



# What Drives Banking Industry Ratings?

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# Agenda



- **Background and Motivation**
- **Methodology**
- **Results**



# Motivation

- **Global Financial Crisis raised renewed interest in models that capture systemic risks of the banking sector**
- **Interconnections amongst players call for an integrated approach to banking industry ratings (BIRs)**
- **BIR is a tool to assess and compare (across countries and over time) the soundness of a banking system**

# Banking Industry Ratings



- **An intermediate layer between sovereign and individual bank ratings**
  - **lenders cannot be assessed in isolation (macro, institutional environment matters);**
  - **industry specific variables need to be accounted for;**
  - **more than the sum/average of individual bank ratings.**






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# BIRs by Rating Agencies



 <p><b>Banking Industry Country Risk Assessment (BICRA)</b></p>	 <p><b>Bank Systemic Risk Macro-Prudential Monitor</b></p>	 <p><b>Banking Financial Strength Rating (BFSR)</b></p>
1-10 scale, low risk-high risk	Systemic Risk Matrix	A to E scale, low risk-high risk
<p><b>Economic risk:</b> structure/stability of economy, policy flexibility, imbalances</p>	<p><b>Banking System Indicators (BSI):</b> weighted average of rated banks. A to E scale, low risk-high risk</p>	<p><b>Operating environment</b> (economic stability, integrity and corruption, legal system) <b>Franchise value</b> (mkt share, geo. diversification, earning stability and diversification)</p>
<p><b>Industry risk:</b> quality/effectiveness of bank regulation, competitive environment (structure, risk appetite, performance), distortions.</p>	<p><b>Macro-prudential Indicators (MPI):</b> credit to the private sector, REER, equity prices and real estate. 1 to 3 scale, low risk-high risk</p>	<p><b>Risk positioning</b> (corp. gov'n'ce, risk management, credit risk concentration, liquidity mgm) <b>Regulation</b> (independence, regulatory standards, supervision, enforcement, health of banking system) <b>Financial fundamentals</b></p>

# || A simple BIR model



## Pros

- ❖ A quantitative tool that provides unambiguous indications
- ❖ A simple and transparent methodology
  - ❖ highly desirable given the small sample size
- ❖ No black box
  - ❖ easy interpretation of results

## Cons

- ❖ Extensive data collection may prove expensive and time consuming
- ❖ A one-size-fits all algorithm may not capture country-specific factors
- ❖ Qualitative appraisal is still needed before results can be used
  - ❖ but this is more transparent as the score provides an objective basis for discussion

# || Choosing the Dependent Variable

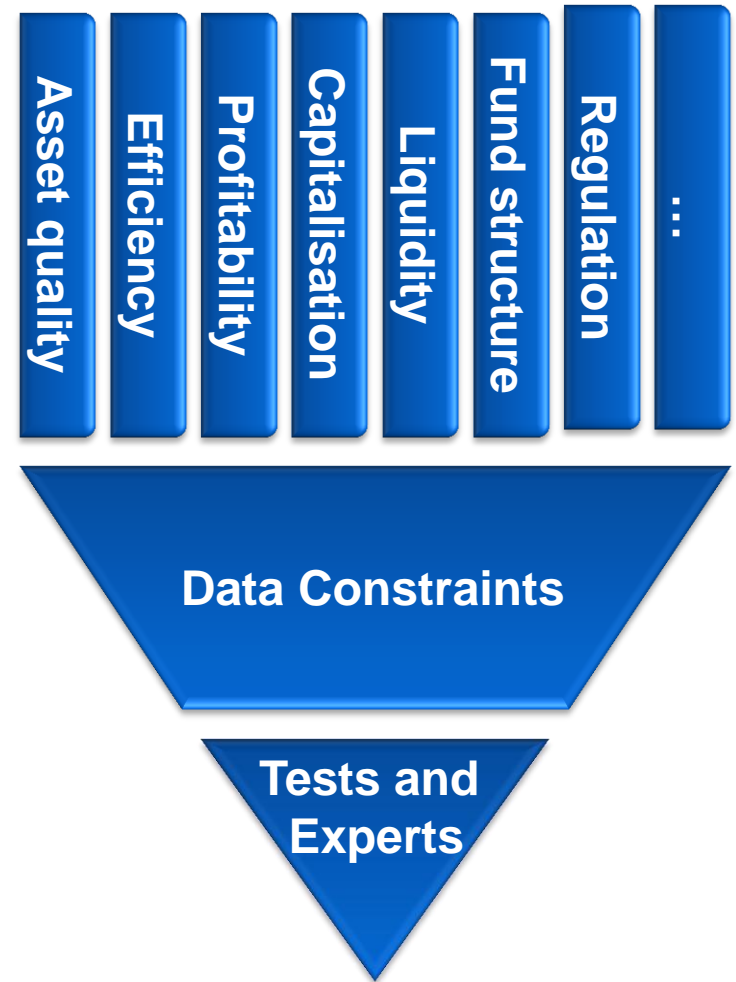
- ❖ Calibrate the model on expert judgement, e.g. on assessments issued by Credit Rating Agencies (CRAs)
- ❖ Each CRA covers different countries, ratings must be pooled to increase coverage
- ❖ Consider different risk perspectives as each CRA has its own and protect from extreme 'bets' by individual CRAs
- ❖ But different rating methodologies, scales and grade
- ❖ CRA ratings translated into a common idiom, based on risk content of each grade, through the use of PDs



# Selecting Explanatory Variables



- ❖ A large number of variables were assembled, capturing all potentially relevant profiles
- ❖ Some were discarded due to data-availability constraints
- ❖ Variables were selected by looking at
  - ❖ significance tests
  - ❖ consistency with the experts' expectations



