Insolvency Laws Around the World – A Statistical Analysis and Rules for Their Design

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The growing literature on law and finance suggests that the development of capital markets is promoted by greater investor protection, while more developed credit markets exist in countries with greater creditor protection.[1] An important component of a country's creditor rights is its insolvency framework, which together with a supporting judicial environment affects the degree to which commercial distress is resolved using formal bankruptcy proceedings. Strong bankruptcy regimes also play a role in determining higher liquidation values and improved chances of ex-post firm survival. A good insolvency regime is one with ex ante screening mechanisms that prevent managers and shareholders from taking imprudent loans and lenders from giving loans with a high probability of default. At the same time it should also deliver an ex-post efficient outcome, in that the highest total value is obtained for the distressed firm with the least direct costs and loss in going concern value. Recent financial crises in Argentina and Russia have highlighted the importance of well-functioning insolvency systems in preventing and resolving corporate sector financial distress.

Consequently, there is increased interest in the design of insolvency systems from the points of resource allocation, efficiency, and stability as well as equality and fairness. There are many aspects in which insolvency regimes differ across countries. Investigating the actual use of the bankruptcy regime in relation to countries' specific insolvency features can be a way to shed light on the importance of particular creditor rights.

Insolvency around the world

Insolvency regimes are complex in design as they try to balance several objectives, including protecting the rights of creditors – essential to the mobilization of capital for investment and working capital and other resources – and preventing the premature liquidation of viable firms. In addition to legal rights, there is a need for an efficient judicial system to enforce these rights, or at least to serve as a credible enforcement threat, and to speedily conduct the process of liquidation or restructuring when so desired. These different objectives and constraints have led to differences in insolvency and collateral regimes across countries, as well as considerable variation in the actual use of bankruptcy proceedings to resolve financial distress. The fact that the literature has found no strong relationships between (an index of) creditor rights, on the one hand, and various aspects of financial sector development and functioning, on the other, may relate to the difficulty of capturing the many features of insolvency regimes.

In a recent study, Claessens and Klapper (2005) document the actual usage of bankruptcy across countries and provide insight on how creditor rights features affect actual bankruptcy use. Previous research has been based on the use of an index of CREDITOR RIGHTS consisting of the summation of four dummy variables, with four the highest possible score (La Porta et al., 1998). The components are:

a) *Restrictive Reorganization*, equal to 1 if the timetable for rendering a judgment is less than 90 days;
b) *Mandatory Management Turnover*, equal to 1 if incumbent management does not stay during a restructuring or bankruptcy;
c) *No Automatic Stay*, equal to 1 if there is no automatic stay on assets;
d) *Secured Creditors Priority*, equal to 1 if secured creditors have the highest priority in payment.

This paper tests whether there are differences between the effects of each specific creditor rights on

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[1] See Levine (2004) for a review of the literature.

firm and creditor behavior. For instance, a stipulation in the insolvency law that provides creditors with the right of no automatic stay on assets also provides creditors with some bargaining power that may allow them to more easily negotiate debt restructuring out of court. At the same time, the absence of an automatic stay may lead to a creditor race to seize assets, thus possibly accelerating the possibility of financial distress and bankruptcy. However, previous guidelines for an effective insolvency and creditor right system suggests that there should preferably be an automatic stay on assets for at least some initial period (World Bank, 2001). This suggests that there are some differences of opinion on what constitute desirable creditor rights features, which in turn may relate to lack of understanding on how certain creditor rights features affect actual bankruptcy use.

The presence in the law of secured creditor priority and absolute priority of claims in bankruptcy or restructuring (i.e., senior creditors are paid first, then junior creditors, followed finally by shareholders if any residual remains) is another example. Such priority may deter ex-ante risky financial behavior and thus reduce the likelihood of financial distress. But such feature can also help overcome creditor coordination problems when a corporation is in restructuring. At the same time, if the law stipulates that shareholders receive nothing in bankruptcy, a firm may attempt to delay or avoid bankruptcy, including undertaking more high-risk projects when the corporation starts to run into financial distress. Alternatively, an insolvency law that stipulates that managers must automatically leave when a firm is in bankruptcy, might be associated with greater use of bankruptcy as creditors will stand to gain more from using this right in formal bankruptcy procedures. These discussions show that each of the specific creditor right features may influence firm and creditor behavior differently and what constitutes a desirable creditor right feature may depend on circumstances or objectives.

