The Changing Nature of Financial Structure in Thailand and Implications for Policy*

Abstract

This paper first documents the recent changing landscape of Thailand's financial sector, noting in particular the decline in bank credit intensity of production. It discusses the reasons behind the observed trend of bank disintermediation and analyzes whether these factors are likely to persist into the future. In this respect, three key issues are addressed: i) the current state of bank balance sheets and the extent to which this may be holding back credit; ii) the observation of growth without credit; and iii) the impact on the monetary transmission mechanism. Moving on to a medium-term perspective, the paper discusses how financial structure (the degree to which the financial system is bank- or market-based) matters for long-run growth, highlighting, in particular, the problems that may arise from an over-reliance on bank-based intermediation. Finally, the paper analyzes the state of financial access in Thailand and its role in facilitating long-term growth. The central message is that the importance of financial access in sustaining growth, especially in the provinces, cannot be understated and significant room for improvement remains in this respect. The paper concludes by offering some policy recommendations that focus on tackling both the short- and long-term problems in Thailand's financial system.

Piti Disyatat
Monetary Policy Group
Bank of Thailand

Don Nakornthab
Monetary Policy Group
Bank of Thailand

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Contents **Page**

1. Introduction ... 2

2. The Thai Financial System ... 2

2.1. A Bird's Eye View of the Financial Sector ... 3

2.2. Thailand's Financial Structure: A Cross-Country Perspective ... 5

2.2.1. A Look From the Financing Side ... 5

2.2.2. A Look From the Saving Side ... 6

3. Legacy of the 1997 Crisis: Bank Disintermediation ... 6

3.1. Current Problems in the Thai Banking Sector ... 7

3.2. Implications of Impaired Credit Flows ... 9

3.2.1. Financing of the Private Sector: Emergence of Alternative Sources ... 9

3.2.2. Explaining the Mystery of Growth Without Credit ... 10

3.2.3. Effectiveness of Monetary Policy Transmission ... 13

3.3. The Importance of Financial Structure ... 14

4. Financial Access and Long-Term Development ... 16

4.1. The State of Financial Access ... 16

4.1.1. Aggregate Provincial Data ... 17

4.1.2. Bank of Thailand's 2002 Financial Service User Survey ... 18

4.1.3. Townsend's 1997 Survey ... 19

4.2. The Importance of Financial Access ... 22

4.2.1. Quantifying the Welfare Gains of Improved Financial Access ... 22

4.2.2. The Nature of Financial Constraint ... 24

5. Policy Implications ... 26

5.1. Short-Term Solution ... 26

5.1.1. Resolution of Non-Performing Loans ... 26

5.1.2. Credit Bureau ... 28

5.1.3. Limited Deposit Insurance ... 28

5.2. Long-Term Solution ... 29

5.2.1. Deeper Capital Markets ... 29

5.2.2. Improved Financial Access ... 30

6. Conclusion ... 31

References ... 33

1. Introduction

One of the most vital foundations of modern economies is the process of channeling resources to their most productive uses. Whether an economy functions smoothly and efficiently or not depends much on the manner in which the financial system performs this task. Indeed, the experience of the 1997 crisis across Asia illustrates just how detrimental the consequences can be if this crucial intermediary function is not conducted in a sound manner. This paper provides an analysis of the financial system in Thailand, evaluating, in particular, the efficiency with which the task of channeling funds from savers to investors is done and identifying key obstacles to improving the process that remain, both from a short- and long-run perspective.

The central message is that despite considerable progress since the crisis, significant weaknesses remain in the Thai financial system. Most immediate is the overhang of non-performing loans that continues to not only hamper credit growth, but also makes the banking sector vulnerable to an economic slowdown and declines in underlying collateral values. A striking observation is that most of the burden of the slowdown in bank credit has been borne by the non-traded sector. The onus on policy in the near term is then to remove constraints on bank lending, including to the non-traded sector, and institute reforms that will make the financial system more resilient to future shocks. From a longer-term perspective, the central challenge is the improvement of financial access—both in terms of outreach and quality of financial services—and the attainment of a more balanced financial structure. Success along these dimensions will enable Thailand to realize a growth process that is both stronger and less volatile, and at the same time also more evenly distributed.

This paper is organized as follows. Section 2 presents an overview of the financial system in Thailand and provides a brief outline of major developments in the financial sector. Section 3 documents the dramatic changes to the Thai financial landscape that have occurred in the wake of the 1997 crisis, noting in particular the decline in bank credit intensity of production, the state of bank balance sheets, and the impact on the monetary transmission mechanism. Moving on to a longer-term perspective, Section 4 analyzes the state of financial access in Thailand and its role in facilitating sustained growth. Finally, Section 5 offers some policy recommendations that focus on tackling both the short- and long-term problems in Thailand's financial system, while Section 6 concludes.

2. The Thai Financial System

Developments in the financial system explain a great deal about the evolution of the Thai economy. Indeed, Thailand's remarkable growth in the late 1980s and early 1990s would not have been possible absent the rapid development of the financial system at the time. Ironically, inherent weaknesses in the financial sector contributed much to the country's most severe economic crisis since the Second World War. This section presents an overview of Thailand's evolving financial system, beginning first with its current structure and associated history, before moving on to an assessment of the relative importance of banks versus capital markets in Thailand from an international perspective.

Table 1: Major Constituents of Thailand's Financial System (end 2002)

	Constituent	First Est.	No.	Total assets/ values (Bt b)	Share of total financial institution assets (%)
1. Commercial banks	Domestic banks	1906	13	5,780	59.4
	Foreign bank branch	1888	18	686	7.0
2. Capital markets	SET market capitalization	1975	N.A.	1,986	N.A.
	Public bonds outstanding	1933	N.A.	1,757	N.A.
	Corporate bonds outstanding	1992	N.A.	543	N.A.
	Securities companies	1953	39	51	0.5
	Mutual fund companies	1975	14	467	4.8
3. Specialized Financial Institutions (SFIs)	Government Savings Bank	1913	1	600	6.2
	BAAC	1966	1	396	4.1
	Government Housing Bank	1953	1	362	3.7
	IFCT	1959	1	210	2.2
	Export Import Bank	1993	1	48	0.5
	SME Bank (formerly SIFC)	1992	1	13	0.1
	Secondary Mortgage Corp.	1997	1	2	0.02
4. Non-bank financial intermediaries	Finance companies	1969	19	254	2.6
	Credit foncier companies	1969	6	6	0.1
	Life insurance companies	1929	26	360	3.7
	Agricultural cooperatives	1916	4,073	67	0.7
	Non agricultural cooperatives	1937	2,333	437	4.5

Source: BOT; DOI; SET; TBDC

2.1. A Bird's Eye View of the Financial Sector

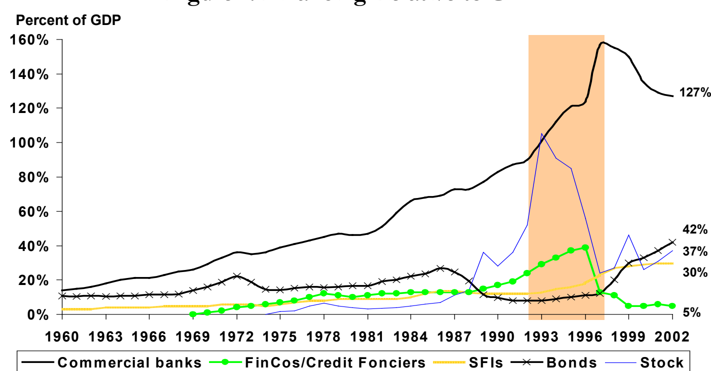
On a broad level, Thailand's financial system consists of four major constituents, namely: i) commercial banks; ii) capital markets (encompassing both the stock and bond markets); iii) government-owned specialized financial institutions (SFIs); and iv) non-bank financial intermediaries (finance companies, credit foncier companies, life insurance companies, and various co-operatives). Table 1, which provides some salient features of these four constituents as of end-2002, shows that commercial banks are both the oldest and largest part of the Thai financial system.[1]

The history of commercial banking business in Thailand dates back to 1888 when the British-owned Hong Kong and Shanghai Bank opened a branch in Bangkok to facilitate international trading. But it was only in 1955 that the Thai commercial banking system entered a modern era as measured by international rules and standards. As illustrated in Figure 1, which traces out the evolution of major constituents of the Thai financial system over the past forty years, commercial banks' assets in 1960 were only slightly larger than that of public bonds (14 percent versus 11 percent of GDP). Since then, however, commercial banks as a whole have grown at a spectacular pace. By the end of 2002, total assets of all commercial banks have risen to 127 percent of GDP, equivalent to an impressive compound annual growth rate of 5.5 percent.

[1] Omitted from Table 1 are pawnshops and informal credit institutions. Both do not take deposits from households. The former lend money against personal articles and is supervised by the Ministry of Interior. The latter are not subject to any prudential regulation.

Bond and equity markets make up the second most important constituent of the Thai financial system. The 1933 bond issuance by the newly formed Ministry of Finance marked the birth of Thailand's bond market. Despite its long history, the Thai bond market did not grow significantly until only recently. Two reasons account for this. First, the Thai government did not issue any domestic bonds between 1987 and 1997 as the budget remained in surplus. Second, before the Securities and Exchange Act came into existence in 1992, the law prohibited limited companies from issuing debentures. It was the 1997 crisis that spurred growth of the Thai bond market. The need to resolve the ensuing losses within the financial system forced the government to run budget deficits. At the same time, Thai firms, facing a credit crunch from the collapse of finance companies and capital constrained banks, turned to bond issuance as an alternative source of funding. By the end of 2002, the value of all bonds outstanding rose from 12 percent of GDP at the end of 1997 to 42 percent, second only to commercial bank loans in terms of relative economic significance.

Figure 1: Financing Relative to GDP



Note: Commercial banks, finance companies, credit foncier companies and SFIs (total assets); stocks (SET market capitalization); bonds (outstanding values of public and corporate bonds at par value)
Sources: BOT; SET; TBDC

Thailand's main equity market, the Stock Exchange of Thailand (SET), was established in 1975, but it wasn't until 1987 that its market capitalization took off in tandem with the start of Thailand's miraculous growth phase. By the end of 1993, SET market capitalization had reached 105 percent of GDP, making it the largest component of the Thai financial system. Subsequently, the SET fell dramatically, as economic conditions deteriorated culminating in the 1997 crisis. Despite recent impressive gains, the SET remains one of the smallest exchanges in the region, with market capitalization amounting to just 47 percent of GDP as of June 2003.

The third constituent of the Thai financial system consists of seven government-owned SFIs. The role of SFIs in the Thai economy has grown in the past five years, particularly the Government Savings Bank (GSB), the Bank for Agriculture and Agricultural Co-operatives (BAAC), and the Government Housing Bank (GHB). This trend is partly a consequence of the crisis, which caused private financial institutions to become more cautious in extending new loans, as well as the result of the more active use of SFIs to serve developmental policies geared towards increasing credit to the previously underserved segments of the population such as the poor and SMEs.

