

WP/99/135

INTERNATIONAL MONETARY FUND

IMF Institute

**Corporate Insolvency Procedures and Bank Behavior:
A Study of Selected Asian Economies**

Prepared by Qaizar Hussain and Clas Wihlborg¹

Authorized for distribution by Reza Vaez-Zadeh

October 1999

IMF WORKING PAPER



INTERNATIONAL MONETARY FUND

IMF Working Paper

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Abstract

This paper explores insolvency and debt recovery procedures, and political, legal, and institutional factors influencing financial decisions of corporations and banks during pre-crisis years in six Asian economies. It also examines whether these factors may have contributed to the depth and duration of the 1997 crisis. There are two key findings: First, bank behavior and other institutional factors, and not the nature of stakeholder orientation, seem to explain variations in capital structures and the depth of recessions across economies. Second, aspects of insolvency procedures favoring rehabilitation of “financially distressed” firms seem to explain well the expected duration of the crisis.

JEL Classification Numbers: G32, G33, K40, P52

Keywords: Insolvency procedures, Bankruptcy, Capital structure, Shareholder concentration, Firm performance, Asian crisis

Author's E-Mail Address: qhussain@imf.org and clas.wihlborg@economics.gu.se

¹ Clas Wihlborg is Professor of Finance and Economics at the University of Gothenburg, Sweden. The authors are grateful to Mohsin Khan, Reza Vaez-Zadeh, Chorng-Huey Wong, Joshua Greene, Richard Sweeney, Edward Altman, Tom Willett, Diwa Guinigundo, and the Asia and Pacific Department staff for valuable comments and suggestions, and to Jack Glen and John Lees for providing access to the data. Art Rios and Alyssa Lum provided excellent research assistance.

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I. INTRODUCTION

The “Asian Crisis” of 1997 has been attributed to a variety of factors. The volatility of short-term capital flows, poor credit allocation mechanisms, weak supervision of banks, “moral hazard” in international lending contributing to bad loans, the pegging of exchange rates at inappropriate levels, unsustainable current account deficits, corruption and cronyism are commonly mentioned causes of crisis, but the list is not exhaustive. There is clearly not one single factor, that can explain all the dimensions of the crisis in individual economies. One factor may explain the timing, the spread from one economy may be due to another factor, while the depth of the crisis in a specific economy and its duration may depend on some other factors. A consensus seems to be emerging regarding the potentially high costs of central banks’ pegging of exchange rates, and the need to reform the “international financial architecture”². This term captures a wide range of legal and regulatory conditions for financial institutions in individual economies, and the linkages to foreign and international financial institutions.

Insolvency and debt recovery procedures constitute one aspect of the financial architecture in an economy. These procedures include formal laws and informal rules for enforcement of debt contracts, bankruptcy, liquidation, and the rehabilitation of distressed firms. It is quite possible that formal laws on books may be markedly different from actual practice in many economies.

In this paper we ask whether insolvency and debt recovery procedures that existed before the crisis, as well as other factors influencing financial decisions in banks and corporations may have contributed to the depth and duration of the crisis in six Asian economies – Indonesia, Korea, Malaysia, the Philippines, Taiwan Province of China and Thailand. Four of the economies have been very hard hit in terms of output while the Philippines and particularly Taiwan Province of China have fared much better. Specifically, we ask whether insolvency and debt recovery procedures and bank behavior during the “good years” (early to mid-1990s) help explain the relative depth of individual economy crisis and the relative speed of recovery. The triggering events and possible contagion among economies in 1997 are not discussed. In essence, our aim is to attempt to disentangle and identify the main precursors of the crisis as they relate to non-financial firms in these economies. We primarily focus on the role of inadequate insolvency procedures and legal framework, unrealistic or sub-optimal levels of leverage, high shareholder concentration, high levels of distress, and connected bank lending and political influences on banks.

² See Eichengreen (1999).

The role of macroeconomic and other policy-related factors that contributed to the Asian crisis are not discussed in the paper.³ In this study, we use the correlations methodology in place of regressions. This is due to two main reasons: First, our objective in this paper is to explore general patterns and relationships among sets of variables in the six economies and not analyze determination of variables or causation between variables. Moreover, it is typically highly difficult to establish exogeneity in financial and accounting data.

In a recent article Pomerleano (1998) shows that corporate financial characteristics in the crisis economies indicated declining corporate performance and the build-up of debt during several years prior to the crisis. Insolvency procedures may have helped make crisis inevitable if they permitted “economically distressed” firms to continue operations. The capital stock of such firms, which may have lost their long-term competitiveness, produces negative value. These procedures may also deepen and prolong a crisis if “financially distressed” firms, with the value of debt exceeding the value of assets, are not reorganized or financially restructured when their capital stock generates positive value.

After a brief description in Section II of the macroeconomic setting in the six economies, we summarize the theory for the economic role of insolvency procedures in Section III. Formal and informal procedures for debt recovery, bankruptcy, and rehabilitation in the six economies are described in Section IV. We also include observations on banks’ lending policies, and other economic and legal system characteristics in this section. Such characteristics have important effects on informal insolvency procedures in non-financial firms. These procedures are given quantitative scores based on responses to questionnaires in terms of their tendency to favor debtors, creditors, or other stakeholders in firms. We also examine the behavior of, and relationships between, certain important financial and accounting indicators using firm-level data in the six economies.

In Section V we explore whether the insolvency procedures and regime characteristics described in Section IV can explain the depth of individual economies crisis, and the ability of the economies to recover. The quantitative analysis is limited to *cross-economy* correlations and rank correlations between the characteristics on the one hand, and corporate debt rates, the depth of recession, recovery, and banks’ non-performing loans on the other. Since we have data for only six economies, statistical significance of cross-economy relationships cannot be claimed. However, the relationships may be suggestive.⁴ Finally, some conclusions are presented in Section VI.

³ Although these factors are not discussed, their importance cannot be overemphasized. For instance, the relatively good performance of the Philippines was partly due to the implementation of extensive reforms and sound macroeconomic policies before the crisis which helped the economy weather the crisis better.

⁴ In an another paper (Hussain and Wihlborg, 1999) we analyze performance, capital structures, ownership concentration, and dividend policies of non-financial firms in more detailed cross-section and panel analyses using a sample of these six economies having different insolvency procedures and regime characteristics.

II. THE MACROECONOMIC SETTING

Before we proceed to the study of insolvency procedures in the six economies, we outline the macroeconomic background of these economies prior to the crisis and their performance during the crisis. All six economies experienced low or negative GDP growth, increasing inflation, and exchange rate depreciations during 1996-98 (Appendix Tables A, B and C). The growth rate of Indonesia fell from 8 percent in 1996 to a nearly 14 percent decline in 1998 or a 22 percentage point decrease. The comparable decreases in Malaysia, Thailand and Korea were 15, 14 and 13 percentage points. The Philippines faring better faced a decrease from 6 percent growth to a slight decline in GDP in 1998. In Taiwan Province of China, growth remained at a highly respectable 5 percent rate in 1998.

Inflation increased during the same period in each of the economies with the exception of Taiwan Province of China.⁵ Indonesia's inflation jumped from a rate of 7 percent in 1997 to 61 percent in 1998. In all the other economies, the increases were quite moderate or between 2-3 percentage points. These differences in inflation rates are partly explained by exchange rate changes. Indonesia's currency depreciated by around 70 percent from 1997 to 1998 after having depreciated moderately during the earlier years to offset the inflation differential relative to the US. Taiwan Province of China's currency depreciated the least (14 percent) while the other economies' currencies depreciated between 30 and 40 percent from 1997 to 1998 after having remained stable through 1996 (see also Table 10). The inflation effects of the depreciation seem smaller in these economies than in Indonesia.

Three interesting observations emerge from the trends in the market capitalization of traded stocks in US dollars and market capitalization relative to GDP in each economy (Appendix Tables D and E). First, all the markets grew phenomenally during the early 1990s. Second, although Taiwan Province of China and Korea have the largest stock markets in terms of market capitalization in 1998, Malaysia's stock market was the largest until 1996 both in actual volume and as a fraction of GDP, after which its size shrank dramatically partly due to the Asian crisis and possibly due to the imposition of controls on foreign capital flows. Third, except for Taiwan Province of China all the markets declined considerably during the Asian crisis.

III. THE ECONOMIC ROLE OF INSOLVENCY PROCEDURES

This section focuses on two key issues. First, it describes the important forms of stakeholder-orientation of insolvency procedures and their characteristics. Second, it explores the relationships between types and causes of insolvencies and their desirable orientation.

Insolvency procedures specify formally or informally how a distressed or insolvent firm's assets should be managed or liquidated, and how the proceeds from the assets' use or sales

⁵ Note that the base year for CPI inflation was 1990, which is the consistent and most recent base year available for *all* six countries at the time of this study.

shall be distributed among the firm's stakeholders. The order of priority of the claims of various stakeholders is only one aspect of the procedures. Equally important are procedures for changes in control once insolvency is established or expected. An important role of the procedures is to enable the assets of the financially distressed firms to remain productive while economically distressed units are closed down. A major problem is to identify which insolvent firms are financially distressed, and to provide mechanisms for the rehabilitation of such firms.

The stakeholder-orientation of the insolvency procedures affects incentives of the various stakeholders at the time contracts are entered with the firm. Asymmetric information about the prospects of the firm implies that agency problems may arise among the various groups. Insolvency procedures influence the *severity* of agency problems and thereby the willingness of stakeholders to "invest" in a contractual relation.⁶

We classify the orientation of insolvency procedures by the stakeholder-group being favored relatively at the time of insolvency (Table 1).⁷ The first case is that of creditor-oriented procedures. These procedures imply that the liquidation of assets or the sale of the firm follows automatically in case of insolvency. Priority rules are followed when the proceeds are distributed among creditors. Creditors' claims are also enforced by the return of assets that shareholders or managers may have diverted to themselves when insolvency was anticipated. Under these procedures, shareholders and managers do not retain ownership and control.

Table 1. Classification of Orientation Of Procedures
And Their Characteristics

Stakeholder-Orientation of Procedures	Main Characteristics of Procedures
Creditors	Firm is liquidated or sold. Proceeds are distributed by absolute priority rule among creditors ahead of shareholders.
Shareholders	Forbearance with respect to shareholders, who may retain a stake while the firm is rehabilitated under direction of external trustee. In the extreme case, shareholders' stake is protected by a "soft budget constraint" as in the last case below.
Management ("composition")	Forbearance (as in the above case) but management retains control during restructuring.
Employees	High degree of forbearance allowing operation to continue. Requires "soft budget constraint".

⁶ These issues are discussed in more detail in Hussain and Wihlborg (1999). In this paper we focus more on the incentives to shut down and to rehabilitate firms.

⁷ Note that the theory relating to these procedures generally assumes an environment characterized by well-functioning financial markets.

Shareholder and management orientation constitute the second and third types of orientation. In these cases, we typically observe some form of debt- forgiveness or forbearance during financial restructuring and reorganization where the firm is allowed to continue its operations. Shareholders normally keep a stake in the firm. The difference between shareholder -and management-oriented procedures is that in the former case a trustee – an outsider – takes on the management’s role during the period of restructuring. Under management-oriented procedures (called “composition” in some economies), the incumbent management team of the debtor company retains some degree of control. An example of a management-oriented procedure is the US Chapter 11 bankruptcy code where the firms are allowed to seek protection against creditors. In some situations, the government may also contribute directly to the bailout of shareholders through their influence on lending policies of banks to non-financial firms.

The fourth form of orientation of insolvency procedures is an employee-oriented regime. Under this orientation, an important objective of a firm is to save jobs no matter whether the operations of a firm are economically viable or not. This regime presumes a substantial degree of forbearance by creditors towards shareholders and management in order to preserve jobs. Employee-orientation typically prevails in an economy when the government either owns the banks or significantly subsidizes their lending in the form of “soft budget constraints”. The last three types of orientations can be classified as “debtor-friendly” procedures.