To examine these arguments, the authors analyze how actual bankruptcy filings relate to countries' individual creditor rights and overall judicial efficiency in order to identify which creditor rights are more important and how a strong judicial system affects their relative importance. The authors constructed a unique dataset on the number of commercial bankruptcy filings in 35 countries, which included all legal proceedings designed to either liquidate or rehabilitate insolvent firms. The average number of total commercial bankruptcy filings was collected from government and private sources for the period 1990 to 1999. The main insolvency measure was constructed by including firms that filed for liquidation or reorganization; thus the measure refers to the total use of the bankruptcy law and the associated judicial system to resolve corporate financial distress. A description of the macroeconomic and legal variables used for the 35 countries examined is given in Table 1.

Panel regressions (not shown) find, controlling for overall economic development and macroeconomic shocks, that bankruptcies are more frequent in countries with better functioning judicial systems. The efficiency of the legal system is significantly and positively related to filing for bankruptcy – the greater the likelihood a creditor can efficiently restructure and collect using the court, the more likely creditors are to use formal bankruptcy proceedings in the case of default. However, CREDITOR RIGHTS, a simple index for the presence of creditor rights alone, as used in past research, is not associated with a greater use of bankruptcy. The overall strength of creditor rights is negatively, but not significantly, related to the occurrence of bankruptcy across countries, although the coefficient for judicial efficiency remains statistically significant.

Of primary importance is the shift from aggregate creditor rights to its individual components. Regression results on that basis are summarized in Table 2. In Column 1, CREDITOR RIGHTS and each of the four subindices are included in separate regressions. Of the four subindices, one is significantly positive – RESTRICTIVE REORGANIZATION – and one is significant negative – NO AUTOMATIC STAY. The other two subindexes, SECURED CREDITORS PAID FIRST and MANDATORY MANAGEMENT TURNOVER, are not significant. These differences suggest that the deterrence and actual bankruptcy usage effects vary by individual creditor rights and that a simple aggregation of creditor right characteristics is problematic.

For example, restrictions on reorganization, such as creditors' consent, provides creditors with more legal tools and reduces the debtor's degrees of freedom, leading to greater use of bankruptcy, including reorganizations. In contrast, the ability of secured creditors to seize assets even when a firm has filed for bankruptcy seems to deter the filing for bank-

Table 1

Summary statistics, by country

Country	Available years	No. of bankruptcies	BNKRPT in %	Legal origin	Rule of law	Creditor rights
Argentina	92–99	2,144	0.12	French	5.35	1
Ausralia	90–99	5,505	2.10	English	10	1
Austria	90–99	2,065	1.33	German	10	3
Belgium	90–99	4,850	2.59	French	10	2
Canada	90–98	12,697	2.96	English	10	1
Chile	90–99	89	0.28	French	7.02	2
Colombia	96–99	226	0.16	French	2.08	0
Czech Republic	92–96	1,729	1.49	Transition	8.3	3
Denmark	90–99	2,376	1.53	Scandinavian	10	3
Finland	90–98	5,106	4.14	Scandinavian	10	1
France	90–99	51,672	2.62	French	8.98	0
Germany	92–98	21,153	1.03	German	9.23	3
Greece	90–94	857	0.29	French	6.18	1
Hong Kong	90–98	1,519	0.55	English	8.22	4
Hungary	92–96	8,425	1.99	Transition	8.7	3.75
Ireland	90–99	789	2.74	English	7.8	1
Italy	90–96	8,663	0.54	French	8.33	2
Japan	90–99	14,001	0.22	German	8.98	2
Netherlands	90–99	3,996	1.30	French	10	2
New Zealand	93–98	716	3.67	English	10	3
Norway	90–98	3,547	1.83	Scandinavian	10	2
Peru	93–99	145	0.05	French	2.5	0
Poland	90–96	3,320	0.23	Transition	8.7	2.25
Portugal	91–99	516	0.08	French	8.68	1
Russia	95–98	2,771	0.31	Transition	3.7	3
Singapore	90–99	228	3.06	English	8.57	4
South Africa	90–99	2,919	4.62	English	4.42	3
South Korea	90–98	163	0.17	German	5.35	3
Spain	90–99	519	0.02	French	7.8	2
Sweden	90–99	13,917	7.61	Scandinavian	10	2
Switzerland	90–98	9,213	3.33	German	10	1
Thailand	90–99	372	0.13	French	6.25	3
Turkey	98–99	1,496	0.86	French	5.18	2
U.K.	93–98	46,584	1.85	English	8.57	4
U.S.A.	90–99	55,753	3.65	English	10	1