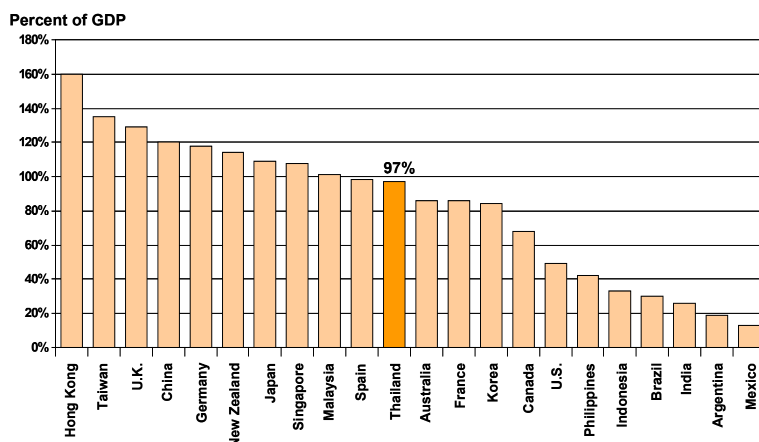
Non-bank financial intermediaries make up the final constituent of the Thai financial system, although its role is rather limited. This has not always been the case. As shown in Figure 1, the combined assets of finance companies were nearly one-third of those of commercial banks at the end of 1996. However, the 1997 crisis almost wiped out finance companies from the Thai financial landscape and by the end of 2002, their number had dropped from 91 to 19 with combined assets amounting to less than one-

seventh of the level in 1996.[2] As a result, life insurance companies and co-operatives now make up the majority of non-bank intermediaries. Despite the economic crisis, their assets have grown steadily, though they still represent only a small fraction of the Thai financial system.

2.2. Thailand's Financial Structure: A Cross-Country Perspective

As already alluded to above, the intermediation of funds in the Thai economy has been and continues to be dominated by banks. To gain a better appreciation of just really how big the role played by banks is in Thailand, this section places the relative importance of various financial constituents—on both the financing and saving sides—in a cross-country context

Figure 2: Claim on Private Sector to GDP (1997-2002 Average)



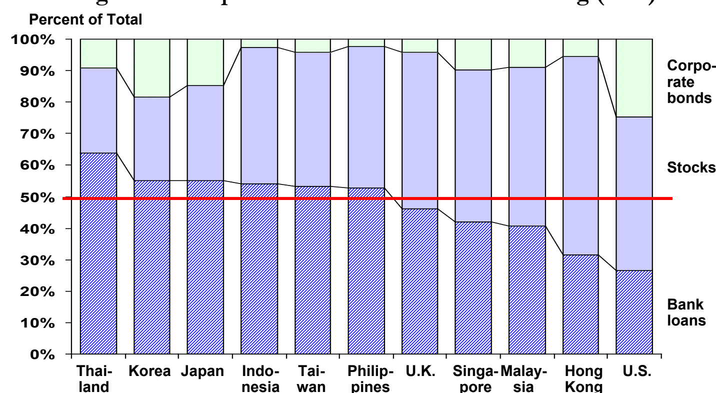
Sources: IFS May 2003; CEIC; Taiwan Central Bank

2.2.1. A Look From the Financing Side

From an international perspective, the size of Thailand's banking sector relative to GDP is large, but not excessively large. As illustrated in Figure 2, which shows the ratio of commercial banks' claims on private sector to GDP of 22 countries averaged over 1997-2002, Thailand lies somewhere in the middle of the pack with a ratio of around 97 percent, slightly larger than the sample average of 83 percent.

More importantly, however, is the *relative* degree to which an economy relies on banks compared to other channels of intermediation. That is, the extent to which a country's financial structure is bank- or market-based. A rough but common way to assess a country's financial structure is to sum up the value of bank loans to the private sector, stock market capitalization, and corporate bonds outstanding, and then break them down in relative proportion. Such an exercise, shown in Figure 3 using end 2001 data, reveals two noteworthy observations. First, despite significant declines in bank lending following the 1997 crisis,

Figure 3: Composition of Private Sector Financing (2001)



Source: HKMA (2003)

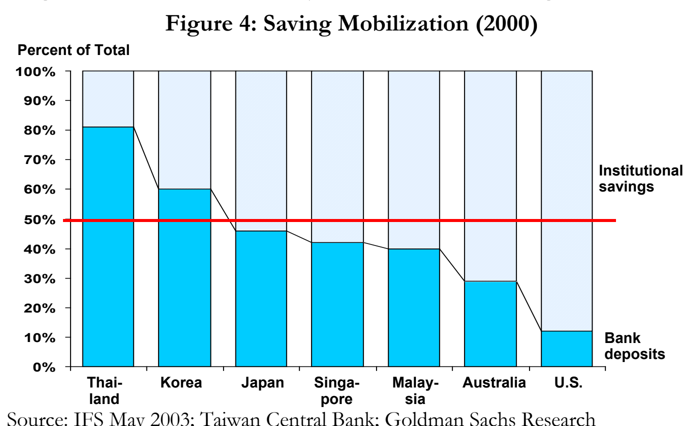
[2] Since the first full-fledged finance companies started operation in 1969, finance companies have always been the Achilles' heel of the Thai financial system. The 1997 crisis marked the third time finance companies went through a shakeout. The other two crises occurred in 1979 and 1982.

Thailand's reliance on bank-finance remains heavy compared to other countries. This picture is unlikely to change much unless growth of the capital market significantly outpaces bank credit growth in the next few years. Second, while other countries, such as Hong Kong and Singapore, may have larger banking sectors than Thailand (recall Figure 2), their financial structures are more balanced, largely due to the existence of deeper stock markets.

2.2.2. A Look From the Saving Side

A similar story comes through with respect to deposit mobilization. Figure 4 shows the relative proportion of bank deposits versus institutional investor assets (life insurance, pension funds, and mutual funds) in a similar group of countries. The shift from bank deposits to institutional savings is one of the major trends in the global financial market, a trend that has also been observed in Thailand where growth in institutional assets between 1997 and 2002 outpaced that of household deposits by more than five times. Nonetheless, the size of institutional savings in Thailand remains extremely low relative to the size of commercial bank deposits, reflecting the continued dominance of banks as a channel of saving.

Figure 4: Saving Mobilization (2000)



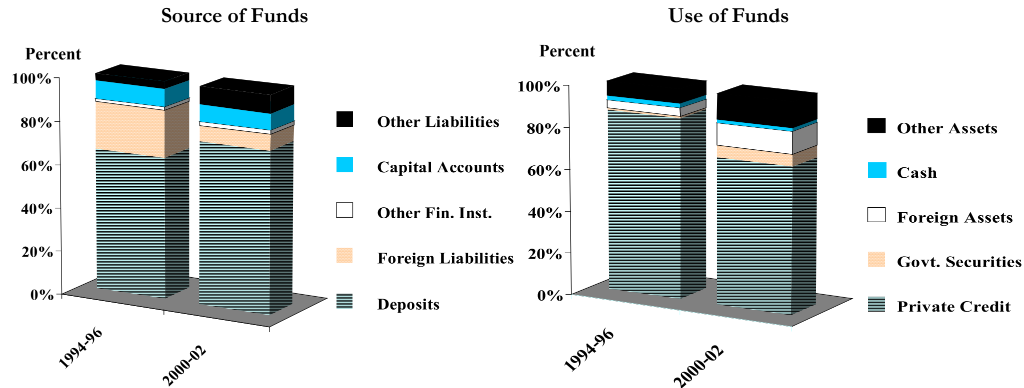
Source: IFS May 2003; Taiwan Central Bank; Goldman Sachs Research

3. Legacy of the 1997 Crisis: Bank Disintermediation

The fact that banks dominate the Thai financial system on both the financing and the saving sides has important implication for the Thai economy going forward. This section documents the dramatic changes to the financial landscape of Thailand that have occurred in the wake of the 1997 crisis, noting in particular the decline in bank credit intensity of production. In this respect, three key issues are addressed: i) the current state of bank balance sheets and the extent to which this may be holding back credit; ii) the observation of growth without credit; and iii) the impact on the monetary transmission mechanism. The section also discusses how financial structure matters for long-run growth in Thailand, highlighting in particular, the problems that may arise from an over-reliance on bank-based intermediation.

Before proceeding, it is instructive to take stock of the key adjustments that have taken place on banks' balance sheets in the wake of the 1997 crisis. Starting with the liability side, the left hand panel of Figure 5 shows that the share of deposit has increased significantly since the crisis in line with the economic recovery. At the same time, commercial banks have substantially reduced their reliance on foreign currency debt as a source of funds. This has been accompanied by a lengthening of the maturity profile of their borrowings, two-thirds of which consisted of short-term loans before the crisis. Reduced short-term borrowing, combined with abundant deposits, means that liquidity risk is no longer a major concern for Thai banks. With respect to the use of funds, the right hand panel of Figure 5 captures the considerable decline in private credit in

Figure 5: Source and Use of Commercial Bank Funds

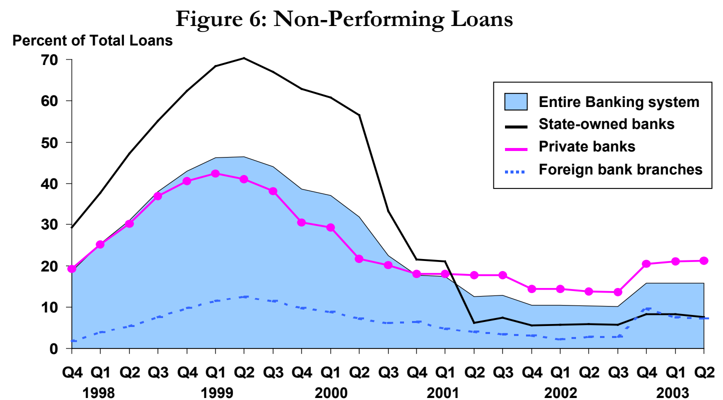


commercial banks' asset portfolio. This decline has been compensated for by higher investments in foreign assets and government securities. Commercial banks' corporate bond holdings have also risen, reflecting the growing size of the bond market.

3.1. Current Problems in the Thai Banking Sector

The Thai financial system has come a long way from the crisis in 1997, having returned to stability and consolidated on a large scale. Improvements in banks' balance sheets are reflected in the decline in the level of non-performing loans (NPLs). As shown in Figure 6, the NPL ratios of all bank groups have declined substantially from their peaks, particularly those of state-owned banks.[3] At the same time, capitalization has been strengthened considerably and the system appears more than adequately provisioned. The ratio of existing loan loss reserves to required reserves at the end of 2003 Q1 stood at 138 percent, while the BIS ratios of capital to risk assets for all banks were several percentage points higher than required.[4] Stronger balance sheets have facilitated a return to profitability for the banking sector. This is captured in Figure 7, which traces out the entire banking system's return on assets, net profits, and pre-provision profits from 1991 to 2003 Q1. The trend is especially comforting when one looks at the latter, which is a better measure of earning strength than net profits.

Figure 6: Non-Performing Loans



Source: Bank of Thailand

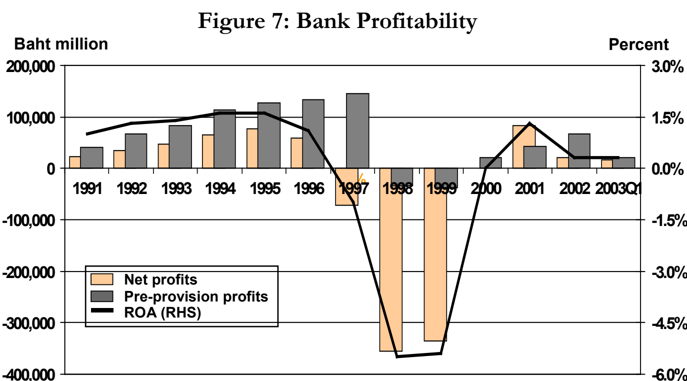
Nevertheless, there remain significant weaknesses that need to be addressed before the financial sector can fully play its role in facilitating sustained economic growth. The biggest challenge continues to be the large overhang of NPLs that still has not been

[3] The jump in NPL ratio in 2002 Q4 was due mainly to a change in NPL definition to include previously written off principal of 'loss' loans.

