

# **Macroeconomic Implications of Basel II: Impact on Economic and Financial Stability in Emerging Markets**

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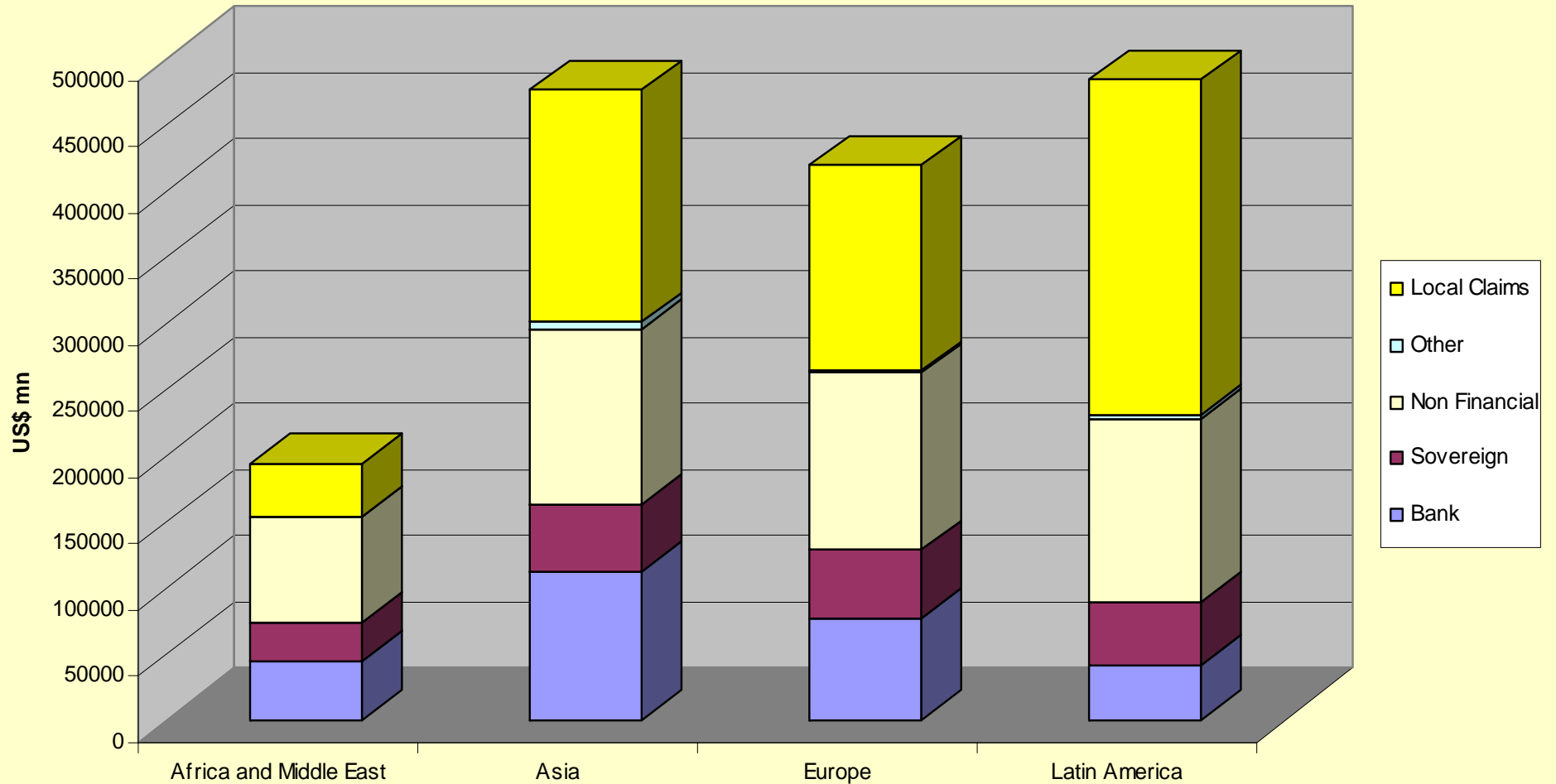
# Plan of the Presentation

