First Credit Bureau Conference

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What is Financial Development?

1. The **financial depth** (size) of financial institutions and markets
2. The degree to which individuals can **access** and **use** financial institutions and markets
3. The **efficiency** of financial institutions and markets in providing financial services
4. The **stability** of financial institutions and markets

The Financial System:

- ***Financial Institutions***—such as banks and insurance companies
- ***Financial Markets***—stock markets, bond markets, derivative markets, etc.

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	FINANCIAL INSTITUTIONS	FINANCIAL MARKETS
DEPTH	**Private sector credit to GDP** Financial institutions' assets to GDP , M2 to GDP, Deposits to GDP ,Gross value-added of the financial sector to GDP, …	**Stock market capitalization plus outstanding domestic private debt securities to GDP** Private debt securities to GDP, Public debt securities to GDP, International debt securities to GDP, Stock market capitalization to GDP, Stocks traded to GDP, ….
ACCESS/USE	**Accounts per thousand adults** Bank branches per 100,000 adults, % of people with a bank account, % of firms with line of credit, % of firms with line of credit, …	**Market cap outside of 10 largest companies** Percent of value traded outside of top 10 traded companies, Government bond yields (3 month and 10 years), Ratio of domestic to total debt securities, Ratio of private to total debt securities (domestic), Ratio of new corporate bond issues to GDP, ….
EFFICIENCY	**Net interest margin** Lending-deposits spread, Non-interest income to total income, Overhead costs (% of total assets), Profitability (return on assets, return on equity), Boone indicator (or Herfindahl or H-statistics)	**Turnover ratio** Price synchronicity (co-movement), Price impact, Liquidity/transaction costs, Quoted bid-ask spread for government bonds, Turnover of bonds (private, public) on securities exchange, Settlement efficiency
STABILITY	**Z-score** Capital adequacy ratios, asset quality ratios, liquidity ratios, net foreign exchange position to capital, distance to default, …	**Volatility of stock price index** Skewness of the index, Price/earnings ratio, Duration, Ratio of short-term to total bonds, Correlation with major bond returns

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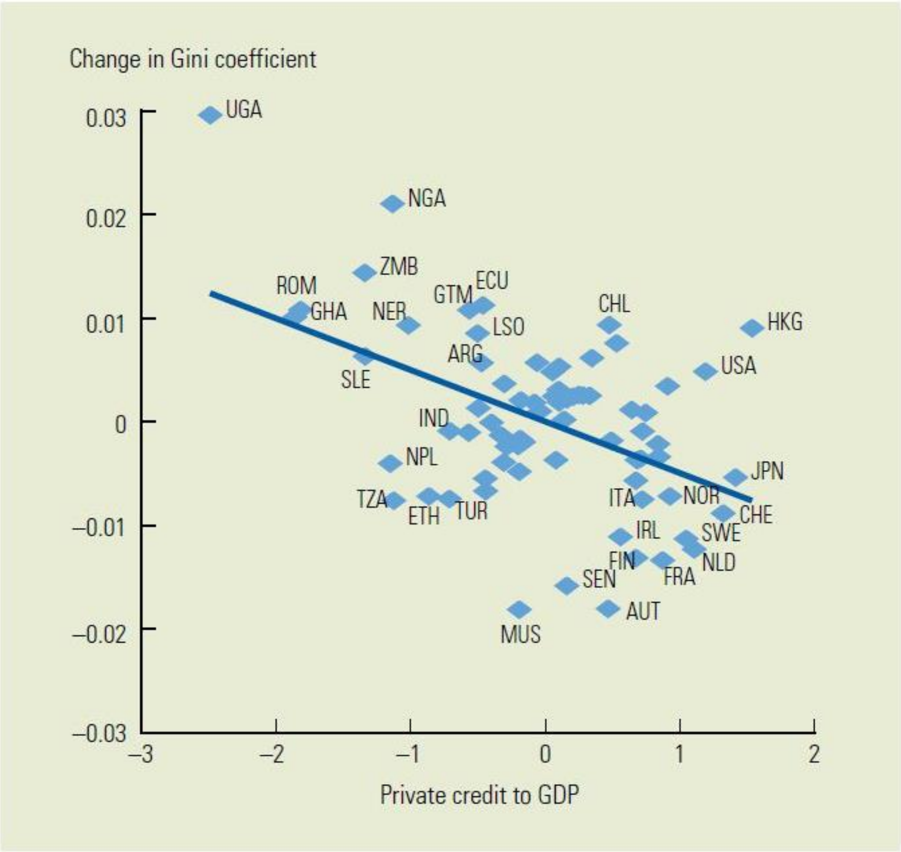
Financial Depth and Income Inequality



Evidence suggests that <u>financial development</u> exerts a powerful influence on economic growth, poverty alleviation, and economic stability

Source: Update of Beck, Demirguc-Kunt, and Levine (2007).
Note: The Gini coefficient is on a scale from 0 (total equality) to 1 (maximum inequality). The chart is a partial scatter plot, visually representing the regression of changes in the Gini coefficient between 1960 and 2005 on the private sector credit-to-GDP ratio (logarithm, 1960-2005 average), controlling for the initial (1960) Gini coefficient. Variables on both axes are residuals. The abbreviations next to some of the observations are the three-letter country codes as defined by the International Organization for Standardization.

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Important role of the state as regulator and supervisor

Financial sector policies *(examples)*

- ***Regulation*** (micro- and macro-prudential, business conduct, etc.)
- ***Direct interventions*** (state ownership, guarantees, subsidies, liquidity provision)
- ***Competition policy*** in finance (level playing field, entry/exit, etc.)
- ***Promotion of financial infrastructure/technology*** (credit information, etc.)