[4] The BIS ratio of locally incorporated banks at the end of 2003 Q1 was 12.5 percent, 4 percent higher than the level required by the Bank of Thailand.

disposed of. Looking back at Figure 6, it is evident that despite a substantial decline, system-wide NPL ratio remains well over 10 percent. Even more troublesome is the fact that the rate of NPL decline due to debt restructuring seems to have reached a plateau while the rate of NPL increase due to relapse of restructured loans is still high (about 8 percent of total loan portfolio in 2002) and possibly rising. These observations reflect weaknesses in the quality of ongoing debt restructuring.

Figure 7: Bank Profitability



Source: Bank of Thailand

The existence of large NPLs obstructs the economic recovery in at least two ways. First, they undermine credit growth as banks have to concentrate their efforts on NPL resolution rather than extending new credit. Furthermore, remaining NPLs give rise to concerns that additional loan loss provisions may have to be taken, which make banks more cautious about granting new loans. Second, non-performing debtors pending restructuring can neither expand their business nor invest in new projects as long as agreement on debt forgiveness and restructuring in general could not be reached. Therefore, effective NPL resolution is crucial for economic recovery.

In addition, banks also face a subtle capital constraint from their huge pile of NPLs. The subtlety arises because given existing provisions and BIS ratios, banks do not face any identifiable capital constraint. But one needs to realize that loan extension is a multi-period decision, as a typical loan has a maturity of several years. Thus, the relevant capital constraint is not a period constraint but an intertemporal one. The fact that a constraint is not binding today does not guarantee that it will not be binding in the future, and as long as the banks' NPL problem has not been resolved, their capital remains at risk. Indeed, in expressing their concern on the adequacy of reserve and capital level of Thai banks, Fitch (2003) cites that net NPL/equity ratios of eight major banks in Thailand averaged at around 100 percent, substantially higher than the international benchmark of less than 20 percent for a strong bank.

That banks' capital may still be under stress is echoed by Kengchon (2002), who argued forcefully that one reason Thai banks are still reluctant to lend is because they are afraid of potential losses to their still-limited capital resources. Indeed, if restructured loans are added on top of banks' NPLs on one side, and claims on collateral on top on loan loss reserve on the other side, it will be apparent that the latter barely covers the former. If the collateral are aggressively marked to market or a significant portion of restructured loans turns sour, banks would find themselves in trouble.[5]

Moreover, the true capital adequacy may be overstated by the current practice of allowing banks to deduct the value of physical collateral prior to required reserve

[5] This could happen either because of deteriorating economic condition or because of more stringent requirements on reclassification of bad loans to normal loans.

calculation. There are two major problems with this method. Firstly, it is difficult to assess the fair value of these collateral, some of which depreciate rapidly once left idle. Although the Bank of Thailand requires banks to take a 10 percent haircut off the appraised value, it is unlikely that the amount would commensurate potential losses—especially in light of the fact that these collateral are likely to be significantly overvalued. Secondly, the current reserve method ignores the time value of money. Foreclosing an asset normally takes about 3-4 years, during which a bank will not be able to realize sale proceeds. As such, the current method allows some banks to delay the realization of losses and the necessity to increase capital. In recognition of these problems, the Bank of Thailand plans to phase out such deduction of physical collateral. However, while this regulatory change will make the capital condition of the banks more transparent, it could act as an additional hindrance to loan extension, especially for banks that know they risk the chance of not being adequately provisioned under the new rule.

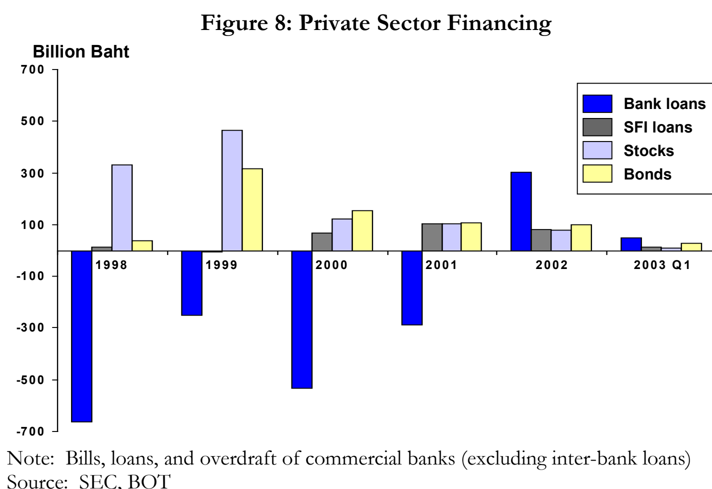
3.2. Implications of Impaired Credit Flows

With ongoing problems in the banking sector holding back credit growth in the past few years, firms in Thailand have started to diversify their financing away from banks as capital market infrastructure—especially that of corporate bonds—have become more established. This section documents this recent trend of bank disintermediation, presents an explanation of how the relatively sharp recovery in growth thus far has been able to take place without a corresponding rise in credit, and discusses how adjustment in the financial sector has affected the monetary transmission mechanism.

3.2.1. Financing of the Private Sector: Emergence of Alternative Sources

In the wake of the tremendous shock to bank balance sheets following the 1997 crisis and the subsequent credit crunch, the private sector in Thailand has come to rely more on non-bank sources of financing. The emergence of SFIs and the capital market as alternative sources of funding for the private sector can be seen from Figure 8, which shows recent changes in outstanding bank and SFI loans along with new equity and bond issuances.

Figure 8: Private Sector Financing

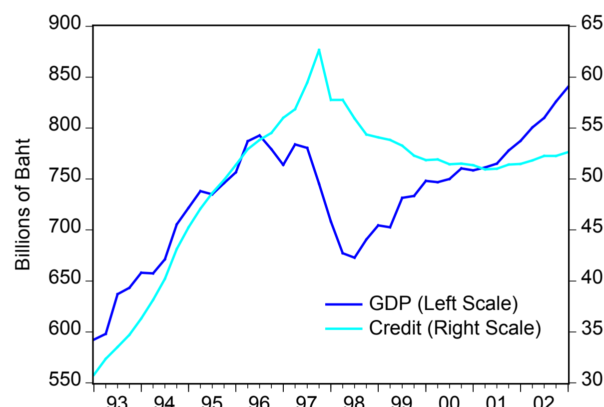


Note: Bills, loans, and overdraft of commercial banks (excluding inter-bank loans)
Source: SEC, BOT

The emergence of financing through the capital market at the expense of bank loans is part of a process commonly referred to as disintermediation. This can occur on either side of banks' balance sheets. Disintermediation on the asset side happens when companies switch from bank-intermediated loans to direct finance in capital markets. Disintermediation on the liability side happens when savers invest directly in capital markets through pension funds, mutual funds, stocks, bonds, and other capital market instruments. Figure 9 suggests that a process of disintermediation has indeed taken place

in Thailand in the past few years. Starting in 1999, the economy has recovered strongly while real credit did not begin to pick up until around 2001, and even then, at a much slower rate than output growth. Moreover, it is evident, looking back at Figure 5, that the process of disintermediation has been asymmetric as savers have continued to rely on bank deposits.

Figure 9: Real Credit and Output

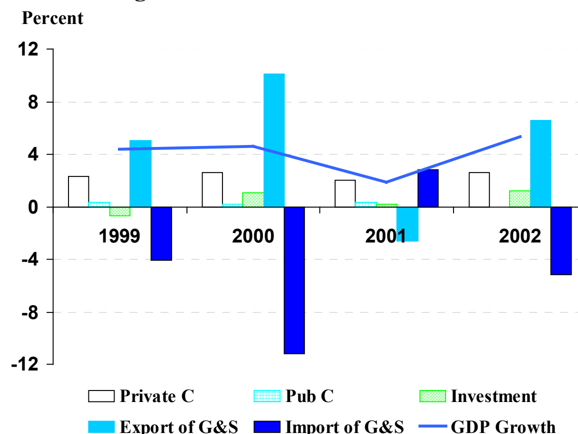


The anemic growth in private credit has its roots in the 1997 crisis, which caused a dramatic contraction of the banking sector. Subhaswasdikul and Nakornthab (2003) show that the contraction in bank lending during the early stages of the crisis was predominantly supply-driven, as banks' balance sheets deteriorated rapidly. Subsequently, demand factors, including large excess capacity and subdued investor confidence, have contributed to the sluggish growth in credit. At the same time, there appears to be a fundamental shift in banks' credit extension policies from relationship-based lending towards more risk-based lending. While this development is clearly welcomed, it hampers credit growth by reducing banks' willingness to lend. The pertinent question at this juncture is to what extent the contraction in bank lending has affected/reflected developments in the real economy. This issue is taken up in the next section.

3.2.2. Explaining the Mystery of Growth Without Credit

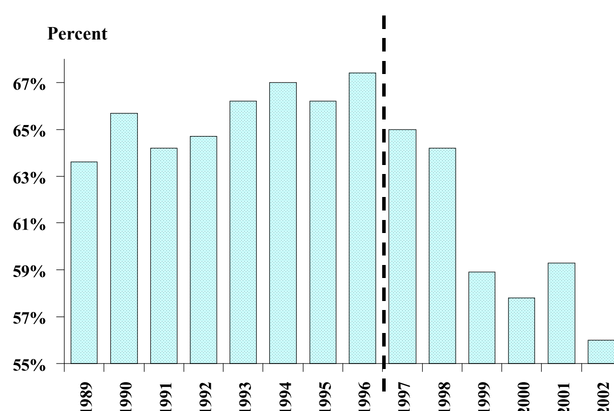
As highlighted above, a striking observation in recent years is that the Thai economy has been able to recover quite quickly from the crisis without a corresponding rise in bank credit. This presents somewhat of a puzzle in light of the heavy reliance on bank finance in Thailand. Figure 10, which shows contributions to GDP growth in recent years, provides some clues. In particular, the figure indicates that the growth rebound has been driven mainly by exports and private consumption, with investment contributing a relatively small share. Since the latter is the component that relies most heavily on credit, it may not be that surprising that bank credit has not kept up with GDP growth. However, the pickup in exports and private consumption also suggests that perhaps the overall anemic credit growth may mask some asymmetric sectoral pattern. Indeed, personal consumption loans as a share of total loans has risen from 10.77 percent in 1997 to 12.26 percent at the end of 2002.

Figure 10: Contribution to GDP Growth



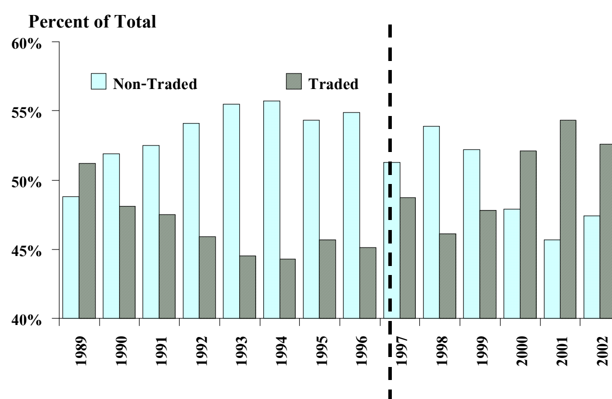
Tornell and Westermann (2002) have documented typical experiences of boom-bust cycles among middle income countries, noting that twin crises (concurrent occurrence of both exchange rate and banking crises) tend to be preceded by real exchange rate appreciation and a lending boom in which the ratio of credit to GDP grows unusually fast. Following the crises, there is typically a short-lived recession and a protracted slowdown in bank lending that persists long after aggregate growth has resumed. The credit crunch hits mainly small and non-tradables firms. In fact, non-tradables production declines relative to the output of the tradables sector for several years after the crisis, and the credit-to-GDP ratio falls. This asymmetric sectoral pattern is also observed before a crisis as the non-traded sector grows faster than the traded sector.