The various sources of insolvencies and their relatively favorable characteristics of procedure-orientations, evaluated at the time shocks occur, are summarized below (Table 2). It is important to note that a specific orientation of procedure may not be the most optimal one for all economic circumstances.

Table 2. Type and Cause of Insolvency and Relatively Advantageous Insolvency Procedures (evaluated at the time shocks occur)

Type and Cause of Insolvency	Relatively Advantageous Procedure-Orientation
Economic insolvency caused by structural change in firm's environment.	Creditor-oriented procedures with little forbearance.
Financial insolvency caused by exchange rate or interest rate change, or other temporary (typically macroeconomic) shock.	Forbearance enabling financial restructuring and avoidance of loss of specific capital. Management-oriented procedures to avoid loss of management's firm-specific skills. Creditor-oriented procedures may work if creditors' interest can be coordinated quickly providing them with incentives that contribute to rehabilitation.
Insolvency caused by managerial incompetence (associated with weak corporate governance structure).	Creditor-oriented procedures are advantageous if they allow ownership and management restructuring.

The first case is economic insolvency or economic distress that can occur in normal economic times and under well-functioning insolvency procedures. This type of insolvency may be caused by a lack of long-term competitiveness due to structural factors such as demand shifts or the emergence of superior competitors. In general, creditor-oriented procedures would be expected to be more favorable by closing down inefficient firms.

The second case of insolvency – financial insolvency or financial distress – arises when the firm's present value of assets is less than its debt, or when liquidity problems hinder firm's operations. Financial insolvency may be caused by exchange rate changes, that increase the domestic currency value of loans in foreign currency, or interest rate increases. Financial insolvency may also be caused by a temporary macroeconomic shock that abruptly increases the costs of financing.⁸ Forbearance may have a positive impact under financial insolvency by contributing to the survival of productive assets of firms whereby viable firms are provided with sufficient time to restructure and reorganize. The role of forbearance is particularly relevant if bankruptcy procedures, for one reason or another, do not enable productive assets of insolvent firms to be redeployed.

While ideally insolvency procedures should enable financially distressed firms to survive in one form or another, they should also prevent the waste of resources in economically insolvent firms. If the procedures imply a high degree of forbearance with economically distressed firms in normal times, the consequence may be that a large financial shock causes the simultaneous failure of a large number of firms when forbearance simply may be too expensive (with the present value of productive assets generating negative value). Furthermore, it is also important that potential lenders and equity investors are given sufficient time and resources to evaluate a firm. Otherwise, it will become difficult to make the distinction between financially and economically distressed firms.

Finally, if the lack of competitiveness, and thereby insolvency, is caused primarily by managers' incompetence, then the firm's corporate governance structure has failed. Creditor-oriented procedures may seem preferable under these circumstances, because shareholders may have failed to change the management in time. Thus, this type of insolvency should enable the creditors to change the ownership structure.

In practice, the orientation of insolvency *laws* can differ from the orientation of insolvency *procedures*. For example, procedures can informally evolve towards a quite different orientation than specified in law. There is an important asymmetry, however. A high degree of forbearance in law is not likely to enable less forbearing, creditor-oriented procedures to develop, while a strict creditor-oriented law is not inconsistent with shareholder –and management-oriented procedures.

⁸ Of course, the argument presumes that agents can distinguish between various types of shocks which is highly difficult in practice.

As mentioned earlier, a strict creditor-oriented law may be efficient and lead to a lower cost of funding for firms, even under financial insolvency, if creditors try to structure weak management and also protect the value of economically-viable physical and human capital of firms (Gangopadhyay and Wihlborg, 1999). On the other hand, a strict creditor-oriented law may not be advantageous when firms' debt structures are highly complicated, leading to prohibitive transactions costs and an inability on the part of creditors to arrive at economically sound agreements (Baird, 1997). A strict creditor-oriented law may also not be advantageous if there is a high degree of complexity and asymmetric information among creditor groups. In this situation, informal procedures that are actually economically efficient may fail to develop if different individuals or groups incur "influence costs" in order to gain an advantage at the expense of one another in organizations or negotiations (Milgrom and Roberts, 1992). Finally, it is important that specific rules for forbearance should be present in law. This is because creditors may have divergent incentive structures resulting in a non-maximization of value during restructuring. An example of divergent incentive structures is when banks face different sets of regulations, political influences, ownership structures, and capital positions from other creditors.

IV. DESCRIPTION OF INSOLVENCY PROCEDURES AND ECONOMIC REGIME CHARACTERISTICS

The relationship between legal systems and the quality of shareholder and creditor protection has recently been studied by La Porta et al (1997) using a sample of 49 economies. Our study only uses their description of the legal system, but we describe in greater detail formal as well as informal insolvency procedures in the six Asian economies.⁹ In Appendix I, we describe existing procedures for insolvency and debt recovery in each of the six economies. In subsection A, we provide the six economies' stakeholder-orientation and measures of effectiveness of insolvency and debt recovery procedures. Characteristics of the legal and political environment influencing corporate and bank behavior as well as several important financial ratios are described in subsection B. The characteristics are chosen because they affect how firms and creditors informally behave in economic and financial distress. The procedures and characteristics we describe existed before the crisis which may have had an impact on the build-up of the crisis. Recent changes in procedures are also noted.

A. Insolvency and Debt Recovery Procedures

The description of procedures and the quantitative measures of the "quality" of formal and informal procedures in the six economies (Tables 3-5 and Appendix Table F) is based on two major sources and a number of articles. First, Tomasic and Little (1997) contain a description

⁹ La Porta et al (1997) divide their sample of economies into four families of legal systems: British (common law), French (civil law), German (civil law), and Scandinavian (civil law). According to their classification, our sample can be categorized as Malaysia and Thailand (British family), Indonesia and the Philippines (French family), and Korea and Taiwan Province of China (German family).

of law and cultural factors influencing informal procedures in a number of Asian economies. Second, we have obtained responses to interview studies based on questionnaires of insolvency law regimes in the six economies. The studies were organized by the Asian Development Bank (1998), "Local Study of Insolvency Law Regimes" and consist of a large set of questions about formal and informal procedures answered by a group of legal practitioners in each economy. One potential weakness of the evaluations provided by the answers is that each local group of practitioners can answer only for one economy. There is a risk that each group has employed a different "scale" for evaluation. Nevertheless, the answers are consistent with information from other sources such as Tomasic and Little (1997) and the Asian Law Guide to Corporate Restructuring (1998).

We have quantified the responses obtained from the study conducted by the Asian Development Bank (1998) (Tables 3 and 4). Numerous responses to questionnaires relating to the evaluation of processes or procedures for debt recovery were quantified with numerical values ranging from one to three on the following basis (Table 3). The responses to the questions on lines 1-7 related to the cost, efficiency, and speed of various procedures.¹⁰ We assigned a numerical value of one for processes which were either *low cost (not expensive), easy, very efficient, or quick*. Alternatively, at the other extreme, the processes that were either *very expensive, very difficult, inefficient, or very slow* received a value of three. Each individual category was thereby averaged based on the numerical values of each response. The main categories for processes included: process for acquiring security or collateral, process for enforcement, time for workout, and incidence of reorganization or liquidation. We also quantified the category describing the predictability or probability of positive outcome for the creditor as a result of these processes (lines 15-20). Judicial handling from the creditor's point of view is evaluated on lines 17-20. Given a larger variety of responses in these categories, the range of scores varied from one (very high) to five (very low) (Table 3).¹¹

After consolidating the detailed results of Table 3, we obtain separate total scores for secured and unsecured creditors and also the final rankings of the six economies in the sample in Table 4.¹² We make two observations. First, the results for secured and unsecured creditors rights are similar across our sample economies. Second, overall Malaysia provides the strongest protection to creditors during insolvency and Indonesia the weakest. Only Malaysia receives a score of high predictability for the creditors as a result of judicial handling. The

¹⁰ The responses by the legal practitioners on the questionnaires to the specific questions were either of the following: a) low cost (not expensive), expensive, very expensive; b) easy, difficult, very difficult; c) very efficient, efficient, inefficient; d) quick, slow, very slow. As an example, we assigned Korea a value of 1.25 for "Process for enforcement of security over land". The responses on this question were: Not expensive, easy, efficient, quick $[(1+1+2+1)/4=1.25]$.

¹¹ The responses by the legal practitioners on the questionnaires to specific questions were either of the following: very high, high, medium, low, very low.

¹² Note that low total score and low ranking corresponds to strong creditor-oriented procedures and high total score and high ranking to debtor-friendly procedures.

remaining economies following Malaysia in terms of creditor protection are Korea, Thailand, Taiwan Province of China and the Philippines. In fact, the scores for Korea, Thailand, and Taiwan Province of China are so close that we cannot draw clear-cut inferences regarding variations in insolvency procedures amongst these economies. The Philippines and Indonesia are clearly the most debtor-friendly. The results are consistent with those obtained by La Porta et al (1996) in relation to creditors' rights for these selected Asian economies. The only difference with our results pertain to Korea and Thailand where the ranks are reversed although the raw scores between these two economies are highly similar with respect to creditors' rights. Finally, apart from Malaysia, all economies have a low or very low score for judicial handling of formal insolvency procedures (lines 19-20). Debt recovery procedures seem more predictable, except in Indonesia (lines 15-18).

Informal procedures are better understood by responses shown on lines 8-14 in Table 3. The time for winding up a bankrupt firm (line 8) and the time for formal reorganization (line 9) is long in all economies except that reorganization is handled with reasonable speed in Korea. The time for informal workouts is also substantial, except in Malaysia and Korea. These two economies are also the ones where the incidence of formal procedures is high (lines 11 and 12). Furthermore, in Malaysia the existence of formal procedures provides incentives for informal workouts, while in Korea the government encourages workouts. In addition to Malaysia, formal procedures in Taiwan Province of China contribute to workouts to some degree while in Indonesia, the Philippines, and Thailand, the formal rules do not have such an effect.

In summary, the respondents' answers to these questions on lines 8-14 in Table 3 confirm the quantitative results derived from the other lines and summarized in Table 4. Malaysia stands alone with clear creditor-oriented insolvency procedures while Indonesia and, to a lesser degree, the Philippines are debtor-friendly. The other three economies are intermediate cases but with an edge towards creditor-orientation in Korea. In fact, we argue below for the case of Korea that it has employee-oriented procedures.

Table 3. Summary Evaluation of Processes for Debt Recovery

	Indonesia	Korea	Malaysia	Philippines	Taiwan Province of China	Thailand
<i>1 = low cost(or not expensive), easy, very efficient, quick; 3 = very expensive, very difficult, inefficient and very slow</i>						
1. Process for acquiring security (collateral) over land	2.75	1.25	1.25	1.5	1.5	1.5
2. Process for acquiring security over other property	2.75	1.25	1.25	1.5	1.5	1.5
3. Process for enforcement of security over land	3	1.25	1.25	2	1.75	1.25
4. Process for enforcement of security over other property	2.5	1.25	1.25	2	1.5	1.75
5. Process for debt collection	2.5	1.25	1.25	3	2	1.5
6. Process for winding up insolvent corporation	2.5	1.25	2	3	2	1.5
7. Process for reorganization/restructuring	2.5	1.75	2	2.25	2.25	1.5
8. Time for winding up	4-6months	6-12months	6-12months	>6months	>6months	>6months
9. Time for formal reorganization	12-18months	2-4months	8-12months	>18months	8-12months	>18months (since 98)
10. Time for informal workout	4-8months	2-4months	2-4months	12-18months	12-18months	>18months
11. Incidence of bankruptcy/liquidation	very low	low	high	N/A	very low	low
12. Incidence of reorganization/restructuring	N/A	high	high	N/A	very low	very low (since 98)
Workouts preferred because:						
13. Bankruptcy procedures are a real alternative	Adverse effect	government encourages workout	yes	no	no	yes
14. Better outcome than under formal procedures	no	no, for secured creditors	yes	no	yes	no
Predictability of positive outcome of:				<i>1 = very high 5 = very low</i>		
15. Process for security enforcement; land	5	2	2	2	2	2
16. Process for security enforcement; other than land	5	4	2	2	1	3
17. Judicial handling of security enforcement	5	3	2	3	2	2
18. Judicial handling of debt collection	5	3	2	3	1	2
19. Judicial handling of bankruptcy/liquidation	5	4	2	4	5	4
20. Judicial handling of rehabilitation	5	4	3	4	5	5

Source: Asian Development Bank, Local Study of Insolvency Law Regimes (1998).