Other policies *(examples)*

- Macroeconomic policy framework (e.g., exchange rate regime, monetary policy, tax policy, capital controls)
- Legal framework, social capital, etc.
- Concentration in the system
- Internationalization, dollarization

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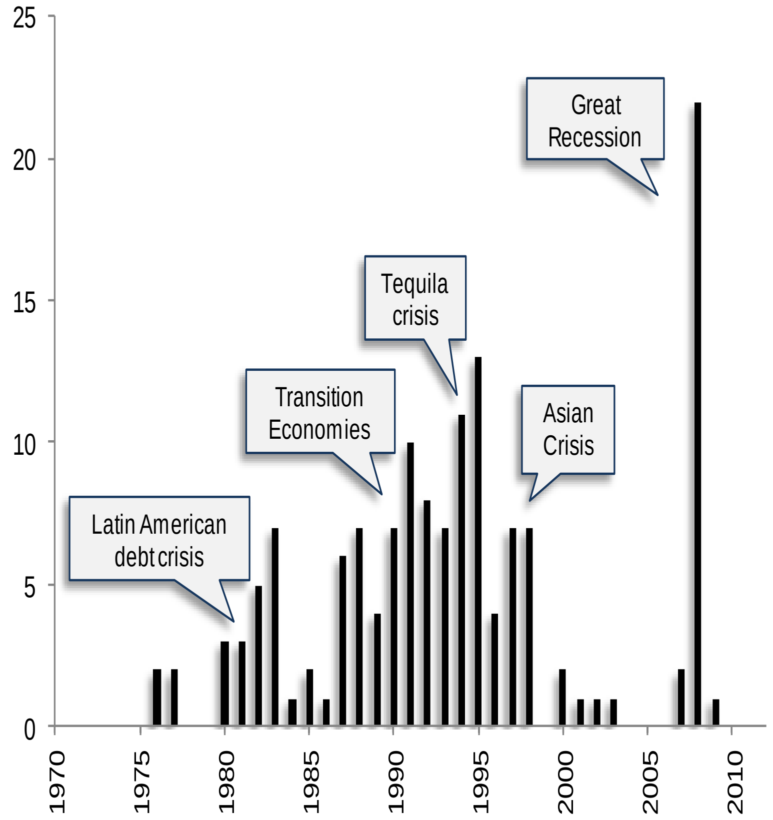
Role of the state during financial crises

Crisis hit countries had weaker regulation and supervision practiced (e.g., less stringent capital and provisioning rules, reliance on banks' own risk assessment)…

… and less scope for market incentives (e.g., generous deposit protection coverage, lower quality of published financial information)

After the crisis, countries stepped up efforts on macroprudential policy, crisis resolution, and consumer protection



Source: Laeven and Valencia (2012).

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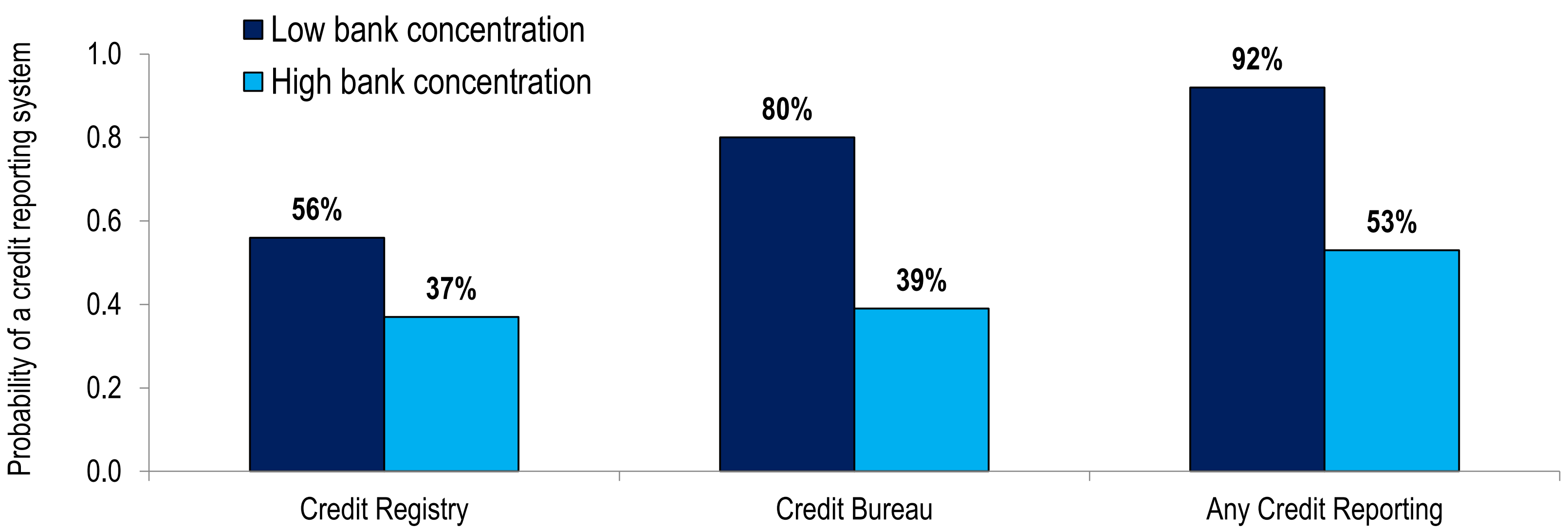
Credit information technology (*example*)

Promote sharing of credit information, ensure consumer protection

Particularly in concentrated environments; private information sharing is less likely to emerge when banking systems are concentrated; state also has a role in increasing participation beyond banks to non-banks



Source: Laeven and Valencia (2012).
Note: The figure shows the percentage of countries with private (credit bureau), public (credit registry) or any credit reporting institutions for countries with high and low bank concentration (above and below the sample mean), respectively. It shows that bank concentration (the asset share of a country's three largest banks) is negatively associated with development of credit reporting.