Figure 11: Non-Traded/Traded GDP



Does this characterization fit the recent experience in Thailand? Figure 11 shows that there has indeed been a very asymmetric sectoral pattern in output. Leading up to the 1997 crisis, growth in the non-traded sector outpaced that in the traded sector, a pattern that reversed dramatically in the aftermath of the crisis. The latter reflects both a steep decline in non-traded production as well as a pickup in traded output, supported in part by a sharp depreciation of the baht. The asymmetric sectoral response indicates that the crisis affected non-traded firms most heavily. Given the sharp contraction in bank credit, a key question is whether this asymmetry reflects a difference in financing opportunities between firms in the traded and non-traded sectors. Figure 12 suggests that the credit crunch following the crisis did in fact hit the non-traded sector especially hard with the proportion of loans to the non-traded sector declining from around 55 percent at the end of 1996 to a trough of just over 45 percent in 2001, before rebounding slightly to 47 percent in 2002.[6] This observation by itself, however, does not necessarily imply that access to financing was more difficult for firms in the non-traded sector. After all, it could be that following the crisis, non-traded firms simply demanded less credit as activity in their sector slowed and excess capacity developed.

Figure 12: Sectoral Bank Credit



[6] The relatively heavy exposure of Thai banks to the non-traded sector before the crisis was one of the key problems that led to enormous losses for banks subsequently.

To investigate whether there is a significant difference in financing opportunities between firms in the traded and the non-traded sectors, survey data at the firm level from the World Business Economic Survey (WBES) of the World Bank is analyzed. The survey, conducted in 1999-2000, covers 3877 firms in 110 countries (422 firms in Thailand) and classifies firms according to size, export share of output, and other characteristics. Importantly, it also provides information on firms' perceived degree of financial constraint. The discussion will focus only on the data collected in Thailand.

The first observation that comes out of the data is that firms in the traded sector tend to be larger than those in the non-traded sector. Table 2 shows that a majority (61 percent) of small and medium firms belongs to the non-traded sector, while firms in the traded sector (76 percent) tend to be large. The survey also asked firms to rank, on a scale of 1 to 4, how much of an obstacle financing was to running their business and how important the lack of collateral is in obtaining financing. The answers were used to estimate ordered probit models to verify whether an asymmetry in financing opportunities between the non-traded and traded sectors was significant. Table 3 confirms that bigger firms and those that export a larger share of their output tend to be less financially constrained, even after controlling for the age of the firm. Similarly, Table 4 shows that more export-oriented firms have smaller complaints about collateral constraints.

Table 2: Sectoral and Size Distribution of Firms Thailand

	N-Sector	T-Sector
Small	61%	39%
Large	24%	76%

Source: *World Business Environment Survey* (WBES), 2001

Note: 'Small' denotes small and medium firms up to 200 employees. Large' firms have more than 200 employees.

Overall, the picture that emerges in Thailand appears consistent with previous experiences of other middle-income countries that have gone through boom-bust cycles. The puzzling coexistence of a protracted credit crunch and GDP growth several years after the crisis reflects the fact that aggregate GDP performance masks an asymmetric sectoral pattern whereby the brunt of the adjustment falls on the non-traded sector. Firms in the traded sector tend to be larger and less dependent on bank credit, as they are more likely to have access to other forms of external finance—trade credit, and equity and bond markets. In contrast, firms in the non-traded sector are typically smaller and heavily dependent on bank credit, which is primarily determined by collateral values, not investment opportunities. Since banks are heavily exposed to the non-traded sector, overall credit declines while GDP is propped up by the traded sector. The result is a protracted slowdown in bank credit that outlives a brief recession.

Table 3: Sectoral Financial Constraint

Dependent variable: Firms' ranking, on a scale of 1 to 4, how much of an obstacle is financing to running their business

Ordered Probit Estimates

	(1)	(2)	(3)
Size of Firm	-0.286**		
	(0.117)		
Share of Exports		-0.006**	-0.006**
		(0.003)	(0.003)
Age of Firm			-0.007
			(0.007)
Log Likelihood	-245.577	-236.046	-228.480

** Denotes significant at 5 percent level

*** Denotes significant at 1 percent level

Against this backdrop, the role that diversification towards non-bank financing has played in sustaining real growth may be smaller than commonly perceived. While overall credit growth has been sluggish, credit expansion across sectors has been quite asymmetric. Importantly, credit to those sectors that have been driving the rebound in GDP, private consumption and the traded goods sector more broadly, has actually increased or remained relatively stable. Sluggish credit growth, therefore, appears to have been mainly the result of declines in credit to the non-traded sector, which also suffered the most in the aftermath of the 1997 crisis. Looking forward, the process of disintermediation is likely to slowdown, if not reverse, and the banking sector should continue to dominate the Thai financial landscape for some time to come.

Table 4: Importance of Collateral

Dependent variable: Firms' ranking, on a scale of 1 to 4, how much of an obstacle is collateral to obtaining financing

Ordered Probit Estimates

	(1)	(2)	(3)
Size of Firm	-0.358***		
	(0.107)		
Share of Exports		-0.004**	-0.004**
		(0.002)	(0.002)
Age of Firm			-0.007
			(0.007)
Log Likelihood	-312.277	-307.375	-296.342

** Denotes significant at 5 percent level

*** Denotes significant at 1 percent level

3.2.3. Effectiveness of Monetary Policy Transmission

The upheaval in Thailand's banking system in the aftermath of the 1997 crisis and the subsequent decline in bank lending have had important repercussions for the monetary transmission mechanism and the formation of monetary policy. A key dimension in this respect lies in the size and speed with which retail interest rates respond to changes in policy or money market interest rates. Disyatat and Vongsinsirikul (2003) analyzed how interest rate pass-through in Thailand has varied before and after the crisis using two methodologies common in the literature, the dynamic multiplier method and the error-correction model.[7] By comparing the results from using the entire sample—from January 1989 to March 2002—with those obtained with data only up to December 1995, an indication of how the pass-through has been affected by the 1997 crisis was obtained. The results indicate that both the long-run pass-through and the speed of adjustment—with respect to the minimum lending rate (MLR) and the 3-month deposit rate—have indeed declined after the crisis.

Disyatat and Vongsinsirikul (2003) also estimate vector autoregresssion (VAR) models for Thailand and found that the responses of output and bank credit to monetary shocks are greater when the estimates were carried out using data only up to 1999Q1, the point at which the divergence between credit and output became apparent. The results suggest not only that the impact of monetary policy on output has weakened since 1999 but also that this decline has been associated with a weaker bank-lending channel.

[7] Details of the estimation method and calculation procedures can be found in Disyatat and Vongsinsirikul (2003).

Looking forward, restoration of the banking system to full health and effective de-leveraging of corporate sector balance sheets are essential steps in unclogging the wheels of the transmission mechanism and improving the effectiveness of monetary policy. At the same time, retail rates that are more sensitive to money market conditions would remove an important impediment in the financial system. Moreover, as households diversify their portfolios more towards bonds and equities, the asset price channel of monetary transmission should strengthen as wealth effects become more important. Finally, if the composition of bank lending changes, the incidence of monetary policy is likely to change as well. Should recent trends continue, policy-induced changes in bank loan rates are less likely to affect large corporations and more likely to influence consumers.

3.3. The Importance of Financial Structure

Given the central role that the financial sector plays in facilitating investment and consumption, a natural question that arises is whether there exists an optimal financial structure that will maximize growth in the long run? Are financial systems that are market-based more efficient than those that are intermediary-based or vice versa? What determines a country's financial structure? The answers to these questions have important policy implications for countries such as Thailand, which is still in the relatively early phase of financial development.

A primary function of financial systems is to move funds from people who save to people who have productive investment opportunities. This primary function can be separated into three basic subfunctions: the mobilization of savings, the acquisition of information, and the management of risks. By fulfilling these functions, the financial system facilitates the allocation of resources across space and time under uncertainty in a manner that improves both the quantity and quality of real investments. More specifically, financial systems affect growth by improving the efficiency with which savings are used and increasing the amount of funds allocated to firms, thereby facilitating the growth of capital and productivity.

While it is widely accepted that financial development (more sophisticated and deeper capital markets and intermediaries) has a positive impact on long-run economic growth. A more pertinent question in the present context is whether financial structure (the degree to which the financial system is intermediary- or market-based) matters for growth.[8] The two main imperfections in credit markets are the existence of transaction costs and asymmetric information. The main reason why financial intermediaries exist is that they have developed techniques to deal with these problems. Intermediaries play an important role in identifying good projects, mobilizing resources, monitoring managers, and managing risk. They also have greater incentives to acquire costly information since private loans are not traded and no one can free-ride on the effort expended on screening and monitoring projects. In so doing, the degree of asymmetric information is reduced and the assessment of investment opportunities improved.

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[8] See Levine (1997) for a comprehensive survey of the literature on financial development and growth.

Although intermediaries can benefit from increasing returns to scale in mitigating asymmetric information, they may be unsuccessful when dealing with uncertainty, innovation, and new ideas. In contrast, markets may be more effective at financing industries that are new or where relatively little relevant data is available; that is, industries in which information is sparse and diversity of opinion persists. In this respect, equity and debt financing are, in general, not perfect substitutes for each other. By providing better information and decreasing monitoring costs for investors and financial intermediaries, stock markets lower the costs of both external debt and external equity. Some of the new investment stimulated by stock market development is financed by new bank loans and bond sales. Thus, in the early stages of stock market development, equity issues tend to complement rather than replace bank lending and bond issues.

At the same time, stock markets provide a means of diversifying risk, mitigating conflicts of interest among different creditors, and improving information flow and corporate governance. Since many profitable investments require a long-term commitment of capital, but investors are often reluctant to relinquish control of their savings for long periods, stock markets may affect economic activity through the creation of liquidity. Liquid equity markets make investment less risky and more attractive because they allow savers to acquire an asset—equity—and to sell it quickly and cheaply if they need access to their savings or want to alter their portfolios. At the same time, companies enjoy permanent access to capital raised through equity issues. By facilitating longer-term, more profitable investments, liquid markets improve the allocation of capital and enhance prospects for long-term economic growth.

The extensive literature, as reviewed by Dolar and Meh (2002), provides strong evidence that financial structure is not important for explaining differential growth rates across countries. Countries do not grow faster, and firms' access to finance is not systematically easier in either market- or intermediary-based systems. For example, Germany and Japan—major intermediary-based systems—and the United States and United Kingdom—the foremost market-based systems—have had different financial systems, but experienced similar growth rates over time. What matters for growth is the overall level and quality of financial services and how markets and intermediaries complement one another. Both intermediaries and markets have a comparative advantage at dealing with different types of information. The primary emphasis should thus be on the overall level and quality of financial services rather than the channels through which those services are provided.[9]

In light of the complementary nature of banks and capital markets, the inadequacies of Thailand's capital market suggests that substantial economic benefits remain to be reaped through further development of the capital market.[10] These benefits

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[9] See also Demirgüc-Kunt and Levine (2001).

[10] Indeed, as of end-June 2003, the country's stock and corporate bond markets were stood at 47 percent and 10 percent of GDP, respectively. In contrast, the average stock market capitalization/GDP ratio of 14 Asia-Pacific countries listed in the World Federation of Exchanges' database at end-June 2003 was slightly above 80 percent. For corporate bonds, the average ratio of

may come not only in the form of higher growth, but also a more stable one. Indeed, the 1997 crisis demonstrated just how detrimental the consequences can be when the banking system collapses in an economy with no firmly established alternative form of financing. As put succinctly by Greenspan (1999), "…multiple alternatives to transform an economy's savings into capital investment act as backup facilities should the primary form of intermediation fail."

