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## Essays on financial intermediation in developing countries

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Publication date 2001

Link to publication

## Citation for published version (APA):

Laeven, L. A. H. (2001). Essays on financial intermediation in developing countries.

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#### **Introduction and Outline**

### 1. Financial Intermediation in Developing Countries

Financial intermediation in developing countries has been hampered by underdeveloped financial systems, that can generally be characterised by a limited availability of credit, a limited choice of financial products, and a misallocation of credit. The scarcity of credit has the result that good projects may not be financed, at least not in the formal credit market. Financial products lack both scope and depth: hedging instruments, foreign financial products and long-term debt instruments are often not available, and markets are illiquid. Credit can be misallocated in the sense that unprofitable projects may be financed, loans may be concentrated among a few borrowers, and insider loans may be extended. Financial intermediaries in such systems are mostly inefficient and take excessive risks. These imperfections are the result of a number of underlying factors.

The main distortion in the financial systems of most developing countries is caused by government interference. The financial systems in such countries have often been repressed by a series of government interventions that have the effect of keeping at very low levels interest rates on savings accounts of domestic banks. To a large extent, such interventions are motivated by fiscal policy considerations. The government lacks the direct fiscal means to stimulate development, and uses the financial system to fund development spending in two ways. First, by imposing large reserve and liquidity requirements on banks, it creates a captive demand for its own debt instruments. Thus, it can finance its own high-priority spending by issuing debt. Second, by keeping interest rates low through the imposition of ceilings on lending rates, it creates an excess demand for credit. It then requires the banking system to set aside a fraction of credit available to priority sectors.

Other common factors contributing to the imperfections of financial systems in developing countries are a weak corporate governance system, a poor legal and regulatory framework, and the poor availability and quality of information. In most developing countries, weak corporate governance of banks is the result of concentrated ownership of banks by either the government or corporate conglomerates. Improper

banking regulations or weak enforcement of banking regulations in combination with weak corporate governance may be conducive to insider lending. Poor quality of information in combination with poor credit skills, poor lending rules and the absence of wage incentives for bankers may lead to the financing of bad projects, while poor information in combination with credit scarcity may result in credit rationing, in particular for small and medium-sized enterprises. In such an environment, where economic institutions are weak, the existence of a deposit insurance scheme may lead to moral hazard problems encouraging banks to take excessive risks at the expense of the depositors.

An underdeveloped financial system has implications for both economic efficiency and the distribution of income. The implications for the economic efficiency are twofold. First, the combination of low rates of return on assets and high reserve requirements implies that even a competitive banking system will be forced to offer low interest rates on its deposits. In many developing countries, the combination of low nominal deposit interest rates and moderate to high inflation has often resulted in negative rates of return on domestic financial assets, with an adverse effect on saving and the financial intermediation process. Second, the introduction of interest rate ceilings induces savers to switch from the acquisition of claims on the banking system to the accumulation of real assets, assets traded in informal markets, and foreign assets. A standard response on the part of policymakers in developing countries has been to declare illegal the holding of both foreign assets and assets in the informal sector. However, these restrictions have often had limited success. Informal financial markets thrive in many developing countries, and capital controls have proven rather ineffective. The induced incentive to hold real assets, however, does not imply the achievement of high levels of investment. The poor legal framework and weak protection of creditor rights in many such countries deter most potential investors from financing projects – both the ineffective court system and the weak protection of secured creditors during bankruptcy procedures reduce the value of collateral. Also, the bribes that are often necessary in the process of financing of projects reduce economic rents. Moreover, many prospective investors will be unable to secure financing. Their own savings may be inadequate to finance large projects; the formal system may not have the resources available, due to the government absorption of a large part of the savings intermediated through commercial banks and other financial

institutions; and the high potential costs of doing business in informal markets, as well as the cost of evading capital controls, may render financing through these channels uneconomical.

The consequences for the distribution of income arise because such a system transfers resources from actual and potential savers, as well as from excluded borrowers, to favoured borrowers who are able to acquire resources at the contracted interest rates. The most important of the latter is the public sector itself. In addition, enterprises in priority sectors and well-connected individuals will tend to benefit from privileged access to credit.

To overcome the aforementioned imperfections in their financial systems, developing countries world-wide are encouraged to liberalise their financial sectors. Such liberalisations should be directed towards an efficient and fair allocation of resources and should therefore include the removal of such restrictions as entry barriers, reserve requirements, interest rate ceilings, and the abolishment of directed credit systems. In order to be effective, financial liberalisation should include the privatisation of state banks to improve corporate governance, and should coincide with the introduction of proper banking regulation.

This book contains a collection of essays on financial intermediation in developing countries. Although the various topics discussed here differ widely, the central theme of the essays in this thesis is that underdeveloped financial systems lead to imperfections in the financial intermediation process. Such a study is of economic importance, because these imperfections impede economic growth.