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Advantages of a national credit bureau

1a) Increase access to credit to Consumers

- A significant rise in the amount of consumer credit granted relative to GDP has been measured in economies where a credit bureau is present (Jappelli and Pagano, 1999)
- Credit bureaus help borrowers build reputational collaterals and more bargaining power for the terms of credit (IFC, 2007)

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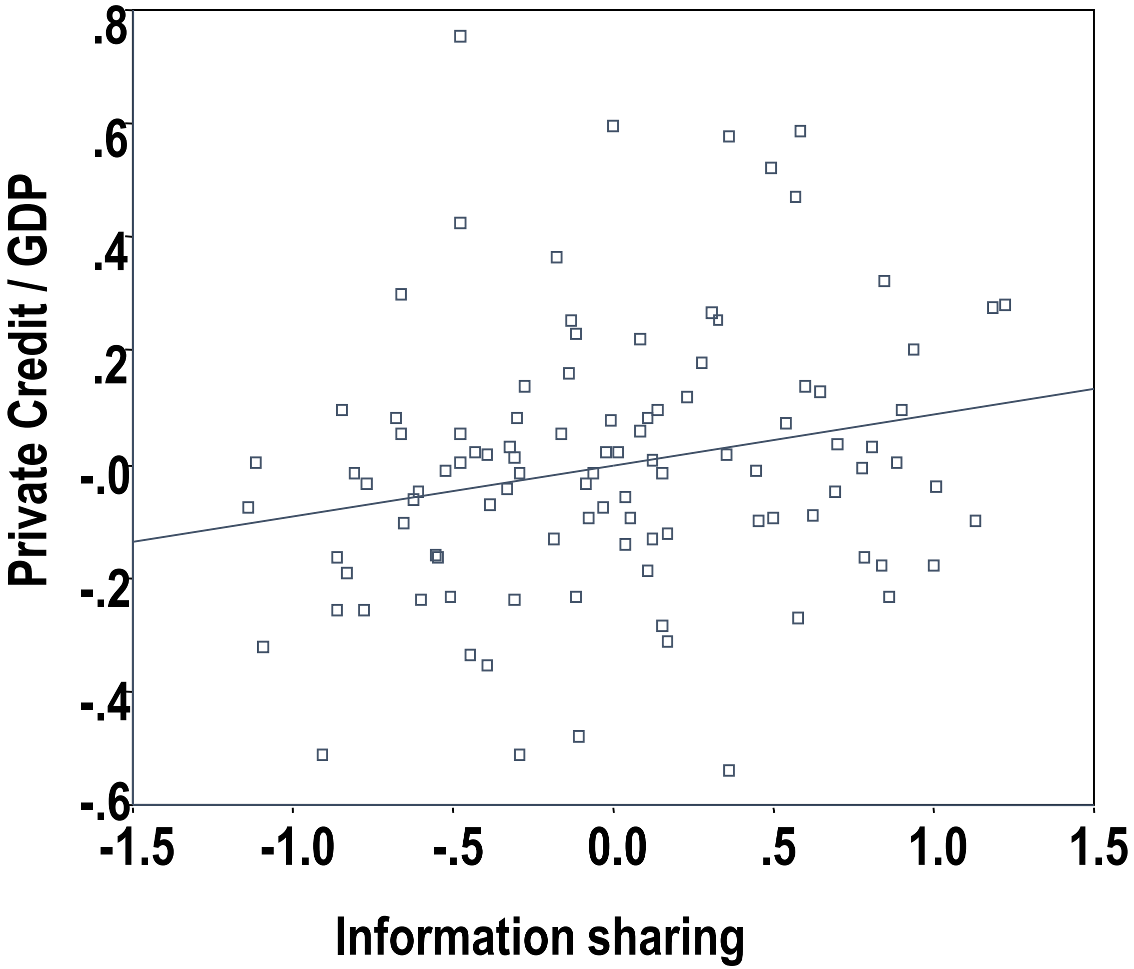
Credit information sharing expands lending



Note: Charts are partial scatterplots controlling for GNI, growth, inflation, rule of law, legal origin. Relationships are statistically significant at 5% level.
Source: Doing Business project, International Financial Statistics

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Credit bureau data has brought consumers lower prices, more equitable treatment, and more credit products

Target Approval Rate	% of Customers who Obtain a Loan		Percent Increase with Full-file Model
	Negative-Only Model	Comprehensive, Full-file Model	
3%	39%	75	48
4%	74%	82	11
5%	84	89	5
6%	91	93	2
7%	95	96	1
Mean	100	100	

