Legal Origin, Creditors' Rights and Bank Lending

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Summary

- In this study, we examine bank lending at more than 1,000 banks in 45 emerging-market countries.
- We find that banks allocate significantly more of their assets to loans where:
  - They enjoy English legal origin
  - Enforcement of debt contracts is more efficient
  - Banks enjoy fewer restrictions on their activities.

Summary

- We also find that banks hold significantly less equity as a percentage of assets where:
  - They enjoy English legal origin
  - Enforcement of debt contracts is more efficient
  - Creditors’ rights are better protected by law.

Background: Law, Finance and Growth

- Our study is based upon the “law and finance” literature as well as the “finance and growth literature.”
- We expect that a bank will allocate more of its asset portfolio to loans when it enjoys better legal protection and more efficient enforcement of contracts.
- Greater bank lending should lead to higher economic growth.

Background:
“Law and Finance”

- “Law and Finance” literature: essentially begins with LLSV 1998 JPE article “Law and Finance”
- Premise: English common law provides superior protection to investors and creditors as compared to civil law, especially French civil law.
- LLSV show that countries with English legal origin enjoy better developed capital markets than do countries of other legal origins.
- Other researchers such as Stulz and Williamson (2003) have challenged LLSV: is it legal origin or is it simply English culture/heritage?

Background: “Law and Finance”

- LLSV make important distinctions between:
  - Investor protection and creditor protection
    - You can protect equity holders at the expense of bondholders and visa versa.
    - They develop separate measures of investor protection (anti-directors rights index) and creditor protection (creditors rights index).
  - Legal rights and legal enforcement.
    - You can have strong laws but they provide little protection without enforcement.

Background:
"Law and Finance"

- Beck, Demirguc-Kunt and Levine JFE 2003 examine country-level data for 70 countries.
- They find, among other results, that private sector credit as a percentage of GDP is significantly lower in countries of French legal origin.

Background: “Law and Finance”

- Djankov *et al*. 2003 QJE “Courts”:
- Develop measures of enforcement efficiency
  - How long does it take to collect on a bounced check?
  - How long does it take to evict a delinquent tenant?
  - Refer to this as “Legal Formalism”
- They find that legal formalism is significantly greater in civil law countries, especially French, than in common law countries.

Background: “Law and Finance”

- Djankov, McLiesh and Shleifer 2007 JFE “Private Credit”: Revise and expand the earlier measure of legal enforcement:
  - How long does it take to collect on a debt equal to half of a country’s GDP?
- Add measures of informational efficiency based upon credit registries.
  - Find that creditors rights and efficient enforcement are associated with more private credit in rich countries.
  - Find that informational efficiency is associated with more credit in poor countries.

Background: "Law and Finance"

- Qian and Strahan 2007 JF:
- Examine how creditors' rights and enforcement efficiency affect terms of loan contracts (amount granted, rate, maturity).
- Find that better legal protection of creditor rights (LLSV 1998) is associated with better terms of credit.
- More efficient enforcement (DLLS 20003) is associated with better terms of credit.

Background:
"Law and Finance"

- John, Litov and Yeung 2004, JF forthcoming:
- Examine how differences in governance impact risk taking and growth of industrial companies in 38 countries from 1992-2002.
- Find that companies enjoying better legal protection take on more risk, and that firms taking on more risk grow faster.

Background:
"Finance and Growth"

- Levine JFI 1999
- FIs are better developed in countries with better legal protection
- Portion of FI development explained by legal protection is positively related to economic growth.
- Earlier works (King and Levine JME 1993, Levine and Zervos AER 1998) showed that greater FI development is associated with higher economic growth.

Research Question

- At the firm level rather than the country level, how do lenders respond to differences in governance regimes?
- Specifically, how do banks in emerging countries respond to differences in legal origin, contract enforcement and creditor rights?

Hypotheses

- Risk-taking behavior of banks is affected by a country's legal tradition and the prevailing institutions.
- The superior legal protection and enforcement available from the institutions in countries of English legal origin encourage banks:
  - to take on more portfolio risk (i.e. extend more loans)
  - to take on more financial risk (i.e., hold less capital)
- In effect, they are substituting portfolio risk and financial risk for expropriation risk.