- Implications of Basel II Implementation in G10 for Developing Countries
- Implementation in Developing Countries and (Unresolved) Cross Border Issues
- Pro-Cyclicality and Circularity
- Conclusions and Recommendations

# **1. Basel II Implementation in G10 is Important for the Developing World**

- Foreign Banks have lent US\$ 1.6 trillion to developing countries
  - Source: BIS, Figures refer to BIS Reporting Banks, Dec 2003 and excludes offshore centers like Hong Kong
- Foreign banks account for more than 50% of domestic credit in Latin America and developing Europe
  - Source: “Banking on foreigners”, Martinez Peria, Powell and Vladkova (2003), World Bank, .

# BIS Reporting Bank Claims on Developing Countries (Dec 2003)



# Will Basel II Affect Spreads and Capital Flows ?

- Critical questions:
  - What drives the cost of credit today, do regulations bind ?
  - Does Basel I bind, will Basel II bind, if so by how much?
- Basel's QIS-3 tells us little:
  - Focus on the overall effects for large (G10) banks
- Foreign Banks are important for many developing countries but developing countries are less important for G10 banks
  - Developing countries account for only 10% of total (BIS) claims

# “Implications of Basel II for Latin America”

(Powell, Bank of Spain, Financial Stability Review, May 2004)

- Paper focuses on *sovereign lending*
- Includes a simple technique to endogenize bank capital
- **Conclusion:** Basel II's *Internal Rating Based Approach* will have little effect on Latin America *sovereigns*, but...
  - There are effects for those with lower credit ratings
  - And the results are sensitive to assumed default probabilities

# Headline Results for Latin America

Country	Rating	Default Probability	Average Spread	IRB Cap Reqs.	Spread Change
Chile	A-	0.05%	1.00%	1.6%	-0.2%
Mexico	BBB	0.22%	2.43%	3.8%	0.0%
Colombia	BB	0.94%	5.09%	7.6%	0.0%
Panama	BB	0.94%	3.73%	7.6%	0.0%
Peru	BB-	1.33%	4.27%	8.7%	0.0%
Brazil	B+	2.91%	8.33%	11.5%	0.0%
Venezuela	B-	10.32%	7.19%	20.3%	2.1%
Ecuador	CCC+	21.32%	11.84%	29.0%	4.8%

Default probabilities are S&P 12 month horizon, average spread is EMBI over 2003 while rating remains constant