Source: Barron and Staten, 2003

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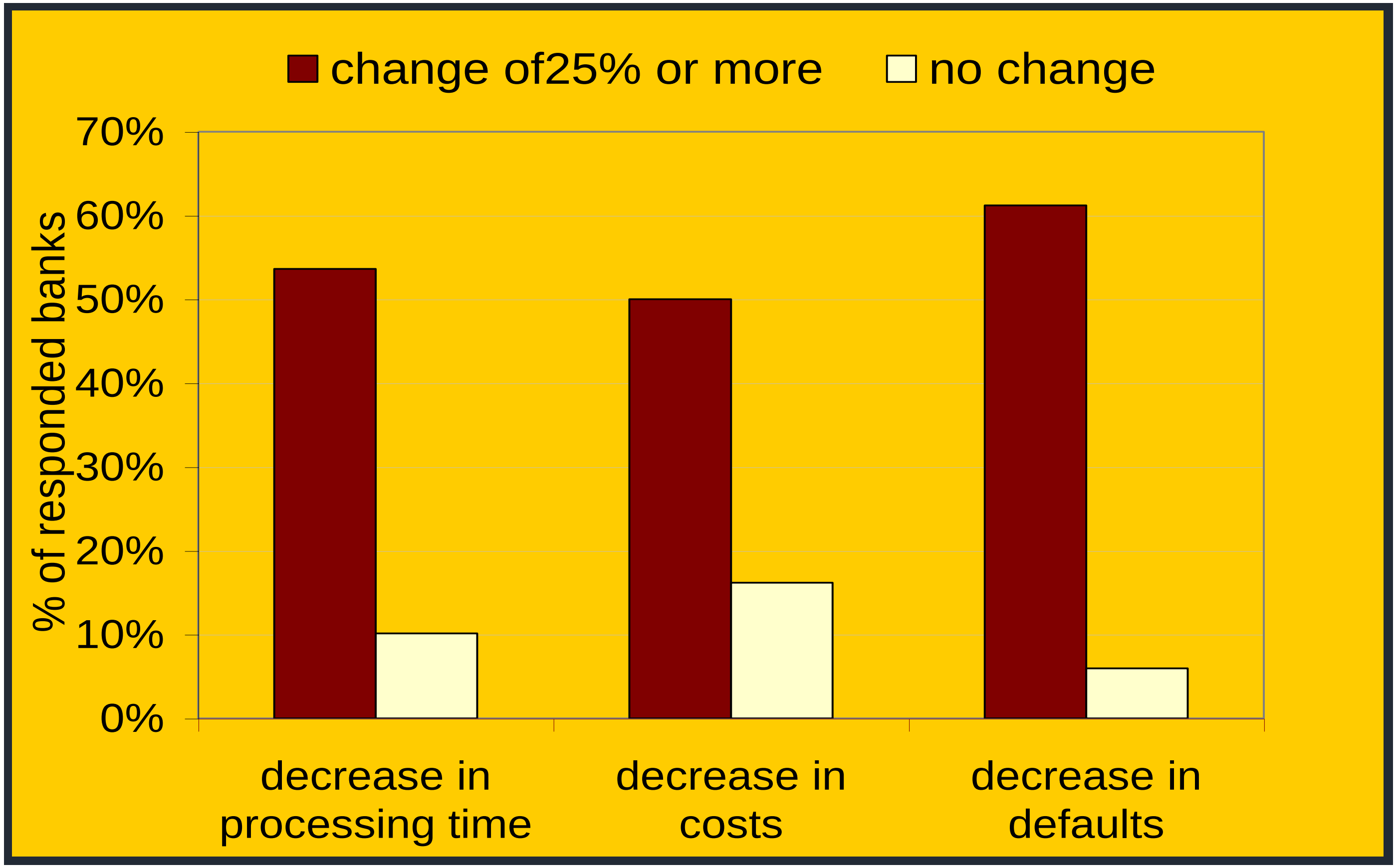
Credit bureau data has brought bank efficiency gains to Banks in Latin America



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Advantages of a national credit bureau

1b) Increase access to credit to Firms

- In Eastern Europe, leverage rates are 4.2 percentage points higher in those countries where credit information sharing is more developed (Brown, et al., 2007)
- The introduction of public registries and private bureaus has raised the ratio of private credit to GDP by 7 to 8 percentage points over a 5-year horizon (Djankov, et al., 2006)
- The percentage of SMEs reporting perceived financial constraints drops from 49 to 27 percent in countries with a credit bureau in place (Love and Mylenko, 2003)

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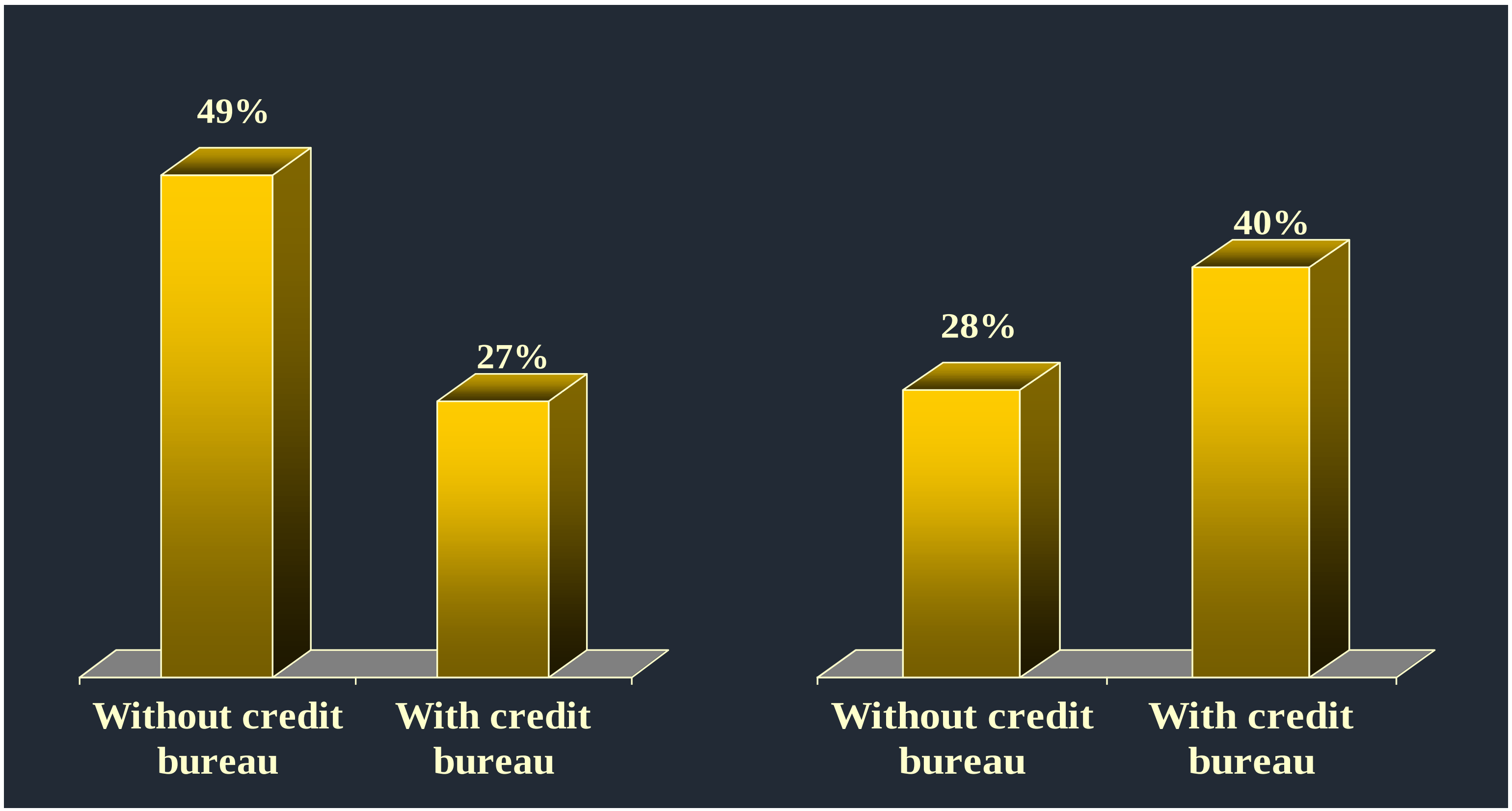
Private credit bureaus are associated with lower financial constraints

