Basel Basics
Framework Overview

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December 13, 2006
Current Rules

• US Banks – “Basel I”

\[
\text{Leverage Capital} = \frac{\text{Capital}}{\text{Assets}} \quad \text{Risk Based Capital} = \frac{\text{Capital}}{\text{Risk-Weighted Assets}}
\]

Well-Capitalized = Leverage - 5%
Tier 1 Risk-Based - 6%
Total Risk-Based - 10%

• US Securities Firms – Net Capital Rule (15c3-1)

Capital and Compliance Largely Distinct Regulatory Issues
Basel II – To Whom Applies

Europe
All Banks/Securities Firms
  • EU Parliament Approved Last Year

US
Large Banks
  • Core
  • Opt-In (Anyone who chooses)

Large Securities Firms
Basel II - Scope – US Banks

• Core banks – (i) consolidated total assets of ≥ $250 billion OR (ii) consolidated total on-balance sheet foreign exposure of ≥ $10 billion

• Core bank holding companies – (i) consolidated total assets (excluding assets held by an insurance underwriting subsidiary) of ≥ $250 billion OR (ii) consolidated total on-balance sheet foreign exposure of ≥ $10 billion OR (iii) a subsidiary depository institution that is a core bank or opt-in bank

• Any qualified institution may opt-in

• Only the “advanced approach” is currently planned to be adopted in the U.S.
  ➢ But, at industry urging, other alternatives being considered

• Market risk capital rules are broader in coverage, applying to any applicable institution with aggregate trading assets and liabilities ≥ 10% of total assets, or ≥ $1 billion
Basel II – Scope – US Securities Firms

Requirements

• Tentative Net Capital - $1 billion
• Net Capital - $500 million
• SEC Oversight (Consolidated Supervised Entity)

Current List

• Goldman Sachs Group, Inc.
• Morgan Stanley
• Merrill Lynch & Co., Inc.
• The Bear Stearns Companies, Inc.
• Citigroup Global Securities Global Markets Inc.
Basel II – Expected Impact

US Banks (Largest)
- Reduce Risk-Weights – Generally, Yes
- Redefine Capital – Generally, No (Maybe Later)
- Eliminate Leverage Ratio – No
- Eliminate Prompt Corrective Action Rules – No

US Banks (Other 9000)
- Basel IA Itself Principally Affects Risk Weights
  - Not Same Focus on Risk Management
- But - Basel II Migration of Risk Management Best Practices?
Basel II – Expected Impact

US Securities Firms – Alternative Net Capital

• Mathematical Models to Calculate Net Capital
  Requirements for Market and Derivatives – Related Credit Risk
• VaR Models
• CSE Reporting
Basel II (Banks) – What Has Happened?
Lower Capital Causes Revision

• QIS4 Results – February 2005
  ➢ Risk Based Capital Materially Reduced
• Congressional Hearings – September 2005
  ➢ Safety and Soundness
  ➢ Competitive Issues
Basel II
U.S. Implementation

- Basel II NPR published 9/25/06
- Basel IA NPR published by FRB/FDIC 12/5/06
- Basel II comments due by ?? (initially due 1/23/07)
Basel II
U.S. Implementation (cont’d)

• **BUT, Significant Issues Remain**
  - **Big Banks**
    - 10% Aggregate Floor
    - Leverage Ratio Permanently Retained
    - Definition of Default
    - Conservative Equity Treatment
  - **Small Banks**
    - Competitive Issues
3 Pillars of New Accord

* Discretion/Integration Place Increased Focus on Compliance
Basel Process
Convergence of Capital & Compliance (Including Disclosure)

Historical
Capital (Calculations)
Compliance (Examination)
Disclosure (Marketplace)

Basel Process

Future
Compliance (Examination)
Disclosure (Marketplace)

Integrated Risk Management Framework
Basel II Capital Rules (NPR)
Qualification Requirements

- Written Broadly
- 5 Qualification Requirements
  - Assign Ratings to Individual Wholesale and Retail Segments
  - Translate Ratings to Numerical Risk Measurements for Inputs
    - PD, ELGD, LGD, EAD, M
  - Validation
  - Data Management Support
  - Oversight and Control Mechanisms
Basel II Credit Risk (NPR)
Quantification