Statistics are reported as the average over available years. Number of bankruptcies were collected from country sources. *BNKRPT* is the ratio of the number of bankruptcies to the number of firms.

ruptcy. This suggests that bankruptcy is a more efficient tool to use when there is an automatic stay on assets, as it helps avoid a creditor race. The no automatic stay provision may, however, still be useful in weak judicial environments as otherwise creditors may be too vulnerable to the discretion of the judicial system. The fact that creditor priority is not significant may indicate that the priority creditor rights feature deters risky behavior and thus reduces the probability of financial distress. It may also reflect that most laws permitting secured creditor rights allow a creditor to seize its secured assets out of court, i.e., without the creditor having to file for bankruptcy. The insignificant sign for the mandatory management turnover index may reflect two opposing effects. For some firms, the requirement to replace management when in bankruptcy is discouraging when incumbent management provides useful skills and know-how. For other firms, there may be value for creditors to be able to replace management immediately when using bankruptcy procedures; for example, when incumbent management may be delaying necessary, but painful restructurings. On balance, this may explain why an insignificant sign results.

Of further interest is the interaction between the effects of judicial efficiency and the individual and aggregate creditor rights. Column 2 shows, in addition to the CREDITOR RIGHTS (sub-) indices and the RULE OF LAW index, the interaction between the two indexes included in the regressions. These regression results generally confirm the earlier finding that efficient courts lead to greater usage of bankruptcy, as does the presence of creditor rights,

Table 2

Cross-country regressions with creditor rights and legal efficiency

		Creditor rights and legal efficiency	Creditor rights and legal efficiency: interaction effects
(1)	Rule of Law	0.258***	0.438***
		(2.81)	(5.77)
	Creditor Rights	–0.067	0.892**
		(–0.85)	(2.50)
	Rule of Law * Creditor Rights	–	–0.125***
			(–3.00)
	Adj. R–squared	0.17	0.20
(2)	Rule of Law	0.242***	0.383***
		(2.94)	(5.81)
	Restrictive Reorganization	0.563**	4.584***
		(2.30)	(3.76)
	Rule of Law * Restrictive Reorganization	–	–0.482***
			(–3.34)
	Adj. R–squared	0.19	0.24
(3)	Rule of Law	0.316***	0.299***
		(3.68)	(3.27)
	No Automatic Stay	–0.987***	–1.734***
		(–5.12)	(–2.76)
	Rule of Law * No Automatic Stay	–	0.090
			(1.23)
	Adj. R-squared	0.231	0.23
(4)	Rule of Law	0.251***	0.298***
		(2.77)	(3.90)
	Secured Creditor Paid First	0.120	0.726
		(0.48)	(0.86)
	Rule of Law * Creditor Rights	–	–0.085
			(–0.79)
	Adj. R-squared	0.169	0.17
(5)	Rule of Law	0.253***	0.422***
		(3.04)	(5.59)
	Mandatory Management Turnover	–0.014	3.492***
		(–0.05)	(3.24)
	Rule of Law * Mand. Management Turnover	–	–0.463***
			(–3.29)
	Adj. R-squared	0.169	0.21

The dependent variable is the ratio of the number of bankruptcies to the number of firms. Transition countries are excluded from all regressions because of the unavailability of disaggregated creditor rights. The regressions are estimated using ordinary least squares with robust standard errors. t-statistics are in parentheses, *, **, and *** indicate significance at the 10%, 5%, and 1% respectively. All regressions include lagged values of GDP per capita, annual GDP growth rates, a dummy indicating a financial crisis, interest rates and year fixed effects. All regressions include 273 observations.

except for the no automatic stay provision. The negative signs for many of the interaction terms suggest a substitution effect: in countries with high judicial efficiency, actions by the courts substitute to some extent for strong creditor rights and encourage more use of bankruptcy procedures. Well functioning courts may weigh, for example, the balance between the costs and benefits of having management stay or leave when filing for bankruptcy and provide a better judgment whether the debtor is cooperative or not in making restructuring proposals.

