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**Financial Liberalization:
What has really been achieved in Bangladesh**

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To
My
Mother

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List of Acronyms

BB	Bangladesh Bank
BBS	Bangladesh Bureau of Statistics
CEO	Chief Executive Officer
FCB	Foreign Commercial Bank
FSRP	Financial Sector Reform Programme
FY	Financial Year
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GNI	Gross National Income
GNP	Gross National Product
IRS	Interest Rate Spread
LDC	Least Developed Country
MFI	Micro Finance Institution
NBFI	Non-Bank Financial Institution
NCB	Nationalized Commercial Bank
NIM	Net Interest Margin
NPL	Non-Performing Loan
PCB	Private Commercial Bank
SB	Specialized Bank
SEC	Securities and Exchange Commission
USA	United States of America

Abstract

There has been considerable controversy over the role of financial liberalization policy, particularly in developing country experiences. This paper explores the consequences of financial liberalization policy execution in the banking sector in Bangladesh. Applying both exploratory and econometric techniques with time series data for the period, FY1981-2008 the study suggests that the main objective of the financial liberalization thesis to promote domestic private savings by raising real interest rate has not been achieved so far. No significant positive correlation has been observed between domestic private savings and real deposit interest rate. On the other hand, financial liberalization has not improved the efficiency of the banking institutions since a high intermediation cost (interest rate spread) is still persisting with allocating financial resources to short-term speculative lending rather than long term productive investment. However, insufficient time series data might limit the significance of the econometric results of the study.

Keywords

Financial liberalization, Domestic private savings, Interest rate, Efficiency, Co integration

JEL Classification: E21, E44, E42, C22

Chapter 1

Introduction

Financial liberalization remains one of the most controversial issues in the literature on economic reforms. With the global integration, deregulation and improvements in technology, financial systems in world economies have undergone remarkable changes in recent years, which have had a bearing on the behaviour of households and firms in terms of savings and investment behaviour. Recent financial crisis, particularly global credit turmoil has stimulated rethinking on financial liberalization.

At the time of writing, banks in the USA and also in Europe are facing liquidity crises incurring massive losses, e.g., Royal Bank of Scotland is set to reveal about EUR¹ 5 billion of losses from the credit turmoil and Citigroup (USA) announced a USD² 5.1 billion loss for the first quarter of 2008 (*Financial Times* 2008). Britain launched a 400 billion pound rescue plan to boost up financial institutions – an effort to restore confidence (Larsen 2008). On the other hand, US government unveiled a historic rescue plan for bank recapitalization amounting USD 250 billion, of which half of the total will be injected into 9 major banks including Bank of America, JP Morgan Chase, Wells Fargo, Citi group (Guha and Politi 2008). Meanwhile, banks have been nationalized by several governments; the Netherlands, Belgium and Luxemburg each bought 49 percent of ‘Fortis’ local banking subsidiaries for combined EUR 11.2 billion (Steen et al. 2008); the Swedish government has taken over Carnegie, the largest investment bank in the Nordic region in order to protect financial stability and to preserve the value of the collateral (Anderson 2008).

Against this back drop, question marks are growing regarding the wisdom of the deregulation process of the financial sector. Therefore, it is timely to examine the outcome of financial liberalization in a developing country like Bangladesh, particularly in terms of its stated objectives; promoting domestic private savings, and efficient allocation of financial resources.

The pioneer in advocating financial liberalization, McKinnon-Shaw (1973) thesis of ‘financial repression’ argues that a low real rate of interest discourages savings, and hence, reduces the availability of loanable funds. In other words, an increase in real interest rate may induce savers to save more, which will provide investment finance (Khan and Hasan 1998:582). The critique of the thesis argued that rise in real interest rate increases inflation in the short run through a cost push effect and lowers the rate of economic growth at the same time, by reducing the supply of credit in real terms available to finance investment (Fry 1995: 18).

¹ EUR is the EURO, currency of the European Union. (EU)

² USD is the US dollar, currency of the United States of America.

However, Levine (1997: 691) explains the theoretical interrelations between savings, investment, financial market and economic growth in a way where financial functions mobilize savings, allocate resources which lead to capital accumulation and technological innovation, and finally achieve economic growth.

From the mid 1970s onwards many developing countries, most notably in Latin America (e.g., Argentina, Brazil, Columbia, Mexico, Uruguay, and Chile) and Asia (e.g., Malaysia, Indonesia, South Korea, Thailand, India, Sri Lanka, Philippines and Pakistan), have implemented various Financial Sector Reform Programmes (FSRPs).

Bangladesh has also experienced financial reform in the early 90s. This process has had a number of phases. The main objective of the programme was to promote domestic private savings for investment finance, and improve the efficiency in resource allocation (Kabir 2004:161). The measures that have already been taken under the reform process include the introduction of a market determined interest rate, privatization of state-owned commercial banks and greater freedom for the operation of private sector commercial banks and other financial institutions. In fact, banking sector has been opened up for private ownership since the implementation of Structural Adjustment Programme in the early 80s.

Table 1.1 shows the gradual expansion of banking sector in Bangladesh:

Table 1.1
Banking Sector Expansion, 1980-2005

Year	NCBs	PCBs	FCBs	SBs	Total
1980	6	0	5	4	15
1985	4	8	5	5	22
1990	4	9	5	5	23
1995	4	16	7	5	32
2000	4	27	9	5	45
2005	4	30	9	5	48

Source: Bangladesh Economic Review, 2007-08

Note: NCBs= Nationalized Commercial Banks, PCBs= Private Commercial Banks, FCBs= Foreign Commercial Banks, SBs= State-owned Specialized (Development) Banks

It is evident from the above table that after opening up the financial market for private sector banking operation in 1982, total number of banks has been increased from 15 to 48 during the period, 1980-2005.

Though financial sector, particularly banking sector has been expanded with the passage of time, savings rate has not improved compared to other low and middle income countries across the world.

Table 1.2 presents a cross country comparison of savings ratio as a percentage of GDP³:

Table 1.2
Gross Domestic Savings as a percentage of GDP: Cross Country

Country	1980	1985	1990	1995	2000	2005
Argentina	23.8	23.1	19.7	17.5	15.6	27.0
Bangladesh	2.1	8.6	9.6	12.6	17.8	18.1
Brazil	21.1	24.4	21.4	20.5	20.0	25.0
China	35.0	34.4	39.9	44.1	37.5	49.0
India	15.5	21.2	22.6	25.3	24.0	29.7
Indonesia	38.0	29.7	32.3	30.6	32.8	26.6
Ireland	12.7	19.6	25.6	29.9	38.7	..
Kenya	18.1	20.5	18.5	15.3	9.4	9.3
Malaysia	29.8	29.9	34.5	39.7	47.3	43.5
Nigeria	31.4	12.6	29.4	18.4	42.3	38.8
Pakistan	6.9	5.9	11.1	15.8	16.1	12.2
Poland	..	29.2	32.8	20.9	18.4	18.7
Sri Lanka	11.2	10.2	13.8	15.3	17.4	14.6
Suriname	21.0	11.3	8.4	10.9	-1.1	13.5
Thailand	22.9	25.5	33.8	35.4	31.5	30.1

Source: World Development Indicator, 2007

Table 1.2 exhibits that China, Malaysia and Nigeria have fairly high saving-GDP ratio compared to other low and middle income countries in the table. While Argentina, India, Indonesia and Thailand have moderate rate. On the other hand, Bangladesh has a gradual increasing trend close to some other South Asian and East European country average, for example, Sri Lanka and Poland.

Until recently, there has been hardly any comprehensive empirical study that attempted to investigate the outcome of financial liberalization in Bangladesh, especially the extent of its impact on savings and efficiency in the banking sector. What has been done so far, mostly address the issue of high lending rates (Islam and Begum 2004), role of commercial banks in development finance (Saha and Choudhury 2000), and the reform process in Bangladesh (Raquib 1999). As such, the studies so far have been limited in scope and not addressed the core issues of financial liberalization.

1.1 Objective of the Study

The present study is going to examine whether financial liberalization promoted more savings, and therefore, provide finance for investment. Secondly, whether financial liberalization has improved the efficiency of the

³ Gross Domestic Product(GDP) of a country is the total goods and services produced in a year.

banking institutions and given rise to a more effective allocation of financial resources in Bangladesh.