% of small firms reporting High financing constraints	Probability of obtaining a bank loan for a small firm



Note: Estimates based on data on 5,000 firms in 51 countries
Source: Mylenko and Love, 2003

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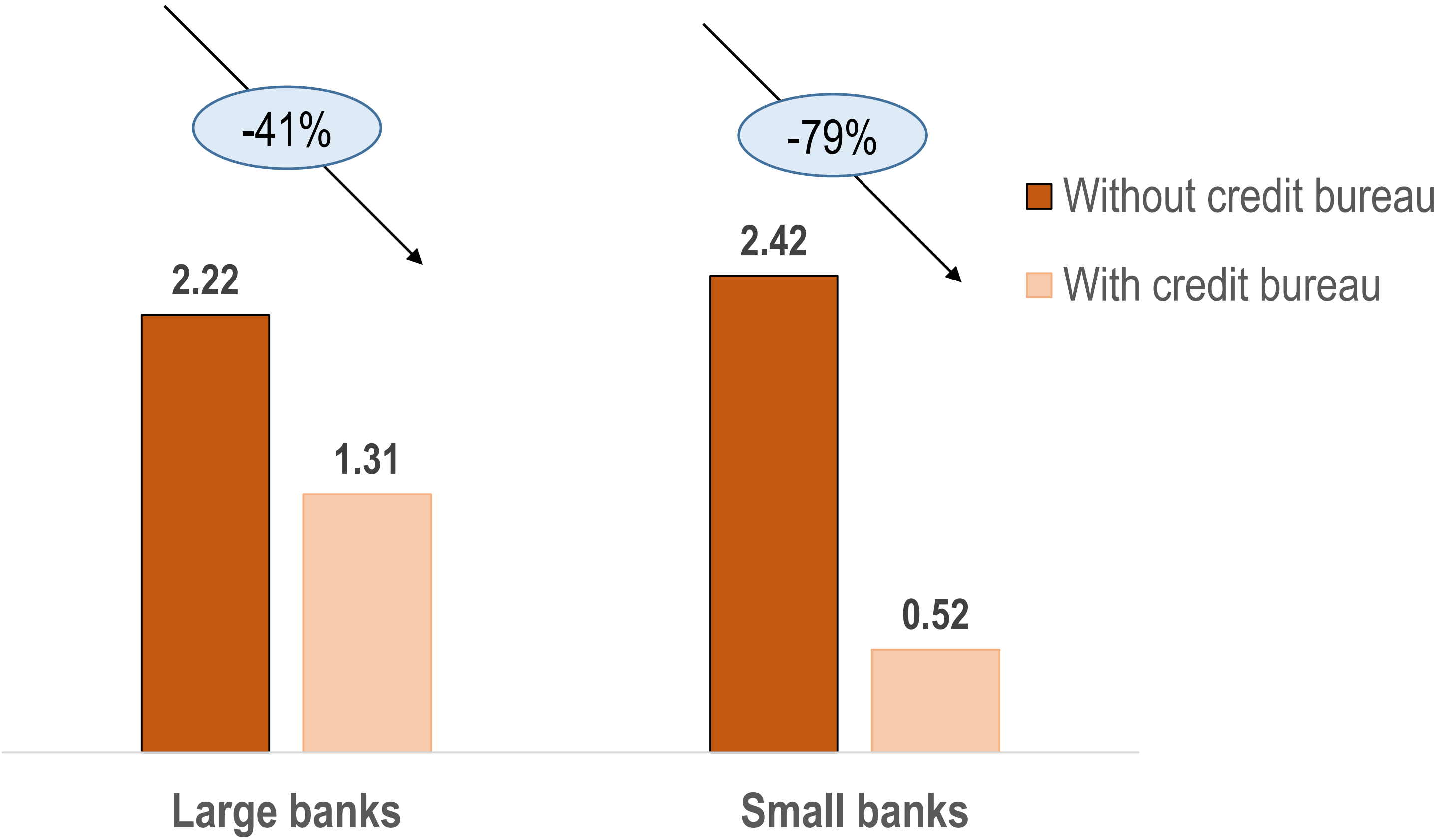
Advantages of a national credit bureau

2) Support responsible lending and reduce credit losses

- NPL ratios were reduced from 6.67 to 4.52 percent in banks in Shanghai at the end 2002, one year after the launch of the local credit bureau (Shanghai Municipality, 2003)
- Arrears rates declined by 2 percent in Guatemala 6 months after the introduction of a national Credit Bureau (Luoto, et al., 2004)
- A study conducted in Argentina in 2004 highlights that with a target loan approval rate of 40 percent, default rates can drop by 79 percent in smaller financial institutions (Powell, et al., 2004)