• Wholesale Exposures -- Risk Weighted on an Individual Basis
  ➢ Corporate, Sovereign, Interbank
• Retail Exposures -- Risk Weighted on a Pooled Basis
  ➢ Residential Mortgages
  ➢ Qualifying Retail Exposures (credit cards and overdraft lines)
  ➢ Other Retail (auto loans, school loans, some small/medium enterprise loans)
Basel II Credit Risk (NPR)
Quantification

• Principal Metrics are Probability of Default (PD), Exposure at Default (EAD), Loss Given Default (LGD) and Expected Loss Given Default (ELGD)
  - PD -- Based on Internal Ratings, minimum of 3bp generally
  - EAD -- Maximum potential loss at default
  - LGD, ELGD -- a percentage of EAD that takes into account recoveries and guaranties
• Collateral and Hedges May Reduce Risk Weighted Assets by Impacting the Principal Metrics
• To Calculate Risk Weighted Assets:
  - Assign rating grade to particular exposure
  - Using the above inputs, calculate Risk Weighted Assets based on regulatory formulas
• Measuring Default
  - Non-Accrual Status (Wholesale Only)
  - Charge-Offs (Full or Partial) due to Credit Status of Obligor
  - Credit-Related Loss of 5% or More
Basel II Credit Risk Mitigation (NPR)

Some Good News

• Greater Range of Permissible Collateral
  ➢ Financial, Nonfinancial, Guarantees, Credit Derivatives

• Credit Derivatives/Guarantees
  ➢ Generally Reduce PD/LGD
  ➢ Some Recognition of Double Default Treatment
    • If Provided by Regulated Financial Firm
    • If obligor on underlying exposure is not
      – Retail exposure
      – Sovereign exposure
      – Securitization exposure
      – Financial institution eligible to write double default
Basel II Securitizations (NPR)
Definition of Securitization Exposure

• Securitization is defined broadly to include any transaction that involves tranching of credit risk:
  ➢ All or part of credit risk is transferred to third parties
  ➢ Credit risk is separated into two or more tranches
  ➢ Performance of securitization exposure depends on performance of underlying exposures
  ➢ All or most of the underlying exposures are financial exposures
Basel II Securitizations (NPR)
Operational Requirements for securitization

• Underlying exposures may be excluded from balance sheet only if operational requirements for securitization are met

• Operational requirements for traditional securitization:
  - GAAP true sale
  - Transfer to 3rd party of credit risk associated with the underlying exposures
  - Clean-up calls must be “eligible”

• Special considerations for synthetic securitization:
  - Credit risk mitigant consists of financial collateral, eligible credit derivative or eligible guarantee (enforceability opinion required in all cases)
  - Credit derivative terms, pricing, yield may not be change based on credit deterioration of underlying exposures

• Implicit Support
  - Regulators can put all securitization exposures back on balance sheet as if not securitized if the originator supports securitization in excess of its contractual obligation
Basel II Securitizations (NPR)
Risk-Weighting Approaches and Deductions

- **Ratings-based Approach ("RBA")**
  - Exposure must be rated by an NRSRO or have an inferred rating
  - Originators need 2 ratings, investors only 1
  - Risk weights depend on rating, seniority and granularity
  - Comparison to ratings-based approach in the Basel I rules

- **Internal assessment approach ("IAA")**
  - Only for qualifying securitization exposures to ABCP programs
  - Bank must obtain regulator’s prior written approval to use of IAA

- **Supervisory Formula Approach ("SFA")**
  - 7 inputs must be calculable on an ongoing basis, including capital requirement for all underlying exposures as if held on balance sheet
  - SFA formula imposes a 56-bp floor

- **Deduction from capital**
  - Gain on sale and credit enhancing interest only strips
  - Securitization exposures that do not qualify for RBA, IAA or SFA.
Basel II Securitizations (NPR)
Hierarchy of Risk-Weighting Approaches and Deductions