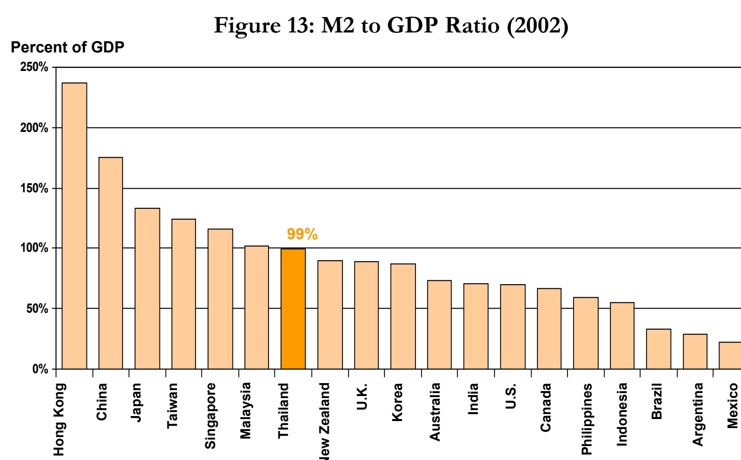
4. Financial Access and Long-Term Development

As outlined in the previous section, it is widely accepted that financial development—well-functioning banks and deep capital markets—is good for growth. However, one dimension of financial development that is often ignored in popular discussions is that of financial access, which relates to the ease with which the general population at large can have access to key financial services. Indeed, a country can have a financial sector which is quite sophisticated and developed in the sense of being liquid, offer a wide range of financial products, and closely linked to foreign markets yet offer only limited financial access for large segments of the population. This is not a far off description of Thailand where, as we shall see, financial access is concentrated in only a few regions.

4.1. The State of Financial Access

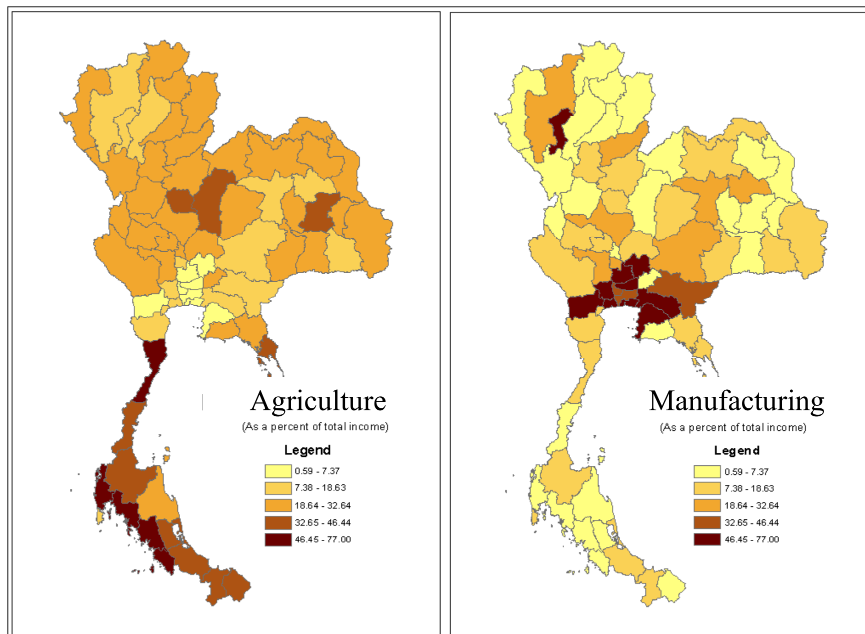
By many standard measures of financial development and deepening, Thailand appears to have come a long way since financial markets were liberalized in the early 1990s. Indeed, Figure 13 shows that from a cross-country perspective, financial deepening as gauged by the ratio of M2 to GDP is quite high. Such measures, however, can mask significant differences in financial development at the provincial level. Unfortunately, quantifying financial access is not a straightforward task since the perceived degree of financial constraint is not directly observable and also because provincial data is not always readily available. This section attempts to document the state of financial access in Thailand by making use of some recent survey data and drawing inferences from aggregate provincial data. Overall, the picture that will emerge is that despite the dramatic improvements in access to basic financial services achieved thus far, wide regional disparities remain.

Figure 13: M2 to GDP Ratio (2002)



outstanding corporate bonds to GDP of East and Southeast Asian countries as of end-2001 was around 17 percent.

Figure 14: Provincial Production (1999)



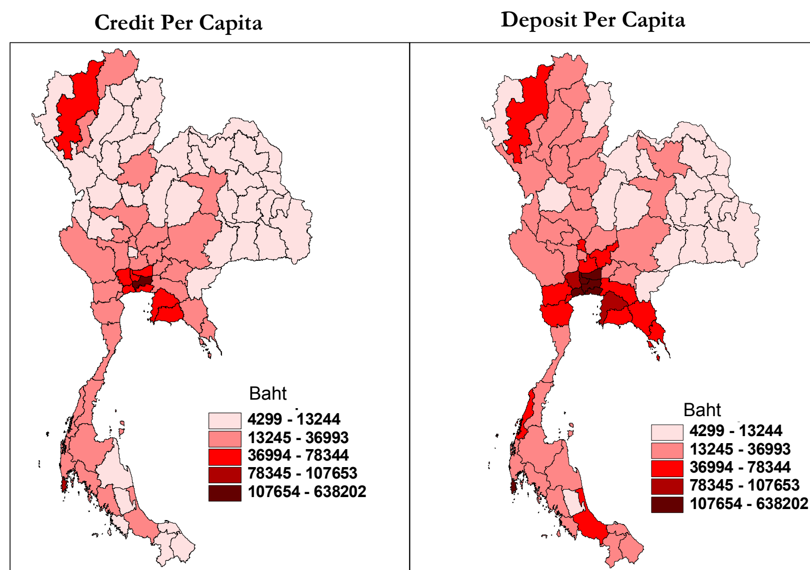
Source: Townsend Thai Project

4.1.1. Aggregate Provincial Data

It is important to recognize, at the outset, the dual nature of production in Thailand. As shown in Figure 14, the Central and most developed region in Thailand is primarily engaged in manufacturing production while the provinces, especially in the South, rely more on agricultural activity as a source of income. In terms of commercial banks, manufacturing represents the biggest loan category accounting for around 26.1 percent of total credit at end-2002, while agriculture constitutes only a very small portion of loans at around 2.3 percent of total credit. Thus in terms of credit, much of the rural and provincial areas are not served by commercial banks. The left hand panel of Figure 15, which shows per capita bank credit by province, confirms that much of the country—especially provinces in the Northeast—remain underserved by commercial bank lending. Things appear slightly better with respect to saving mobilization (right hand panel

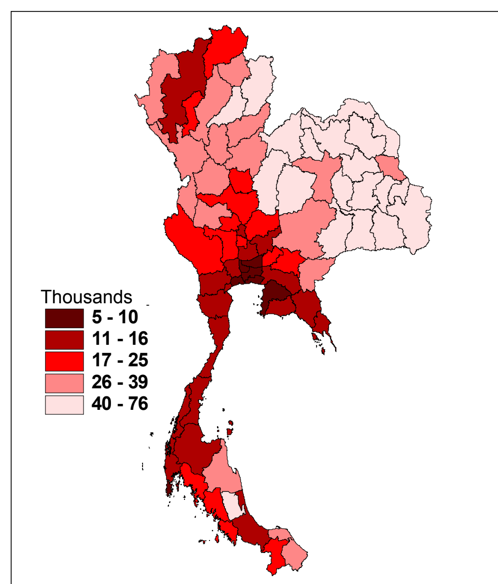
Figure 15: Credit and Deposit Per Capita (Feb. 2003)

Credit Per Capita **Deposit Per Capita**



of Figure 15), indicating that financial access in the provinces is perhaps more problematic on the borrowing side than the saving side. Finally, given that the number and distribution of banking outlets have a strong influence on access to banking services in rural areas—since transaction costs for savers and borrowers fall when banking outlets move closer to rural businesses and residences—Figure 16 illustrates just how underserved the provinces, again especially in the Northeast, is in this respect.

Figure 16: Population Per Branch (Feb. 2003)



The question, then, is what are the sources of finance in rural areas? In terms of outreach, the most important and organized financial service provider in Thailand at the provincial level appears to be the Bank for Agriculture and Agricultural Co-operatives (BAAC). For example, 95 percent of Northeastern Thai villages and 89 percent of Central Thai villages had at least one BAAC borrower as of 1994. The major expansion in BAAC outlets occurred in the 1990s, when the number of provincial and district branches rose from less than 200 to more than 600. In addition, many co-operatives and associations on-lend BAAC funds to low-income households in rural areas. Finally, moneylenders, landlords, traders, farmers, input suppliers, friends, and relatives make up a heterogeneous group that can be categorized as informal finance in rural areas. Informal loans are often used for short-term emergency and consumption purposes, but they also finance production and marketing activities, and the lenders are more likely to make loans without collateral or group guarantees.

Overall, the nature of financial services providers in rural Thailand is quite heterogeneous. The market appears to be segmented with commercial banks serving large farms and agro-industries; the BAAC largely serving small and medium farms, co-operatives, and associations; while the poor and landless are served mainly by informal finance, a few government programs, and NGOs. To obtain a better picture of the state of financial access in Thailand, the next two subsections examine the results of two relatively recent surveys. These provide a much richer perspective on the situation at the micro-level and offer more direct information on financial access than can be inferred from aggregated data.

4.1.2. Bank of Thailand's 2002 Financial Service User Survey

As an input to the development of the Financial Sector Master Plan, the Bank of Thailand commissioned a nation-wide survey of 4,800 individuals and 1,190 businesses in

2002 to appraise consumer and corporate satisfaction with available financial services.[11] The results of the survey revealed that although both consumers and corporations were well served by the system in terms of deposits, it was access to credit that created the most problems. The survey indicated that 57.7 percent of all consumers do not have access to formal credit channels, while 23.4 percent of corporations surveyed, the majority of which were small to medium size enterprises (SMEs), faced similar problems. The problem of loan accessibility was particularly acute for low-income people regardless of where they reside. Similarly, access to credit for businesses improved with the size of the firm. Among individuals and businesses who deemed their need to borrow from financial institutions as unfulfilled, stringent conditions and collateral requirements were cited as major barriers to access.

With respect to coverage of service providers, the primary formal providers of loan products to surveyed individuals were SFIs—GSB in the municipal areas (low-income segment only) and the BAAC outside the municipal areas. The BAAC's active role in the less developed areas is consistent with the finding that those who worked in the agricultural sector appear well served when it comes to borrowing for liquidity. Nevertheless, the BAAC's concentration on agricultural-based lending leaves non-agricultural lending needs of rural Thais unfulfilled. This is reflected in the finding that individuals in the agricultural sector found it just as difficult as any other group when it comes to borrowing for business start-up and business expansion. With respect to businesses, the provision of basic financial services is dominated by commercial banks. Only a handful number of firms, mostly medium- and large-sized business, were able to raise funds from stock and debenture issuances.

4.1.3. Townsend's 1997 Survey

One of the most rigorous attempts to study financial access in Thailand was conducted under the Townsend Thai Project administered by the University of Chicago.[12] As part of the project, a relatively large socio-economic survey was fielded in March-May of 1997 to 2,880 households which yielded a rich database that includes current and retrospective information on wealth, occupational history, access to and use of a wide variety of formal and informal financial institutions. The data also provides detailed information on household demographics, entrepreneurial activities and education.