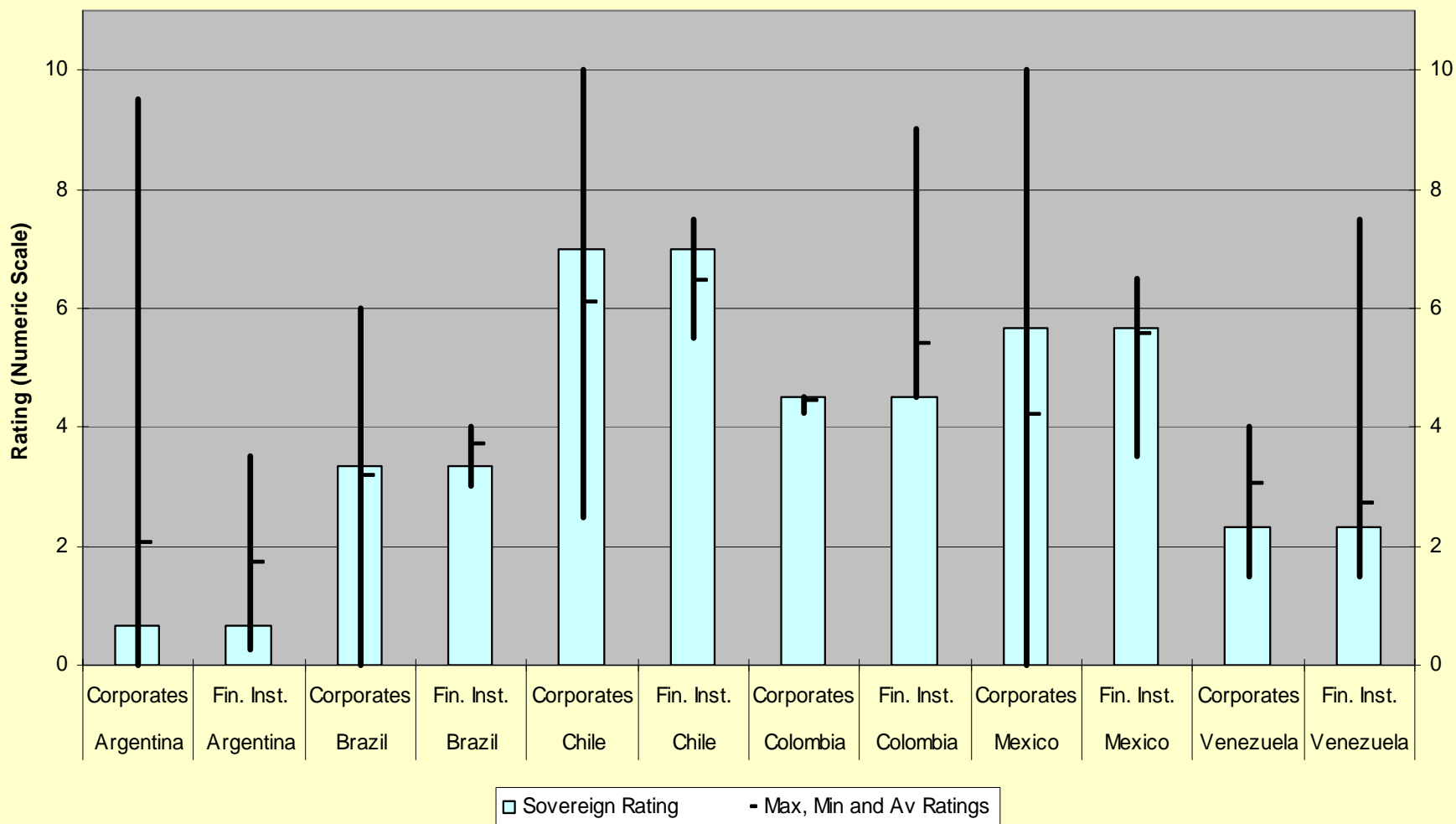
# A Brazil (B+ Risk) Motivated Sensitivity Analysis

				Default Probability				
		2.0%	5.0%	10.0%	15.0%	20.0%	25.0%	
	2.0%	0.38%	1.19%	2.40%	3.51%	4.54%	5.6%	
	4.0%	0.00%	0.88%	2.40%	3.51%	4.54%	5.6%	
	6.0%	0.00%	0.00%	2.40%	3.51%	4.54%	5.6%	
<b>Spread</b>	8.0%	0.00%	0.00%	0.72%	3.51%	4.54%	5.6%	
	10.0%	0.00%	0.00%	0.00%	3.47%	4.54%	5.6%	
	12.0%	0.00%	0.00%	0.00%	0.89%	4.54%	5.6%	
	14.0%	0.00%	0.00%	0.00%	0.00%	4.09%	5.6%	