Table 4. Summary Evaluation of Processes and Predictability of (Positive) Outcome for Creditors in Debt Recovery Procedures

Cost, efficiency, and time required for debt recovery process for:	Indonesia	Korea	Malaysia	Philippines	Taiwan Province of China	Thailand
1. Secured creditors (Lines 1-4 in Table 3)*	4.5	2	2	3	2.5	2.5
2. Unsecured creditors (Line 5 – Table 3)*	4	2	2	5	3	2.5
3. Bankruptcy/liquidation (Line 6 in Table 3)*	4	2	3	5	3	2.5
Predictability of positive outcome						
4. Secured creditors (Lines 15-17 in Table 3)	5	3	2	2.5	1.5	2.5
5. Unsecured creditors (Line 18 in Table 3)	5	3	2	3	1	2
6. Bankruptcy/liquidation (Line 19 in Table 3)	5	4	2	4	5	4
7. Rehabilitation (Line 20 in Table 3)	5	4	3	4	5	5 (since 98)
Total score: Secured (1+3+4+6+7)	23.5	15	12	18.5	17	16.5
Total score: Unsecured (2+3+5+6+7)	23	15	12	21	17	16
Ranking of creditors' interests (Secured and Unsecured)	6	2	1	5	4	3

* Recalculated to scale 1-5 from scale 1-3 in Table 3; rounded to 1 decimal; 1= very strongly in favor of creditors. Source: Asian Development Bank, Local Study of Insolvency Law Regimes (1998).

B. Economic Regime Characteristics

In this subsection we focus on two different issues. First, we describe the six economies in terms of some legal and political characteristics with a bearing on corporate and bank behavior in financial decision making (Tables 5 and 6). Second, we present some descriptive financial statistics (Table 7) and sample correlations (Tables 8 and 9) using firm-level data for economies pertaining to the period before the crisis in order to examine firm behavior and characteristics.

Our contention is that debtors' rights become stronger if corporations enjoy informal and loose relations with banks and the government. The first category describes the sources of banks' permissiveness in credit decisions (Table 5). In all the economies in the sample, with the exception of Malaysia and Taiwan Province of China, factors other than risk such as

employment (Korea) or connected lending (Thailand) are important in credit decisions. Only in Taiwan Province of China is risk-assessment considered adequate. Second, we use the sum of state and family ownership as a proxy for the political strength of vested interests favoring owners of corporations (line 6 in Table 5). Indonesia ranks as the highest (82.5 percent), closely followed by Malaysia (77.4 percent) and Thailand (76.0 percent). On the other hand, Korea has the most diluted ownership structure (44.5 percent) with the Philippines (49.6 percent) and Taiwan Province of China (48.8 percent). Therefore, these statistics point to a high degree of loose and informal relationship of companies with banks and state in all economies, although in Taiwan Province of China and Malaysia credit allocation seems to be handled by banks with less government interference.

We can gain additional insight into the legal and political environment in these six economies by examining indicators of “rule of law” compiled by La Porta et al (1996) that include estimates for corruption, rule of law, efficiency of judicial system, risk of expropriation, risk of repudiation, and rating of accounting standards (Table 6).¹³ These indicators have been ranked such that the lower scores suggest a weak rule of law and highest risk. Their findings are consistent with ours (in Table 4)¹⁴ in terms of laws pertaining to corporate insolvency – Malaysia and Taiwan Province of China generally have the strongest rules of law, while Indonesia and the Philippines have the weakest laws.

In sum, the legal and political characteristics help explain the debtor-orientation of insolvency procedures in Indonesia and the Philippines and the relatively strong creditor-orientation in the remaining economies, especially in Malaysia. Where political influences on lending decisions are strong, we expect that the degree of creditor protection in insolvency procedures will matter less for lending decisions.

¹³ Except for the last two columns, all indicators are computed or re-scaled from other sources (such as the International Country Risk Guide) using a scale of 0 to 10.

¹⁴ However as noted earlier, our lower rankings correspond to strong creditor-oriented procedures (as in Malaysia) and higher to debtor-friendly procedures (as in Indonesia).

Table 5. Aspects of Corporate Relations with Banks and State

	Indonesia	Korea	Malaysia	Philippines	Taiwan Province of China	Thailand
1. Sources of banks' permissiveness in credit decisions*	Lack of information hinder risk assessment. Central bank support of banks bailing out corporations	Factors other than risk, such as employment, are often involved in credit decisions	Some weakness in risk assessment capability	Significant influences of politicians favoring projects and "relations", although efforts made by central bank to limit related lending	Adequate risk-assessment. In case of large corporate distress, the Ministry of Finance coordinates grace period	Strong ties between politicians, banks, and conglomerates. Lending to friendly parties without risk assessment.
2. Banks' ownership of equity	Restricted	Restricted but control is possible	Restricted	Legal	Generally not permitted	Restricted
3. Banks' representation on corporate boards*	Rare	Usual with equity	Rare	Usual even without ownership	No	Usual
4. State's control of publicly traded companies	15.2	19.9	34.8	3.2	3.3	24.1
5. Families' control of publicly traded companies	67.3	24.6	42.6	46.4	45.5	51.9
6. State's plus families' control**	82.5	44.5	77.4	49.6	48.8	76.0

* Source: Asian Development Bank, Local Study of Insolvency Law Regimes (1998).

** Source: Claessens (1999).

Table 6. Rule of Law¹⁵

	Efficiency of judicial system	Rule of Law	Corruption	Risk of Expropriation	Risk of Repudiation	Rating of Accounting Standards
Indonesia	2.50	3.98	2.15	7.16	6.09	N.A
Korea	6.00	5.35	5.30	8.31	8.59	62
Malaysia	9.00	6.78	7.38	7.95	7.43	76
Philippines	4.75	2.73	2.92	5.22	4.80	65
Taiwan Province of China	6.75	8.52	6.85	9.12	9.16	65
Thailand	3.25	6.25	5.18	7.42	7.57	64

Source: La Porta et al (1996).

In order to obtain a more detailed and comprehensive picture of corporate behavior and to analyze variations across economies, we computed a variety of pre-crisis firm-level financial indicators for *listed manufacturing and mining companies* in the six economies covering the period 1991-95. The data set appears in the form of balance sheets, income statements, and financial ratios of individual companies. The data for Indonesia, Korea, Malaysia, and Thailand were obtained from the International Finance Corporation (IFC) database that generally covers 1991-94, and for the Philippines and Taiwan Province of China from the Financial Times Extel database that covers 1993-95. Figures for shareholder concentration for all the six economies were available from the Extel database.¹⁶ Since shareholder data for several firms in the Philippines were missing from the Extel database, we filled in some of the missing information from the Global Corporate Finance Database (1998).

We present a variety of descriptive statistics (Table 7) for the latest year (1994 or 1995), followed by correlations between selected financial indicators (Tables 8 and 9),¹⁷ pertaining to firm performance, asset specificity, capital structures, shareholder concentration, and age of firms. The following analysis pertains only to firms *within* economies in contrast to that in Section V which relates to cross-economy analysis.

1. Descriptive Statistics

The first measure of performance or expected performance, is the average Q across all firms. It is the ratio of market value to book value of a firm¹⁸ for 1994 or 1995 depending on the

¹⁵ As indicated earlier, the lower scores in this table signify a weaker rule of law and higher risk.

¹⁶ About 30 firms in Korea had missing shareholder data.

¹⁷ As noted earlier, we only performed correlations and not regressions for the following reasons: First, our objective is to explore general patterns and relationships among sets of variables in the six economies and not determination of or causation between variables. Moreover, it is highly difficult to establish exogeneity in financial and accounting data.

¹⁸ In particular, it is computed as (market value of the firm+liabilities)/(shareholder's equity+liabilities).

economy. As is widely known, this variable measures intangible assets that provide growth opportunities, and therefore higher expected performance of firms. Higher values of Q are expected to stimulate investment. In addition to Q, we have also computed the cumulative value of Q (CumQ) (which captures the change in Q from the first year to the last year or the sum of the changes in Q over each year)¹⁹ and also normalized value of CumQ (CumQ/Q). If the value of CumQ is negative, we contend that the firm was losing its medium -or long-term competitiveness and was approaching economic distress. We observe that Q, CumQ, and CumQ/Q all show substantial variations among the economies. In terms of mean values of Q, Malaysia and Taiwan Province of China enjoyed the highest, and Korea and Indonesia the lowest performance among firms as evaluated by the stock market. As with Q, even CumQ for Malaysia is the highest followed by Taiwan Province of China. The Philippines has the lowest value (-0.218) preceded by Thailand (0.086). In terms of normalized values of CumQ/Q, Malaysia and Taiwan Province of China enjoy the highest, while both the Philippines and Thailand experienced negative ratios (-0.282 and -0.153 respectively).

For comparison with performance in terms of market values, we also examined the sum of the book values of earnings before interest and taxes (CumEBIT) of firms over the same time span as CumQ.²⁰ We construct a normalized variable, CumEBIT divided by total assets (CumEBIT/A). Thailand and Indonesia have the highest average values closely followed by Malaysia. However, the Philippines and Taiwan Province of China have the lowest values. It is noteworthy that the rankings for CumEBIT reverse in relation to CumQ for Indonesia, Taiwan Province of China, and Thailand.

We have also computed the proportion of companies in each economy with negative CumQ's. Thailand, the Philippines, and Indonesia have a much greater proportion of companies in decline in terms of growth opportunities as evaluated by the change in the market value of the companies (CumQ) than Taiwan Province of China, Korea, or Malaysia (as of 1994 or 1995 depending on the economy). The percentage of companies with negative values for CumQ in Thailand are 65.5 percent, 33.3 percent in the Philippines, and 32.3 percent in Indonesia, followed by 24.7 percent in Taiwan Province of China, 19.0 in Korea, and 16.9 percent in Malaysia. This indicator provides information about the state of companies a few years prior to the Asian crisis, and supports the Pomerleano (1998) contention that corporate performance was declining in the crisis economies. Considering these indicators of looming crisis, it is quite surprising that Malaysia was relatively hard hit by the crisis while the Philippines was not.

However, the number of firms experiencing declining book values over the years is dramatically lower if earnings are evaluated using book values in contrast to the stock market. The proportion of firms with negative CumEBIT is 1.6 percent for Indonesia, 1.3 percent for Korea, 3.6 percent for Malaysia, 18.0 percent for the Philippines, 3.9 percent for Taiwan

¹⁹ Note that due to data limitations, CumQ are calculated over the period 1993-95 for the Philippines and Taiwan Province of China, 1992-94 for Indonesia, and 1991-94 for Thailand, Korea and Malaysia.

²⁰ Except for Indonesia, where though CumEBIT is available for 1991-94, CumQ is only available for 1992-94 since the series for the market value of firms were missing for 1991.

Province of China, and 3.6 percent for Thailand. Except for the case of the Philippines where the proportion is relatively high, all the economies show an insignificant number of companies on the path to distress. These striking differences between the market and book value of companies heading towards distress, lead us to conclude that stock markets were probably providing substantial information about the predicament of companies which could easily have been hidden on the books. Thus, the development of financial markets in emerging market economies during the 1990s was valuable at least as far as providing information about the state of listed companies is concerned, if not from the point of view of financing investment.