1. Deduct from Tier 1 capital (i) after-tax gain on sale and (ii) credit enhancing interest only strips greater than 25% of tier 1 capital
2. Apply the RBA to any other securitization exposure that has the requisite ratings
3. For an ABCP program securitization exposure that does not qualify for the RBA, apply either IAA or the SFA to the exposure if either can be used
4. For a securitization exposure not described above, apply the SFA if the bank can calculate the SFA risk factors for the securitization exposure and the underlying exposures
5. For a securitization exposure not described above, deduct the exposure pro rata from tier 1 and tier 2 capital
Basel II Securitizations (NPR)
Some Exceptions to the Hierarchy of Approaches

- **Multiple Exposures to Single Securitization**
  - The risk-based capital requirements for all securitization exposures held by a single bank associated with a single securitization cannot be greater than the sum of (i) $K_{IRB}$ for the underlying exposures and (ii) the bank’s expected credit loss for the underlying exposures.

- **MBS Interest-only strips**
  - Mortgage-backed interest-only strips cannot have a risk weight below 100% regardless of rating (often AAA). This reflects volatility and prepayment risk.

- **Securitization of non-IRB assets**
  - A bank with securitization exposure to assets that are not wholesale, retail, securitization or equity exposures must apply RBA or deduct the exposure from capital. E.g. music or film receivables.

- **Eligible Servicer Cash Advances**
  - Banks servicing securitized residential mortgage loans are not required to hold capital against the undrawn portion of eligible servicer cash advances.
Basel II Securitizations (NPR)
Treatment of Overlapping Exposures

• **ABCP Programs**
  - A bank with multiple duplicative securitization exposures to an ABCP program must apply the risk-based capital treatment to the position that results in the highest capital requirements.
  - E.g. include program wide credit enhancement and pool-specific liquidity facilities.

• **Securitization exposures resulting from loan swaps**
  - A bank with securitization exposure in the form of a MBS or participation interest resulting from a mortgage loan swap with recourse must bifurcate the position into the retained recourse obligation and the percentage of the MBS or participation interest not covered by the recourse.
  - The bank must separately calculate the risk-based capital requirement for each component.
  - The total risk-based capital requirement is capped at the risk based capital requirement for the underlying exposures as if they were held directly on balance sheet.
Basel II Equities Risk Weighting (NPR)

- Standard Risk Weight Approach
  - 300% RW for Publicly Traded
  - 400% RW for Nonpublicly Traded
- Internal Models
  - Requires Regulatory Approval
  - Floor = 200% RW for Publicly Traded
    = 300% RW for Nonpublicly Traded
- Look – Through Approaches for Investment Funds
Basel II Operational Risk (NPR)
Qualification Requirements

- Function Independent from Business Line Management
- To Qualify, Must Incorporate 4 Elements
  - Internal Operational Loss Event Data
  - External Operational Loss Event Data
  - Results of Scenario Analyses
  - Assessments of the Bank’s Business Environment and Internal Controls
- Must Have Data Management, Control and Oversight, Validation, Internal Audit, Stress Testing, and Documentation
Basel II Operational Risk (NPR)
Quantification

• Measure Using Internal Systems at 99.9\textsuperscript{th} Percentile Over 1 Yr Horizon
• Mean of Loss Distribution is Expected Operational Loss
• Generally = EOL + UOL
• But – Only UOL if Can Prove Offset of EOL With Eligible Offsets
  ➢ Internal Business Practices Absorb Predictable Losses (GAAP Reserves, e.g.)
• Can Use Risk Mitigants (\textit{E.g.} Insurance) to Offset Up to 20\% of Operational Risk, after giving effect to EOL offsets
Basel II Disclosure (NPR)

- Enhanced – 11 Tables of Information
- Scope, Capital Structure, Capital Adequacy, Credit Risk, Securitizations, Operational Risk
- Board Approved Formal Disclosure Policy
Basel II
What Can Banks Do Now?

• Relief from regulators allows institutions to get a “head start” on Basel II treatment of securities lending transactions
Conclusion

• Although Express in Basel II, Increased Compliance Focus Will Ripple Throughout the Financial Services Industry

• Capital & Compliance No Longer Distinct
  - Capital
  - Risk Management
  - Compliance

• With Enhanced Discretion/Convergence Comes Increasing Responsibility/Reward for Compliance Programs
Questions

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