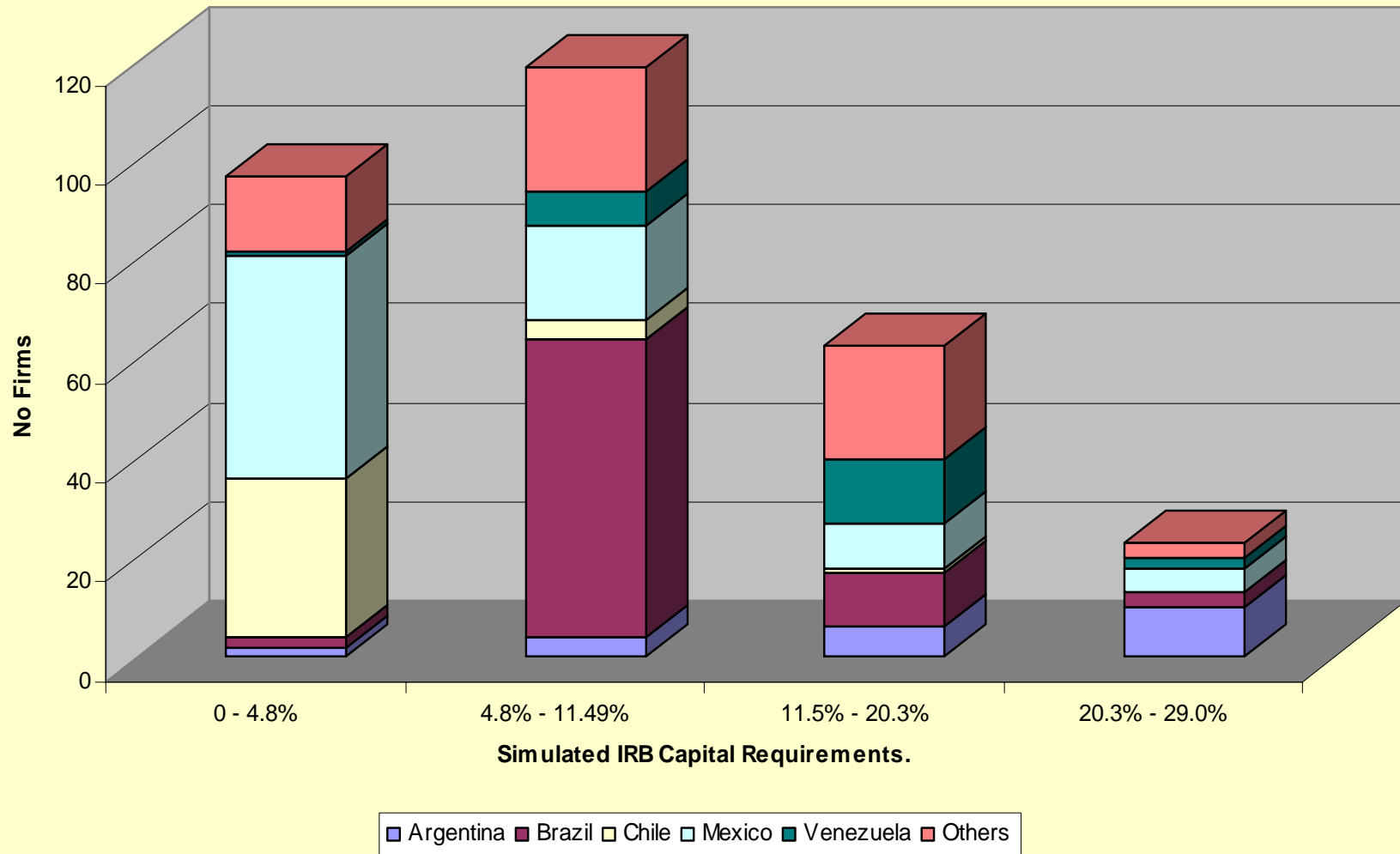
Average Brazil Spread 8.33% 2003, S&P 12 Months B+ PD=2.91%