The second category of indicators relates to the degree of “asset-specificity”. It is proxied by the average coefficient, for each economy, of variations in the market to book value of firms (s.d. $Q/Avg(Q)$). This variable estimates the degree to which firms’ investments are irreversible. In other word, the degree to which market or liquidation values of assets are below their replacement values (Banerjee and Wihlborg, 1999). We observe that Thailand and Malaysia have high specificity while Korea and Taiwan Province of China in particular have low specificity.

The third category pertains to firms’ capital structures or leverage (L/A). Total liabilities are further divided into short-term liabilities and long-term liabilities. The average L/A is by far the highest in Korea (0.71) followed by Indonesia and Thailand each having ratios of 0.47. Malaysia had the lowest ratio of 0.36. However, the shares of short-term to total liabilities are highest in Malaysia (0.79) and Indonesia (0.79), followed by Korea (0.62), Taiwan Province of China (0.36) and the Philippines (0.31).

Finally, we have computed average values of ownership concentration for both the largest shareholder and the sum of three largest shareholders. High level of concentration, through the non-dilution of shares by family and state, is expected to result in distortions in the stock market. Therefore, dilution of control and information is positively related to the development of the stock market. These factors may affect firms’ ability and willingness to obtain debt as well as performance. Both variables suggest that Indonesia has the highest degree of shareholder concentration for listed firms (49.7 percent for top shareholder) and Taiwan Province of China the lowest (12.5 percent) with Korea (19.5 percent) slightly higher than Taiwan Province of China. Malaysia, the Philippines and Thailand have means ranging from 30 percent to 36 percent. These figures are consistent with those obtained for state and families’ control of publicly traded companies in Table 5, with Indonesia having the largest and Korea the smallest ownership structure.

Table 7. Descriptive Statistics

	Indonesia	Korea	Malaysia	Philippines	Taiwan Province of China	Thailand
Q						
Min	.599	.628	.743	.164	.639	.777
Max	5.588	1.657	5.366	3.828	5.151	10.623
Mean	1.397	1.117	2.546	1.495	2.115	1.876
s.d.	.892	.166	.987	.651	.721	1.617
Cum (Q)						
Min	-1.231	-.128	-2.697	-3.406	-1.244	-1.775
Max	4.481	.523	4.048	1.058	3.265	8.766
Mean	.265	.129	.745	-.218	.416	.086
s.d.	.770	.136	1.077	1.084	.714	1.414
CumQ/Q						
Min	-.941	-.115	-1.305	-3.058	-.830	-2.180
Max	.802	.450	.788	.615	1.000	.825
Mean	.105	.110	.233	-.282	.152	-.153
s.d.	.345	.114	.373	.958	.284	.425
CumEBIT/A						
Min	-.038	.038	-.123	-1.199	-.045	-.255
Max	1.683	.521	.981	.761	.580	1.897
Mean	.345	.263	.322	.107	.183	.355
s.d.	.289	.092	.214	.331	.126	.281
s.d.(Q)/Avg(Q)						
Min	.022	.058	.057	.009	.024	.091
Max	.712	.441	.919	.814	.522	1.074
Mean	.217	.158	.328	.250	.177	.392
s.d.	.129	.079	.163	.173	.012	.193
Liabilities/Assets						
Min	.103	.369	.052	.003	.119	.063
Max	.793	.961	.705	.930	.678	.824
Mean	.470	.706	.362	.385	.432	.470
s.d.	.175	.125	.169	.212	.126	.164
S.T. Liabilities/Assets						
Min	.056	.146	.015	.003	.001	...
Max	.769	.722	.570	.409	.554	...
Mean	.363	.436	.274	.139	.165	...
s.d.	.171	.126	.139	.107	.120	...
L.T. Liabilities/Assets						
Min	.0003	.066	.000	.005	.0001	...
Max	.449	.522	.475	.344	.409	...
Mean	.129	.269	.089	.131	.110	...
s.d.	.123	.096	.106	.110	.087	...
Sum of Three Largest Shareholders (%)						
Min	23.8	7.5	1.2	1.2	.43	14.3
Max	100.4	62.9	81.5	90.2	89.9	75.3
Mean	67.0	28.3	50.6	60.1	26.0	48.3
s.d.	15.9	13.0	18.3	24.9	23.1	15.2
Top Shareholder (%)						
Min	8.7	2.2	.61	1.2	.43	6.9
Max	85.0	49.0	75.0	71.7	45.0	65.0
Mean	49.7	19.5	34.1	36.4	12.5	30.8
s.d.	18.9	10.4	18.3	17.6	10.3	15.8

2. Correlations

The characteristics of the economic regimes may also be detected by analysis of correlations *within* each economy between liabilities to assets ratios and ownership concentration on the one hand, and variables revealing performance and behavior on the other. The correlations for liabilities to assets are reported in Table 8 and for ownership share of the largest shareholder in Table 9.²¹

a. *Liabilities to Assets*

The first set of correlations are between liabilities to assets ratio and measures of performance using market indicators and book indicators (Table 8). Capital structure theory generally predicts a negative relationship between L/A and expected performance (Sundararajan, 1985 and Frankel, 1992), because intangible assets creating growth opportunities are relatively heavily equity financed (Titman and Wessels, 1988). We observe a strong negative correlation between L/A and Q only in Taiwan Province of China. The (total) liabilities to assets ratio is negatively correlated with the change in Q (CumQ/Q) in Korea (-0.2345) and Taiwan Province of China (-0.2726), but positively correlated in the Philippines (0.2338), and essentially non-correlated in other economies. Thus, firms with declining values of intangibles tend to have high debt ratios in these economies. Firms with declining competitiveness in Korea and Taiwan Province of China may have been particularly vulnerable to large shocks. This vulnerability would have been further enhanced if highly indebted firms held significant short-term debt. As noted above, Indonesia and Malaysia have the highest shares of short-term debt while the Philippines has the lowest. We can infer that Korean firms in particular, were vulnerable to shocks since they held a relatively large share of short-term debt as a proportion of total debt, had highest total debt-asset ratios among the six economies, and had debt ratios that were strongly correlated with declining performance. High short-term debt to total debt in Malaysia and Indonesia could be a potential source of vulnerability. However, debt is not related to declining performance in these economies, and Malaysia also enjoyed a low debt-asset ratio (0.36). Therefore, we cannot form a firm conclusion regarding the relationship between debt and performance for Malaysia and Indonesia simply based on L/A. Finally, although L/A is negatively related to both Q and CumQ in Taiwan Province of China, the level of short-term debt is low which may dampen the potential source of vulnerability.

When we use CumEBIT as a measure of performance, the theoretical relationships are not clear. Traditional theories such as the “static trade-off”²² or the “pecking order”²³ theories have been used as arguments for profitable firms in choosing debt over equity. The latter theory states that firms prefer financing first through retained earnings, then debt, and finally through

²¹ As indicated earlier, Hussain and Wihlborg (1999) contain a fuller cross-section and panel analyses of firms’ capital structures, performance, dividend policy, and ownership concentration in the six economies.

²² Under this approach, firms choose debt levels by estimating the benefits and costs of increasing debt in their portfolio (see Jensen and Meckling (1976)).

²³ See, for example, Donaldson (1961).

issuing equity. This theory proposes that it is cheaper to borrow from banks than to sell shares. Alternatively, one study finds for the case of the US that profitable firms resort to an equity mode of financing.²⁴ Our results for five economies are consistent with this study; we also find negative correlations between L/A and CumEBIT, except for Korea where the correlations are insignificant. Apparently, profitable firms in Asian economies were relying less on debt than equity.

Second, high asset specificity (s.d. $Q/\text{Avg}(Q)$) is expected to lower firms' capacity to carry debt, because if insolvency occurs the assets cannot be liquidated at their replacement values (Banerjee and Wihlborg, 1999). Economy differences in terms of specificity or irreversibility may be created either by differences in the degree of firm-specificity of assets or by differences in insolvency procedures. If insolvency procedures do not allow for speedy liquidation of assets, then the values of these assets to creditors fall short of their replacement values. In other words, the assets' values as security is reduced. We observe that the debt-asset ratio (L/A) is negatively correlated or uncorrelated with the specificity proxy. In the case of Malaysia (or lack thereof in Korea), it is arguable that asset-specificity depends *more* on the nature of firms' assets than on the nature of insolvency procedures, since in both economies creditors' position seemed relatively strong. Thus, asset-specificity, and not insolvency procedures, may partly help explain the fact that Malaysia has the lowest debt to asset ratio (L/A), while Korea has the highest.

We have also examined whether age of firms determines their reliance on debt or equity (Table 8). It may be expected that firms eventually "graduate" from indirect sources of finance (banks) to direct sources (bonds or stocks)²⁵ once their reputation has been established as a result of repeated monitoring by banks. This is because monitoring is expensive and firms would ultimately prefer to rely on direct sources of finance for a portion of their funding for investment (Diamond, 1991 and Hussain, 1995). We have included variables for age as measured by date of establishment (Age1) and date of stock exchange listing (Age2).²⁶ We would expect liabilities (primarily bank debt in these economies) to assets ratio to be negatively correlated with both Age1 and Age2. The results are somewhat mixed. We find that, in general, the correlation coefficients are more significant for Age1 than Age2. Moreover, except for Malaysia where old firms rely less on borrowing, old firms in the Philippines, Taiwan Province of China, Thailand, and less so in Korea rely more on borrowing, contrary to what we expect. It is also quite surprising that the coefficients for Age1 are positive but for Age 2 are negative in both Korea and the Philippines. It signifies that old *listed* firms rely less on borrowing but old *established* firms rely more, once their reputation has been established through consistent monitoring by banks.

²⁴ This study considered 367 American firms that went public in 1983 (see *The Economist*, October 8, 1994, p.88).

²⁵ We were not able to distinguish between bank borrowings and bonds as components of liabilities in our dataset although bank borrowing typically constitutes a highly significant proportion of liabilities.

²⁶ Note that both Age1 and Age2 were missing for Indonesia and only Age1 was missing for Thailand.

b. Shareholder Concentration

As noted, shareholder concentration in the equity market is an important indicator of distortions in the stock market. It also may influence the firm's choices of financing. The argument is that large shareholders may act as monopsonists in the market for equity by continuing to hold on to their high initial purchases of shareholdings, preventing the secondary market from developing, and thereby increasing the firms' reliance on banks for financing (Hussain, 1995 and Zeckhauser and Pound, 1990). Therefore, we may expect a positive relationship between shareholder concentration and leverage. We confirm that the share of the top shareholder (Table 9) is strongly correlated across firms with the share of the top three shareholders, as well as with the share of state plus family ownership across economies shown in Table 5. Ownership concentration is negatively correlated with liabilities to assets in the creditor-oriented insolvency regime of Malaysia (-0.3385), but positively correlated in the more debtor-friendly Philippines (0.3171) and Thailand (0.2053). It is plausible that the insolvency procedures induced owners to be more prudent in Malaysia in terms of less reliance on debt, where we observe that the short-term debt to assets (though high as proportion of total debt) is also negatively correlated with ownership concentration. As noted, the average concentration ratio is not high in Malaysia. The opposite relation holds for the Philippines as compared to Malaysia where the correlation is positive and the regime is debtor-friendly.

Second, ownership concentration may be expected to raise both the cost of debt and the cost of equity (especially dividends) and hence may increase the cost of capital (Zeckhauser and Pound, 1990 and Hussain, 1995). High cost of capital for firms would dampen the performance measures. On the contrary, concentration is positively related to growth opportunities (Q) in all economies, especially Indonesia and Korea. Also, except for Malaysia, concentration is positively related to improved growth opportunities (CumQ/Q) in Taiwan Province of China and Thailand, in particular. In terms of CumEBIT/A, the results are mixed. Although we find a positive relationship for Malaysia and Indonesia, Philippines and Korea are negatively related. Thus, although high leverage is related to low firm performance (Table 8), ownership concentration may be improving performance evaluated by the market, which is in contrast to what we expect. However, when performance is estimated by book value of earnings, the evidence is not clear.