1.2 Basic Line of Argument or Hypothesis

In fact, financial liberalization policy has not worked well in Bangladesh. No significant rise in domestic private savings has been observed to facilitate investment finance. On the other hand, efficiency of the banking institutions has not been improved much since higher intermediation cost (interest rate spread) is still persisting with allocating financial resources to short-term speculative lending rather than long term productive investment.

1.3 Data and Methodology

The study deals with annual banking and real sector data for the last 28 years, FY⁴1981-2008 from secondary sources, mainly from Bangladesh Bank (Central Bank) and Bangladesh Bureau of Statistics (BBS). Both econometric and exploratory data analysis have been made to investigate the impact of financial liberalization on domestic private savings and the efficiency of the banking sector. An exploratory analysis with graphs and tables has been done to explain the relationship between domestic private savings and real deposit interest rate. With the same data set, an effort has been made to estimate a savings function using time series econometric technique (co-integration approach). Finally, a detail exploratory analysis with graphs and tables has been made to examine the extent of efficiency (operational and allocative) in the banking sector.

1.4 Scope and Limitations of the Study

The study can broadly be categorized as an empirical exercise on to analyze the financial liberalization thesis which mainly advocates for promoting domestic private savings by raising real interest rate, and therefore, provide investment finance. However, the study also examines the efficiency of the banking sector achieved due to financial reforms in Bangladesh.

Needless to say, the paper has its limitations. It limits its focus on the basic objective of the financial reform policy implementation, but it does not cover the broader interrelations among savings, investment and growth phenomenon. Furthermore, the study focused on the banking sector, not extending discussion on capital market issues since the contribution of the capital market is very shallow to the financial market in Bangladesh. Besides, insufficient time series data might limit the significance of the econometric results.

⁴ FY stands for fiscal or financial year for the period, July-June.

1.5 Structure of the Paper

The remainder of the text is organized as follows: The next chapter presents a critical review of the financial liberalization thesis, where it has been argued that theoretical foundations underlying the explanation are not as solid or empirical support as uncontested, as its proponents advocated. This will be followed by chapter 3 - a brief historical sketch of macro financial trend and the development of financial institutions in Bangladesh. Chapter 4 provides both exploratory and econometric analysis of the relationship between domestic private savings and deposit interest rate to test the proposition of financial liberalization thesis. Chapter 5 focuses on the efficiency of the banking institutions. Several indicators have been discussed to explore the extent of efficiency in operation, and also in resource allocation, where it has been observed that little progress has been achieved so far. The paper ends with a conclusion where summary of evidences has been discussed with some policy implications.

Chapter 2

Literature Review and Analytical Approach

This chapter focuses on the theoretical frame work of the financial liberalization thesis; McKinnon-Shaw (1973), and also the critique of the thesis. Later some indicators for measuring the extent of efficiency in the banking sector have been discussed. An analytical approach based on the empirical evidences on financial reforms will be stated at the end of the chapter.

2.1 Financial Liberalization Thesis

The theory of financial liberalization (McKinnon 1973; Shaw 1973) is based on the premise that the higher the real rate of interest, the greater the degree of financial deepening, the more saving there will be, and financial saving will be allocated and invested more efficiently than if saving is invested directly in the sector in which it takes place, without financial intermediation (Thirlwall 2005:198)

Till the 1960s, the dominant view in the finance and growth literature was the neo-Keynesian perspective, which argued that interest rates should be kept low in order to promote capital formation (Sen and Vaidya 1997:1). During this period, the guiding philosophy of governments in several less developed economies was one of economic planning with directed credit programmes and interest rate controls. These became popular as a means of allocating scarce resources to 'preferred sectors' at low cost.

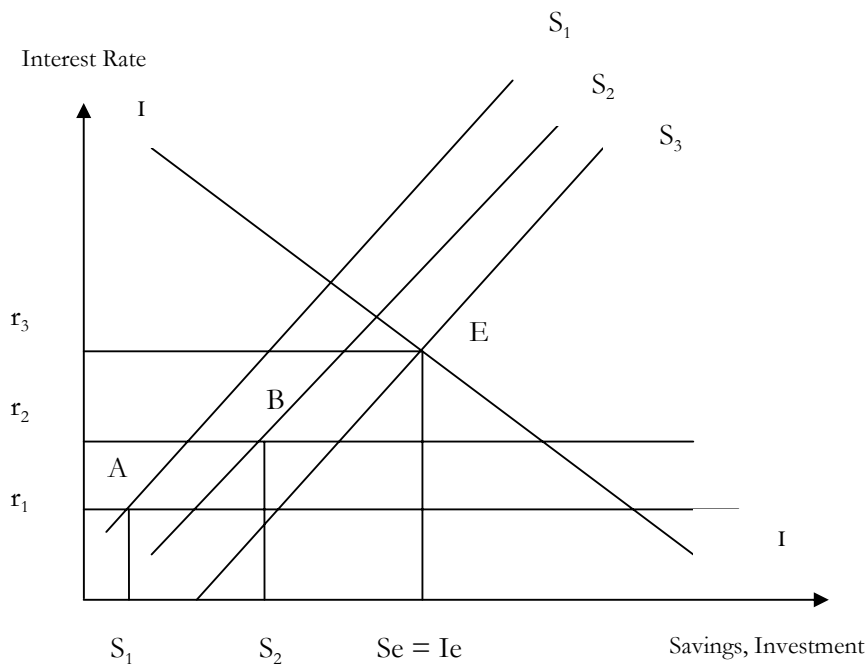
In 1973, the dominant theoretical position was challenged by Ronald McKinnon and Edward Shaw. They termed developing economies as "financially repressed". Their central argument is that financial repression – indiscriminate "distortions of financial prices including interest rates and foreign-exchange rates" (Fry 1995: 20). In other words, financial repression – a combination of heavy taxation, interest rate controls and government participation in the credit-allocation process- would lead to both a decrease in the depth of the financial system and a loss of efficiency, with which savings are intermediated (Sen and Vaidya 1997:1). The proponents of financial reform (McKinnon-Shaw thesis is the pioneer) argue that financial liberalization tends to raise ratios of domestic private savings to income (Shaw 1973:9). Therefore, it (financial liberalization) will lead to significant economic benefits through a more effective domestic saving mobilization, financial deepening and efficient resource allocation. (ibid: 11).

The core argument of the McKinnon-Shaw thesis where savings are assumed to be positively related to the real rate of interest. It is also argued that an administratively determined nominal rate of interest (a characteristic

situation in LDCs⁵ according to McKinnon and Shaw) holds the real interest rate below its equilibrium level (Arrieta 1988:589). The latter situation is referred to as one of financial repression which is explained graphically in figure 2.1, where the real interest rate is very low r_1 as it is administered rather than market determined, and so generates only relatively small savings S_1 (at the intersection point A). Investment is savings constrained in a financially repressed regime, and investors generally depend on self-financing. With financial liberalization, r_1 will be pushed up to r_2 . The savings curve shifts to S_2 and both savings and investment rise to the point S_2 from the origin (at the intersection point B). When market is fully liberalized, the rate of interest is r_3 and savings and investment are at equilibrium ($S_e=I_e$). (Fry 1995:24)

Unless interest rate $r=r_3$, there is a disequilibrium between savings and investment. As interest rate rise, allocation of resources will be better and growth rate of output will be stimulated (Fry, as cited in Ghatak 1997:120-21).

Figure 2.1
McKinnon-Shaw Thesis: Savings, Interest Rate, and Investment



⁵ LDC stands for Least Developed Country with average Gross National Income (GNI) per capita USD 578 (World Bank 2007.) <http://devdata.worldbank.org>, (accessed 10 November 2008).

As such, figure 2.1 presents the McKinnon-Shaw core argument that financial intermediation is repressed and sub optimal when interest rates are administratively fixed below the equilibrium (Fry 1995:28). As the real rate of interest increases, savings and total real supply of credit increase, which induces a higher volume of investment (Arestis and Sawyer 2005:10).

However, there has been a re-assessment of the neo-liberal view of financial markets. New theoretical developments- in particular, the application of the theories of ‘asymmetric information’⁶ and ‘incomplete contracts’⁷ to financial markets- suggests that financial markets are different from other markets (such as commodity markets), where ‘market failures’ are more pervasive in financial markets than in other markets in the economy. This indicates that there exists ‘forms of government intervention’ that will not only make (financial) markets function better but will also improve the performance of the economy (Stiglitz 1993:20).