# But Private Sector Lending May be Affected

## 302 Latin American Rated Banks and Corporates

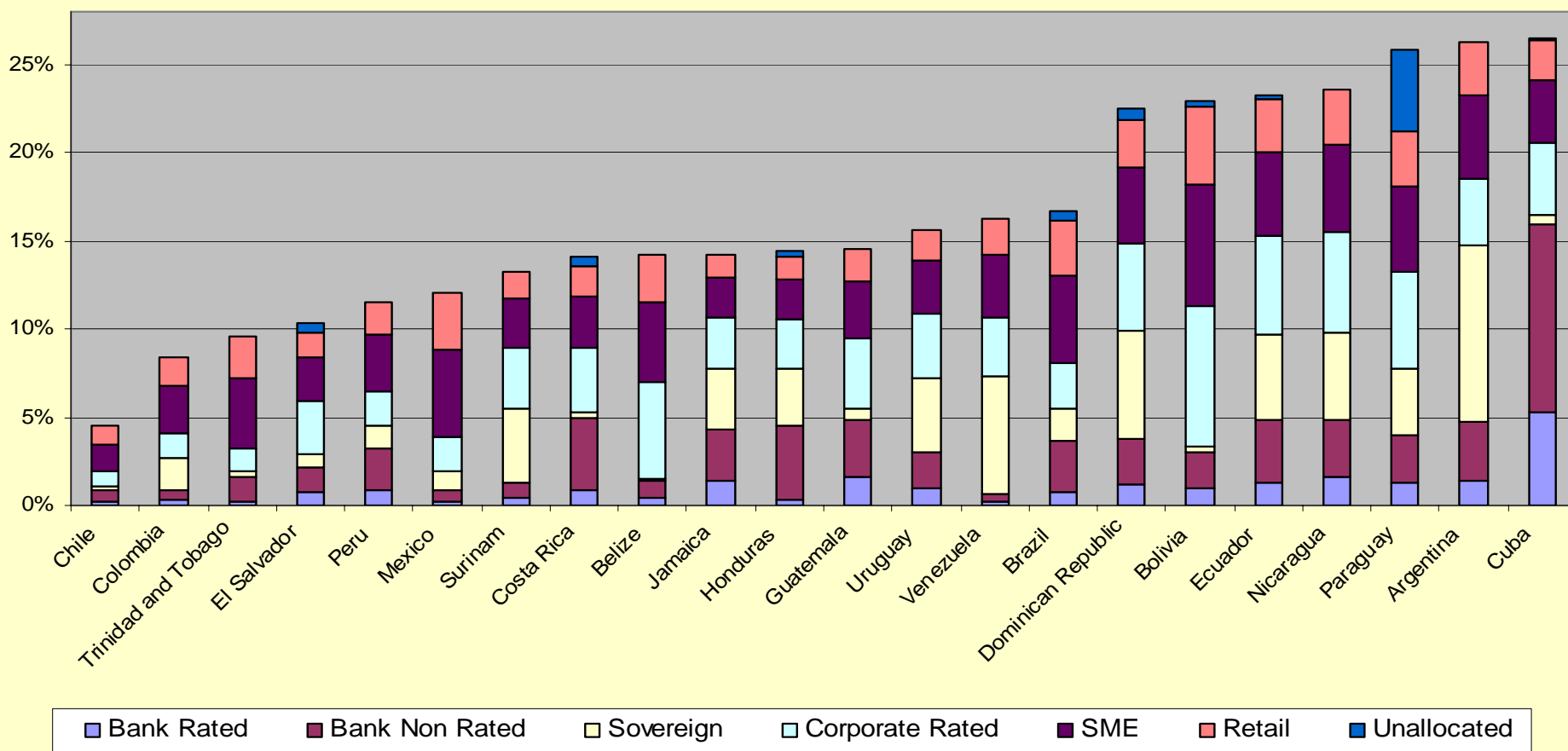


# Bank and Corporate Capital Requirements in Latin America



Based on 302 Rated Banks and Corporates by 3 Leading Rating Agencies

# Estimated Average Capital Requirements and Sectoral Contributions



# Heroic Assumptions Employed

- Distribution of local lending by sector
- Distribution between rated and non-rated claims
- Default probabilities of non-rated claims
- Latest IRB curves, for SME and Retail

# Requirements Look High for Poorly Rated Sovereigns

- 10 Countries (including Brazil) > 15% average
- A sharp increase from Basel I's 8%
  - But still, may not be binding
  - Assumes literal application of IRB to all parts of a global bank