Finally, we related the two measures of age (Age1 and Age2) with concentration. We may expect firms to be increasingly owned by small shareholders over time with the development of the equity market. In Taiwan Province of China and Korea, both measures of age are negatively correlated with concentration signifying that old firms are more diluted in terms of shareholdings, as expected. However, in the Philippines and, to a lesser extent, Malaysia and Thailand, old firms seem to be less diluted which may be attributed to a variety of factors ranging from family ownership to ineffective bank monitoring. In other words, large shareholders continue to retain substantial control of these firms in some economies. Perhaps, the rapid development of the stock markets has been most beneficial for *new* firms which are increasingly being owned by small shareholders.

Summarizing these indicators of corporate behavior in the six economies before the crisis, growth opportunities associated with intangible assets were positively related, or had improved with greater ownership concentration, except in Malaysia. However, in Malaysia concentration seems to have induced more prudent debt policy, but we also find that concentration is long-lasting. In the Philippines and Thailand in particular, ownership concentration seems to have induced less prudent debt policies. These differences may be explained by the relative creditor-orientation of insolvency procedures in Malaysia and debtor-orientation in the Philippines and Thailand.

There are indications that high debt, especially high short-term debt policy, particularly in Korea left firms with declining growth opportunities vulnerable to severe economic shocks. Indonesian and Malaysian firms with high debt may also have faced vulnerability due to their high share of short-term debt in total debt. However, debt ratios were generally low in Malaysia.

In the next section we ask which of the economy characteristics discussed in this section explain average capital structures, the depth of recession, and the duration of the crisis across economies.

Table 8. Correlations for Liabilities to Assets with Selected Variables²⁷

	Indonesia	Korea	Malaysia	Philippines	Taiwan Province of China	Thailand
Number of observations	62	79	83	39	77	55
Q	-.0204	.0920	-.0028	.0766	-.5875	.1144
CumQ/Q	.0767	-.2345	-.0857	.2338	-.2726	.0662
CumEBIT/A	-.3610	.0420	-.2470	-.0530	-.5660	-.2630
s.d. Q/Avg(Q)	-.2828	.0013	.1075	-.0046	-.3527	.0406
Age1 (1994-date established)	---	.0632	-.2578	.2005	.2281	---
Age2 (1994-date listed)	---	-.0998	-.1278	-.1318	.0570	.1278

²⁷Note that the correlations for the Philippines and Taiwan Province of China are for 1995 and the rest of the four economies for 1994.

Table 9. Correlations for
Top Shareholder with Selected Variables²⁸

	Indonesia	Korea	Malaysia	Philippines	Taiwan Province of China	Thailand
Number of observations	60	41	76	21	46	54
Liabilities/Assets	-.0492	-.0351	-.3385	.3171	.0559	.2053
S.T. Liabilities/Assets	-.0474	-.1469	-.2165	.2384	.0338	---
L.T. Liabilities/Assets	-.0176	.1334	-.2664	.0413	-.0781	---
Q	.1760	.2057	.0834	.0855	.0546	.0221
CumQ/Q	.1284	.0719	-.1618	.1020	.3068	.2813
CumEBIT/A	.2140	-.1590	.3260	-.2370	.0390	.0370
Age1 (1994-date established)	---	-.2226	.1438	.2771	-.2155	---
Age 2 (1994-date listed)	---	-.0894	.0757	.1110	-.1440	.0883

V. INSOLVENCY PROCEDURES, CAPITAL STRUCTURE AND CRISIS CHARACTERISTICS

In this section, we turn first to capital structures of firms in the six economies, asking whether insolvency procedures and other economic regime characteristics before the crisis adversely affected debt-equity ratios thereby increasing the likelihood of financial distress during the crisis. Thereafter, we turn to the depth of recessions in each economy as measured by the fall in GDP growth rate and banks' non-performing loans. Lastly, we discuss how insolvency procedures may influence the duration of recessions and compare our predictions for duration based on insolvency procedures with the forecasts of GDP growth. Table 10 presents correlations and Table 11 rank correlations. Note that a high rank score in the rank correlation table indicates a less "favorable" score.

²⁸ Note that the correlations for the Philippines and Taiwan Province of China are for 1995 and the rest of the four economies for 1994.

Table 10. Cross-Economy Correlations

Values:	Rule of Law ¹	Corruption Index ¹	Ownership (state & family) ²	Top Shareholder	Total Secured	Total Unsecured	Total Secured & Unsecured	
Indonesia	3.98	2.15	82.50	49.71	23.50	23.00	6.00	
Korea	5.35	5.30	44.50	19.52	15.00	15.00	2.00	
Malaysia	6.78	7.38	77.40	34.08	12.00	12.00	1.00	
Philippines	2.73	2.92	49.60	36.39	18.50	21.00	5.00	
Taiwan Province of China	8.52	6.85	48.80	12.51	17.00	17.00	4.00	
Thailand	6.25	5.18	76.00	30.79	16.50	16.00	3.00	
	L/A	Q	CumQ					
Indonesia	0.47	1.40	0.27					
Korea	0.71	1.12	0.13					
Malaysia	0.36	2.55	0.74					
Philippines	0.38	1.49	-0.22					
Taiwan Province of China	0.43	2.11	0.42					
Thailand	0.47	1.88	0.09					
Recession Depth and Duration:	Economic Growth (1997-98)³	Non-Performing Loans⁴ (1998 in percent)	Exchange Rate (% Ch.)⁵ 6/30/97 - 5/8/98	Stock Market (% Ch.)⁵ 6/30/97 - 5/8/98	Econ. Growth Forecast 1999⁶ (consensus as of 4/99)	Econ. Growth Forecast 2000⁶ (consensus as of 4/99)		
Indonesia	-13.70	32.00	-73.80	-40.00	-4.00	1.80		
Korea	-5.50	28.00	-36.20	-50.00	1.70	4.00		
Malaysia	-6.80	20.00	-33.60	-46.20	0.50	2.40		
Philippines	-0.50	9.00	-33.00	-21.30	1.40	3.30		
Taiwan Province of China	4.90	3.80	-13.80	-9.10	0.00	4.60		
Thailand	-8.00	27.50	-36.00	-26.70	-0.40	2.70		
Correlations:	Rule of Law	Corruption Index	Ownership (state & family)	Top Shareholder	Total Secured	Total Unsecured	Total Secured & Unsecured	
L/A	-0.041	-0.061	-0.400	-0.346	-0.026	-0.111	-0.201	
Q	0.657	0.723	0.358	-0.146	-0.543	-0.567	-0.446	
CumQ	0.687	0.691	0.408	-0.113	-0.439	-0.581	-0.509	
Recession Depth and Duration:	Rule of Law	Corruption Index	Ownership (state & family)	Top Shareholder	Total Secured	Total Unsecured	Total Secured & Unsecured	L/A
Economic Growth (1997-98)	0.394	0.431	-0.771	-0.760	-0.312	-0.165	-0.056	-0.173
Non-Performing Loans (1998)	-0.275	-0.317	0.573	0.497	0.191	0.019	-0.097	0.490
Exchange Rate (% Ch.)	0.596	0.725	-0.625	-0.854	-0.670	-0.564	-0.462	-0.115
Stock Markets (% Ch.)	0.247	0.028	-0.313	-0.341	0.225	0.303	0.454	-0.460
Econ. Growth Forecast 1999	0.511	0.636	-0.800	-0.901	-0.583	-0.464	-0.381	0.045
Econ. Growth Forecast 2000	0.428	0.424	-0.906	-0.925	-0.313	-0.236	-0.164	0.333

¹La Porta et al (1996).²Claessens (1999).³International Financial Statistics.⁴J.P. Morgan 1998b, in World Bank: Global Economic Prospects (1998).⁵Goldstein (1998).⁶Economist Magazine (April 17, 1999) poll of forecasters: Deutsche Bank, EIU, Goldman Sachs, HSBC, ING Barings, J.P. Morgan, Merrill Lynch, Salomon Smith Barney, Warburg Dillon Read.

Table 11. Cross-Economy Ranks & Rank Correlations
(high rank score indicates less "favorable" score)

Ranks:	Rule of Law ¹	Corruption Index ¹	Ownership (state & family) ²	Top Shareholder	Total Secured	Total Unsecured	Total Secured & Unsecured	
Indonesia	5	6	6	6	6	6	6	
Korea	4	3	1	2	2	2	2	
Malaysia	2	1	5	4	1	1	1	
Philippines	6	5	3	5	5	5	5	
Taiwan Province of China	1	2	2	1	4	4	4	
Thailand	3	4	4	3	3	3	3	
	L/A	Q	CumQ					
Indonesia	4	5	3					
Korea	6	6	4					
Malaysia	1	1	1					
Philippines	2	4	6					
Taiwan Province of China	3	2	2					
Thailand	5	3	5					
Recession Depth and Duration:	Economic Growth (1997-98) ³	Non-Performing Loans ⁴ (1998 in percent)	Exchange Rate (% Ch.) ⁵ 6/30/97 - 5/8/98	Stock Market (% Ch.) ⁵ 6/30/97 - 5/8/98	Econ. Growth Forecast 1999 ⁶ (consensus as of 4/99)	Econ. Growth Forecast 2000 ⁶ (consensus as of 4/99)		
Indonesia	6	6	6	4	6	6		
Korea	3	5	5	6	2	2		
Malaysia	4	3	3	5	4	5		
Philippines	2	2	2	2	3	3		
Taiwan Province of China	1	1	1	1	1	1		
Thailand	5	4	4	3	5	4		
Rank Correlations:	Rule of Law	Corruption Index	Ownership (state & family)	Top Shareholder	Total Secured	Total Unsecured	Total Secured & Unsecured	
L/A	0.143	0.314	-0.371	-0.314	0.029	0.029	0.029	
Q	0.714	0.657	-0.257	0.200	0.371	0.371	0.371	
CumQ	0.714	0.657	-0.257	0.200	0.371	0.371	0.371	
Recession Depth and Duration:	Rule of Law	Corruption Index	Ownership (state & family)	Top Shareholder	Total Secured	Total Unsecured	Total Secured & Unsecured	L/A
Economic Growth (1997-98)	0.257	0.429	0.771	0.600	0.086	0.086	0.086	0.257
Non-Performing Loans (1998)	0.429	0.486	0.371	0.429	0.086	0.086	0.086	0.600
Exchange Rate (% Ch.)	0.429	0.486	0.371	0.429	0.086	0.086	0.086	0.600
Stock Markets (% Ch.)	0.143	-0.143	0.086	0.143	-0.543	-0.543	-0.543	0.314
Econ. Growth Forecast 1999	0.371	0.543	0.886	0.771	0.257	0.257	0.257	0.029
Econ. Growth Forecast 2000	0.314	0.371	0.943	0.829	0.143	0.143	0.143	-0.200

¹La Porta et al (1996).

²Claessens (1999).

³International Financial Statistics.

⁴J.P. Morgan 1998b, in World Bank: Global Economic Prospects (1998).

⁵Goldstein (1998).

⁶Economist Magazine (April 17, 1999) poll of forecasters: Deutsche Bank, EIU, Goldman Sachs, HSBC, ING Barings, J.P. Morgan, Merrill Lynch, Salomon Smith Barney, Warburg Dillon Read.