Two assumptions of the neo-liberal paradigm have come increasingly under scrutiny. The first is the assumption of perfect information which implies that all relevant information is freely available to all agents in the market. However, in reality, most financial markets are characterised by asymmetries of information that exist between providers of capital and those seeking capital. Secondly, the assumption of the neo-liberal approach that has been questioned in the literature is the supposition that individuals and firms may write and enforce richly detailed financial contracts with any cost. However, this “completeness” of financial markets may not be a reasonable approximation of reality if either information or the ability to enforce contracts is severely limited (Gertler and Rose 1994:20).

⁶ In financial markets, one party often does not know enough about the other party to make accurate decisions. This inequality is called asymmetric information. For example, a borrower who takes out a loan usually has better information about the potential returns and risk associated with the investment projects for which the funds are earmarked than the lender does (Mishkin 2007:37).

⁷ The theory of incomplete contracts argues that in a world of incomplete contracts, the ex post allocation of power (or control) matters. For example, two forms of external finance; debt and equity. Debt finance yields a fixed return to its suppliers in states when the firm is not bankrupt, but when the firm is bankrupt the suppliers receive funds as available to the firm and also the right to make decisions about firm’s subsequent operation.. On the other hand, equity finance gives its suppliers the right to the firm’s residual returns after payments to the suppliers of debt finance, and in addition the right to vote on decisions concerning the firm’s operations in states when the firm is not bankrupt. Clearly debt and equity have different control rights attached to them. The theory of incomplete contracts provides two important insights into the process of financial liberalization. Firstly, it predicts that the design of financial arrangements in the economy can have a strong influence on growth. Secondly, the legal infrastructure- in particular, property rights, and contract enforceability and bankruptcy procedures has an important role to play in financial sector reform process (Sen and Vaidya 1997:5-6).

While there are several models that have examined the implications of asymmetric information for financial markets, perhaps the most well-known is the Stiglitz-Weiss (1981) model of credit rationing⁸. The key prediction of the model is that the profit-maximizing or equilibrium interest rate may be lower than the market-clearing rate, i.e., there will be potential borrowers who will be unable to obtain credit even if they indicated a willingness to pay more than the market rate. The model implies that ‘market failures’ can be quite endemic to credit markets (which are in general characterized by imperfect information). Therefore, theories of asymmetric information and incomplete contracts provide a vision of the financial system that is markedly different from that of the neo-liberal model.

Apart from this, problems of adverse selection⁹ and moral hazard¹⁰ are acute in the financial market, and have important implications for the effects of financial liberalization. Because adverse selection makes it more likely that loans might be made to bad credit risk, lender may decide not to make any loans even though there are good credit risks in the market place (Mishkin 2007:37). On the other hand, moral hazard lowers the probability that the loan will be repaid; lenders may decide that they would rather not make a loan (ibid: 38). It is argued that government regulation can reduce adverse selection and moral hazard problems in financial markets and increase their efficiency by increasing the amount of information available to investors (ibid:44). Bank supervision is an important method for reducing adverse selection and moral hazard in the banking business (ibid : 284).Therefore, developing countries need regulatory supervision as they are facing inherent obstacles in setting up efficient financial regulation and lack of economies of scale in the banking sector (Murshed and Subagjo 2002 :1).

⁸ Another way, in which financial institutions deal with adverse selection and moral hazard. It has two forms. The first occurs when a lender refuses to make a loan of any amount to a borrower, even if the borrower is willing to pay a higher interest rate. The second occurs when a lender is willing to make a loan but restricts the size of the loan to less than the borrower would like. Financial institutions engage in the second type of credit rationing to guard against moral hazard they grant loans to borrowers, but not loans as large as the borrowers want (Mishkin 2007:238).

⁹ A problem created by asymmetric information before the transaction occurs. Adverse selection in financial market occurs when two potential borrowers who are the most likely to produce an undesirable (adverse) outcome- the bad credit risks- are the ones who most actively seek out a loan and are thus most likely to be selected (ibid :37).

¹⁰ A problem created by asymmetric information after the transaction occurs. It’s a risk (hazard) that borrower might engage in activities that are undesirable (immoral) from the lender’s point of view, because they make it less likely that the loan will be paid back (ibid:38).

2.2 Critique of the Financial Liberalization Thesis

The formal theoretical critique focused on the informal financial markets (Wijnbergen, as cited in Sikorski 1996 :4). The failure of financial liberalization due to the fact that the resultant increase in interest rate in the official market decreases the quantity of finance available to firms because it draws resources out of the unorganized market. The recipient of these funds, through household asset substitution, is the formal market, which is less efficient in intermediation than the informal market because of the prevalence of high reserve requirements. Therefore, the structuralist theory (Taylor 1983; Van Wijnbergen 1983) suggests that the higher interest rates, which follow financial liberalization, might leave unchanged or, indeed, decrease total supply of productive investment funds.

The wide spread financial crises have brought attention to all to the short comings of financial policy under liberalization. Financial liberalization – giving banks and other financial intermediaries more freedom of action, can increase the opportunities to take on risk, thereby increasing financial fragility (Caprio et al. 2001:96). This is not necessarily bad for the economy, as high-risk, high-returns investment projects may be acceptable over low-risk, low-return ventures. However, because of limited liability compounded with other forms of implicit and explicit guarantees, banker's appetite for risk is likely to be greater than what is socially desirable.

Furthermore, the McKinnon-Shaw type of models is based on the unrealistic assumption of perfect competition in financial markets. The banking sector departs from perfect competition in at least two respects. First, banking sectors are rather oligopolistic, and the result of financial liberalization could very well be decrease in loans and the increase in the real interest rate are higher magnitudes than that under perfect competition. Second, perfect competition involves the assumption that economic agents can borrow or lend as much as they wish at the prevailing rate of interest, and in contrast credit rationing is a pervasive feature of the banking sector.

2.3 Financial Liberalization and Banking Efficiency

The efficiency in financial intermediation¹¹ covers two aspects of efficiency: Operational and allocative. The indicators to measure the operational efficiency are the extent of competition, i.e., expansion of financial institutions, for example, bank branches, cost effectiveness, i.e., interest rate spread, IRS¹² (Dijkstra 1996:6). On the other hand, allocative efficiency can be examined by the extent of allocation of financial resources to productive sector.

¹¹ The process of indirect finance using financial intermediaries(banks, insurance companies, pension funds) called financial intermediation, is the primary rout for moving funds from lenders to borrowers (Mishkin 2007:35)

¹² difference between lending and borrowing rate of banks.

Operational Efficiency

The main indicator of operational efficiency is the minimization of intermediation cost, i.e., interest rate spread (IRS). It is argued that a low IRS is a vital in respect to the efficiency and competition in the financial system (Ahmed and Islam 2006:1). In the banking literature, the concept of 'spread' has been variously interpreted. First, there is the difference between the weighted average lending and deposit rates. However, an alternative concept of net interest margin (NIM) is often more prevalent. NIM is typically defined as the difference between "interest expenses" and "interest income" per unit of "total bank assets". This is believed to be an important indicator of intermediation efficiency (FSR 2006:75). Ordinarily, as the banking industry matures and competition prevails, NIM should gradually decline. Historically, least developed countries with financial imperfections have been characterised by higher spreads due to factors such as absence of competition, burden of non-performing loans (NPLs), high administrative costs, etc. (Islam and Begum 2004 :109)

Competition among banks is also seen as a desired outcome of the liberalization process. However, there seems to be limits to the beneficial effects of competition for operational efficiency. This is because of economics of scale¹³ and scope in banking (Gibson and Tsakalotos, as cited in Dijkstra 1996:8). For small banks it is impossible to have an extensive branch network which is necessary to attract deposits. They will also have more problems in spreading lending risks by diversification, and tend to be dependent on a few borrowers. In other cases, it will be more profitable to offer a range of banking services instead of just a few products, but this also requires larger banks. In fact, there is a rather complex relationship between competition and operational efficiency. If competition increases, operational efficiency first increases (as cost decreases), but after certain point, operational efficiency of banks decreases (Dijkstra 1996:9). Indeed, the optimum competition depends on the size of the market (ibid). Financial intermediaries can substantially reduce transaction costs developing expertise and also taking advantage of economics of scale (Mishkin 2007:35). Apart from this, use of technology in banking service is another element which influences efficiency and optimal scale as well.