Data Variables

- Bank-level data over the period 1998-2004, covering 6,486 bank-year observations on banks located in 48 emerging-market countries from 9 world regions (Latin America, East Asia, Eastern, Northern, Central and Southern Europe, MENA and GCC).
- We apply a number of filtering rules to eliminate non-representative data, reducing our analysis sample to 5,648 observations on 1,132 commercials banks. (*Source: BankScope).*

Data Variables

- Legal Origin: Identifies the legal origin of the company law or commercial code of each country (English, French, Socialist). (*Source: Djankov et al. 2003).*

- GDP per capita. (*Source: IFS).*

Data Variables

- *Banking Activity Restrictions:* an indicator of relative openness of banking & financial system with a higher score indicating more restrictions on banking. (*Source: Heritage Foundation).*
- *Property Rights:* freedom from government influence over the judicial system with a lower score indicating better protection of property rights in the country. (*Source: Heritage Foundation).*

Data Variables

- *Creditors' Rights* : Index is based upon four separate rights (Source: *Djankov, McLiesh and Shleifer 2007* based upon *LLSV 1998*):

1. Existence of restrictions, such as creditor consent, when a debtor files for reorganization
2. Ability to seize collateral after a reorganization petition is approved
3. Payment of secured creditors first out of the proceeds of liquidating a bankrupt firm
4. Responsibility for running the business during the reorganization falls upon an administrator, and not management

Data Variables

- *Legal Formalism*
  1. An estimate of the number of days that are necessary to collect on a bounced check before the courts in the country' s largest city, Djankov *et al*. (2003).
  2. An alternative measure is an estimate of the number of days necessary to collect an unpaid debt equal to 50% of the country's GDP per capita, *Djankov, McLiesh and Shleifer* (2007).
- Higher values indicate greater procedural formalism and greater inefficiency in judicial enforcement

Methodology

- We merge all data sets together and:
  - calculate univariate statistics
  - conduct Random Effects regressions.
- Univariate statistics:
  - We split our sample into groups of high and low levels of governance indices, and conduct simple t-tests for difference in means of bank credit risk exposure, capitalization level and profitability.
  - Idea is to provide some broad evidence on the importance of legal origin and creditor protection on bank conditions and performance.

Univariate Results

Governance Indicator	Credit Risk	Capitalization	Profitability
English vs. Others	…	-	+
Hi vs. Low Legal Formalism	-	+	-
Strong vs. Weak Creditor Rights	-	-	…
Strong vs. Weak Banking Freedom	…	-	-
Strong vs. Weak Property Rights	+	…	-

Multivariate Regressions

$$\boxed{Y_{i,t} = \beta X_j + \delta C_j + \eta Z_{j,t} + \varepsilon_{i,t}}$$

- $Y_{i,t}$ measures bank risk-taking (total loans to total assets), profitability (net income to total assets or to total equity), and capital adequacy (equity to total assets) for bank *i* during year *t*;
- X_j are dummy variables describing the legal origin of country j;
- C_j are structural/ governance variables for country j
- $Z_{j,t}$ controls for the level of economic development
- $\varepsilon_{i,t}$ is a random error term for bank *i* during year *t*.

Multivariate Results: Loans to Assets

Intercept	0.046		0.401	a	0.417	a	0.524	a
	0.045		0.064		0.063		0.067	
ln (GDP per capita)	**0.057**	**a**	**0.061**	**a**	**0.063**	**a**	**0.056**	**a**
	0.006		0.006		0.006		0.058	
English	**0.038**	**b**	**0.044**	**a**	**0.053**	**a**	**0.065**	**a**
	0.016		0.017		0.017		0.017	
Socialist	0.011		0.005		0.014		0.015	
	0.011		0.011		0.011		0.011	
Legal Formalism			**-0.065**	**a**	**-0.062**	**a**	**-0.061**	**a**
			0.010		0.010		0.010	
Creditors' Rights					**-0.025**	**a**	**-0.025**	**a**
					0.005		0.005	
Banking Freedom							**-0.017**	**a**
							0.004	
Property Rights							-0.005	
							0.004	