The lack of significance of the interaction term for NO AUTOMATIC STAY may imply that while an automatic stay on assets is triggered by a court, it is a simple court action that does not require much further action by the judiciary and as such is less affected by the efficiency of a country's court system. These substitution effects in turn suggest that in countries with weak judicial proceedings creditors will use bankruptcy – a costly resolution – only if they have very strong entitlements. For example, in order for creditors to implement their rights, a business environment that allows for easy and electronic registering of collateral may be more important than the availability of efficient courts, leading to the insignificant coefficients for creditor rights and the interaction term.

As robustness checks, additional regressions included the following control variables (results not shown):

a) Restrictiveness of Entry,
b) Regulation of Labor Markets,
c) the ratio of the Number of Total Patents to the Total Number of Manufacturing Firms,
d) the percentage of Employment attributed to Small-Medium-sized Enterprises (SMEs).

The main results are robust to the inclusion of these variables. Furthermore, countries in which it is more restrictive and difficult to open a new business are found to have lower bankruptcy rates. Restrictive employment laws are significantly negatively related to the use of bankruptcy. Bankruptcy is used relatively more often in countries that use more intangible assets in their economy (as proxied by the number of patents), possibly because bankruptcy and reorganization procedures allow better for the preservation of these assets. Finally, SMEs are less likely to use bankruptcy proceedings.

The World Bank's "Principles & Guidelines"

The results of Claessens and Klapper (2005) suggest that well designed bankruptcy laws may encourage a greater use of formal bankruptcy proceedings. In an ongoing dialogue since 2001, the World Bank (2005) has developed a catalogue of *Principles and Guidelines for Effective Insolvency and Creditor Rights Systems*. This manuscript presents 33 principles that countries should adopt to promote more efficient resolution of financial distress. These are separated into four broad focus areas as summarized in Table 3 and briefly described below.

Table 3

World Bank Principles for Effective Insolvency and Creditor Rights Systems

	Part A. Legal Framework for Creditor Rights
A1	Compatible Commercial Law Systems
A2	Security (Real Property)
A3	Security (Movable Property)
A4	Recording and Registration of Secured Rights
A5	Commercial Enforcement Systems
	Part B. Risk Management and Corporate Workout
B1	Credit Information Systems
B2	Director & Officer Accountability
B3	Enabling Legislative Framework
B4	Corporate Workout - Restructuring Procedures
B5	Regulation of Workout and Risk Management
	Part C. Legal Framework for Insolvency
C1	Key Objectives and Policies
C2	Due Process: Notification and Information
	Commencement
C3	Eligibility
C4	Applicability and Accessibility
C5	Provisional Measures and Effects of Commencement
	Governance
C6	Management
C7	Creditors and Creditors Committee
	Administration
C8	Collection, Preservation, Administration and Disposition of Assets
C9	Stabilizing and Sustaining Business operations
C10	Treatment of Contractual Obligations
C11	Avoidable Transactions
	Claims and Claims Resolution
C12	Treatment of Stakeholder Rights & Priorities
C13	Claims Filing and Resolution
	Reorganization Proceedings
C14	Plan Formulation and Consideration
	Voting and Approval of Plan
	Implementation and Amendment
	Discharge and Binding Effects
	Plan Revocation and Case Closure
C15	International Consideration
	Part D. Implementation: Institutional and Regulatory Frameworks
D1	Role of Courts
D2	Judicial Selection, Qualification, Training and Performance
D3	Court Organization
D4	Transparency and Accountability
D5	Judicial Decision making and Enforcement
D6	Integrity of the System (Courts and Participants)
D7	Role of Regulatory or Supervisory Bodies
D8	Competence and Integrity of Insolvency Administrators

The legal framework for creditor rights

The first group establishes principles for the creation of enforcement mechanisms to promote credit markets. These principles set a framework for the protection of credit providers in terms of the allowance of security interests in both immovable (i.e. mortgages, charges etc.) and movable property (whether tangible or intangible). They further point out the imperativeness in creating integrated and accessible registry systems providing accurate (and electronic) records of security interests. Finally, the principles highlight need for supportive commercial enforcement systems. These entail both judicial and non-judicial mechanisms and procedures that provide efficient, transparent and reliable enforcement of secured and unsecured debt.