Allocative Efficiency

Improvement in credit allocation to productive sector is another desired outcome of financial liberalization policy (Dijkstra 1996:10). It is often argued by the proponents of financial liberalization that freeing of the interest rate,

¹³ The presence of economies of scale in financial markets helps explain why financial intermediaries developed and have become such an important part of financial structure. Economics of scale are also important in lowering the costs of things such as computer technology that financial institutions need to accomplish their tasks (Mishkin 2007:185).

i.e., making an end to financial repression produces a better allocation to credit (McKinnon 1973; Shaw 1973). In fact, financial intermediaries play a key role in improving allocative efficiency because they help financial markets channel funds from lender-savers to people with productive investment opportunities (Mishkin 2007:39).

However, Stiglitz and Weiss (1981) argued that credit rationing is a rational strategy of banks also in a liberalized environment. In order to avoid the most risky borrowers banks will set the lending rate lower than the market clearing rate and apply rationing (Dijkstra 1996:10). Therefore, hindering an efficient credit allocation is always present in an environment with risk than what is efficient.

2.4 Analytical Approach

Two main issues need to be addressed to examine the impact of financial liberalization hypothesis; first, do real interest rates significantly affect domestic private savings, and second, which form of financial deepening seems to be most important; is it the number of financial institutions (for example, bank branches) relative to the size of the population or the volume of financial assets relative to the size of the economy or the extent of bank lending to the private sector, or what?

Rationale for the Variables

The rationale for including different variables in savings function has much implication. The proposition of McKinnon-Shaw thesis of financial liberalization argued for positive interest responsiveness of savings, which should ideally be based on domestic private savings rather than domestic aggregate savings as the dependent variable (Arrieta 1988:593).

National accounting procedure suggests that saving is always obtained as a residual when it is derived from national income accounts (Fry 1995:160). National expenditure is, $Y = C + I + G + X + NFI - M$, where, Y = national income, C = private consumption, I = investment, G = government expenditure, X = exports, NFI = net factor income from abroad, and M = imports.

Therefore, Gross Savings, $S = Y - C$, which is the sum of private savings (S_p), government savings (S_g) and foreign savings (S_f), i.e., $S = S_p + S_g + S_f$. Therefore, savings which is relevant to the McKinnon-Shaw thesis is domestic private savings (S_p), since it can not be assumed government savings responds positively to real interest rate changes because government payment (i.e., expenditure) increases if interest rate increases. Besides, foreign savings depends on the capital flow, particularly Foreign Direct Investment (FDI). Higher real interest rates are associated with a higher ratio of foreign capital flows to GDP, which in accounting terms shows up as a lower domestic savings ratio if part of the capital inflows is consumed (Thirlwall 2005:199).

Concerning the interest rate data, the relevant interest rate for the McKinnon-Shaw thesis is the real rate of interest on time deposit. The inclusion of real deposit interest rate is standard in the savings literature, particularly when the financial liberalization thesis is tested, which mainly suggested for promotion of private domestic savings due to rise in real interest rate. (Chowdhury 2001 ; Melo 1985; Fry 1982). The real deposit interest rate is defined as at least 12 months time deposit rate minus inflation. Indeed, some literature suggests for using expected inflation. It may be noted that the expected rate of inflation is unobservable, but be proxied by assuming adaptive expectation method.

Another explanatory variable, number of bank branches has been used as a proxy of expansion of financial institutions since the empirical evidence (Burkner 1980: 467) suggests that this is an important determinant of estimating institutional access to private saving as it indicates the availability of financial institutions for savings.

Empirical Evidences

The empirical evidences on the impact of financial liberalization are not consistent across the countries. Giovannini (1983) concludes that the results from his research on eight Asian countries 'cast serious doubts on the view that the interest elasticity of saving is significantly positive and easy to detect in developing countries'. Similarly, Gupta (1987) concludes from his analysis of 22 Asian and Latin American countries over the period 1967-76 that 'there is little support for the repressive hypothesis that the positive substitution effect of real interest rates on savings dominates the negative income effect' (Thirlwall 2005:198).

Fry-Mason (1982) savings function, estimated on pooled time series data for seven Asian countries, concludes that real interest rate would raise (other things being equal) the ratio of savings to GNP (Fry 1995 :161). Therefore, a significant positive responsiveness of savings to changes in real rate of interest, which provides empirical support to the McKinnon-Shaw thesis. But Fry used foreign savings ratio or balance of payments deficit on current account as explanatory variable, which seems to be not as valid as already discussed at the beginning of this section.

However, Maxwell Fry (1995:158), a leading advocate of financial liberalization, has conceded that 'what is agreed- is that if an effect [on saving] exists at all, it is relatively small', and that 'positive effects are easier to find in Asia than in other parts of the world, but even in Asia the effects appear to have diminished over the past two decades' (Thirlwall 2005:199).

An empirical study of World Bank on the impact of financial reforms in five Asian countries, where reform programme was initiated in the late 70s' (Malaysia in 1978; Sri Lanka in 1977; Philippines in 1980; Indonesia in 1983 and Korea in 1981-82) and three Latin American countries (Chile in 1974; Argentina in 1976 and Uruguay in 1976) concludes that

It was believed until recently that removal of the repressive policies would boost saving--- [but our survey] does not reveal any systematic trend or pattern in regard to saving. In most of these countries, saving changed in a random fashion. The study lends support to the conclusion that decisions to save are determined by several factors and the relationship between saving and real interest rates is at best ambiguous (Cho and Khatkhate 1989: 106).

A more recent estimate for Sri Lanka, India, Bangladesh, Indonesia, Korea, Malaysia, Nepal, Pakistan, Philippines, Taiwan and Thailand found that on average national savings ratio is increased in the long run by 0.1 percentage point for each 1 percentage point increase in real deposit interest rate (Fry 1995:163), but the magnitude is not large enough to warrant much policy significance. Moreover, the estimate does not consider private domestic savings, rather use national savings rate, which constitutes other types of savings, for example, foreign savings and government savings, and therefore, not appropriate to test the financial liberalization thesis as discussed in the beginning of this section.

Jaime de Melo and James Tybout (1985:15) find that real interest rate change exerted a positive (0.083) effect on saving ratio in Uruguay, though the magnitude of the coefficient is very low, over the period, 1962-1973, but they could detect no effect after financial liberalization occurred in 1973.

Increased proximity of depository institution branches seems to have exerted a substantial influence on national saving ratios by increasing rural savings, notably in Sri Lanka over the past two decades (Fry 1995:165). Hans-Paul Burkner (1980) also finds significant positive coefficients for the real deposit interest rate and bank branches per 1000 inhabitants in an estimate of private savings for the Philippines (*ibid.*).

Another study on Sri Lanka (Nicholas 2008: 178) finds an inverse relationship between real deposit interest rates and domestic private savings rates. The author considers private savings instead of aggregate savings as dependent variable since it can not be assumed government savings responds positively to real interest rate changes.

One empirical study of Bangladesh (Chowdhury 2001: 9) on private savings suggests that financial private savings and real interest rates show a negative correlation during post and pre reform period. Using time series econometric technique, the study regress private savings on real interest rate and several explanatory variables, for example, share of agriculture in GDP, financial liberalization index, dependency ratio, and ratio of public savings to gross national disposable income calculated as domestic investment plus current account surplus minus public savings.

Thirlwall (2005:199) argued that there is no robust evidence that higher real interest rates raise the domestic saving ratio of countries. At least three possible explanations for the negative or insignificant relation between the savings ratio and interest rates has been suggested; first, positive income effect out weighs the negative substitution effect; second, there is substitution between financial and real assets, leaving total saving unchanged, and third possibility is that higher real interest rates are associated with a higher ratio of

foreign capital flows to GDP, which in accounting terms shows up as a lower domestic savings ratio if part of the capital inflows is consumed.

On the other hand, Kaldor (1957) argued that savings occurs out of profit only, and hence, Kaldor savings function is: $S = S_w(Y - R) + S_R R$, where, Y = income, R = profits, S_w = savings rate of wage, and S_R = savings rate of profit income.

Since workers typically have lower incomes than capitalists or firms, they will consume a higher share of their income. Therefore, assuming the saving propensity out of wage income is zero, and the simplified form: $S = S_R R$, where savings occurs out of profits only (Stockhammer 1999:5).