# Independent Variables



	Variable	Proxy for	Source
<b>Structure</b>	Bank Ownership	public vs private (x) 8 if 75% < x 5 if 40% < x < 75% 2 if 10% < x < 40% 0 if x < 10%	Fraser Institute
	Bank Concentration	% of assets held by the three largest banks	BankScope
	M2 over GDP	financial sector depth	IMF
	Growth of Credit to the Private Sector (0% floor)	overheating	IMF
<b>Soundness &amp; Performance</b>	Capital Adequacy Ratio / Equity over Assets	capitalisation	IMF, BankScope
	ROA (capped at 2%)	profitability	IMF
	NPLs (% of total loans)	asset quality	IMF
	Loans over Assets	liquidity - riskiness	BankScope
	Cost to income ratio, overhead costs, net interest margin	efficiency	BankScope

# Independent Variables



	Variable	Proxy for	Source
<b>Regulation and Institutions</b>	Basel II dummy	quality of regulation 0 → Basel II not implemented or SA only 1 → otherwise (IR, P2, P3)	BIS – FSI Survey
	Rule of Law, Investor Protection	quality of the institutional-legal environment	World Bank – Governance Indicators and Doing Business
	GPD per capita at PPP	economic development	IMF
	Sovereign Rating	economic development and stability, quality of policy framework, quality of institutional-legal environment, etc.	ECON

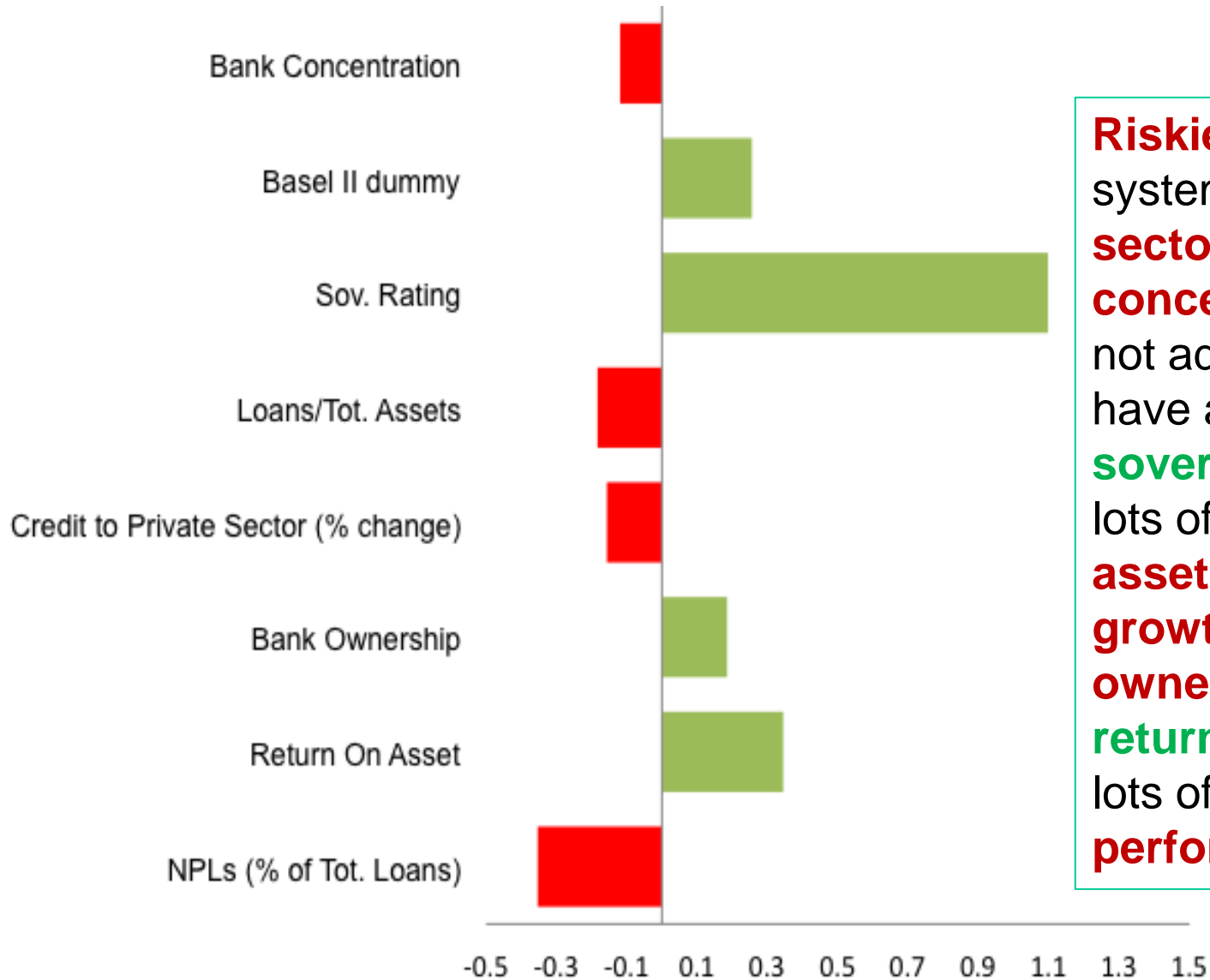


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# Results



**Riskier** banking systems have **high sector concentration**, do not adopt **Basel II**, have a low **sovereign rating**, lots of **loans in their assets**, high **credit growth**, low **private ownership**, low **return on assets**, lots of **non-performing loans**



**Thank you!**