

# **Basel II: Is this the most promising way to enhance financial stability in emerging markets?**

Richard J. Herring  
Director of the Lauder Institute  
Co-Director, The Wharton Financial Institutions Center

The World Bank/IMF/US Federal Reserve Board  
4th Annual International Seminar on Policy Challenges for the Financial Sector:  
Basel II - The International Banking System at the Crossroads  
June 1, 2004

©Richard J. Herring

1

## **Overview**

- ✓ The Rationale for Basel II
- ✓ The Objectives of Basel II
- ✓ The 3 Pillar, Basel II Approach
- ✓ Problems in applying Pillar 1
- ✓ Problems in applying Pillar 2
- ✓ Redressing the Imbalance: Taking Pillar 3 Seriously

©Richard J. Herring

2

## Banks Found Ways to Undermine Basel I

- ✓ Increase numerator without increasing economic capital
  - Gains trading
  - Evergreening of loans
- ✓ Increase exposure to risk without increasing risk-adjusted asset denominator
  - Shifting allocation from AAA to BB
  - Loan sales
  - Securitization
- ✓ Increasing exposures to non-credit risks

3

## Advances in Risk Management

- ✓ Economic capital became industry standard for measuring and managing risk
  - Definition: *Amount of capital a bank requires to provide a given level of protection against default to its creditors*
  - Operationally, expressed as a target rating for its long term debt
- ✓ VaR (or RAROC) revolution in trading rooms

4

## Internal Models Approach to Market Risk

- ✓ 1996 Amendment on Market Risk permitted qualifying banks to rely on supervised use of their own internal models to determine capital charge
  - Diminished incentives for regulatory capital arbitrage because capital charge reflect bank's own estimate of risk
  - Accommodated financial innovations readily
  - Provided an incentive for banks to improve their risk management processes and procedures to qualify for the internal models approach
  - Reduced compliance costs since regulated in the same way managed

©Richard J. Herring

5

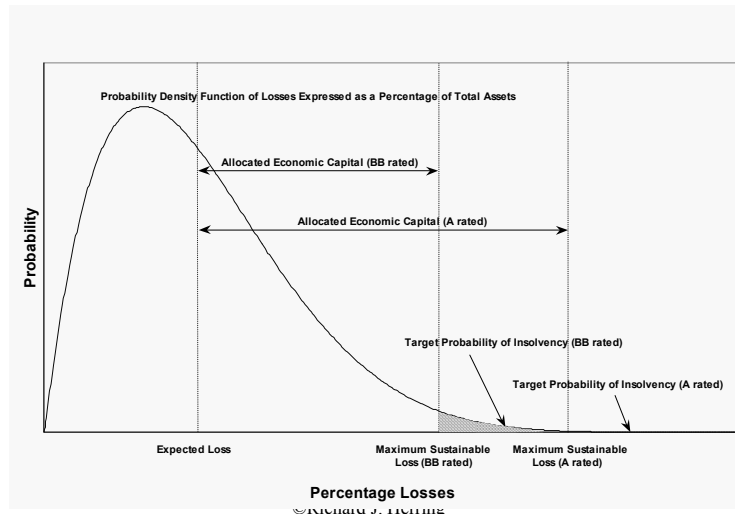
## Boundary between Credit Risk and Market Risk Increasingly Blurred

- ✓ Traders increasingly deal with less liquid, less creditworthy instruments.
- ✓ The market for bank loans is becoming more liquid.
- ✓ The market in credit derivatives is booming.
- ✓ External stakeholders press to consolidate accountability for risk management.
- ✓ Why not extend the internal models approach to credit risk?

©Richard J. Herring

6

# The holy grail of risk management: probability density function of losses



## Advantages

- ✓ Disaggregation to individual credit facilities disciplines pricing
- ✓ Facilitates active management of credit risk
- ✓ Automatically discourages buildup of concentrations of risk
- ✓ Provides a natural way to set exposure limits for individual customers, markets or regions
- ✓ Establishes basis for evaluating performance of employees underwriting credit risk
- ✓ Guides capital allocation decisions