Similarly, Nicholas (2008:165) also argued that in a capitalist economy, most investment finance comes from profits of corporations and not individual abstention from present consumption.

It is evident from the cross-country empirical analysis that most of the studies suggest no significant positive correlation between domestic private savings rate and real interest rate, which contradicts to the financial liberalization prediction. On the other hand, few studies which find positive relationship do not deserve much policy significance as the magnitude of the coefficients is not large enough and/or used variables that are not appropriate to test the financial liberalization thesis.

Chapter 3

Financial Sector in Bangladesh: An Overview

A healthy and vibrant economy requires a financial system that moves from people who save to people who have productive investment opportunities. But the question is how the financial system makes sure this financial intermediation in an efficient way. This entirely depends on the financial structure, policies and overall macro financial environment. As such, this chapter is going to present a brief sketch of macro financial environment prevailing in Bangladesh, and trends in major macro economic indicators compared to other low and middle income economies across the world. Then the study will concentrate on historical evolution of the financial system¹⁴ in Bangladesh and the extent of financial development over the years. At the end, different phases of financial liberalization process will be discussed with an emphasis on banking policy changes so far.

3.1 Macro Financial Environment

After independence in 1971, Bangladesh started its journey with a war broken economy with a shallow financial market, and weak institutions. Therefore, the then government decided to nationalize all banks, financial institutions and industrial units in the early 70s. Later the government undertook different reform measures under the Structural Adjustment Programme in the early 80s, and decided to step into market oriented system privatizing most of the sectors. In line with this policy, financial sector reform programme (FSRP) was initiated in 1990.

Bangladesh, with a current population of 159 million has been experiencing a stable macro economic condition during last one decade. GDP growth rate¹⁵ has been remained around 5.5 to 6.5 percent during the period, FY1997-2008, except 1999¹⁶ and 2002¹⁷. Total revenue income of the government increased to 10.6 percent of GDP in 2007 from 8.6 percent in 1987. The deficit financing decreased slightly; overall deficit reduced from 3.9 percent of GDP in 1987 to 3.1 percent in 2007 (World Bank 2007)¹⁸. The annual average inflation increased to 7.20 percent in 2007 from 5.4 percent in

¹⁴ The financial system is complex in structure and function throughout the world. It includes many different types of institutions : banks, insurance companies, mutual funds, stock and bond markets, and so on (Mishkin 2007:181).

¹⁵ At constant price, 1995-96

¹⁶ In 1999 GDP growth was low due to flood

¹⁷ In 2002 GDP growth was low due to political unrest in the previous year with agitation and strikes, and therefore, production and the economy as whole was seriously affected.

¹⁸ Source : <http://devdata.worldbank.org/data> - query, (accessed 05 November 2008).

1997(BB 2007:4). Besides, broad money (M2)¹⁹ growth increased from 13.1 percent to 17.0 percent, private sector credit from 13.5 percent to 15.1 percent, and GNI²⁰ per capita increased from USD 378 to USD 520, during the period FY2002-07, (ibid: 167-73).

Table 3.1 shows the trend of some macro economic and financial indicators during the period, FY1997-2008: GDP growth rate, CPI inflation rate²¹, Deposit as a percentage of GDP, private investment as a percentage of GDP and broad money (M2) as a percentage of GDP.

Table 3.1
Trend in Macro Economic and Financial Indicators

FY	GDP growth rate	Inflation	Deposit as a percentage of GDP	Private Investment as a percentage of GDP	Financial Development (M2/GDP)
1997	5.40	3.96	25.76	23.40	28.00
1998	5.20	8.66	25.92	23.85	27.90
1999	4.90	7.06	26.96	24.03	28.70
2000	5.90	2.79	29.61	25.11	31.50
2001	5.30	1.94	32.19	27.17	34.40
2002	4.40	2.79	33.68	29.27	36.10
2003	5.30	4.38	35.46	29.22	37.90
2004	6.30	5.83	36.43	31.14	39.00
2005	5.90	6.48	38.46	32.95	41.10
2006	6.60	7.16	40.61	34.94	43.60
2007	6.40	7.20	41.69	35.68	44.90
2008	6.20	10.06	40.47	38.01	45.99

Source: Monthly Economic Trend, June 2008, Bangladesh Bank (BB), Statistics Department, BB

It is evident from the above table that inflation rate has been increasing since 2005 and reached a peak in 2008, this is particularly due to world inflationary pressure. On the other hand, deposit, investment and broad money expansion has been experienced a gradual increasing trend over the years.

3.2 Financial System of Bangladesh

The financial system is complex in structure and function throughout the world. It includes many different types of institutions: banks, insurance companies, mutual funds, stock and bond markets and so on. The financial system of Bangladesh embraces four categories of scheduled banks, non-bank financial institutions (NBFIs), co-operative banks, microfinance institutions (MFIs), insurance companies, credit rating agencies and two stock exchanges.

¹⁹ Broad money includes currency outside bank plus demand deposit plus deposit with Bangladesh Bank plus time deposit (Economic Trends, June 2008, Bangladesh Bank).

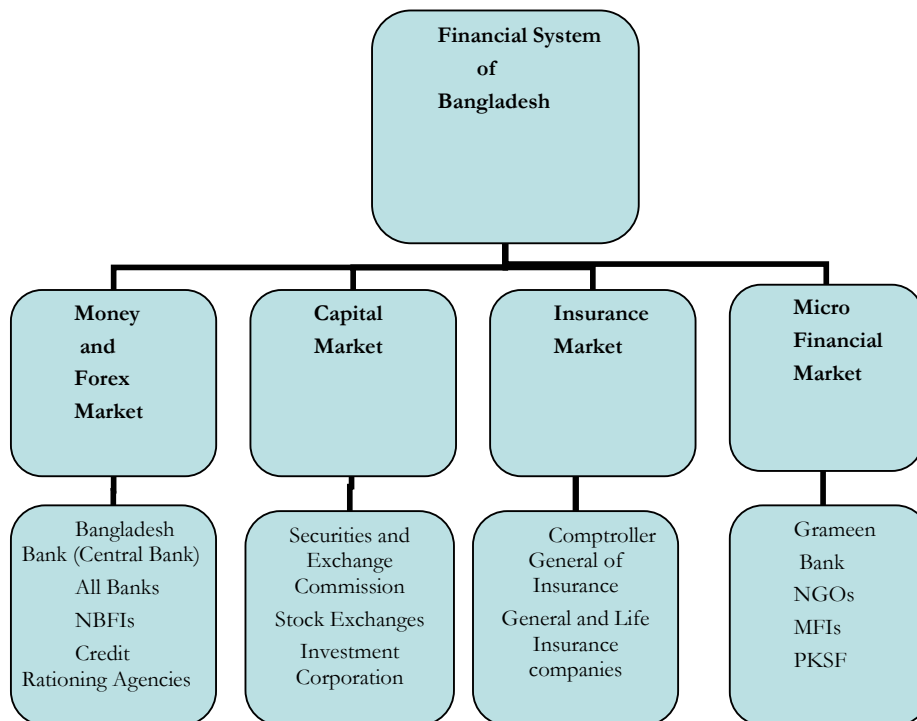
²⁰ Gross National Income (GNI).

²¹ 12 month average, base : 95-96=100

While Bangladesh Bank (BB, the Central Bank of Bangladesh) has regulatory and supervisory jurisdiction over the entire banking sector as well as the NBFIs, the Securities and Exchange Commission (SEC) exercises similar functions for the stock exchanges and the merchant banks. Most components of the financial sector are characterized by a mix of public and private ownership. For example in the banking sector; there are four nationalized commercial banks (NCBs), which has been made public limited company in November 15, 2007, five government-owned specialized (development) banks (SBs) dedicated to agricultural and industrial lending, 30 domestic private commercial banks (PCBs) and Nine foreign commercial banks (FCBs). Out of the 28 non-bank financial institutions (NBFIs), only one has significant government ownership, and the rest are in the private domain. Apart from these, three development financial institutions namely House Building Finance Corporation (HBFC), Ansar-VDP Unnayan Bank and Karma Shangsthan Bank are operating in Bangladesh, all of which are state-owned. (FSR 2008:1).