Multivariate Results: Equity to Assets

Intercept	0.314	a	0.212	a	0.216	a	0.219	a
	0.029		0.042		0.041		0.043	
ln (GDP per capita)	**-0.021**	**a**	**-0.022**	**a**	**-0.021**	**a**	**-0.021**	**a**
	0.004		0.004		0.004		0.004	
English	**-0.071**	**a**	**-0.072**	**a**	**-0.070**	**a**	**-0.070**	**a**
	0.011		0.011		0.011		0.011	
Socialist	-0.002		0.000		0.003		0.002	
	0.008		0.008		0.008		0.008	
Legal Formalism			**0.018**	**a**	**0.019**	**a**	**0.019**	**a**
			0.006		0.006		0.006	
Creditors' Rights					**-0.007**	**b**	**-0.007**	**b**
					0.003		0.003	
Banking Freedom							0.000	
							0.003	
Property Rights							-0.001	
							0.003	

Multivariate Results: Return on Assets

Intercept	0.0039		0.0033		0.0033		-0.0158	c
	0.0070		0.0072		0.0071		0.0089	
ln (GDP per capita)	0.0014		0.0016	c	0.0016	c	0.0029	a
	0.0008		0.0009		0.0009		0.0010	
English	0.0033		0.0036	c	0.0034	c	0.0006	
	0.0019		0.0019		0.0019		0.0019	
Socialist	0.0022		0.0021		0.0020		0.0015	
	0.0014		0.0014		0.0014		0.0014	
Legal Formalism			-0.0015		-0.0015		-0.0019	c
			0.0010		0.0010		0.00100	
Creditors' Rights					0.0003		0.0004	
					0.0006		0.0006	
Banking Freedom							0.0035	a
							0.0010	
Property Rights							0.0003	
							0.0009	

Conclusions

- In this study, we extend the literature on "law and finance" by using firm level data to analyze how lenders respond to differences in legal origin, creditors' rights and legal formalism in enforcement of debt contracts.
- Using a random-effects model that controls for bank heterogeneity, we find that bankers allocate significantly higher portions of their assets to loans:
  - Where they enjoy English legal origin
  - Where enforcement of debt contracts is more efficient
  - Where banks enjoy fewer restrictions on their operations

Conclusions

- We also find that banks hold less capital
  - Where they enjoy English legal origin
  - Where they enjoy stronger creditors' rights
  - Where enforcement of debt contracts is more efficient.
- We find no significant differences in profitability across these governance measures.
- Together, these results suggest that bankers substitute portfolio risk and financial risk for expropriation risk when they enjoy superior legal protection.
- More bank credit should lead to higher growth.

Conclusions

- These results document one channel by which legal protection leads to financial sector development, which has been documented at the country level by numerous researchers.
- With better legal protection, lenders increase the portion of their asset portfolio allocated to loans.
- Countries with inefficient enforcement can increase private sector credit and, therefore, economic growth by improving their enforcement mechanisms, which should lead bankers to make more loans.

Policy Implications

- The paper has established that countries enjoying better creditors’ rights and more efficient legal enforcement engage more in lending activities and hold significantly less equity capital.
- Less capitalization, in turn, reduces the cushion available to absorb losses in the case of bank failure, and *could* expose banks to more financial fragility.

Policy Implications

- According to Basel II, credit risk represents the major risk component of banks' risk profile.
- When calculating the adequate capital charge to account for credit risk, however,
  - assets are assigned risk weights according to the default risk of the counterparty;
  - a 100% risk weight is assigned to borrowers that are unrated;
  - retail and corporate borrowers in emerging markets are highly unlikely to be rated.

Policy Implications

- This implies that banks operating in emerging countries will have to provide a higher capital charge to account for credit risk.
- If more credit risk exposure resulting from a bigger loan portfolio and less capitalization do in effect increase banks' fragility, then such a measure would be justified.
- If, in contrast, banks that operate in an environment that offers better legal protection and enforcement of creditors' rights engage in more lending activities that foster economic growth, then why should they be penalized for channeling surplus funds to their most productive uses in countries where capital markets lack both depth and breadth?

Policy Implications

- In assessing credit risk for capital adequacy purposes to ensure safety and soundness of banking sectors, regulators need to account for differences in governance regimes.
- Specifically, minimum capital requirements should reflect differences in creditors' rights and efficiency of enforcement.
- One solution is to assign lower asset risk weights in countries with better creditors' rights and more efficient contract enforcement. From Basel II to Basel III?

Directions For Further Research

- How does the risk-shifting behavior of banks affect their overall risk exposure?
- Do the greater portfolio risk/financial risks that are substituted for expropriation risk lead to more financial fragility?
- Would we find similar results for developed countries?