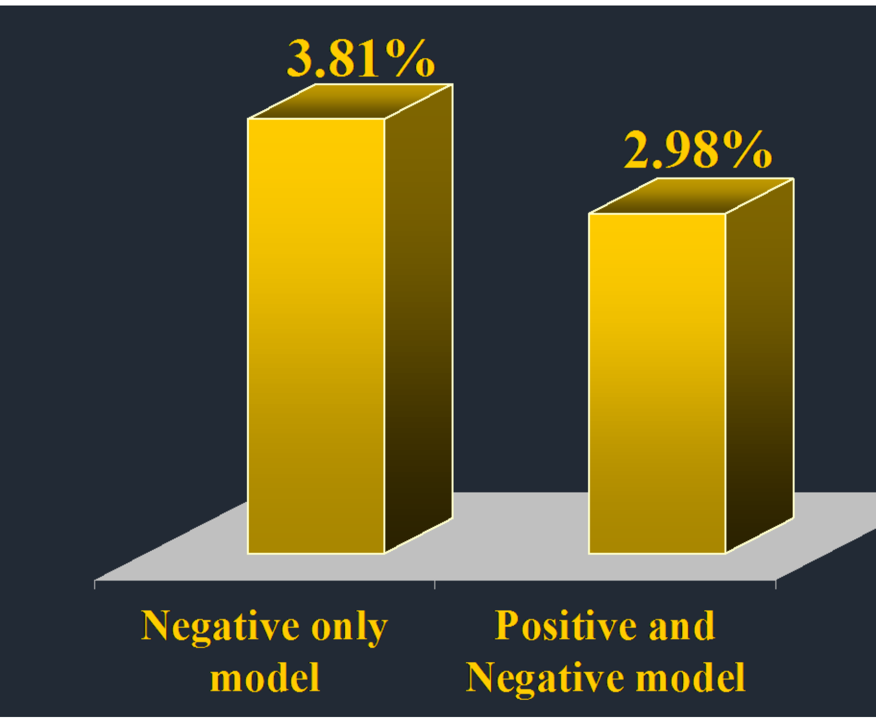
Private credit bureaus are associated with lower defaults rates—Argentina example



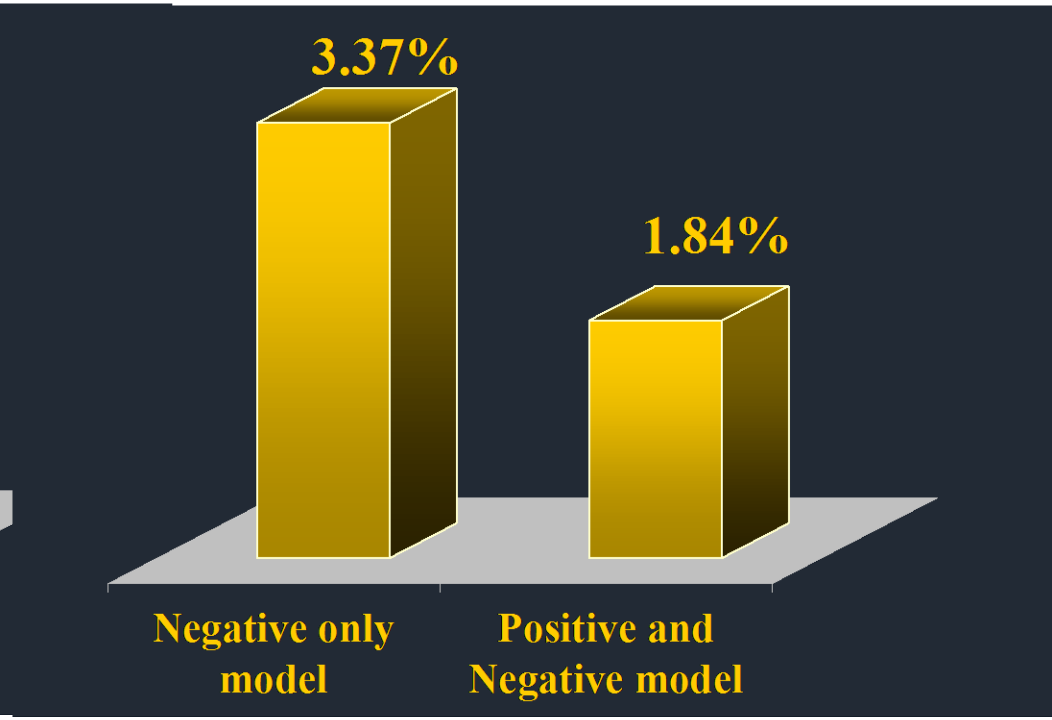
Source: Powell, et al. (2004)

Use of positive information results in lower default rates

Argentina



Brazil



Note: Estimates based on data on 5,000 firms in 51 countries

Estimates are based on information on large loans from public credit registries in Argentina and Brazil. Graph represents predicted default rates at 60% approval rate. Based on Majnoni, Miller, Mylenko and Powell (2003) "Public Credit Information Systems: Evaluating Available Information", World Bank

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Advantages of a national credit bureau

3) Cost and Time Savings from Credit Reports and Credit Scoring

Some case studies:

- A bank in Canada: processing time decreased from 9 days to 3 days, in 18 month since scoring was implemented
- A bank in US: processing time decreased from 3-4 weeks to a few hours.
- A bank in Netherlands: processing time decreased from 8-10 hours to 15 minutes for existing clients and 45 minutes for new clients
- A bank in the US: average cost of processing a small business loan decreased from $250 to $100 after implementing scoring system

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Advantages of a national credit bureau

4) Strengthen banking supervision in monitoring systemic risks

- Support the estimation of appropriate capital and provisioning requirements for supervised institutions
- Monitor risk concentration
- Monitor financial institution use of credit reports in lending practices
- Monitor level of consumer indebtedness as a key indicator of the risk of a consumer credit crisis
- Assess evolution of credit risk at specific sector/industry/ geographic level
- Ascertain relative reliability of banks' assessment of credit risk by performing comparisons between the 'status' (performing vs non performing reported for borrowers who are served by multiple banks

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Challenges to developing a national credit bureau