The sample covers four provinces and focuses on households living in two distinct regions of Thailand: rural and semi-urban households living in the Central region (Lopburi and Chachoengsao) which is close to Bangkok and rural households living in the semi-arid Northeastern region (Buriram and Sisaket). The distinction between the survey areas is deliberate and helps to contrast the impact of financial constraints in the Central region, where household wealth is relatively high and financial markets are comparatively well

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[11] The full survey report (in Thai) is available from the following website: http://www.bot.or.th/bothomepage/BankAtWork/Financial_Supervision/FI_Research/FIresearch_thai.asp

[12] Details of the project can be found at:
www.src.uchicago.edu/~leas/newsite/townsend_thai/townsendproj.html

developed, with their impact in the much poorer and more remote Northeast. The uniqueness of the data is that construction of the survey was very much guided by economic theory making the data quite suitable for economic analysis.

Table 5 provides a summary of the results from the initial survey. In the relatively prosperous Central region, 28 percent of the households have a business compared to only 13 percent in the Northeast. In both the Northeast and the Central regions, the median annual income of business households was more than twice that of non-business households. In addition to having higher incomes, business households were also wealthier. The difference in wealth between business and non-business households was also larger in the Central region compared to the Northeast. Business households were wealthier both at the time of the survey as well as prior to starting a business compared to their non-business counterparts.

Table 5: Household Characteristics from Townsend-Thai Survey

	Whole Sample		**Northeast**		**Central**	
	No Business	Business	No Business	Business	No Business	Business
Observations	2282	593	1253	185	1029	408
% of sample	79%	21%	87%	13%	72%	28%
Median Annual Income*	40,000	102,450	27,420	55,680	64,800	130,450
Total Wealth (1,000's of baht)						
Mean	1,374	3,735	1,184	1,370	1,605	4,808
Standard Deviation	4,079	8,850	3,892	3,240	4,286	10,300
Total Financial Assets (1,000's of baht)						
Mean	26	125	9	40	46	163
Standard Deviation	142	789	45	297	203	928
Total Financial Liabilities (1,000's of baht)						
Mean	33	149	28	81	40	180
Standard Deviation	102	797	100	192	103	951
% who are currently members/customers of institutions						
Formal Financial Institution	40	67	34	55	48	73
Village Institution	35	40	41	51	29	36
Agricultural Organizaion	50	56	56	74	43	48
Money Lender	15	14	16	14	14	14
% who were members/customers of institutions 6 years ago						
Formal Financial Institution	15	29	11	18	19	34
Village Institution	12	13	14	14	10	13
Agricultural Organizaion	26	32	26	36	26	30
Money Lender	4	4	4	4	4	4

The data provides insightful information about the degree of financial constraint. Most directly, each respondent engaged in business was asked, "If you could increase the size of your business, do you think it would be more profitable?" Households who answered 'yes' to this question were classified as being 'constrained'. Sixty-four percent of household businesses in the Northeast and 50 percent of households in the Central region

answered 'yes' to this question. These households were then asked to name the main barriers to expanding their businesses. The most common answer, especially in the Northeast, was "not enough money to expand". Seventy-two percent of 'constrained' businesses in the Northeast gave this answer, compared with 47 percent in the Central region.

Business owners were also asked to report how initial asset purchases and other start-up costs were financed. The relatively small role that credit plays in funding business startups is reflected in the observation that almost half of the initial funding, 48 percent, came from cash and another 26 percent from credit. The reported sources of credit, in order of relative importance, were: relatives, store owners, the BAAC, and commercial banks. Commercial bank lending was so rare in the Northeast as to fail to be a consideration at all in business starts and investment. The important sources of additional funding were very similar across the two regions, namely savings (41 percent of total, on average), the BAAC (15 percent), other (12 percent), and commercial banks (6 percent).

Using this dataset, Paulson and Townsend (2001) conducted an extensive analysis that revealed some unique insights about the state of financial access in Thailand. The most convincing evidence that credit markets in Thailand are imperfect is the finding, using both non-parametric and reduced-form estimates from probit models, that wealthier households are more likely to start a business. If financial constraints were not important, then potential entrepreneurs would make the decision to start a business based solely on expected profitability, using outside financing if necessary, and their own wealth would not be a factor in whether or not the business was started. When financial constraints are important, however, outside financing may be unavailable or insufficient and households have to wait until they have accumulated enough wealth to finance the initial investment—creating a link between the wealth of the potential entrepreneur and the decision to start a business.

Information about the operation of existing businesses also point to the presence of significant financial constraints. In particular, financial constraints may prevent entrepreneurs from investing the optimal amount in their businesses. In this case, wealthier entrepreneurs will be able to invest more in their businesses because they are less dependent on the availability of outside funding and their returns to investment should be lower. In the data, median investment in every case is indeed higher for wealthier households compared to poorer households. At the same time, median returns to investment, as proxied by income to capital ratios, decreases from 57 percent for business households in the lowest wealth quartile to 16 percent for households in the highest wealth quartile (significant at a 5 percent level). The same pattern is observed in both the Central and the Northeast regions. In addition, the median return to business investment is higher for households who report that they are constrained. Thus constrained credit appears to have kept these businesses operating at a small scale with high marginal returns.

Overall, there is substantial evidence that financial constraints play an important role in determining which households start businesses in rural and semi-urban Thailand. Moreover, the evidence suggests that financial constraints place greater restrictions on entrepreneurial activity in the Northeast compared to the Central region, a reflection of the fact that the Central region is wealthier and has a relatively sophisticated financial system. Thus despite systematic and evident efforts on the part of the Thai government to

solve the problem of imperfect and limited credit, low wealth households still face a simple, mechanical relationship between their accumulated wealth and the amount of overall credit they have access to. The main determinant of lending is whether the household has land and other assets, either as predictors of the magnitude of crop income or as collateral.

4.2. The Importance of Financial Access

The importance of financial access for economic development cannot be understated. Financial access improves households' ability to smooth consumption over time, especially in the face of unexpected shocks, and provides them with a means with which to invest their savings alongside others as part of a diversified pool. More importantly, financial access enables potential entrepreneurial talent to be exploited by facilitating the creation of new firms. In so doing, the overall level of investment—and hence the speed of technology adoption—is increased, contributing to higher per capita income levels.

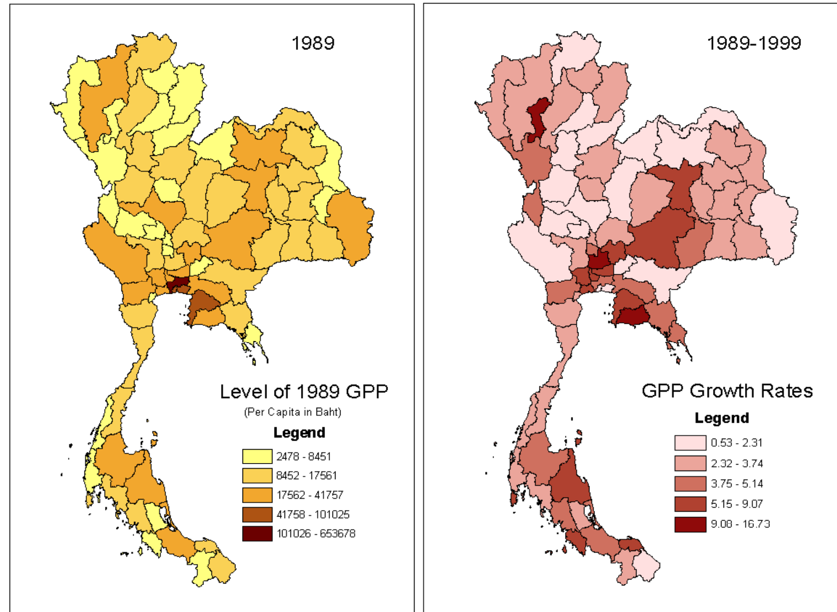
This section analyses the extent to which existing gaps in Thailand's financial access, especially the uneven nature of credit availability, has hampered Thailand's economic performance. To crystallize things, it presents some evidence on the magnitudes of welfare gains that may be reaped from improved financial access. In addition, some of the key obstacles to financial access are discussed to pave the way for policy recommendations in Section 5.

4.2.1. Quantifying the Welfare Gains of Improved Financial Access

Uneven financial access does not only hold back growth for the economy as a whole, it also exacerbates inequality across regions. Indeed, one of the factors behind Thailand's uneven distribution of income and provincial growth rates is the differences in financial access across the country. Figure 17 shows not only how per capital income levels were uneven as of 1989, but also how the inequality exacerbated during the 1990s when financial market liberalization tremendously improved financial access to certain regions but left most of the country behind. As an example of the income disparity generated by uneven financial access, the Townsend-Thai data indicates that the average annual income of business owners in rural and semi-urban Thailand was three times higher than that of non-business owners.

One of the main benefits of financial development at the regional level is that it facilitates the creation of new firms. Thus in more financially developed areas it should be easier for an individual to become an entrepreneur and a higher rate of new firm creation should be observed in these areas. Using data on Italian regions, Guiso et. al. (2002) study the effects of differences in local financial development and find that financial development indeed enhances the probability that an individual starts his own business, favors entry, increases competition, and promotes growth of firms. As predicted by theory, these effects are weaker for larger firms, which can more easily raise funds outside of the local area. Compared to the least financially developed provinces, the ratio of new firms to population is three percentage point higher, the number of existing firms per

Figure 17: Concentration and Divergence



Source: Townsend Thai Project. GPP = Gross Provincial Product.

capita 50 percent higher, and per capita GDP growth around 1 percent per annum higher in the most financially developed provinces.

In the Thai context, Giné and Townsend (2002a) attempt to quantify the welfare gains from improved financial access by estimating a macroeconomic model of growth with financial deepening and changing inequality (a general equilibrium model with constrained occupation choice) using data from the Thai Socio-Economic Survey and from the Townsend Thai Project mentioned above. The estimated model is able to replicate quite well actual historical movements in GDP growth, savings, labor share, inequality, and fraction of entrepreneurs. It can therefore be said that the estimated welfare gains and losses are based on a solid, somewhat realistic picture of the actual Thai economy.

By comparing two versions of Thailand's history from 1976-1996, the actual one and a counter-factual one where financial intermediation is limited even below the observed low level, an indication of who gained from the expansion in the financial sector can be obtained. The results suggest that even modest improvements in Thailand's financial system could lead to large increases in the growth of per-capita income. Reflecting limited financial intermediation in Thailand, the data suggests that business activity is dictated too much by wealth and too little by actual ability and underlying productivity. If some of the existing savings were lent to existing businesses short of capital, and to households for business start-ups, then national income would go up. Likewise, relatively small but steady improvements over time in intermediation could lead to substantially higher per-capita growth rates.

Those with the most to gain from improved financial access are agents with relatively high entrepreneurial talent who could expand existing small- or medium-sized business, or switch from agriculture or wage employment into business, but are constrained from doing so by a lack of credit associated with their relatively low wealth levels. Mean gains for these groups range from 17 to 34 percent of observed overall

average household income. Moreover, with a faster expansion of financial infrastructure, the real wage in Thailand would likely be higher than it otherwise would be, benefiting relatively unskilled workers.

Overall, the results confirms that Thailand's remarkable growth from l976-l996, at 6 percent on average, and much higher in the second part of this 20-year period, had been driven in no small part by expansion of financial infrastructure, that is, by improved intermediation. If, contrary to what actually happened, that expansion had been far more limited, virtually zero, then the model predicts that Thailand would not have grown much at all. The best that could have been managed is a low and flat 2 percent per year.[13] Those that gained the most from financial expansion were relatively low-wealth households that managed to switch occupations and go into business.

