banking system risk: aggregate, 157–61; changes in, 161–71
Banking system stability: aggregate banking system risk and, 157–61; assessing, 134; bank contagion risk and, 148–57; cross-Atlantic comparison of, 155–57; data and descriptive statistics for, 143–48; data for, 143–48; estimation of indicators of, 139–41, 173–75; in Euro area, 149–55; hypotheses for, 141–43; indicators of, 137–39; overview of, 133–37; test for time variation in indicators of, 176–77; volatility modeling and analysis of, 184–85
Bank of England, 341
Bank panics, 1, 235–36
Bankruptcy, SPVs and, 557–58
Banks: cheating and, 399; costs of recapitalization for, 395–97; liquidity risks and, 105–8; model of, 387–94; risk-based capital requirements for, 397–402; securitization effects on overall default risk of, 615–19
Bank trading revenues, 62–66; on days of large market moves, 80–84; densities for, 63, 63f; descriptive statistics for, 63–64, 64t; 10 percent lowest and highest values for, by historical dates, 64–66, 65f
Basel Committee on Banking Supervision, 30, 380–82. See also New Basel Accord
Basel Market Risk Amendment (MRA), 62
Basel market risk charge, 32
Subject Index

Bootstrapping, 538
Business cycle shocks, 459–63
Business risks, 11
Capital regulations, 21–22; increased systemic risk from, for banking sector, 356–66. See also Regulation
Cash flow at risk (CaR), 11, 11n16
Cheating, banks and, 399
Collateral invested amount (CIA), 565
Collateralized bond obligations (CBOs), 603
Collateralized debt obligations (CDOs) transactions: loss allocation in, 611–14; share price reactions and, 619–28; types of, 606
Collateralized loan obligations (CLOs), 603–4
Commercial paper (CP) market, U.S., 111–12
Conditional return distributions, modeling entire, 533–40
Conduits, 561–62
Constant Conditional Correlation (CCC) GARCH model, 526
Covariance matrices: high-frequency return data for, 527–33; modeling asset return, 523–27; via dynamic conditional correlation, 526–27; via exponential smoothing, 524; via Flex-GARCH, 526; via mapping to liquid base assets, 532–33; via multivariate GARCH, 524–25
Credit default models, 422–29
Credit derivatives, 344–45
Credit enhancement, SPVs and, 559–60, 565
Credit loss distribution, 429–31; simulated, 446–66
CreditMetrics, 16
Credit risks, 8–9; modeling, 16
Credit risk transfer: diversification through, 346–56; institutional background on, 343–46; literature on, 342–43
CSFB/Tremont index, 250–51, 254–59
Daily trading revenues, 60
Deposit change, bank, 113–14
Derivatives, 1, 2
Diagonal GARCH model, 525
Disclosure, unintended effects of, 19–22
Diversification, 17–18
Dynamic Conditional Correlation (DCC) model, 526–27
Earnings at risk (EaR), 11, 11n16
Electronic trading, 1
Euro area banks: domestic vs. cross-border extreme spillover over risk among, 149–55, 150–51t, 152–53t; vs. U.S. banking system, 136–37, 155–57
Excess spread, 464
Extreme value theory (EVT), 135, 476
Factor model approach, 59, 60–61; derivations, 86–90; with varying positions, 66–71
Federal Deposit Insurance Corporation (FDIC), 235
Federal Reserve System, 341
Filtered Historical Simulation (FHS), 538
Financial asset securitization investment trusts (FASITs), 550n2
Financial contagion, 135–36
Financial system distress: managing and risks of, 1; traditional public policy for, 1–2
Firm value, model of, 422
Firm value maximization, risk management and, 5–7
Firmwide risks, measuring, 12–14
First-loss position (FLP), 607–8
Flex-GARCH model, 526
GARCH. See Generalized autoregressive conditional heteroskedastic (GARCH) modeling
Generalized autoregressive conditional heteroskedastic (GARCH) modeling, 15, 37, 515; volatility via, 520–23
Glass-Steagall Act (1933), 235; repeal of, 309
Global vector autoregressive macroeconomic model (GVAR), 419–20; empirical application of, 437–46; expected loss due to default for, 434–36; firm returns based on observed common factors linked to, 433–34; overview of, 431–32; simulating credit loss distributions for, 446–66; simulation of loss distribution for, 436
Graveyard funds, 251–54, 251n11; liquidations and, 279–81
GVAR. See Global vector autoregressive macroeconomic model (GVAR)
Hedge funds, 1, 236, 236n1, 346; attrition rates of, 282–92; banking sector and, 309–18; CSFB/Tremont index for, 250–51, 254–59; data for, 250–51; “Graveyard” database for, 251–54; liquidations of, 274–82; literature review of, 247–50; “Live” database for, 251; logit analysis of liquidations of, 292–301; modeling risk exposures of, 237–38; vs. mutual funds, 271–76; nonsynchronous trading effect of, 269–70; outlook for, 325–26; phase-locking risk and, 243–47; regime-switching models for, 318–24; risk models for, 301–9; serial correlation and illiquidity for, 268–77; tail risk and, 238–42; TASS database for, 251–54, 260–67. See also Systemic risk