Regulatory framework issues

- Data privacy and protection laws

Lack of or unreliable data

- Lack of unique identifiers
- Lack of location identifiers
- Unavailability of key credit information
- Poor data quality of available information

Information technology issues

- Weak IT infrastructure within banks
- Lack of experienced service providers for infrastructure setup and maintenance

Skills and HR issues

The Balance Between Privacy Rights—and Creditors' Need for Payment History

1) ***Limit credit reports to <u>factual information pertaining to past credit experience</u> (no subjective investigative reports)***

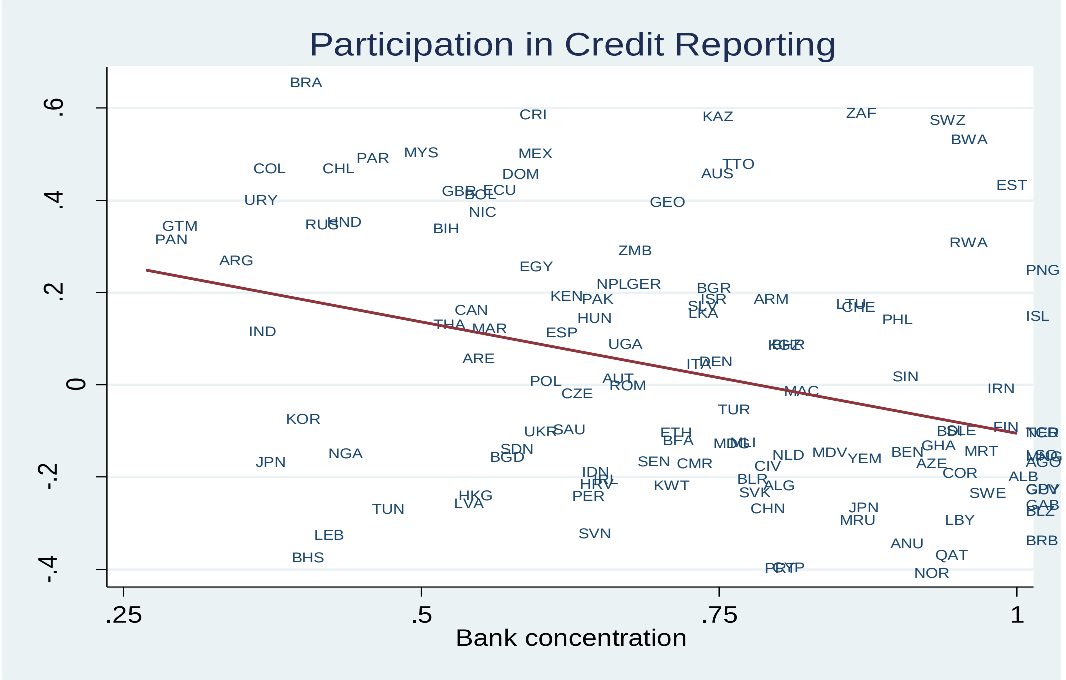
- Personal identification information (e.g., name, address, social security number)
- Open trade lines (credit card accounts, auto loans and leases, first and second mortgage accounts, personal loans, etc.) with data such as outstanding balance, credit limit, date account opened, date of last activity, and payment history
- "Public record" items related to the use of credit, including bankruptcies, accounts referred to collection agencies, legal collection judgements and liens
- Inquiries on the credit file, including date and identity of inquirer, for at least the previous two years

2) ***Consumer reporting agencies should release credit files only for <u>permissible purposes</u>***

(Demand-Side) Challenges to developing a national credit bureau

Bank Concentration

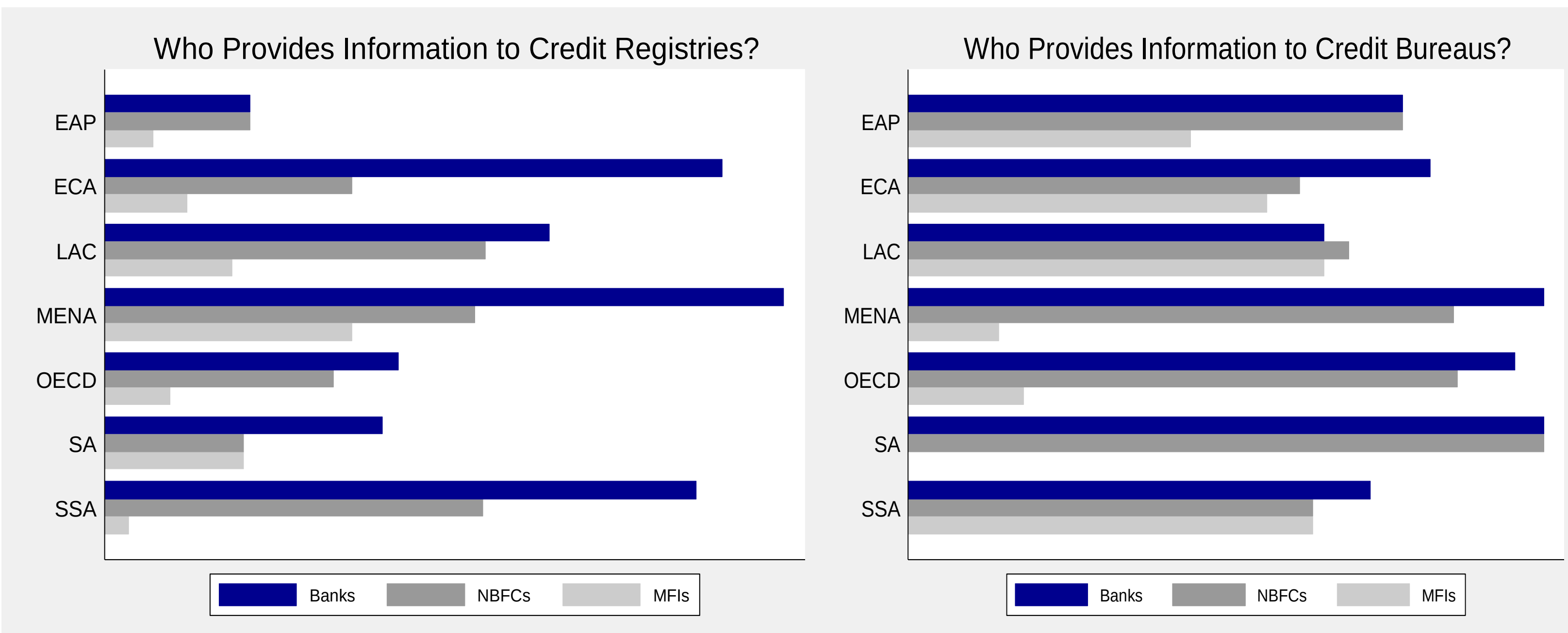
- 92 percent of countries with low-bank concentration have a credit bureau or registry—compared to 53 percent of countries with high bank concentration