A. Capital Structures

In the previous section, we examined correlations between liabilities to assets (L/A) and important financial measures for firms within each economy. In this subsection, we again focus on L/A but specifically on *average* L/A for each economy and attempt to explore how this variable is related to various regime characteristics identified in the previous section. Further, we relate the pre-crisis L/A to variables which indicate the depth and duration of the crisis in subsequent subsections. Here we make several observations.

First, we know that Korea had the highest average L/A and the second most creditor-friendly procedures, and Malaysia had the lowest average L/A and the most creditor-friendly procedures (see also Table 10). However, the components of short-term debt in total debt were highest in Malaysia and Indonesia, followed by Korea, and lowest in the Philippines.

Second, if an economy has strongly creditor-oriented insolvency procedures associated with hard budget constraints imposed by banks such as in Malaysia, we could expect it to have the highest share of debt financing. This supply-side argument presumes that banks enjoy a priority rule at liquidation combined with effective monitoring of loans. When we observe the correlations for creditor-orientation of insolvency procedures and other regime characteristics across economies,²⁹ we find that the average L/A for the six economies is independent of the degree to which insolvency and debt recovery procedures favor secured (“Total Secured”) and unsecured (“Total Unsecured”) creditors (Table 4). Thus, differences in capital structures may not be determined by the relative *supply* of debt in banking systems through the imposition of hard budget constraints on borrowers. Instead, factors that determine the *demand* for debt by borrowing firms in combination with banking systems imposing only soft budget constraints may explain such differences. Under this situation, the government typically owns the banks or significantly subsidizes their lending in the form of “soft budget constraints”.

Third, the correlation table (Table 10) shows that ownership concentration, measured by the top shareholder’s share, is negatively correlated with L/A. As indicated in the previous section, a positive relationship may be expected if large shareholders behave as monopsonists or significant buyers in the market for equity, not diluting their initially-owned shares and increasing the reliance of firms on banks, thus contributing to high levels of L/A (Hussain, 1995 and Zeckhauser and Pound, 1990). However, the rank correlations (Table 11) indicate that in terms of rankings, the index for corruption is positively correlated with L/A³⁰ substantiating that the soft budget constraints in some economies could be explained by political influences on behalf of shareholders. Moreover, we know that the influences of governments and politicians on banks’ lending decisions were important in Indonesia, Korea, the Philippines, and Thailand (Table 5). Except in Korea where the political involvement appears to be in favor of employees, the political involvement may have been more in favor of

²⁹ As noted, low total score and low ranking corresponds to strong creditor-oriented procedures and high total score and high ranking to debtor-friendly procedures.

³⁰ As noted, a high rank score in the rank correlation table indicates a less “favorable” score.

shareholders in other economies. In Taiwan Province of China, the government became involved only in situations when the firms were experiencing serious distress. Taiwan Province of China and Malaysia are the only economies where policies toward banks may have contributed to a reasonably hard budget constraint and we have also noted that both have relatively low debt ratios.

The key results obtained after combining the observations here with those from the previous section are: Malaysia stands out as an economy with prudent market-based mechanism for determining debt structures. Political influences on banks were of little importance and insolvency procedures favored creditors. The employee-orientated insolvency procedures and the lack of effective credit evaluation and monitoring by the banking system in Korea appear to be related to a highly vulnerable debt structure along with high debt ratios and large shares of short-term debt.

B. The Depth of Recession

We have included four variables to proxy for the depth of recession following the outbreak of the Asian crisis in June 1997 (Tables 10 and 11). They are: the economy's GDP growth (1997-98), the share of non-performing loans in the loan-portfolio of banks (1998), exchange rate changes (mid-1997 to mid-1998), and the changes in the stock market values (mid-1997 to mid-1998).³¹

Correlation coefficients between economic growth from 1997 to 1998 and insolvency procedures, and also between economic growth and economic regime characteristics, are reported (Table 10). One hypothesis with respect to the role of insolvency procedures is that the economy with weaker creditor-oriented procedures should have been harder hit by the crisis, because economically-distressed firms would not have been closed down before the crisis. Banks' lending policies and the government's role in these policies would be expected to play an important role (Table 5). In particular, if these policies had contributed to greater lending to inefficient firms, then they may have increased the likelihood of economic and financial distress at the time of the shock leading to a more severe recession. Furthermore, if banks' lending policies had contributed to high liability to debt ratios before the crisis, then the vulnerability to financial distress would have been relatively high. The column "Total Secured" shows that there is a negative correlation (-0.312) between decreased "secured" creditor-orientation and economic growth. A negative correlation implies that the weaker the position of secured creditors (higher score), the more the GDP declines. The correlation under "Total Secured & Unsecured" is near zero, however. The rank correlations for the same variables are also near zero (Table 11). Thus, the contention that insolvency procedures explain the decline in GDP is somewhat weak.

However, the regime characteristics illustrate a clearer picture. The characteristics that are most strongly correlated with economic growth from 1997 to 1998 are "Rule of Law" (0.394),

³¹ GDP growth data for several years are presented in Appendix Table A. Only the figures for 1997-98 are reproduced in Table 10.

the “Corruption Index” (0.431), “Ownership by State and Family” (-0.771) and “Top Shareholder” (-0.760). A high score for rule of law (stronger laws) is associated with a smaller decline in GDP. A high score for the corruption index implies a lack of corruption and also is associated with a smaller decline in GDP. The same result is observed in rank correlations where the coefficient is stronger for corruption than for rule of law. These results are consistent with the argument made above that political and politicians’ influences on banks’ credit allocation were strong in some economies. The strong negative correlations and positive rank correlations between economic growth and the two ownership concentration variables support the same view of recession depth. The sum of state and family ownership is seen as an indicator of strong vested interests with influences on bank behavior and government policies favoring particular firms for non-economic reasons. The political interests may have contributed to forbearance towards non-competitive firms before the crisis but once the crisis hit, the accumulated economic distress was revealed.

The second proxy for the depth of the recession is non-performing loans. Table 12 provides a historical perspective of such loans and shows how bank-portfolios have improved in most economies from the 1980s to the 1990s. Except in Taiwan Province of China, all economies experienced a slight decline in non-performing loans from 1994 to 1996 just before the crisis. Since the Bank for International Settlements (BIS) data are provided by official agencies, non-performing loans may be underestimated. Therefore, we apply a most recent measure that was also presented in the recent World Bank (1998) study using J.P. Morgan (1998) as its original source. This measure is employed in both correlations and rank correlations. Table 13 presents estimates of non-performing loans obtained from private firms whose figures appear to be more realistic than the BIS numbers.

Table 12. Non-performing Loans
as a Percentage of Total Loans

	1980s (average)	1990	1994	1995	1996
Indonesia	...	4.5	12.0	10.4	8.8
Korea	6.7	2.1	1.0	0.9	0.8
Malaysia	30.5	20.4	8.1	5.5	3.9
Philippines	...	7.9	4.7	4.0	3.5
Taiwan Province of China	5.5	1.2	2.0	3.1	3.8
Thailand	15.0	9.7	7.5	7.7	N.A

Sources: Bank for International Settlements, 67th Annual Report (1997), *Bangko Sentral ng Pilipinas* (1999).

Table 13. Estimates of Actual and Peak Non-performing Bank Loans in Selected Asian Economies

	Jardine Fleming (1997) PNPL/TL	Ramos (1998) Goldman Sachs ANPL/TL	Jen (1998) Morgan Stanley ANPL/TL	Peregrine (1997) ANPL/TL	Eschweiler (1998) JP Morgan ANPL/TL	BIS (1997) official estimates for 1996 ANPL/TL	J. P. Morgan (1998b) in World Bank (1998)
Indonesia	16.8	9.0	9.0	15.0	11.0	8.8	32.0
Korea	N.A	14.0	14.0	30.0	17.5	0.8	28.0
Malaysia	15.6	6.0	6.0	15.0	7.5	3.9	20.0
Philippines	13.4	3.0	N.A	7.0	5.5	N.A	9.0
Taiwan	N.A	N.A	N.A	N.A	N.A	N.A	3.8
Province of China							
Thailand	19.3	18.0	18.0	36.0 ^a	17.5	7.7 ^b	27.5

PNPL=Peak nonperforming loans (1997 or 1998).
 ANPL=Actual nonperforming loans (1997 or 1998).
 TL=Total loans.

a. Includes finance companies.

b. Estimates for 1995.

Sources: Goldstein (1998), p. 10; J.P. Morgan (1998b) in World Bank, *Global Economic Prospects* (1998).

The line “Non-Performing Loans” in Table 10 shows its correlations with different economy characteristics. We expect positive correlations between the decreased creditor-orientation (higher score) and the share of non-performing loans. There is no strong result of this kind, however, though the correlation is positive between “Total Secured” and the share of non-performing loans. The rank correlations for the same measure of non-performing loans are near zero, however (Table 11). As with GDP growth, both the correlations and rank correlations suggest that the political influences (“Rule of Law” and the “Corruption Index”) and influences through high ownership concentration are associated with high levels of non-performing loans.

Liabilities to assets ratio is significantly correlated with measures of non-performing loans (0.49 for correlations and 0.60 for rank correlations), although the association between economic growth and the liability to asset ratio is surprisingly not strong. This observation may lead us to infer that variations in political influences among economies in the *quality* of debt may explain more of the decline in their GDPs than political influences on the *size* of overall debt. But we also know that short-term debt constitutes a large proportion of total debt for several economies which may again say something about the quality and vulnerability of debt.

The last two measures of the depth of recession are changes in exchange rates and stock market values which would be expected to have similar relationships with the insolvency procedure variable (Total Secured & Unsecured) as GDP growth. The correlation coefficients for exchange rate changes (decrease represents percentage depreciation) with the insolvency variable have the correct signs and are high (-0.462), with Total Secured even higher than

Total Unsecured (-0.670 vs. -0.564). Moreover, coefficients for all the rule of law and concentration variables are also significantly high, in line with our expectations, for both correlations and rank correlations. The stock market values are, surprisingly, giving us opposite signs with the insolvency variable (0.454), which is in contrast to what we expect. The relationship suggests that debtor-oriented procedures are associated with smaller declines in the stock markets. However, the political and concentration variables have the correct relationships but of smaller significance than with exchange rates. Finally, each economy's average Q and CumQ are also related to the political and institutional indicators (Tables 10 and 11). Declining values of these measures can be treated as signals of future distress for listed firms evaluated during the "good years". As expected, these stock market performance measures are strongly correlated with the political environment, shareholder concentration, and the orientation of insolvency procedures. In other words, a weak rule of law, high corruption, large concentration, and debtor-oriented insolvency procedures are all related to the lack of future growth opportunities of firms across economies.

Although the correlations are consistent with the view that political and informal influences on the economy contributed to the depth of the recession in individual economies, both Malaysia and the Philippines are anomalies. Malaysia is the economy that scores the highest, or almost the highest, on creditor-orientation of insolvency procedures, rule of law, and lack of corruption. Also, bank lending was relatively free from political influences. Nevertheless, the economy was hard hit in terms of declines in GDP. The Philippines, on the other hand, scores relatively low on the same characteristics but economic growth declined little. One may speculate that changes in the political direction of the two economies during the crisis influenced expectations about future conditions for economic activity.³²

C. The Duration of the Crisis

Although the differences in insolvency procedures do not seem to explain much of the differences in the depth of recession, the procedures may be important for the relative ability of economies to rehabilitate firms in financial distress and to reallocate capital from firms in economic distress to more productive ventures. In Table 10 (11), we observe a negative (positive rank) correlation between the score for orientation of insolvency procedures and published growth forecasts for 1999 and 2000,³³ as expected.³⁴ This means that economies with "debtor-friendly" procedures have a lower future GDP growth and those with "creditor-oriented" procedures have a higher future GDP growth. The correlations are stronger for procedures relating to secured financing than unsecured financing and for 1999 than for 2000. Moreover, the political and concentration variables in these economies seem to have a

³² As noted in the introduction, the existence of sound macroeconomic policies in association with extensive reforms before the crisis may have softened the impact of the crisis on the Philippines.