4.2.2. The Nature of Financial Constraint

While the recognition that the credit market in Thailand is imperfect is a vital first step, it is difficult to draw appropriate policy conclusions or envision possible remedies without a firmer understanding of the underlying obstacles to better access. To understand why households with low wealth are unable to start businesses as easily as their higher wealth counterparts, or to expand existing businesses, it is necessary to understand what determines the supply of credit: who gets credit and who does not, and to understand the nature of the credit that is actually offered.

The provision of financial services is especially difficult and costly in rural areas. Rural bank clients are more dispersed than urban clients and often demand relatively small loans and savings accounts, so per unit transaction costs are high for financial institutions. Information costs for providers and users are higher because transportation and communication infrastructure is usually less well developed. Moreover, deficiencies in laws and regulations mean that the enforcement of claims can be costly, lengthy, and uncertain. These difficulties discourage for-profit financial institutions from establishing themselves in rural areas. In this respect, informal lenders have an advantage since they often know and live in close proximity to their clients so they can more easily evaluate creditworthiness and monitor their performance.

Nonetheless, perhaps the most important obstacle to financial access in rural areas is that many potential clients with good prospects have little acceptable loan collateral, and property rights to mortgaged land may be uncertain and hard to enforce. In Thailand, the land tenure system has been a constraint for commercial banks and other financial institutions that use traditional collateral-based lending to screen borrowers and enforce loan contracts. Many farmers on private lands and squatters on public lands do not have legal documents that lenders will accept as collateral.[14] One way in which formal financial

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[13] Jeong (1999) estimates that access to intermediation accounts for 20 percent of the growth in *per capita* income in Thailand between 1976-1996.

[14] Security of tenure also has a substantial effect on the agricultural performance of farmers, since an important determinant of greater productivity on legally owned land is better access to cheaper and longer-term institutional credit enjoyed by titled owners.

institutions have tried to resolve the problem of access to loans by persons without collateral has been the use of joint liability group loans, such as those by the BAAC, in which members guarantee each other's loan repayment. The groups screen their own members and this process plus peer monitoring may reduce lending risks.

A rigorous attempt to pin down the nature of the financial access problem has been carried out by Paulson and Townsend (2002b) through an analysis conducted on the Townsend-Thai data outlined above. Using non-parametric, reduced form, and structural techniques, they attempt to distinguish between two models of growth with inequality that differ as to their assumption about the nature of financial constraint. In the first model, commonly referred to as the 'limited commitment model' in the literature, households can borrow freely at interest to go into business but only up to a multiple of their assets. Thus if assets are limited, they will be constrained, regardless of education and talent. In the second model, households who borrow heavily will pay back much in principal and interest, leaving little incentive to work for residual profits, on their own account. This is a moral hazard model, in that effort or diligence is unobserved by outside lenders, and too much insurance against non-payment, that is higher interest rates, may cause the entrepreneur to shirk. In this class of models, low wealth households face high interest rates and the lowest wealth households may be screened out of the credit market altogether.

When each model is taken to the data, the asset-backed lending model fits the data better for low wealth households and those in the Northeast, where financial contracts tend to relate the maximum amount that can be borrowed to a fixed multiple of total household wealth. In contrast, the moral hazard model fits the data best among wealthy households and those in the Central region. Here the main problem is designing financial contracts that provide appropriate incentives to the borrower when effort is unobservable. The key distinguishing fact is that for higher wealth households and households in the Central region, the higher wealth is, the more these households invest in their own businesses, the more they bear the fruit of their own effort, and the less is the overall level of credit. In contrast, for low wealth and Northeastern households facing lenders more worried about repayment, credit is increasing in wealth.

The overall conclusion is that the dominant source of credit market imperfection varies with wealth. While the symptoms of these imperfections maybe indistinguishable, such as the link between wealth and business start-ups, the underlying problem is not the same. As such, policy remedies to improve financial access must be tailored to the specific underlying problem in each case. Simple and blunt expansion of credit may not solve the problem. In particular, a program to establish secure property rights in land (so that it could serve as collateral) would be a higher priority in the Northeast compared to the Central region, while better use of information about potential debtors can help to overcome the moral hazard problem in the Central region. The latter follows since in the moral hazard model, the demand and the supply of credit varies as a function of the characteristics of the borrower and the investment project so that credit supply in the Central region is likely to be more client-based. This is not the case in the limited commitment model.

5. Policy Implications

The financial sector's critical role in the economy dictates that lingering problems from the 1997 crisis and existing structural weaknesses must be dealt with carefully and forcefully if Thailand is to fully attain its growth potential. In light of the evidence presented so far, this section attempts to draw some conclusions that may serve as a guide towards policy both from a short- and long-run perspective. Note that the section does not attempt to propose specific measures, rather the aim is to highlight areas where policy initiatives should focus on.

5.1. Short-Term Solution

The Thai financial system has come a long way from the crisis in 1997, having returned to stability and consolidated on a large scale. Capitalization of all financial institutions has strengthened considerably and profitability has been restored. Nevertheless, there remain significant weaknesses that need to be addressed before the financial sector can fully play its role of facilitating sustained economic growth. In light of the dominant role played by banks, much of the focus in the near term rests on addressing weaknesses in the banking sector. The most pressing short-term challenge to the sustainability of the economic recovery lies in the revitalization of bank credit. Simply relying on private consumption and the traded sector to propel the economy may not be a sustainable strategy, given considerable uncertainty as to their resilience. To this end, contribution from the non-traded sector is crucial, and the latter cannot take place until bank credit into the non-traded sector fully recovers.

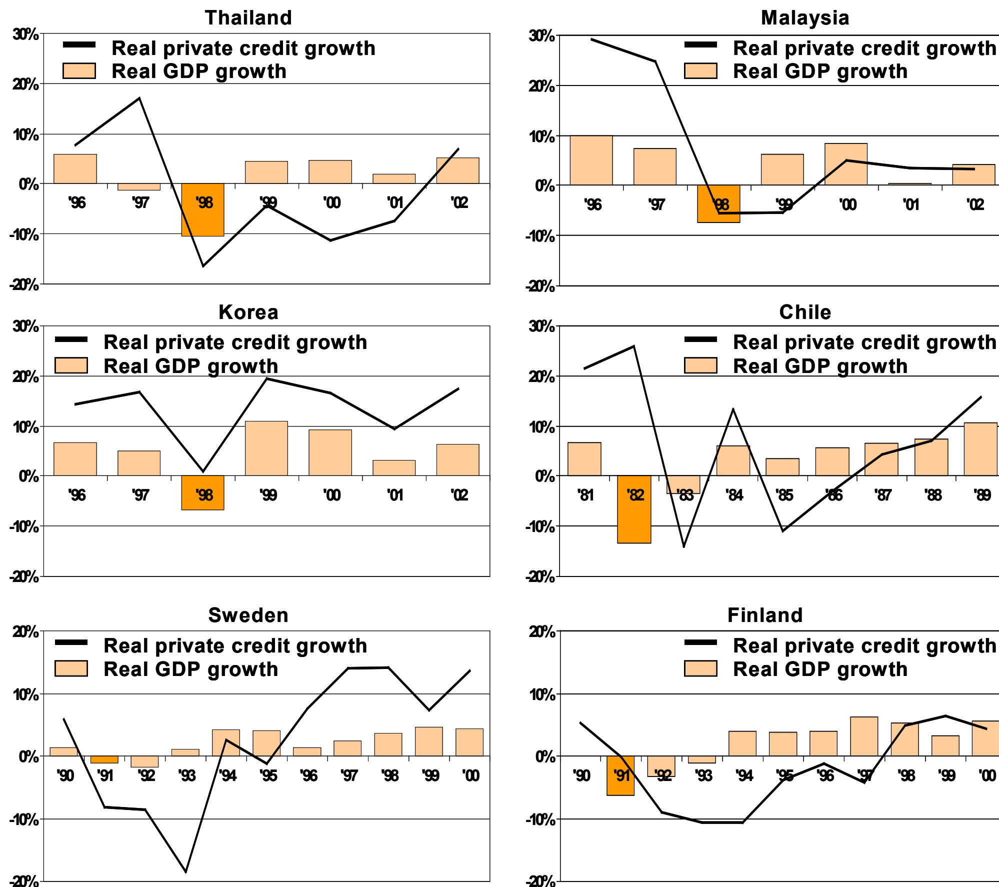
This section proposes three major avenues to overcome the short-term challenge posed by impaired bank credit flow, namely: i) further acquisition of NPLs by the state; ii) enhancing the role of credit bureaus; and iii) introduction of a limited deposit insurance scheme. Implicit in these supply-side measures is the presumption that aggregate demand is managed in a sound manner by the pursuit of a supportive fiscal and monetary policy mix that is appropriate and sufficiently forward-looking.

It should be noted at this juncture that the process of credit revival is typically drawn out. As reflected in Figure 18, which shows the post-crisis evolution of real private credit and real GDP in a number of countries, credit recovery takes time, especially when the banking system is deeply inflicted. Thus even once the proposals outlined below have been implemented, it might take a few more years for credit growth to become robust again.

5.1.1. Resolution of Non-Performing Loans

The most urgent problem that must be addressed in Thailand's financial sector is the significant overhang of non-performing loans (NPLs) that continues to hamper bank balance sheets and constrain credit expansion. Resolving these problems will have an especially important impact on how well commercial banks serve small firms as well as farms and agribusinesses in the future, because they are more dependent on banks than on other sources of financial services.

Figure 18: Real Private Credit and GDP Growth



Source: IFS May 2003; Authors' calculation

From the authorities' perspective, a key priority is the need to ensure effective functioning of the various specialized agencies that have been established to facilitate the resolution of NPLs. These agencies need to concentrate on maximizing asset recovery, minimizing moral hazard, and limiting potential economic distortions between performing and non-performing debtors. The focus should also be on selling assets off quickly rather than restructuring them on their own so as to would minimize the claims on taxpayers and ensure that debtors are not able to put off restructuring.

The establishment of the Thai Asset Management Corporation (TAMC) in June 2001 has been an important catalyst to the NPL resolution process. As of end-2002, the TAMC's cumulative acquisitions of impaired assets amounted to more than a quarter of all distressed assets in the financial system, at approximately 760 billion baht. The fact that around 80 percent of this came from state-owned financial institutions and AMCs suggests further opportunities to capitalize on the TAMC's special mandate. In particular, provided that the TAMC operates efficiently along the lines suggested above, further gains could be had by another round of NPL acquisition from private banks. This would be facilitated by an amendment of the TAMC's NPL selection criteria of accepting only 'untouched' NPLs (those that have not been restructured or achieved court ruling) since much of the NPLs in private banks do not fall into this category. In addition, sufficient incentives should be provided for private banks to sell a large chunk of their NPL portfolio to the TAMC. Such an acquisition will free the private banks from the subtle

capital adequacy constraint discussed in Section 3.1, enabling banks to provide fresh loans to the non-traded sector and small firms without access to the capital market.

To enhance the NPL recovery effort by TAMC, the government also needs to seriously consider amending the current legal framework. While considerable progress has been made towards building an effective legal foundation for NPL recovery since the crisis, a number of shortfalls remain, especially with respect to the Bankruptcy Law (last amended 1999). It should also not be forgotten that a country's laws are only as good as the manner in which lawyers, judges, and the government administer them.

5.1.2. Credit Bureau

Just as crucial as the speedy resolution of existing bad assets in the banking system is the need to ensure that the problem does not reoccur in the future. A key dimension in this respect lies in reducing the degree of information asymmetry in the banking system. In particular, the quality of credit data available to banks needs to be improved in order to facilitate better assessment of risk. This is especially pertinent in light of the rapid growth in consumer finance, which represents at the same time an additional channel for banks to boost earnings, as well as a new source of risk that will have to be dealt with carefully. Much of the improvement in this respect can be provided by effective credit bureaus.