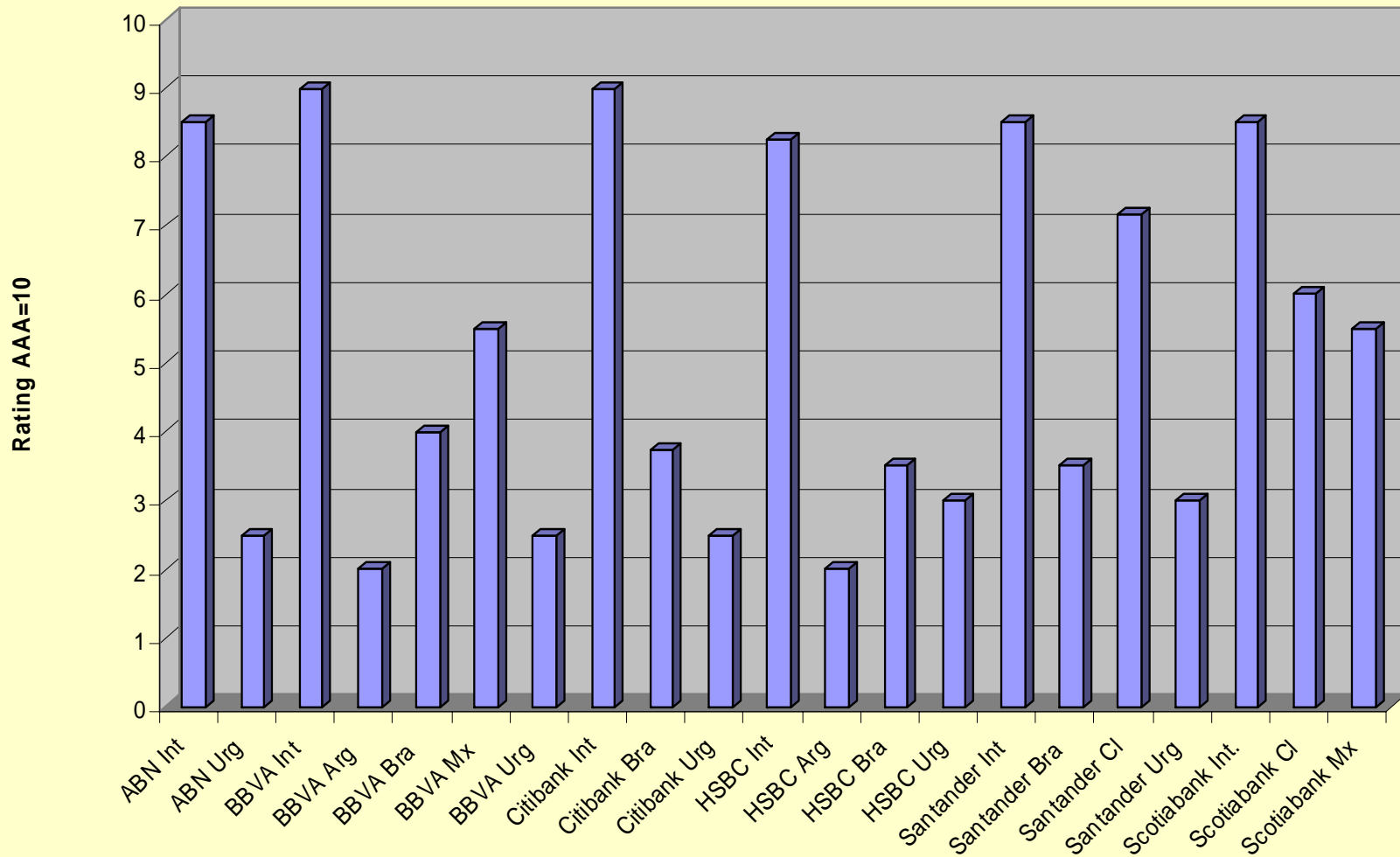
## 2. Emerging Country Implementation

- The effects of Basel II will depend on
  - Basel II Implementation in emerging countries
  - And (unresolved) *Cross Border Issues*.

# The Cross Border Issue

- The risk of a subsidiary (or branch) is that of the international bank, only if there is a *transparent and comprehensive parental guarantee*.

# But the Ratings of Subsidiaries are well below those of Parents



- Failing such a guarantee:
  - If the subsidiary (or branch) is significant for the host
  - The host will require a regulatory regime that protects its financial system and that it **can understand and monitor**
  - Probably calls for a simpler (and less pro-cyclical) approach to that applied by the home
- If the subsidiary or branch is small for global bank:
  - For regulatory homogeneity, **the home regulator may wish to use the approach of the host** for these small parts of the global bank (cf: Pillar 3's definition of “materiality”).