Figure 3.1 presents the major components of financial system in Bangladesh:

Figure 3.1
Financial System of Bangladesh



The financial intermediation ratio as a percentage of GDP is very low in Bangladesh. Basically, banks²² are dominating in financial intermediation process. Table 3.2 shows the trend in financial intermediation as a percentage of GDP²³ during the period, FY1999-2007.

Table 3.2
Trend in Financial Intermediation as a percentage of GDP

FY	Financial Intermediation	Contribution of Bank	Contribution of Insurance	Contribution of Others
1997	1.58	1.28	0.23	0.07
1998	1.57	1.26	0.25	0.07
1999	1.58	1.24	0.27	0.07
2000	1.57	1.22	0.28	0.07
2001	1.57	1.20	0.31	0.07
2002	1.61	1.22	0.33	0.06
2003	1.63	1.22	0.34	0.06
2004	1.65	1.23	0.35	0.06
2005	1.69	1.27	0.36	0.06
2006	1.72	1.28	0.37	0.07
2007	1.73	1.29	0.37	0.07

Source: Bangladesh Economic Review, 2007-08

It is revealed from the above table that the contribution of total financial intermediation to GDP was 1.58 percent in 1997, which slightly increased to 1.73 percent in 2007. Of which, major contribution has come from the banking sector.

3.3 Development of Banking Institutions

As discussed in the previous section 3.2, banking sector is the dominant in the financial market in Bangladesh. After the independence in 1971, the government nationalized the entire banking system reorganizing all the domestic commercial banks into six separate entities, e.g., Sonali, Janata, Agrani, Rupali, Uttara and Pubali Bank. Except the three foreign commercial banks, development banks were also nationalized and restructured as Bangladesh Krishi Bank and Bangladesh Shilpa Bank.

On the other hand, Bangladesh Bank (BB) started its operation as the Central Bank of Bangladesh by the promulgation of the Bangladesh Bank Order 1972 (Ahmed 1999:6), has been empowered to formulate and execute the monetary policy of the country. Besides, BB is also responsible for

²² Financial intermediaries, particularly banks, an important part of the financial structure, have evolved to reduce transaction costs and allow small savers and borrowers to benefit from the existence of financial markets (Mishkin 2007:185).

²³ Based on constant prices, 1995-96

regulating and monitoring all scheduled banks and financial institutions operating in Bangladesh.

At the beginning of the Structural Adjustment Programme in the early 80s, two state-owned large commercial banks, Uttara and Pubali were denationalized in 1983 and 1984 respectively, while Rupali Bank was partly privatized. Moreover, financial market has been opened up for the entry of new private sector banks.

Initially, banks played a developmental role expanding branch network and lending to priority sectors according to the guidelines provided by the Central Bank and the Government. As a result, number of bank branches increased from 1299 in 1973 to 5042 in 1985 (ibid). In the mid 80s, several private sector banks came into operation, which aimed at ushering in a spirit of competition. During the last two decades, mainly private sector banks have expanded their branch network across the country. In contrast, state-owned commercial banks slashed their branch network by merging with another big branch in order to reduce losses under a government policy initiative in 2002.

The trend in the expansion of bank branches is depicted in the table below:

Table 3.3
Expansion of Bank branches by Types of Banks

Year	NCBs	SBs	PCBs	FCBs
1985	3378	993	650	21
1990	3555	1145	863	22
1995	3615	1149	1066	22
2000	3608	1213	1264	34
2005	3386	1340	1635	41
2007	3383	1359	1922	53

Source: Statistics Department, Bangladesh Bank

Note: NCBs= Nationalized Commercial Banks, PCBs= Private Commercial Banks, FCBs= Foreign Commercial Banks, SBs= State-owned Specialized (Development) Banks

Table 3.3 reveals that nationalized commercial banks' (NCBs) branch expansion has been stopped since 2000 under a government policy initiative to reduce losses, and therefore, 232 branches have been closed down or merged during the period, 1995-2007. On the other hand, the number of branches of other three categories of banks has been increasing with a steady growth.

Since private sector banking is mainly based on profit seeking intention, they are reluctant to expand branches in rural areas. Therefore, the expansion of bank branches mostly occurred in urban areas. As of 31st December 2007, there are total of 6717 scheduled bank branches across the country, of which 2823 are in rural and 3894 are in urban areas²⁴. Foreign banks have no rural branch network.

²⁴ Source : Statistics Department, Bangladesh Bank.

Due to the expansion of banking institutions the economy has been monetized rapidly particularly during last one decade. Concentration of deposit in the financial system has been increased. Total deposit as a percentage of GDP increased from 30 percent in 1990 to 41 percent in 2008²⁵.

Table 3.4 shows a cross country (low and middle income countries) comparison of the monetization of the economy, measured by broad money ²⁶(M2) as a percentage of GDP.

Table 3.4
Trend in Financial Development (M2/GDP): Cross Country

Country	1980	1985	1990	1995	2000	2005
Argentina	19.0	10.3	6.2	20.4	31.6	28.6
Bangladesh	13.1	19.1	22.3	27.4	31.9	41.2
China	33.2	47.3	70.3	88.5	129.5	150.6
Ghana	16.2	11.5	13.3	18.4	23.2	27.6
India	32.8	37.5	39.9	42.0	52.0	62.2
Indonesia	13.3	21.4	34.2	43.3	50.0	40.9
Kenya	29.8	25.9	27.1	37.5	34.3	36.9
Malaysia	71.2	108.0	89.4	106.6	121.6	124.8
Nigeria	24.1	30.7	19.4	14.8	18.6	18.8
Pakistan	38.7	38.0	37.1	40.9	36.8	45.2
Philippines	22.0	27.3	31.1	46.9	59.2	51.2
Poland	n.a.	36.8	23.5	26.9	37.5	40.3
Sri Lanka	28.4	29.4	25.9	33.7	36.2	39.9
Suriname	39.3	76.8	94.5	17.5	29.6	55.5
Thailand	38.2	58.9	68.4	78.6	111.9	104.7

Source: World Development Indicator, 2007

It is evident from the above table that the economies of China, Malaysia and Thailand are more monetized than the other developing countries in the table since the M2/GDP ratio is above 100 percent. The ratio is also higher in case of India and Suriname. On the other hand, the ratio is more or less similar in East European country Poland, South Asian countries Sri Lanka, Pakistan and Bangladesh and East Asian countries Indonesia and the Philippines. West African countries, Ghana and Nigeria, and East African country Kenya are between 19 to 36 percent.

²⁵ Source: Statistics Department, Bangladesh Bank.

²⁶ Broad money includes currency outside bank plus demand deposit plus deposit with Bangladesh Bank (Central Bank) plus time deposit (Economic Trends, June 2008, Bangladesh Bank).

Financial Deepening : Bank Deposits and Loans

As a financial intermediary, the main function of a bank is to collect deposits and disburse loans, in other words, to mobilize fund from surplus unit to deficit unit of an economy. Due to financial development and expansion of bank branches the extent of financial deepening with concentration of deposit and loans has been increased over the years.

Table 3.5 shows the trend in deposit and loans in the banking system during last three decades, 1975-2005:

Table 3.5
Trend in Deposit and Loans in the Banking System, 1975-2005

Year	Deposits as a percentage of GDP	Loans as a percentage of GDP
1975	9.0	7.4
1980	16.6	15.6
1985	25.9	24.9
1990	29.6	28.5
1995	26.9	22.9
2000	32.5	26.7
2005	39.0	31.2

Source: Statistics Department, Bangladesh Bank

Table 3.5 depicts that both deposit and loans as a percentage of GDP have been very low due to a lower degree of financial deepening in a shallow financial market in the early 70s, when the country has just born²⁷. Later in the 80s, it showed an increasing trend, but again dropped in post reform period, 1990-95. However, the situation has improved further after 2000. The uptrend of deposit-GDP ratio indicates that the economy is gradually gaining financial deepening (Neusser and Kugler, as cited in FSR 2006:61)

Furthermore, the table below illustrates the extent of financial deepening providing the trend in the deposit mix of the banking sector at a disaggregate level in respect to its time dimension:

Table 3.6
Trend in Deposit Mix in the Banking System, 1975-2005

Year	Share of Demand Deposit in Total Deposit (in percent)	Share of Time Deposit in Total Deposit (in percent)
1975	52.5	47.5
1980	40.1	59.9
1985	28.5	71.5
1990	16.6	85.4
1995	18.6	81.4
2000	17.6	82.4
2005	14.5	85.5

Source: Statistics Department, Bangladesh Bank

²⁷ Bangladesh got independence in December 16, 1971

Table 3.6 shows that the concentration of deposit has been shifted to time deposit type (deposit for longer period) over the years, though initially in the 70s', a large portion of bank deposits was demand deposit.