Herding, 29; empirical approaches to theories of, 34–35; theories of, 29–30; VaR induced, 29–30

High-frequency return data, 527–33

Idiosyncratic risk, 463–66

Illiquidity risk: aggregate measure of, 277–78; measuring, 267–78; serial correlation and, 268–77

Implicit recourse, 565

Implicit recourse equilibrium, 575–78

Interest-rate swaps, 2

LDCE. See Operational Risk Loss Data Collection Exercise (LDCE)

Leverage, 236, 267

Lindley’s Paradox, 296n38

Liquidations, of hedge funds, 278–82; attrition rates and, 282–92; logit analysis of, 292–301

Liquidity, 236, 267


Liquidity risks, 10–11, 106n2; banks and, 105–8; constructing measures of, 114–16; methodology for measuring, 113–14; results of case study of, 116–25. See also Illiquidity risk

Long-term Capital Management (LTCM), 1, 32, 60, 106, 109, 146, 236, 515; literature on, 249–50

Loss data. See Operational loss data

Loss distribution, credit, 429–31

Loss distributions, estimating, 610–11

Losses. See Operational losses

Market risk charge (MRC), 31–32, 42f; data sample for, 38–39; description of, 39–46; future trading risk and, 37; properties of relative changes in, 44–45t

Market risks, 7–8; modeling, 14–16

Master trusts, 563–64

Measurement technologies, 3

Model risk, 11–12

Modigliani-Miller theorem, for risk sharing, 354–55

MRA. See Basel Market Risk Amendment (MRA)

MRC. See Market risk charge (MRC)

Multivariate extreme bank spillovers, measure of, 138–39

Multivariate GARCH model, 524–25

Multivariate models, 523

Mutual funds, performance of, vs. hedge funds, 271–76

New Basel Accord, 377, 420; advantages and drawbacks of, 383–87; overview of, 380–83; principles of, 382. See also Pillar 1; Pillar 2; Pillar 3

Nonsocialized trusts, 564

Nonsynchronous trading effect, 269–70

Offering Circulars (OCs), 610n3

Operational loss data, 478–79; descriptive analysis of, 482–85; distributions for, 479–82; fitting distributions to, 486–91; literature on, 479; statistical analysis of, 475–77; threshold analysis of, 491–99

Operational loss distribution, aggregate, 500–503

Operational losses, frequency of, 477

Operational loss frequency distribution, 499–500

Operational Risk Loss Data Collection Exercise (LDCE), 478–79

Operational risks, 9–10; modeling, 17

Option pricing, 29

Panics, 1, 235–36

Performance smoothing, 270–71

Phase-locking risk, 243–47

Pillar 1, 397–402; New Basel Accord and, 381; overview of, 377–78; Pillar 2 and, 402–5