# Supervisory Cooperation

- More generally, cross border issues should be used as a springboard for supervisory cooperation
  - e.g.: joint inspections of subsidiaries or branches
- Guidelines (in Pillar 2) would be useful on how supervisors should cooperate to best effect
  - Supervisory cooperation
  - Supervisory knowledge transfer.

# Local Basel II Implementation:

Many developing countries fall into two categories

- A) Countries that should concentrate primarily on Pillar II compliance (and enhancing market discipline), before introducing more complex Pillar 1 rules
- B) Countries that fall between two stools:
  - Given the lack of *rating penetration*, the Standardized Approach yields little in linking capital to risk
  - The IRB approach looks complex and difficult to monitor

# **A Centralized Rating Based Approach (CRB) for Provisioning as a Transition to IRB**

**“Sailing through the Sea of Standards”, Powell (2004)**

- **Regulator** defines a rating scale
- **Banks** rate according to that scale
  - Easy to monitor banks’ ratings of major borrowers, and ratings by sector, by region, by type of bank etc.
  - Can be used to calibrate forward-looking provisions to complement Standardized Approach (SA) capital
- Could be calibrated such that
  - Provisions + (SA) Capital  $\sim$  Value at Risk (IRB curve)
- Builds on Public Credit Registry policies

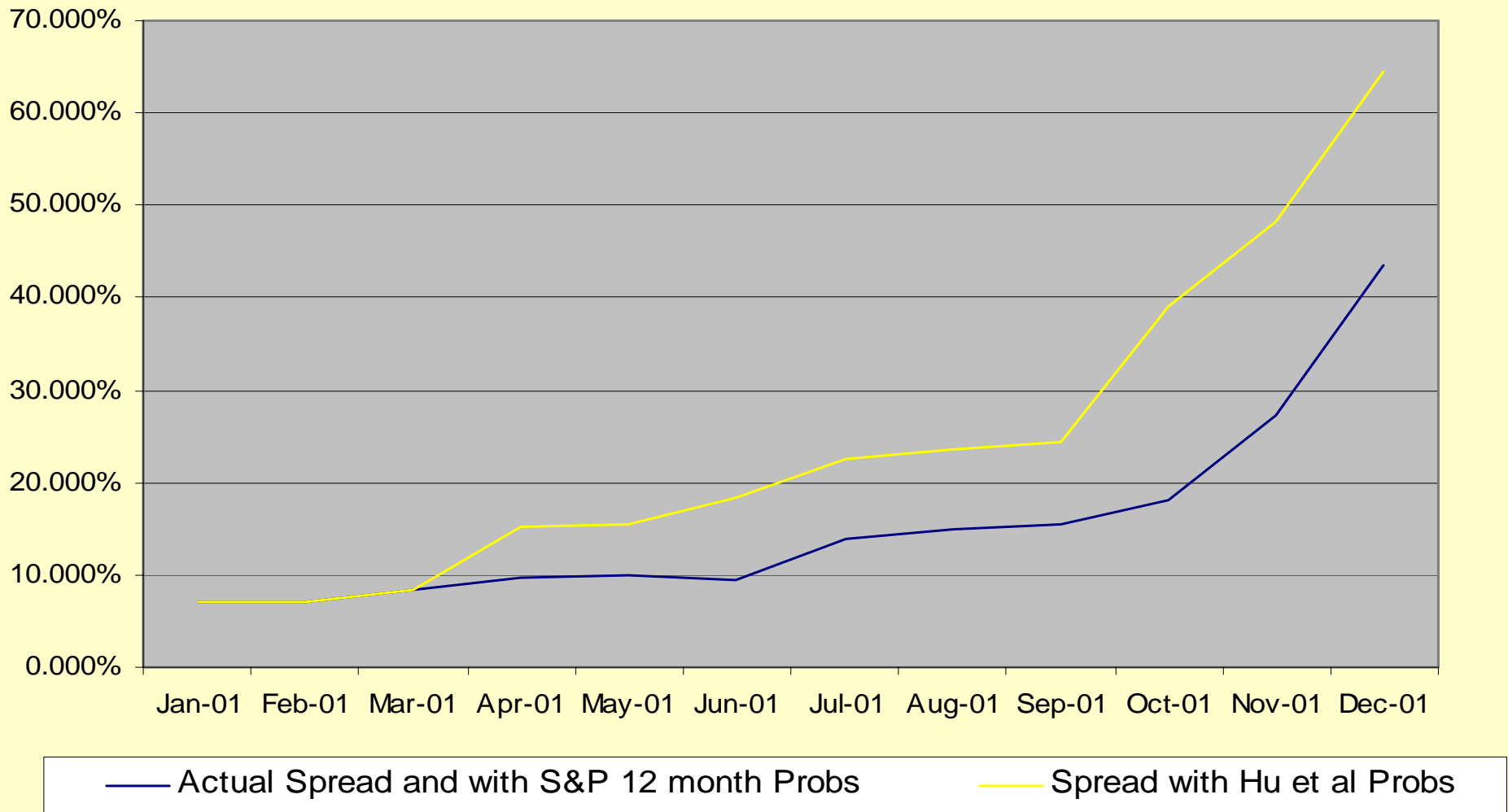
# **Developing country issues where we need to go further than Basel II**