On the other hand, non-performing loan (NPL) has been constituted a larger portion of total bank assets or loan portfolio for a long time. This undermines the asset quality of banking institutions, which is also a major hindrance to efficient portfolio management. However, the increasing trend in NPL has been stalled in recent years since banks are now allowed to write-off bad loans from the balance sheet after keeping appropriate provisions against the classified loans. Therefore, the total classified loan ratio declined from 41 percent in 1999 to 13.2 percent in March 2008.

Furthermore, total classified loan is categorized into three sub-groups in respect to the length of duration of the overdue status, e.g., if the loan overdue period is between 3 and 6 months, it is called sub-standard, if the period is 6 months and above but below 12 months it is doubtful, and if the period is 12 months and above, it is called bad and loss.

Table 3.7 presents the status of classified loans in the banking sector during the period, 1999-2008.

Table 3.7
Status of Classified Loans in the Banking System

FY	TCL as a percentage of TL	Sub-standard loan as a percentage of TCL	Doubtful loans as a percentage of TCL	Bad/Loss loans as a percentage of TCL
1999	41.1	5.3	8.3	86.5
2000	34.9	4.4	6.6	89.0
2001	31.5	5.6	5.9	88.5
2002	28.1	8.7	5.3	86.1
2003	22.1	10.2	8.8	80.9
2004	17.6	7.2	6.6	86.2
2005	13.6	8.7	6.9	84.4
2006	13.2	13.1	7.2	79.7
2007	13.2	9.8	7.5	82.7
2008 (until March)	13.2	10.9	7.4	81.8

Source : Banking Regulation and Policy Department, Bangladesh Bank

Note : TL= Total loan, TCL= Total Classified loan

It is evident from the above table that a high proportion of total classified loan (TCL) are in the category of bad and loss, which remained overdue at least for one year and more. This category (bad and loss) of classified loan is a major impediment to the quality of asset or loan portfolio in banking sector.

3.4 Financial Liberalization Process in Bangladesh

Financial Sector Reform Programme (FSRP) was launched in 1990 to shift the policy stance gradually towards liberalization. Earlier in 1986, a national commission on 'Money, Banking and Credit' made several recommendations on overall structure of the banking system, capital adequacy requirements of

scheduled banks and non bank financial institutions, monetary management of the Central Bank, issues of non-performing loans, foreign exchange management of the Central Bank, legal framework for supervision by the Central Bank (Chowdhury et al. as cited in Kabir 2004:150). Financial sector reform has become a continuous process which is being carried out in its second phase under the style of commercial banks restructuring project.

With a view to strengthening the prudential supervision and regulation, Bangladesh Bank has also made additional institutional reforms. These include revisions of capital adequacy ratios, deposit insurance, loan classification and provisioning modalities, Anti-Money Laundering Act, single-borrower exposure limit, appointment procedure of bank CEOs²⁸, introduction of a new loan ledger, and International Accounting Standard (IAS-30) for scheduled banks and strengthening both off-and-on-site supervision by Bangladesh Bank.

Basically, reform programme has had two aspects; institutional policy reforms and legal reforms. One of the objectives of the FSRP was to open up the financial market for private sector institutions, for example, private banks and financial institutions. This policy aimed at bringing efficiency through competition.

Major Banking Policy Reforms

A major banking policy change in 1990 was the introduction of a flexible market oriented interest rate structure in place of arbitrarily fixed interest rate. In 1992, Bangladesh Bank accelerated the interest rate flexibility eroding interest rate bands in all sectors except small industries, exports and agriculture, and abolished sector specific concessional refinance facility. Earlier, BB²⁹ introduced rules for assessing loan quality and provisioning for classified loans in 1989. All loans were required to be classified into four categories, viz., unclassified, sub standard, doubtful and bad/loss according to the duration of the overdue status. Banks had to keep funds from their profits for appropriate provisioning against the different categories of overdue or classified loans at a different rate as a safeguard to the total loan portfolio. Later in 1989, a revised policy for loan classification and provisioning was adopted effective from January 1999 with a view to attaining international standard. The revised policy emphasized on independent assessment of each loan on the basis of qualitative factors and objective criteria (Kabir 2004:151).

Disclosure of financial information of banks and financial institutions to the stake holders was another major reform measure, where after every six (6) months banks and financial institutions have to disclose balance sheet in the public media, so that depositors can make choice. Credit Information Bureau (CIB) was set up in the Central Bank in 1992 (which came into operation in 1993) to restore credit discipline and to provide reliable information regarding

²⁸ CEO stands for Chief Executive Officer.

²⁹ BB stands for Bangladesh Bank.

the credit worthiness of borrowers. Besides, a supervisory unit (both off-site and on-site) was established in the BB to evaluate the performance of banks grading them using 'CAMEL' rating system, a device judging five major indicators of banks on a scale of 1 to 5 in ascending order of performance deficiency (Capital adequacy, Asset quality, Management, Earning and Liquidity) (ibid.)

Apart from this, minimum capital requirement rule has been applied to banks with a view to restoring the strength of banks and protect the depositors in particular. The required amount of capital is determined on the basis of risk-weighted assets, which is now set at 9 percent of the risk-weighted assets³⁰ according to Basel capital accord II recommendation. Moreover, to ensure a competitive financial market, private sector banks including foreign banks are allowed to operate, if they are meeting up minimum paid up capital requirement.

Major Legal Reforms

In order to encourage greater operational efficiency, Bangladesh Bank Order 1972, the Banks (Nationalization) Order 1972 and the Bank Company Act, 1991 have already been amended in 2003. The amended Bangladesh Bank Order redefined the central bank's functions in a more focused way, by giving it enhanced authority and make it accountable for its performance.

The Banks (Nationalization) Order has been amended with a view to improve the governance of state owned commercial banks (NCBs). Besides, amendments to the Bank Company Act 1991 give Bangladesh Bank more authority and increased powers to regulate and supervise the banking sector.

The Financial Institution Act, 1993 has been enacted to deal with the affairs of Non-Bank Financial Institutions (NBFIs). As per the provision, cautious approach is taken to issue license, and also the supervision procedure. Besides, the Bankruptcy Act was enacted in 1997, and separate bankruptcy courts have been set up to deal with delinquent big defaulters.

A new Financial (Money) Loan Court Act 2003 has been enacted to provide speedy procedures for obtaining decrees and execution. Provision has been made for Alternative Dispute Resolution to ensure early settlement of disputes through settlement conference and negotiation. Apart from this, Money Laundering Prevention Act 2002 was enacted in April 2002, which has already been amended in 2007 incorporating some additional provisions (FSR 2008:8).

³⁰ Risk weighted asset means the asset which is calculated on the basis of risk involved with the loan portfolio of a bank, and capital requirement is determined on the basis of that portfolio or asset risk. As such, if any default, the asset could be protected by the capital already provisioned on the basis of portfolio risk of the bank (FSR 2006:85).

Chapter 4

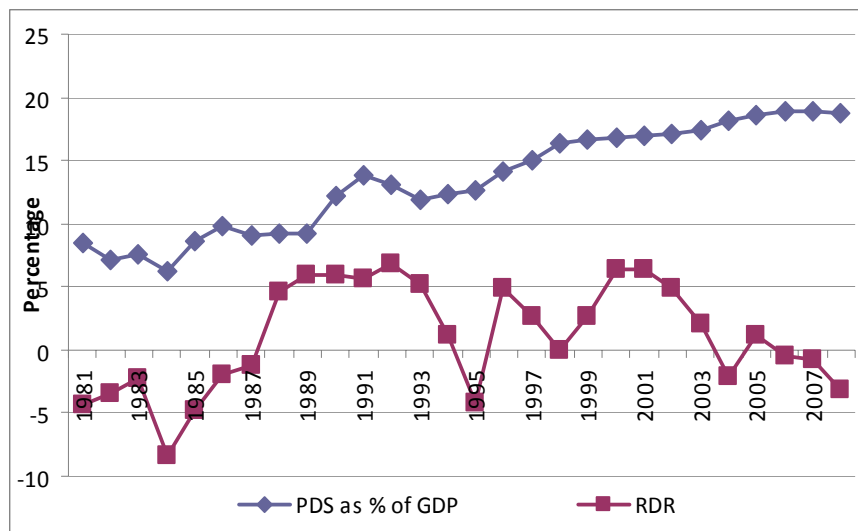
Financial Liberalization and Savings

Following the preceding theoretical and empirical discussion (chapter 2), this chapter is going to investigate the main objective of the financial liberalization thesis, whether it (financial liberalization policy) has promoted more savings for investment finance, using both exploratory and econometric techniques.