³³ See *The Economist* (April 17, 1999).

³⁴ Again note that a higher score for insolvency procedures relates to debtor-friendly procedures and a lower score to creditor-oriented procedures (see Table 4).

formidable impact on the economic forecasts, with all the correct signs for correlations and rank correlations.

However, to predict the order in which the economies will restore economic health, we focus not only on the total scores for orientation of procedures but also on the scores capturing the ability to rehabilitate firms (Table 3). Line 9 (“time for formal reorganization”), line 10 (“time for informal workout”), line 13 (“workouts preferred because bankruptcy procedures are a real alternative”), and line 6 (“process for winding up insolvent corporations”) are indicators of the speed and effectiveness with which firms may be rehabilitated or assets of firms may be reallocated. Korea stands out as the economy that would be expected to rehabilitate firms relatively fast. The time for formal and informal workout is short and the government encourages informal workouts. The process for winding up insolvent corporations is also relatively efficient. At the other extreme, Indonesia and the Philippines have time consuming and ineffective procedures, and the impact of the law on incentives for informal workouts is negative. In Taiwan Province of China and Thailand, the procedures are highly time consuming but in both economies as well as in Malaysia, the existence of bankruptcy law provides positive incentives for informal workouts. Thailand and Indonesia have had new legal procedures for reorganization since 1998. It is not likely that the existence of new procedures on their books will have an immediate effect on their court systems’ ability to handle reorganizations.

In summary, insolvency procedures and economic regime characteristics of these economies appear to have a strong impact on the duration of the crisis. We expect Korea to restore economic growth the fastest, followed by Malaysia. Taiwan Province of China, the Philippines, and Thailand will be in the intermediate range, while Indonesia is expected to lag. We can compare these predictions with individual economies’ growth forecasts for 1999 and 2000 (Table 10 with actual forecasts or Table 11 with forecast rankings). Also in line with these predictions, Korea will restore economic growth the fastest. In actuality, Taiwan Province of China and the Philippines did not experience such dramatic declines anyway. The positive forecasts for these economies are therefore less interesting. Among the four crisis economies, Malaysia has the second highest expected growth for 1999, followed by Thailand and Indonesia. This order for economic growth in 1999 for these four economies is consistent with our predictions based on the scoring of rehabilitation procedures.

VI. CONCLUSIONS

In this paper we have examined the nature of insolvency and debt recovery procedures, as well as factors such as political influences and ownership concentration, affecting financial decisions of corporations and banks during the pre-crisis years. We focus on six Asian economies – Indonesia, Korea, Malaysia, the Philippines, Taiwan Province of China and Thailand. These economies have had laws specifying procedures for debt recovery and bankruptcy for a long time. Formal procedures for rehabilitation specified in law have also existed in most of the economies. In spite of these laws, most firms in distress have had their liquidation or reorganization handled informally.

One exception to these observations is Malaysia, that seems to have had functioning formal insolvency procedures and reasonably efficient courts enforcing the law. In all the other economies, the courts are considered unpredictable in their handling of creditors' claims. Moreover, only in Malaysia and Taiwan Province of China have the existence of bankruptcy law provided an incentive for creditors and debtors to work out distress situations informally. In Korea, informal workouts have been encouraged by the government. Since 1998, laws have changed in, for example, Indonesia and Thailand with the purpose of strengthening formal mechanism for reorganization. It is not likely that these laws will change procedures rapidly since the capacity and competency of the court systems cannot be enhanced rapidly. The efforts aimed at creating U.S. Chapter 11-like rehabilitation procedures may be useful, but if the courts and their appointees in rehabilitation are not considered qualified and fair, then the letter of the law is less important.

One finding of our study is that the proportion of firms with negative changes in the values of Q (market to book value) far exceeded the proportion of firms with negative book values of firms (estimated as sum of the earnings before interest and taxes) over the pre-crisis years in all the six economies. These differences between the market and book value of companies heading towards distress leads us to conclude that stock markets were probably providing information about the predicament of companies which could easily have been hidden on the books. Thus, the development of financial markets in emerging market economies during the 1990s was valuable at least as far as providing information about the state of listed companies is concerned, if not from the point of view of financing investment.

We have also investigated whether the orientation of insolvency procedures and indications of bank behavior in the six economies can explain differences in the average liability to asset ratio of firms, the depth of the recession in 1998, and the expected speed of recovery from the crisis. In general, the orientation of insolvency procedures towards creditors and debtors (or employees as in Korea) does not seem to explain much of the differences in liability to asset ratios and the depth of recession. The aspects of insolvency procedures favoring rehabilitation of financially distressed firms seem to explain the expected speed of recovery well, however.

Although the correlations show that insolvency procedures explain little of liability to asset ratios and the depth of recession, both the liability to asset ratios and the depth of recession are correlated with a weak rule of law, relatively high corruption, and a high share of state and family control over corporations. The last variable is seen as a proxy for the strength of vested interests extracting favors from the government. In Indonesia, the Philippines, and Thailand, related lending and lending based on political or politicians' influence seem to have been common. In Korea, the government's influence on credit decisions of banks was part of its employment policy. These credit policies must have been supported by explicit or implicit government guarantees. Korean firms appear to be highly vulnerable to shocks since they had very high debt ratios consisting of large shares of short-term debt, and these debt ratios were also strongly related to declining firm performance in pre-crisis years. Only in Malaysia and Taiwan Province of China, were credit allocated primarily on commercial grounds based on adequate assessment by banks.

In terms of the several indicators measuring the depth of recession analyzed in this study, both Malaysia and the Philippines break the pattern described. Malaysia should have performed better than any other economy, while the Philippines should have been relatively harder hit by the crisis. One may speculate that political changes creating expectations about a redirection of economic policy in opposite directions in the two economies help explain the recent economic performance. In particular, the Philippines had been implementing sound macroeconomic policies before and during the crisis which may have dampened the impact of the crisis.

Finally, our study suggests that in addition to the relative creditor -or debtor-orientation of insolvency procedures, there are several other important factors that are expected to determine the speed of recovery of financially distressed firms from the crisis. One important factor is the speed of informal workouts and the incentives for such workouts provided by formal bankruptcy procedures. Other factors include a strong rule of law, low corruption, and diluted ownership concentration. Indicators of the ability to rehabilitate firms in financial distress, and relocate resources from economically distressed firms show that Korea can be expected to recover the fastest, followed by Malaysia, Thailand and Indonesia. The published GDP forecasts for 1999 and 2000 (*The Economist*, April 17, 1999) support our conclusions.

This paper provides lessons and future research scope for the role of insolvency procedures and political factors in influencing economic and financial variables in other regions of the world.

Table A. Real GDP Growth

	Indonesia	Korea	Malaysia	Philippines	Taiwan Province of China	Thailand
1991	6.95	9.13	8.60	-0.58	7.55	8.56
1992	6.46	5.06	7.80	0.34	6.76	8.08
1993	6.50	5.75	8.35	2.12	6.32	8.71
1994	7.54	8.58	9.30	4.39	6.54	8.90
1995	8.22	8.94	9.36	4.68	6.03	8.66
1996	7.98	7.06	8.60	5.85	5.67	6.40
1997	4.65	5.51	7.70	5.17	6.76	-1.34
1998	-13.70	-5.50	-6.77	-0.48	4.90	-8.00

Source: World Economic Outlook (various years).

Table B. Inflation (CPI based; base year=1990)*

	Indonesia	Korea	Malaysia	Philippines	Taiwan Province of China	Thailand
1991	9.38	9.34	2.62	18.68	3.62	5.70
1992	7.52	6.23	4.72	8.97	4.47	4.07
1993	9.67	4.79	3.54	7.56	2.94	3.36
1994	8.53	6.28	3.73	9.07	4.09	5.10
1995	9.43	4.47	3.40	8.10	3.68	5.77
1996	7.94	4.92	3.53	8.40	3.07	5.85
1997	6.60	4.44	2.66	6.02	0.90	5.61
1998	60.69	7.48	5.27	9.72	1.66	8.10

*Percentage change over the previous year. CPI is reported as period average for the calendar year.

Source: World Economic Outlook (various years).

Table C. Exchange Rates (National Currency per US Dollar)*

	Indonesia	Korea	Malaysia	Philippines	Taiwan Province of China	Thailand
1991	1950.30	733.35	2.75	27.48	26.81	26.06
1992	2029.90	780.65	2.55	25.51	25.16	25.87
1993	2087.10	802.67	2.57	27.12	26.39	25.99
1994	2160.80	803.45	2.62	26.42	26.46	25.15
1995	2248.60	771.27	2.50	25.71	26.49	24.92
1996	2347.00	804.45	2.52	26.22	27.46	25.34
1997	2909.38	951.29	2.81	29.49	28.70	31.36
1998	10013.62	1401.44	3.92	40.89	33.59	41.36

*Period average.

Source: International Financial Statistics (various years).

Table D. Market Capitalization, US Billions*

	Indonesia	Korea	Malaysia	Philippines	Taiwan Province of China	Thailand
1991	6.82	96.37	58.63	10.20	124.86	35.82
1992	12.04	107.45	94.00	13.79	101.12	58.26
1993	32.95	139.42	220.33	40.33	195.20	130.51
1994	47.24	191.78	199.28	55.52	247.33	131.48
1995	66.59	181.96	222.73	58.86	187.21	141.51
1996	91.02	138.82	307.18	80.65	273.61	99.83
1997	29.11	41.88	93.61	31.36	287.81	23.54
1998	22.11	114.59	98.56	35.31	260.01	34.90

*End of period.

Source: Emerging Stock Markets Factbook (1999).

Table E. Market Capitalization/GDP

	Indonesia	Korea	Malaysia	Philippines	Taiwan Province of China	Thailand
1991	0.05	0.33	1.22	0.22	0.70	0.37
1992	0.09	0.35	1.61	0.26	0.48	0.53
1993	0.21	0.42	3.43	0.74	0.88	1.07
1994	0.27	0.50	2.75	0.87	1.03	0.91
1995	0.33	0.40	2.55	0.79	0.72	0.84
1996	0.40	0.29	3.10	0.97	1.00	0.55
1997	0.14	0.09	0.96	0.38	1.02	0.15
1998	0.25	0.37	1.46	0.55	1.00	0.30

Source: Emerging Stock Markets Factbook (1999).

DESCRIPTION OF INSOLVENCY LAWS AND PROCEDURES IN SELECTED ASIAN ECONOMIES

Indonesia

The Indonesian legal system closely follows the French family of legal systems, although the insolvency legislation is founded on the Dutch colonial tradition.

Bankruptcy and moratorium fall under the Bankruptcy Act of 1906 and the Company Law of 1995. The Act originated from the Dutch legislation which was enacted in 1893. The Act is aimed to give importance to creditors and does not allow debtors to continue with the original business which is deemed insolvent. Bankruptcy law applies to both private companies (domestic and foreign) as well as state enterprises. One important component of the law is that the debtor must be liable to two or more creditors in order to file for bankruptcy. Given the antiquity of the insolvency law, both creditors and debtors seldom resort to actual court proceedings at the time of distress. The judicial process is considered unpredictable as noted in Appendix Table F. Also, culture and political influences affect the actual insolvency procedures in Indonesia.

Formal bankruptcy normally results in the creation of lien over the property of the debtor. The only exceptions are personal items of the debtor and certain copyrights. As a consequence, the power of the debtor over the property are terminated and all the claims are suspended against the debtor except for the claims of the secured creditors.

“Composition” is a formally possible alternative to bankruptcy (Appendix Table F). In contrast, if bankruptcy leads to reorganization the management has to forego control in favor of the court-appointed receiver. Therefore, management is likely to favor composition at the time of bankruptcy. If composition is not approved, then liquidation proceedings are held. Both secured and preferred creditors are not bound by composition. Although the law states that during bankruptcy all creditors are to be treated equal in terms of their respective claims, in practice, secured creditors and preferred creditors have a first preference over the rights on assets of the bankrupt firm. At the time of bankruptcy, a debtor company may declare a moratorium on debt owed to all creditors except secured creditors.