Pillar 2: New Basel Accord and, 381–82; overview of, 377–78
Pillar 3: New Basel Accord and, 382; overview of, 377–78
Pooling, of assets, 561, 561f
Portfolio credit risk models, 3, 4, 8–9
Portfolio insurance, 29
Portfolio volatility, modeling, 514–23.
See also Volatility
Prompt Corrective Action (PCA), 378.
See also Pillar 2
PVDIL. See Value of deposit insurance liabilities (PVDIL)
Qualified special purpose vehicles (QSPVs), 556–57
Random coefficient model, 61, 71–77
Real estate investment trusts (REITs), 550n2
Real estate mortgage investment conduits (REMICs), 550n2
Recapitalization, costs of, 395–97
Regime-switching models, 318–24
Regulated investment companies (RICs), 550n2
Regulation: systemic risk and, 341–43; unintended effects of, 19–22. See also Capital regulations
Return distributions, conditional, modeling entire, 533–40
Risk-based capital regulation (RBCR), 379, 398; effect of, on welfare function variables, 399–402
Risk buyers, 344
Risk factor shocks, impact of, 453–59
Risk management: firm value maximization and, 5–7; overview of, 29–30
Risk measurement, future of, 23–24
RiskMetrics model, 8n7, 14
Risks: allocation of, tranching and, 605–19; business, 11; credit, 8–9, 16; established, 7–10; idiosyncratic, 463–66; market, 7–8, 14–16; measuring firm-wide, 12–14; model, 11–12; modeling, 14–17; operational, 9–10, 17; phase-locking, 243–47; range and types of, 7–12; shifting, 17–18; spillover, 136; strategic, 11; technologies for controlling, 3–5. See also Banking system risk; Bank trading risks; Illiquidity risk; Liquidity risks; Systemic risk
Risk sharing, Modigliani-Miller theorem for, 354–55
Risk shredders, 344
Risk transparency, 21
Rolling regressions, 77–80
Runs, 1, 2n1, 235
Safety-and-soundness regulatory design, 21
Securitization: implicit recourse, 565; overview of, 561–63; SPVs and, 560–65; structure of, 563–65
Seller's interest, 564
Serial correlation, illiquidity and, for hedge funds, 268–77
Sharpe ratios, 271
Socialized trusts, 563–64
Special purpose vehicles (SPVs), 345; accounting issues for, 555–57; bankruptcy and, 557–58; credit enhancement and, 559–60; data for testing hypotheses, 579–80; empirical tests for determining which firms securitize, 587–91; empirical tests for implicit recourse equilibrium, 580–89; hypotheses for, 578–79; introduced, 549–55; legal form of, 555; qualified, 556–57; taxes and, 558–59; theoretical analysis of, 565–79; use of off-balance sheet financing and, 560
Spillover risk, 136
Stock return volatility, 113
Strategic risks, 11
Stress tests, 15
Swaps, 2, 2n4
Systemic failure, risk of, bank concentration and, 199–217
Systemic risk, 11–12, 137; changes in, 161–71; defined, 231; increased, from capital regulation, for banking sector, 356–66; modeling, 17; modern forms of, 236; regulation and, 341–43; VaR and, 30–37. See also Hedge funds
Systemic stability, 22
Tail losses, distribution of, 3–4
Tail risk, 238–42
Tail-ßs, 135, 139, 157–61
TASS database, 251–54, 260–67
Taxes, SPVs and, 558–59
Trading revenues: aggregate, 48–50, 50f; for bank holding companies, 46–48, 47t; components of, 52, 52f; empirical evidence on VaR and, 35–37; risk analysis and correlation of, 50–52, 51t; tests of
stability in volatility of, 52, 53t; volatility of, 48, 49t
Tranching: allocation of risk and, 605–19; of assets, 561, 561f
Trusts: master, 563–64; nonsocialized, 564; socialized, 563–64
U.S. banking system, vs. European banking system, 136–37, 155–57
U.S. commercial paper (CP) market, 111–12
Value-at-risk (VaR), 33f, 59; capital charge, 31–32; empirical evidence on trading revenues and, 35–37; herding, 29–30; systemic risk and, 30–37; vicious circle hypothesis, 32–34
Value-at-risk (VaR) measures, 3–4, 29; for regulation, 20–21
Value-at-risk (VaR) models, 8
Value of deposit insurance liabilities (PVDIL), 386, 392, 396–97
Variable interest entities (VIEs), 556n9
Variance targeting, 525
Vector error-correcting models (VECM), 431
Volatility: modeling, of banking system stability, 176–77; modeling portfolio, 514–23; overview of, 513–14; portfolio level analysis of, 514–23; stock return, 113; of trading revenues, 48, 49t; VaR systems and, 54–56; via exponential smoothing, 518–20; via GARCH models, 520–23