We study how weak corporate governance structures and weak enforcement of banking regulation may lead to favoured lending to insiders. We also investigate whether financial liberalisation measures, guided towards installing prudent regulation, abolishing directed credit systems and improving corporate governance through the privatisation of banks may lead to more balanced distribution of credit resources. Finally, we explain how the existence of deposit insurance schemes in countries with weak economic institutions may lead to excessive risk taking by banks, and we study whether such moral hazard behaviour differs between different types of banks.

The different essays highlight that financial intermediation in developing countries often suffers from wrong incentives that arise from weak corporate governance structures

and weak legal systems. They also show that liberalisation of the financial intermediation sectors has in general a positive impact on the performance of a country's corporate sector, especially on small and medium-sized companies, because it reduces distortions in the allocation of capital. Financial liberalisation is, however, only effective if countries introduce both measures to reduce distortions in the financial system and prudential regulations. Without a proper enforcement of prudent laws a liberalised financial system can pose systemic risks to a country's economy, its depositors and taxpayers. It is, therefore, essential to assess the different risk-taking behaviours of financial institutions. Our final essay proposes a way to assess the degree of risk-taking of a deposit-taking institution. This methodology could be part of an early warning system, that could be used to signal future vulnerabilities of a country's financial sector.

#### 2. Outline of the Book

In Chapter 1, we develop a model of insider lending, in which a borrower can give incentives to a bank manager to misuse his right of control by extending a loan at favourable rates to the borrower at the expense of the equity value of the bank. The model explains why insider loans often occur to borrowers that are also large shareholders of the bank. The reason is that, although in principle every borrower can bribe the bank manager for insider loans, large shareholders have the power to fire the bank manager, and will use this power if the bank manager extends insider loans to others. Therefore, a bank manager has a reason to favour large shareholders if engaging into insider lending. Using a World Bank survey of Russian enterprises, we provide evidence of our model. We find that Russian banks and their majority shareholders engaged into insider lending on the basis of loan volume. To limit insider lending we propose to give proper incentives to bank managers, such as high penalties or equity incentive schemes.

In Chapter 2, we review the literature on estimating financing constraints and present a structural model of firm investment that we use in the following chapters to assess the impact of financial liberalisation on the financing constraints of firms. The chapter also describes the econometric techniques we employ to estimate the structural model of firm investment.

In Chapter 3, we use panel data on a large number of firms in 13 developing countries to find out whether financial liberalisation relaxes financing constraints of firms. We find that liberalisation affects small and large firms differently. Small firms are financially constrained before the start of the liberalisation process, but become less so after liberalisation. In other words, small firms tend to benefit from (re)gained access to credit. Financing constraints of large firms, however, are low both before and after financial liberalisation. The initial difference between large and small firms disappears over time. We also find that financial liberalisation reduces financial market imperfections, particularly the informational asymmetries with respect to the financial leverage of firms. We hypothesise that financial liberalisation has little effects on the financing constraints of large firms, because these firms had better access to preferential directed credit during the period before financial liberalisation.

In Chapter 4, we apply the techniques in Chapter 2 to the special case of Korea. The Korean financial system has been characterised by government interference and a chronic shortage of funds. Since the 1960s the government has promoted the financing of large, chaebol-affiliated firms. Towards the end of the 1980s, the government changed its focus from large firms to small and medium-sized enterprises. We assess the impact of this change in government policy on the financing constraints of different types of Korean firms. We find that Korean firms suffered from informational asymmetries and severe financing constraints during this period, and that these imperfections differ across firms. Our findings also suggest that the government's change in focus towards small and medium-sized enterprises has been successful in the sense that it has reduced financing constraints for these type of firms. We also find some evidence that firms with concentrated ownership are more financially constrained than firms with dispersed ownership.

In Chapter 5, we calculate the cost of deposit insurance for a large sample of banks in twelve countries to assess the relationship between risk taking behaviour of banks and their corporate governance structure. We find that the cost of deposit insurance has been highest for banks with concentrated ownership, especially for banks that are predominantly owned by either a single company or another financial institution, and to a smaller extent for banks that are predominantly owned by a family or the state. Banks with dispersed ownership, on the other hand, are found to engage into a relatively low

degree of risk-taking. We also find that the cost of deposit insurance is higher for banks that are affiliated to a business group, that are small, and/or have high credit growth, and for banks in countries with low levels of GDP per capita, high inflation rates, and/or poor quality and enforcement of the legal systems. Finally, we find that measuring bank risk by calculating the cost of deposit insurance has some power in predicting bank distress. Our findings suggest that moral hazard and other incentive problems created by existing governmental deposit insurance schemes differ in magnitude between different types of banks, in particular between banks that differ in governance structure.