- Pillar 1 issues
  - Lending to own sovereign
  - Lending in foreign currency
  - Related lending
- Pillar 3 issues
  - Further measures to enhance market discipline

## 3. Pro-Cyclicality

- If Basel II does not bind for *sovereign lending*, pro-cyclicality concerns may also be exaggerated
- A simulation on what would have happened to Argentina's spread in 2000 and 2001 (with S&P's default probabilities), suggests little would have changed although other probabilities give different results

# Argentina: Actual and Simulated Spreads with (different assumptions on default probabilities)



Source: Powell, Bank of Spain Financial Stability Review, May 2004

# Circularity versus Cyclicity

- But there is potential Circularity
  - Very few rating agencies, political risk is highly subjective
  - Perhaps a rating agency gets it wrong, this will affect access to capital which may feedback to the rating
- And banks should *know* their sovereign borrowers
- The BIS (or possibly another institution) could provide a clearing house for banks' internal ratings for sovereigns and publish aggregate statistics
  - As an alternative to the OECD as a clearing house for Export Guarantee Agency ratings for the Standardized Approach

# Pro-Cyclicality and the Private Sector

- Pro-cyclicality in private sector risk assessment is a valid concern, especially in countries with lower credit ratings:
  - Local banks likely to stay on the *Standardized Approach* where there remains some (but less) concern
  - Literal application of IRB to subsidiaries and branches of foreign banks may exacerbate pro-cyclicality and for little benefit to the global bank and the home regulator
- Again, suggests the home regulator considering the use of a simpler, (less pro-cyclical) host-regulator approach

# **Pro-Cyclical Capital, Anti-cyclical Provisions**

- Need to consider complementary measures, including anti-cyclical general provisions to compensate pro-cyclical capital

# Conclusions and Recommendations

- Basel II unlikely to strongly affect sovereign lending
  - except those sovereigns with lower ratings
- More serious impacts on lending to developing country private sector
  - depending on *Cross Border* issues and local implementation
- Urgent need to consider home-host issues:
  - A simpler and less pro-cyclical host-regime for subsidiaries (or branches) of foreign banks
  - Cross border issues should be harnessed to make real advances in supervisory cooperation and knowledge transfer

# Conclusions and Recommendations

## Complementary Measures to enhance Developing Country Financial and Macroeconomic Stability

- Pillar I
  - Lending to Own Sovereign
  - Lending in Foreign Currency
  - Related-Lending
- Provisions
  - A CRB approach for specific provisions to complement, Standardized Approach capital
  - Anti-cyclical general provisions, to complement Pro-cyclical capital
- Pillar 3: Market Discipline