Thailand currently has two credit bureaus, established in September 1999, to facilitate centralized credit data collection: The Thai Credit Bureau Company and The Central Credit Information Services Company. So far, their usefulness have been limited by narrow coverage and poor quality of information. The two credit bureaus together cover a few million consumers, but there is only a limited number of SMEs in the database (only the Central Credit Information Service covers SMEs). Furthermore, the data comes predominantly from financial institutions. There is no information coverage from non-financial sources such as department stores, telecom companies and utilities. Finally, their short lifespan limits the availability of historical data.

While these problems are to be expected given that it typically takes 5-10 years to build up trusted and comprehensive credit information, Thailand can leverage on experiences in other countries to speed up the development of the country's credit bureaus. With respect to commercial credit, the establishment of a comprehensive SME database should be a priority. On consumer credit, the integrated coverage of financial and non-financial sources is crucial. Finally, pressure for the two bureaus to merge together should be resisted to maintain competition. Instead, certain basic information of the two bureaus should be consolidated, in line with the practice in Germany. Such data consolidation will achieve benefits of pooled data, but at the same time keep competition alive.

5.1.3. Limited Deposit Insurance

One legacy of the 1997 crisis that continues to distort Thailand's financial system is the blanket guarantee for depositors and creditors of financial institutions. While the guarantee helped to stabilize the Thai financial system at the time, its continued existence has entailed significant costs. First, it represents a considerable contingent liability to taxpayers because depositors and creditors would not have to bear the losses associated

with bank failures. Second, it removes market discipline since prudent management is not rewarded. Third, because banks do not have to worry about a deposit run, it creates moral hazard, which could undermine disciplined risk assessment. Finally, it holds back capital market development by discouraging the flow of funds away from banks. These problems would be effectively addressed by the introduction of a limited deposit insurance scheme.

During the past couple of years, considerable progress has been made towards the establishment of the Deposit Insurance Agency (DIA), an organization that would administer limited deposit insurance in Thailand. With much of the groundwork completed, the key consideration at this stage is the timing of its introduction. This matters not least because changes in confidence regarding certain financial institutions may have potentially destabilizing effects on the financial system. In light of remaining weaknesses in the Thai banking sector discussed in Section 3.1, it would be best to begin the transition to limited deposit insurance only once these gaps have been addressed. This simply reinforces just how crucial the resolution of NPLs is to the whole process of financial sector restructuring.

5.2. Long-Term Solution

From a longer-term perspective, the resolution of remaining weaknesses in the balance sheets of Thai banks will not be enough to ensure the attainment of growth at full potential that is both more stable and evenly distributed across the country. The missing pieces are: i) deeper capital markets to complement banks; and ii) greater financial access to facilitate entrepreneurship, especially in the provinces.

5.2.1. Deeper Capital Markets

As argued in Section 3.3, the presence of a well-functioning and deep capital market to complement the banking sector is crucial not only for a more efficient allocation of resources, but also for a more resilient growth process when the latter is experiencing problems. While the crisis has indeed spurred firms to seek alternative non-bank financing, which has rapidly expanded the size of the corporate debt market, it has not broken the banking sector's dominance. The pertinent question that arises is then: what conditions are necessary to encourage capital market development and bring about better financial services? Laporta et al. (1997, 1998) argue that the legal system plays a crucial role in this respect. Creating a strong legal system that supports the rights of outside investors (both equity and debt investors) and then efficiently enforcing those laws is crucial for the provision of growth-enhancing financial services.

Intuitively, this is a simple idea, since a promise to deliver one unit of financial service tomorrow is worthless if delivery cannot be enforced. Put simply, investors provide capital to firms only if they have the ability to get their money back. For equity holders, this means that they must be able to vote out managers who do not perform and/or sell their holdings easily in a liquid market. For creditors, this means having the authority to repossess collateral. If these conditions are not met, then capital markets will in general be less developed and less attractive for both lenders and borrowers. This will result in a dominance of bank-based financing. Indeed, the empirical evidence shows that countries with legal systems that give high priority to secured creditors, rigorously enforce

contracts, and set accounting standards that produce comprehensive financial statements, have better developed financial intermediaries and enjoy faster growth (Cecchetti, 1999).

5.2.2. Improved Financial Access

The other dimension of financial sector development whose importance cannot be understated is that of financial access. There is strong evidence that an imperfect credit market is a big constraint on the small business sector in Thailand. The results highlighted in this paper suggest that local financial development is an important determinant of the economic success of an area and much can be gained simply from improving financial access and development of poorer regions across Thailand. At issue here is what can be done to overcome the barriers to financial expansion?

One of the most significant obstacles to wider financial access in Thailand in the past, especially through formal financial institutions, has been the use of loan collateral for reducing credit risks. This does not work efficiently when many intended clients do not have acceptable collateral, and expensive and time-consuming legal procedures prevent effective realization of legal claims on collateral. In Thailand, enhancing the availability of collateral through a reform of laws governing land ownership would alleviate constraints on many who have the right to use land but no legal document that can be used as collateral.

This would not help those with good projects but no access to collateral, however. Collateral substitutes are needed in this situation. The BAAC lends to informal borrowing groups as a way to help resolve the loan collateral problem. Lending to co-operatives and farmers' associations is another way, provided that the members exert peer pressure on borrowers to repay. More effectively, however, would be to shift the focus away from collateral-based lending to project-based assessment. This would enable projects with the highest marginal product to be financed, irrespective of whether the borrower has access to collateral or not. Moving in this direction requires large improvements in information collection and processing as well as better-designed contracts. In this respect, financial institutions need supportive public policies to develop accounting and disclosure systems and to improve the legal infrastructure.

Given the important role that the BAAC plays in the rural Thailand, careful consideration should be given to its policies and performance. Despite its impressive outreach, one of the main constraints of the BAAC lies with a mandate that prevents it from serving the rural non-farm sector, where much investment potential lies. Rural industries and non-farm enterprises will be better served if commercial banks and the BAAC are allowed to compete in serving their financial demands. Moreover, the BAAC itself may be less vulnerable to risks if it develops a less specialized portfolio. This is not to say that the BAAC is not helping. On the contrary, the BAAC does facilitate business entry and business investment. But it seems to be doing this in a way that links its credit supply to wealth. A careful assessment of the credit instruments offered should thus be done keeping in mind that optimally designed credit contracts need to take into account risk, incentives, and the ability to repay. More flexible risk-contingent lending would also be helpful. Finally, the pursuit of subsidized interest rate policy on loans should be

reconsidered since they discourage other financial institutions from trying aggressively to serve agriculture.

It is also essential to recognize that the appropriate remedy may not be uniform across different regions of the country. As outlined in Section 4.2.2, the nature of financial constraint appears to vary with wealth and simplistic or blunt policies, which may take the form of mandated lending, subsidized interest rates, or the creation of new credit institutions, may thus miss the mark—largely because they address the symptoms rather than the underlying cause of inadequate rural financial intermediation. Policy should be aimed at identifying the causes of market failures and correct them through reforms rather than through direct financial-intermediation interventions. Indeed, the availability of cheap loans and debt forgiveness has the potential to weaken the repayment culture and make lending unprofitable. Subsidized interest rates may encourage unprofitable investments while borrowers are more likely to default on directed credit because of the perception that the government will not pursue them vigorously. Importantly, any expansion of credit and saving facilities must take place efficiently. Specific policies need to be directed at specific institutions. Institutional sustainability, breadth and depth of outreach, and quality of services provided should be emphasized as key performance measures.

It should also be kept in mind that even when households have access to credit, it may be limited. Thus improving access encompasses not only helping those who were previously unable to borrow to obtain loans, but also increasing the amount with which entrepreneurs with viable investment opportunities can borrow to expand their businesses. Finally, one should not loose sight of the fact that while the financial sector can respond to opportunities created by rapid economic growth, it cannot accelerate the growth process in the face of an unfavorable economic environment. Credit cannot compensate for unprofitable production activities. It cannot compensate for missing roads, bridges, and communications. It cannot compensate for bad seed, missing input supplies, inefficient marketing systems, and poor transportation. These fundamental economic bottlenecks must be addressed before more loans can make a significant impact.

6. Conclusion

Thailand has within its grasp the potential to attain a growth process that is both stronger and less volatile, yet at the same time more evenly distributed. The key to unlocking this potential is the realization of a superior financial system. Crucial elements in this respect are: i) stronger bank balance sheets; ii) a conducive regulatory environment that fosters market efficiency and discipline; iii) a more balanced financial structure; and iv) much improved financial access, especially in the provinces.

Despite sizeable increases in the use of non-bank sources of finance, the private sector in Thailand still relies heavily on the banking sector. While the puzzling coexistence of a protracted slowdown in bank credit and robust economic recovery may suggest that the growth process has become less dependent on banks, the fact of the matter is that the aggregate output performance masks an asymmetric sectoral pattern. Importantly, credit to those sectors that have been driving the rebound in output, private consumption and

the traded goods sector more broadly, has actually increased or remained relatively stable. This asymmetry in financing opportunities across the traded and non-traded sectors suggests that the recovery could be further supported by a revitalization of credit to the non-traded sector.

In this respect, banks will continue to play a dominant role in financing private sector activity for some time to come. As such, the speedy resolution of remaining problems on banks' balance sheets is crucial in re-establishing the single most vital link between savers and productive activity in the Thai economy. At the same time, policymakers should not loose sight of the need to lay the necessary foundation for much improved risk assessment and management that puts more of the onus on market discipline and peer review. Not only will this process improve resource allocation across the economy, but it will also minimize the risks of a re-emergence of the imbalances that led to the turmoil in 1997.

While there is nothing wrong with intermediary-based financing *per se*, the existence of a deep and liquid capital market to complement banks significantly enhances the efficiency and resilience of the financial system. A key factor in this regard is a sound legal system that effectively protects the rights of investors and enforces contracts efficiently. The important policy message is that policy-makers should focus on legal, regulatory, and other policy reforms that encourage the proper functioning of both markets and intermediaries, rather than concern themselves with the degree with which their national financial system is market- or intermediary-based.

An often neglected dimension of financial market development is that of access. Although Thailand has become closely integrated with international financial markets at the national level, the benefits that such linkages provide have been quite concentrated in a handful of regions, leaving much room for improvement at the local provincial level. Substantial evidence suggests that both the formation of new businesses and the way that existing businesses are run appears to be affected by financial constraints, with personal wealth playing a dominant role in both. The focus, therefore, should not be solely on improving the integration of Thai financial markets with that of the Asian region or the world, but also on making sure that financial integration occurs at the provincial level as well. What is required is a well functioning financial intermediation system that allows talented individuals to go into business or expand existing businesses, regardless of where they live or their current wealth level. Client-based lending procedures, rather than client-blind, collateral-based lending would be particularly helpful in this respect. Estimation based on formal economic models suggests that the benefits could be large if the financial sector reforms are well conceived and carefully implemented.

Ensuring that limitations within the financial sector will not impede upon growth in the real sector is a central goal of the Bank of Thailand's Financial Sector Master Plan, currently under consideration by the Ministry of Finance. In recognition of Thailand's unique economic characteristic whereby a highly industrialized and modern urban manufacturing sector coexists with a traditional rural agricultural sector employing the majority of the workforce, the Financial Sector Master Plan aims to improve the efficiency and competitiveness of financial services for the modern sector, while providing additional access to financial services for those underserved by the current system. Through ongoing

efforts to address the current gaps in the financial system that fully takes into account the linkages and synergies between various segments of the financial sector, the Thai economy should emerge stronger, more resilient, and be better placed to reap the benefits of technological innovations and increased integration with the world economy.

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