In terms of rules regarding security required for debt, the only assets that can be registered are mortgages over land and ships. Hypothecation, which gives a right over immovable property to the creditor, is recognized by the law whereby the creditor is permitted to sell the property at a public auction without the approval of the court. However, the lack of registration in general has resulted in hypothecation being only a limited solution to the effectiveness of insolvency procedures. It has also made it especially difficult for foreign investors (lenders) to feel secure in lending to local firms. Other forms of security commitments such as a pledge and fiduciary transfer of ownership are also used. However, the cultural environment is such that it favors negotiation over litigation.

Although laws favor secured creditors, in practice it is very seldom that the courts permit lenders to foreclose on secured property at the time of bankruptcy. In fact, the law is hardly ever implemented formally owing to a variety of reasons ranging from weak professional services, and expensive and prolonged legal process, to cultural factors (see Appendix Table F and Table 3). In 1998, under the Jakarta initiative, procedures for out of court negotiations were established. The purpose of these rules is to speed up the reorganization and restructuring of insolvent corporations. A separate agency, Indra, was created for this purpose.

Korea

The Korean legal system closely follows the German family of legal systems. The insolvency law is similar to that of Japan. There are three main Acts in Korea that protect creditors and shareholders. They are the Composition Act, Corporate Reorganization Act, and the Bankruptcy Act. It is claimed that the insolvency laws generally protect foreign investors, although offshore creditors need to obtain permission from the Bank of Korea and the Ministry of Finance in order to provide credit and to enforce the security interest (*International Financial Law Review*, April 1998). The Composition Act is aimed at the prevention of bankruptcy, the Corporate Reorganization Act at the rehabilitation of bankruptcy, and the Bankruptcy Act at the liquidation of the insolvent company. The insolvency laws are designed such that the creditors are granted preferential claim on assets and the equity holders a secondary claim once the distribution of assets is completed among the creditors. Clearly, composition is popular among shareholders and management since the process does not involve an appointment of trustees or a relinquishment of shares by existing shareholders. However, under corporate reorganization, the shareholders are required to relinquish all shares of the distressed firm. Therefore, the tension between the desire for composition and corporate reorganization becomes evident at the time of insolvency. The Bankruptcy Act allows creditors to invoke the right to liquidate the company and therefore constitutes the last stage of the insolvency process.

Regarding rules related to security for debt, firms can use both immovable and movable property for collateral. In Korea, mortgage can be used as collateral (termed as hypothec) and is thereby registered, but the debtor does not transfer the title of the asset to the creditor. Another form of collateral includes the pledge where the actual asset is transferred from the debtor to the creditor, but the ownership of the collateral does not change hands.

The order of priority of security at the time of insolvency is such that the earliest date of the security pledge carries the highest priority assuming that the securities are similar, and registered security also has a higher priority than unregistered collateral. Moreover, secured interests enjoy a higher priority over unsecured interests.

Malaysia

Prior to the crisis, the legal framework that governs bankruptcy and insolvency procedures in Malaysia, which is largely modeled on the British legal system, was more comprehensive

than those of other economies in the sub-region. Insolvency rules for corporate entities are found in the Companies Act of 1965 which was subsequently revised in 1973. An important component of the rules is a strong orientation toward the creditors (strongest creditor-orientation in our sample of economies). However, some initiatives are presently being taken to strengthen the role of debtors in the bankruptcy process along the lines of laws such as US Chapter 11.

The Companies Act provides rules for the liquidation (winding up) of companies. In that context, repayment priorities are clearly stated. Various instruments are used for security interests such as charges, interests in property in land, debentures, hypothecation of goods, quoted securities, guarantees and indemnities. As a general rule, the winding up process does not affect any security held by a creditor of a company. Creditors are favored in various ways. For example, they have the right to set off mutual claims and then request payment for the balance, and the set off amount is not subject to any reduction resulting from the bankruptcy proceedings. In addition, creditors with floating charges³⁵ over the assets of the insolvent company are normally given priority over unsecured creditors in regard to assets subject to those charges. The Act provides for asset recovery by creditors in line with international practice.

Concerning the rehabilitation of distressed firms, there are presently no comprehensive provisions in the Companies Act. However, a “compromise or arrangement” may be concluded between a company and its creditors but there are numerous hurdles at arriving at such an arrangement. It is also noteworthy that there are no detailed provisions for the rehabilitation through judicial management, such as the appointment of independent managers to develop a recovery plan and the automatic suspension of claims against a distressed company pending its rehabilitation. Nevertheless, we found the judicial process to be relatively more efficient in Malaysia than in the other sample economies (Table 3). The authorities are in the process of simplifying procedures for rehabilitation.

As in other Asian economies in our sample, cultural factors and other family relationships play a critical role in Malaysia, but the stigma attached to bankruptcy is slowly fading away.

Philippines

The Philippines falls under the French family of legal systems. The Philippines’ insolvency law dates back to 1909 although new modifications have been instituted in recent years. Under this law, the debtor is allowed to file a petition in order to obtain a “suspension of payments”. It is stated that the creditors have to approve the terms with a majority but they

³⁵ These charges applied to all assets are particularly relevant for companies which have a continuously changing asset base, such as inventories in stock (see *Malaysia: Selected Issues* (1998)).

can very well disapprove of the plan whereby they can initiate insolvency proceedings. Such proceedings are lengthy, however. The suspension of payments is an administrative procedure, however, outside the domain of courts and therefore subject to political influence. It should be noted that Bangko Sentral ng Pilipinas (BSP) has been making efforts to strictly implement regulatory and supervisory framework in order to limit related lending and improve credit evaluation. This suspension can be followed by the insolvency proceedings which can either be initiated by the debtor (voluntary insolvency) or the creditor (involuntary insolvency). Who initiates the insolvency proceedings largely depends upon the asset and liability position of the debtor. If liabilities are not sufficient to back assets, then the creditor will initiate the proceedings and the court will appoint a receiver to take control of the assets.

Security interests are obtained through the use of mortgage, pledge and antichresis³⁶. In general, registered interests enjoy greater priority over other interests. Under “suspension of payments” all claims are suspended, however.

Culture and traditions appear to play a relatively less important role in determining insolvency procedures than in most Asian economies. Nevertheless, the procedures for suspension of payments imply that the procedures are highly debtor-friendly. The Securities and Exchange Commission decides on petitions for suspension of debt payments and also oversees the rehabilitation of distressed companies. The magnitude of corporate distress has been limited in Philippines as compared to other Asian economies partly because of sound macroeconomic policies and also efforts made by BSP to strictly implement regulatory and supervisory framework of the financial sector, as noted above.

Taiwan Province of China

The Taiwanese corporate legal system is largely borrowed from the German system with a certain degree of Japanese influence. It dates back to the *Bankruptcy Law* of 1935 and the *Company Law* of 1929. The system relies heavily on informal Chinese traditions for actual insolvency proceedings whereby disputes are resolved out of court.

An insolvent debtor may apply to courts for composition. Secured creditors are able to retain their rights and are normally exempt from composition proceedings. Unsecured creditors have a lesser degree of influence. Bankruptcy petition can be filed during the composition proceedings but the court will generally dismiss the petition if it feels that composition will work. In practice, both composition or bankruptcy proceedings have been almost nonexistent, especially for large companies.

There are also reorganization procedures as part of *Company Law* of 1966. These procedures provide a significant delaying tactic for publicly-held companies in filing for bankruptcy,

³⁶ Under this contract the creditor derives benefits from collateral (immovable property) if such collateral is used only to pay debtor’s obligations.

sometimes lasting for 15 years. In this case, even a secured creditor is not exempt from the reorganization procedure.

There is a stronger stigma attached to bankruptcy in Taiwan Province of China than in other market economies in Asia. Moreover, observers note a dearth of competence in handling formal processes for insolvency administration and bankruptcy (as in several other economies in our sample).

Thailand

Thailand falls under the British family of legal systems. Thailand's Bankruptcy Act has been in existence since 1940. The possibility of legal procedures for reorganization for companies in distress was absent from the law until March 1998. Earlier, liquidation initiated by the creditors was the most obvious option available to insolvent companies, although debtors were permitted to submit an application for composition. In other words, owners of debtor companies facing "economic insolvency" were not easily able to rescue their companies through formal reorganization.

With regards to the security interest, both movable and immovable assets (tangible and intangible) can be used as collateral. Mortgage, sale with right of redemption, and pledge are the most common forms of security. Despite the absence of a full-fledged registration system for pledges, the system works quite efficiently in Thailand and the creditor can normally sell the collateral through a public auction.

Priority of security interests at the time of insolvency is highly similar to that in other Asian economies. The order of priority of security is such that the earliest date of the security pledge carries the highest priority assuming that the securities are similar, and registered security also has a higher priority than unregistered collateral. Moreover, secured interests enjoy a higher priority over unsecured interests. Under the 1998 procedures, security in assets needed specifically for business operations cannot be enforced.

Table F. Secured Financing and Rehabilitation Rules

	Indonesia	Korea	Malaysia	Philippines	Taiwan Province of China	Thailand
Main kinds of secured financing	Real estate mortgage. Pledge (Unregistered security interest over moveable property). Fiduciary Transfer Agreement (private arrangement).	Mortgage on real estate and other assets. Lien by retention. Pledges.	Debentures containing charges over property. Mortgage of shares of controlling shareholders. Proceeds of contracts.	Mortgage on real estate and other assets (Chattel mortgage). Pledges.	Mortgage on real estate and other assets (Chattel mortgage). Pledges of share certificates. Conditional sale arrangements.	Mortgage over immovable property. Pledge of moveable property by delivery to pledge. (Shares are common pledges).
Aspects of foreclosure rules	Security can be foreclosed only after final court judgement (3-5 years).	Secured creditor may "self enforce" without a court order.	Foreclosure through receiver appointed by court.	Lien but no appropriation without legal proceedings.	Mortgages enforced through court action. Self-enforcement of share pledges are common.	Slow and restrictive process. Pledged property can be sold in public auction if debtor has been given reasonable time.
Legal procedures for rehabilitation	Indra (Indonesian Debt Restructuring Agency) and Jakarta initiative for out of court negotiations established in 1998. Before 1998 a reconciliation plan (composition) could be offered before declaration of insolvency.	Composition where shareholders retain rights and management is in charge of ordinary business. Reorganization process where rights of shareholders and management are terminated. Government supervised Company Reorganization Agreement.	"Scheme of Arrangement" requires approval by court and creditors representing 75% of debt. "Special Administration" since 1998.	SEC (administrative agency) appoints rehabilitation receiver after "Suspension of Payment."	Composition (often supervised by Chamber of Commerce) wherein operations continue under supervision. Reorganization if operations otherwise must cease. Receiver takes over.	Restructuring procedure introduced in bankruptcy law in 1998.
Secured credits in bankruptcy/Liquidation	Secured assets are not included in bankrupt estate	Secured assets are separated from other assets with preserved priority.	Priority preserved.	Priority preserved.	Enforcement of security is not affected.	Enforcement of security is not affected.
Secured credits in rehabilitation	Subject to negotiation, creditors position is weak due to time and unpredictability of procedures.	In composition, secured assets are separated. In reorganization, security cannot be enforced.	Under "Scheme..." security is generally preserved. In "Special Administration" since 1998 security cannot be enforced.	All claims are suspended when SEC appoints receiver.	In composition, secured creditors may exercise their rights. In reorganization, all creditors must follow plan approved by court.	Since 1998, claims against assets needed for business operations cannot be enforced.

Source: Asian Development Bank, Local Study of Insolvency Law Regimes (1998).

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