## Why not rely on internal models to regulate credit risk?

- ✓ Regulators must be assured that models are
  - conceptually sound,
  - empirically validated &
  - produce comparable allocations of economic capital across institutions
- ✓ Conceptual differences in measuring credit losses
  - Only in the event of default?
  - Or also because of a decline in borrower's creditworthiness or increase in credit spreads?
- ✓ Data limitations in modeling credit risk
  - Need a long span of data, preferably covering several credit cycles
  - Inevitably, right tail subject to great uncertainty

9

## Basel Committee Concluded

- ✓ Internal models not yet sufficiently credible
- ✓ But subject to appropriate qualifications, banks may use critical inputs of their internal models
  - PD
  - LGD
  - EAD

## Basel II Aims to

- ✓ Eliminate incentives for regulatory capital arbitrage by getting risk weights right
- ✓ Provide banks with incentives to enhance risk measurement and management capabilities
- ✓ Extend risk assessment to operational and interest rate risks

## What won't change

- ✓ Minimum ratio of capital to risk-weighted assets remains 8%
- ✓ Oddly, in view of the emphasis on *economic capital*, the definitions of Tier 1 and Tier 2 capital
  - Only equity, not debt instruments count as economic capital
- ✓ Focus on accounting data, not market values than underlie economic capital

# The Three Pillars

1. Minimum regulatory capital requirements
2. Supervisory review process
3. Market discipline

Pillar 1 is responsible for most of the complexity

- ✓ Capital charges for credit risk
  - Standardized Approach
  - Internal Ratings Based Approaches
    - Foundation IRB
    - Advanced IRB
- ✓ For most banks, capital charges for credit risk are likely to decline

But what the Basel Committee giveth,  
it taketh away (on average)

- ✓ New capital charge for operational risk calibrated to offset the reduction in the capital charge for credit risk on average
- ✓ Capital charges for operational risk
  - Basic Indicator Approach
  - Standardized Approach
  - Advanced Measurement Approaches
- ✓ Overall adjustments through “single scaling factor”

## Reliance on models presumes

- ✓ Personnel who understand models and limitations and who can explain them to senior managers and board
- ✓ A sufficient span of high quality data to validate model
- ✓ A “black box” model or even a good model fit to bad data or an insufficient span of data may lead to disaster

## Data Requirements for Advanced Approaches are Very Demanding

### ✓ Credit risk

- Must validate both the parameters used in internal rating systems and default estimates assigned to ratings
- Need long spans of high quality data
  - At least 5 years for PDs
  - At least 7 years for LGDs
  - At least 7 years for EAD
- A serious hurdle even in the most sophisticated institutions
  - Failure to archive information
  - Incompatibilities of data definitions and systems, especially when mergers
  - For some categories, defaults so rare than cannot implement statistical analysis

## Data issues (cont'd)

### ✓ Operational risk

- Very few banks have historical data that links losses to operational risk events
- Loss data must be correctly identified, classified and recorded
- At least 3-5 years of data

## Concerns re: Pillar 1 Capital Charges

### ✓ Complexity

- Heavy compliance costs for banks & both home country and host country supervisors
- Simplicity incompatible with greater precision in risk weights
  - Practitioners press for special rules for special kinds of lending
- But accurate risk weights are not the only way to achieve risk-sensitive capital requirements

## Regulatory Capital Functions May Retard Progress in Risk Modeling

- ✓ Attempt to hardwire state of the art in regulations is doomed to failure
  - Complex international negotiations will inevitably lag innovations in risk management
  - Heavy compliance costs
  - Leading banks will need to run separate systems for regulatory capital and economic capital
- ✓ Paradoxically, low compliance costs under Basel I facilitated investment in sophisticated models

# Procyclicality

- ✓ Loan losses generally lag 6-12 months behind a cyclical downturn
- ✓ PD and LGD tend to rise in economic downturn
- ✓ Thus capital is likely to decline just as capital requirements increase
- ✓ Basel Committee hopes
  - Knowledge that capital requirements will rise in downturn will lead institutions to stockpile excess capital in good times
  - Better risk management will improve stability of financial sector
  - Supervisory discretion may offset

# Insensitive to Needs of Emerging Economies

- ✓ Competitive disadvantage for banks who adopt less sophisticated approaches to credit and operational risk
  - Level playing field objective rests uneasily alongside incentives for banks to qualify for the most advanced approaches
- ✓ Will increase capital charges against loans to some emerging markets (but reduce others)
- ✓ Retains privileged role for short-term interbank lending
- ✓ Ignores critical risks for emerging markets
  - Currency convertibility
  - Political risk
  - Liquidity and funding risk
  - Business risk