(Demand-Side) Challenges to developing a national credit bureau

Participation of non-banks (NBFI's, Leasing, Factoring, etc.)

- Private bureaus collect more information from non-bank/non-regulated lenders
- Potential limitations of registry for risk-management in emerging markets with large NBFI share



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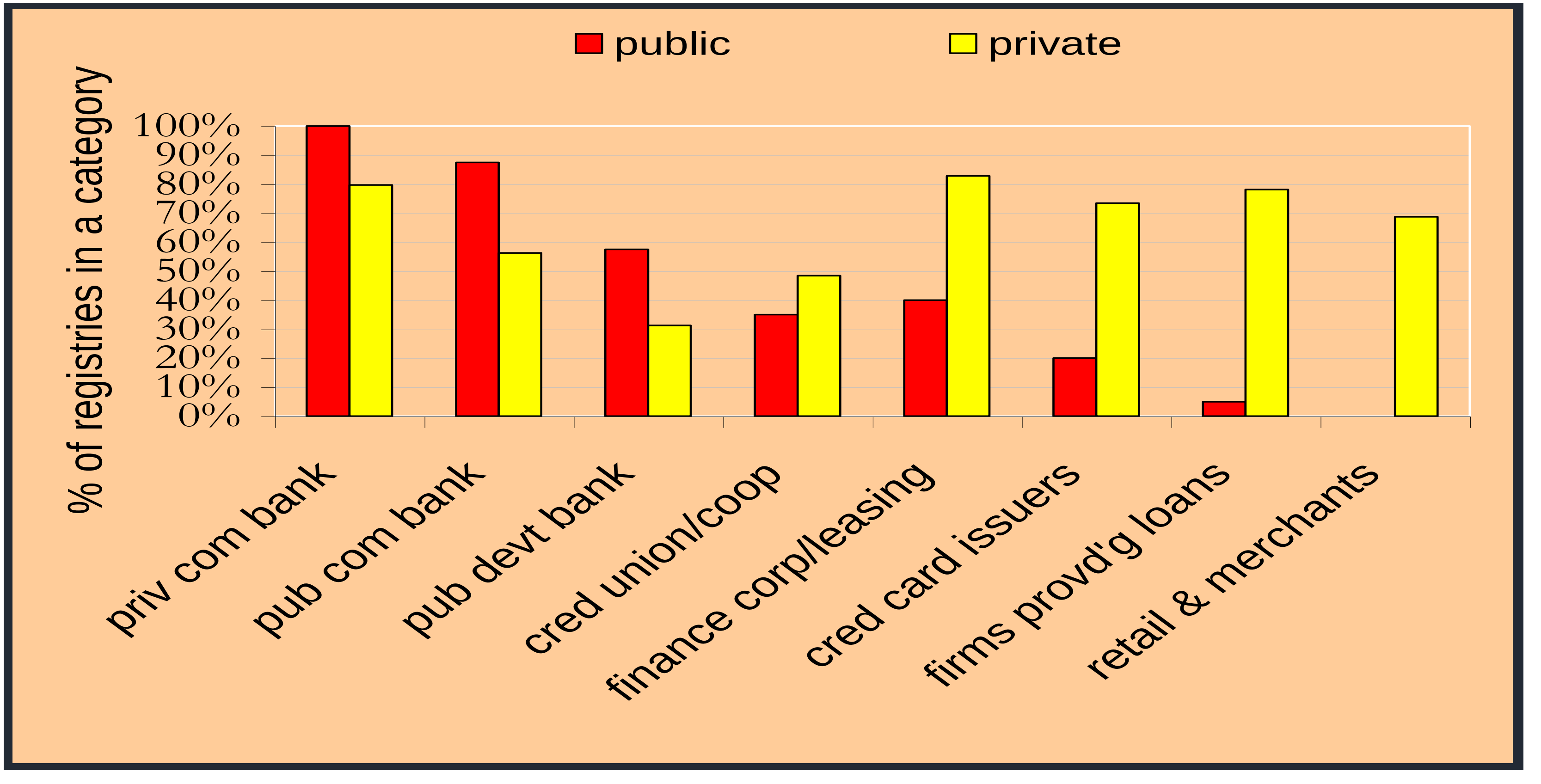
Importance of competitive credit information environment

Who submits information to public and private registries?



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Key lessons from international experience

- Ensure strong project leadership
- Set realistic targets in order to show early results and gain momentum
  - By limiting data coverage to business credit only or to credit facilities with amounts over a certain threshold
  - By focusing data collection on a subset of fields considered critical
  - By offering credit information reports only with no additional value-added products
- Base design on accepted best-practices and focus on execution to bridge gaps in implementation capabilities
- Do not underestimate data quality and information technology issues

Key lessons from international experience (Cont.)

- Value – credit reports greatly reduce the time and cost of providing credit
- Public credit registries and private credit reporting firms are not substitutes – but they can complement one another
- No country has a consolidated database for both government and commercial uses
- Maximize the completeness of credit histories, data available to open user group
- There is a trade-off between privacy and cost and access of credit