The risk management and corporate workout

The second area of interest shifts from the legal framework to the corporate workout and puts forth five principles related to risk management. First, access to complete credit information of borrowers' borrowing and payment history (i.e. both positive and negative information) is stressed. This requires a supporting legal framework, mechanisms for data protection, policies prohibiting societal discrimination and protecting subjects' privacy, as well as continuous monitoring of the systems' operation. Second, the necessity for setting legal standards of director and officer accountability on behalf of distressed or insolvent enterprises is underlined. The third principle concerns the existence of an enabling legislative framework that ensures the possibility of restructuring and restoration of distressed but financially viable enterprises. The fourth prin-

ciple promotes the use of informal workout practices such as voluntary negotiation, mediation and informal dispute resolution as complements or useful precedents of formal proceedings. The last principle pertains to regulation and practice and endorses an environment where financial institutions and regulators support a consensual code of conduct.

The legal framework for insolvency

The third pillar of regulatory principles focuses on the insolvency framework. Of great importance is the timing and the proper use of the insolvency system, its balance with reorganization practices, the asset value maximization for creditor recovery protection, and the establishment of a cross-border insolvency framework. The protection of the rights of the related parties is examined, with a special focus on practices of notification and information. For instance, the right to be heard must be guaranteed to all parties involved and intermediation by impartial and independent experts and investigators must be offered for the resolution of a dispute.

The next three principles focus on the commencement of the insolvency processes. Both debtors and creditors should be entitled to apply for insolvency proceedings, and when creditors do, debtors must be given the opportunity to defend against the application in court before the commencement of the case. After insolvency proceedings commence, measures must be granted to protect the debtor's assets and the interest of stakeholders. This entails a stay of actions by secured creditors in reorganization proceedings, although the stay must always be of limited, specified duration, balancing between creditor protection and insolvency objectives.

The next two principles focus on governance while under insolvency proceedings. The guidelines recommend either

a) exclusive control is entrusted to an independent insolvency representative;
b) management remains in control; or
c) supervision of management is undertaken by the independent representative or supervisor.

In the latter two approaches, complete power should be shifted to the independent authority if management displays any form of misbehavior or incompetence.

The seventh guideline safeguards creditors' role and rights during proceedings. The preferred mechanism to ensure fairness and integrity is a creditors' committee, especially when the creditors are numerous. The functions of the committee should be chartered by the law and it should serve as a conduit for processing and distributing information to the creditors and facilitating their decision processes. Principles 8 – 11 refer to administration of debtor's assets, which should be protected during proceedings. For instance, ordinary operations should be permitted the business should have access to sound, monitored financing in order to meet ongoing needs.

The last four principles concern claim resolutions under insolvency. Priority is given to the collateral of secured creditors, followed by unsecured creditors. Consideration to employee rights should be given, while shareholders are entitled to compensation either when creditors have been fully repaid or under limited exceptions. The reorganization plan must be structured and approved by the majority of creditors and its implementation should be independently supervised and be open to amendment. Finally, international aspects of insolvency proceedings are examined, and rules for their facilitation are set.

The implemenation strategy, in terms of the institutional and regulatory frameworks

The forth group of principles present eight guidelines concerning the implementation of the aforementioned principles. These consider the role of courts, the judicial selection, training and performance, and court organization. Of key importance is transparency, accountability and integrity of the system. The last two principles examine the role of regulatory or supervisory bodies appointing insolvency representatives. Criteria ensuring the integrity and competence of these representatives are established.

Conclusion

A better understanding of how the different features of creditor rights are individually related to bankruptcy rates use can be useful for policymakers. Claessens and Klapper (2005) show that while the overall index of creditor rights is not statistically significantly associated with more use of bankruptcy, there exist statistically significant effects for individual creditor rights, which also differ in direction. Specifically, the presence of a "no automatic stay" is associated with fewer bankruptcies and the presence in the law of a "restriction on reorganizations" with

more bankruptcies. The use of bankruptcy also varies by the efficiency of the judicial system. Greater judicial efficiency is associated with more use of bankruptcy, but the combination of more creditor rights with greater judicial efficiency leads to less use, suggesting some substitution between creditor rights and judicial efficiency.

These findings suggest that insolvency systems with greater creditor rights and efficient judicial systems encourage less risky behavior and more out-of-court settlements. They also suggest that strong creditor rights are more necessary in countries with weak judicial systems to compensate for weaknesses in legal enforcement. The World Bank (2005) *Principles and Guidelines for Effective Insolvency and Creditor Rights Systems* proposes a framework for efficient bankruptcy proceedings and resolution of financial distress. Implementation of these design features may in turn affect the relative use and importance of bankruptcy across countries.

References

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