## Pillars 2 & 3 could hold greater promise for emerging markets

- ✓ Supervisors in emerging markets are already having difficulty complying with the Core Principles
- ✓ But Pillar 1 imposes still heavier burdens on supervisors
  - Must evaluate and monitor use of models
  - Prescriptive approach may subtly undermine market discipline & increase burden on supervisory discipline
    - Official blessing of models can give both boards and markets a false sense of security, increase moral hazard
  - Diversion of scarce resources
- ✓ Enhanced market discipline could offset
  - Has clear advantages vis-à-vis supervisory discipline

### **Supervisory Discipline**

- ✓ Episodic
- ✓ Backward looking
- ✓ Bureaucratic
- ✓ Slow to Change
- ✓ Rule-based sanctions, imperfectly risk based
- ✓ Substantial compliance costs

### **Market Discipline**

- ✓ Continuous
- ✓ Forward looking
- ✓ Impersonal
- ✓ Flexible and adaptive
- ✓ Variable, risk-sensitive sanctions
- ✓ Lighter compliance costs

## More fundamentally...

### Supervision

- ✓ Supervisors need to show an institution is taking excessive risks
  - Subject to review
  - Tendency to delay until damage occurs
  - Undermines corporate governance

### Market Discipline

- ✓ Boards need to show they are not taking excessive risks
  - Encourages stronger corporate governance
  - Promotes disclosure
  - Reduces supervisors' liabilities

Unfortunately,  
Pillars 2& 3,  
as currently constituted,  
do little  
to reduce the burden  
on supervisory discipline  
or  
strengthen market discipline

## Pillar 2: Supervisory Review Process

- ✓ 4 key principles
  1. Banks must have process for assessing overall capital relative to risk profile & strategy to maintain capital
  2. Supervisors should review and take action if not satisfied capital is adequate
  3. Supervisors should expect banks to hold excess capital & have the power to compel them to do so
  4. Supervisors should intervene at an early stage to prevent capital from falling below minimal levels and should require rapid remedial action if capital is not maintained or restored

## Pillar 3: Market discipline

- ✓ Quantitative & qualitative disclosures in 4 key areas
  1. Scope of application
  2. Composition of capital
  3. Risk exposure assessment and management processes
  4. Capital adequacy

## But disclosure does not constitute market discipline

- ✓ Pillar 3 fails to address the more important and logically prior issue of incentives
  - With appropriate incentives, the market will demand disclosure
  - The key incentive for creditors is fear of loss
  - Inadequacy of bank resolution tools undermines incentives for market discipline until prospect of loss is obvious

## Too big to fail syndrome

- ✓ Inability to impose loss on creditors without jeopardizing systemic stability leads to
  - Lender of last resort assistance to banks of doubtful solvency
  - Forbearance
  - Issuance of blanket guarantees in crisis
    - Hugely expensive
    - Difficult to terminate
  - Undermines incentives for market discipline

## Most supervisors lack efficient resolution tools

- ✓ Intervention is delayed until losses loom large
- ✓ Ultimate allocation of losses is ambiguous and delayed
- ✓ Depositors and creditworthy borrowers lose access to funds with consequence of large spillovers

## Efficient resolution of failing financial institutions

- ✓ Prompt intervention
- ✓ Clear and unambiguous allocation of losses
- ✓ Establishment of a bridging institution to
  - Maintain services to depositors and creditworthy borrowers and minimize spillovers to rest of economy
  - Wind down positions
  - Liquidate assets in a orderly fashion
  - Make final disposition in a way that best preserves ex ante priorities of repayment and going concern value

## Current Basel II is not ideal for emerging markets

- ✓ Complex, prescriptive Pillar 1 rules divert resources and attention from more urgent improvements in the financial infrastructure
- ✓ Framework is useful, but need to redress the balance
  - Provide supervisory authorities with more efficient bank resolution tools so that can credibly impose losses on creditors and shareholders without jeopardizing systemic stability
  - Provide market with stronger incentive to exercise discipline
- ✓ Then market discipline can relieve some of the mounting burden on supervisory discipline