4.1 Domestic Private Savings and Real Deposit Interest Rate: An Exploratory Analysis

The graph in the figure 4.1 has been explored using annual data for the period, FY³¹1981-2008, to examine the relationship between domestic private savings and real deposit interest rate.

Figure 4.1
Domestic Private Savings and Real Deposit Interest Rate



Source: Statistics Department, Bangladesh Bank

It is evident from the above figure that no systematic relationship has been observed between domestic private savings and real deposit interest rate. From the mid 90s, savings show a gradual increase but interest rate oscillates. On the other hand, a positive relationship was observed from 1984 until 1989 which was basically the period before the financial reforms. The result is quite similar to the conclusion drawn in the empirical evidences (chapter 2), on some

³¹ FY= Fiscal Year, July- June

Asian and Latin American countries where no significant and systematic pattern has been observed, and also the relationship was negative in the studies on Bangladesh and Sri Lanka.

4.2 Savings Function: Econometric Approach

In light of the analytical chapter an econometric approach is applied using the same data set as the exploratory part (section 4.1) to estimate a savings function.

Rationale for the Variables

The rationale for including different variables in savings function has much implication. Savings which is relevant to the McKinnon-Shaw thesis is domestic private savings as the dependent variable as discussed in the analytical chapter.

Concerning the interest rate data, the relevant interest rate is the real rate of interest on time deposit. The real deposit interest rate here is defined as at least 12 months time deposit rate minus actual inflation.

Another exploratory variable, number of bank branches has been used as a proxy of expansion of financial institutions across the savers, which is considered to be an important determinant of estimating institutional access to private savings since it indicates the availability of financial institutions for savings as discussed in the analytical chapter.

Since the study uses time series data for the period, FY1981-2008, it can be noted that data might have non stationarity in character. If the data generating process of the dependent and the explanatory variables are non stationary, spurious correlations are likely to be occurring. This means that the regression equation with non stationary time series variables may have a high R square combined with a low Durbin-Watson statistics, and also is likely to be statistically significant when they are virtually not (Gujarati 2003:806). In order to avoid such misleading statistical inferences, unit root test (ADF Test³²) needs to be done for all the variables under investigation in the model to check whether the variables have non stationary data generating process or not.

Model Specification

Domestic private savings (as a percentage of GDP) can be modelled as a function of real deposit interest rate and the number of banking institutions (i.e., bank branches). Therefore, savings function is:

$$S_p = \alpha_0 + \alpha_1 RDR + \alpha_2 Bankbr + v \text{ ----- (1)}$$

³² Augmented Dicky Fuller Test

Where, S_p = Domestic Private Savings as a percentage of GDP, RDR= Real deposit interest rate, Bankbr= Bank branches, and ν = Error term

Estimation

To test the presence of non-stationarity in the variables unit root test (ADF test) has been done for each of the variables under investigation (Annex I). The result suggests that variables are non stationary in levels but stationary at first difference (graphs are in appendix A and B). i.e., variables used in the analysis have the order of integration I (1) which becomes order of I (0) at first difference. In this situation, the Engle and Granger Technique (1987) suggests for co-integration analysis.

Therefore, applying OLS method in estimating equation (1) with the variables in level, the predicted error term is found stationary (significant since p value is 0.05 at 10 percent level of significance) (Annex II).

As such, the variables under investigation are co integrated and there exists a long run relationship between private savings and its determinants. This suggests for obtaining short run dynamics using Error Correction Model (ECM), regressing private domestic savings on explanatory variables (at first difference) of real deposit interest rate and banking institutions (bank branches) and one period lag residual (Annex III).

The estimated savings function (equation (1)) is noted below:

$$S_p = 0.68 + 0.07RDR - 0.01Bankbr - 0.34EC$$

(0.35) (0.05) (0.01) (0.13) $R^2 = 0.33$

Results

The magnitude of the estimated coefficient of the real deposit interest rate is very small (0.07), which is also statistically insignificant (since p-value is 0.19). Therefore, no systematic pattern or relationship can be drawn from the regression results. The magnitude of the error correction (EC) coefficient suggests that 34 percent deviation corrects in each turn to reach the long-run private savings. However, due to insufficient observations, and also loss of degrees of freedom with the data at first difference, further econometric analysis can not be explored. It is mentionable that similar results can be found even if broad money (M2) as a percentage of GDP is included in the model as an explanatory variable (Annex IV, V and VI).

4.3 Chapter Conclusion

It is evident from the exploratory analysis that there is no systematic relationship has been observed between real deposit interest rate and domestic private savings even after the financial liberalization policy execution, which

contradicts to the financial reform prediction- where a positive relation is advocated. Further more, the econometric results reveal the same phenomenon as the exploratory analysis.

There are several possible explanations could be suggested for interpreting the saving behaviour. As discussed in the analytical chapter (chapter 2), where Kaldor (1957) argued that savings occurs out of profit only. Also, the empirical study on Sri Lanka supports that most investment finance comes from profits of corporations and not individual abstention from present consumption in a capitalist economy. On the other hand, Thirlwall (chapter 2) also interpreted the negative or insignificant relationship as substitution between financial and real assets, for example, gold holding.

Chapter 5

Efficiency in banking sector

This chapter focuses on the efficiency condition of the banking sector in Bangladesh. The proponents of financial reform argue for efficient operation of financial institutions and allocation of financial resources to productive sector. Therefore, in light of the discussion in the theoretical and analytical part (chapter 2), this chapter analyses the different indicators of operational and allocative efficiency of the banking institutions following exploratory approach.

5.1 Operational Efficiency

As discussed in Chapter 2, intermediation spread, IRS³³ is the main indicator of measuring efficiency in financial intermediation, which reflects the efficiency in the operation of financial institutions.

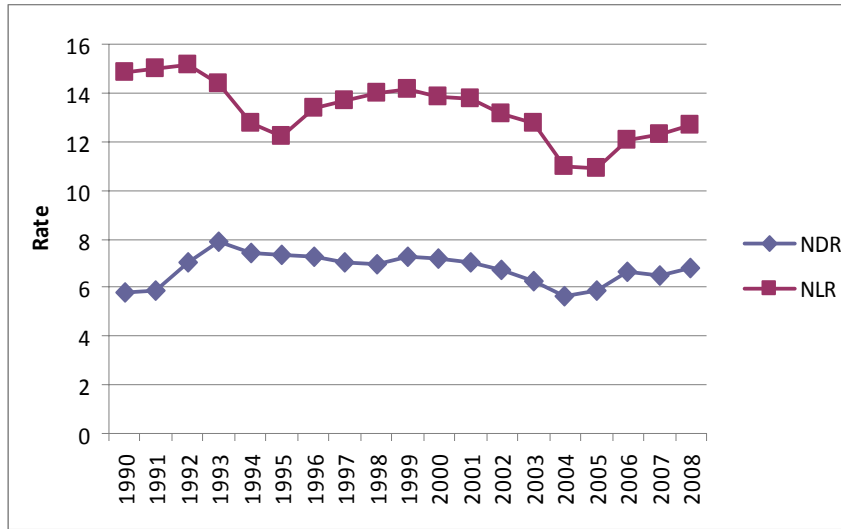
Intermediation Cost (Interest rate spread)

In Bangladesh, IRS in the banking sector has been persistently high over the years, which basically indicates high cost of financial intermediation. The resulting high cost of borrowing not only tends to discourage private investment but also puts strain on the government by increasing the cost of servicing public borrowing (Mahmud, as cited in Ahmed and Islam 2006:6).

The trend in IRS is shown in the figure 5.1 which explicitly describes the movements in lending and deposit interest rates (in real terms) and the difference (IRS) - in particular.

³³ IRS stands for interest rate spread or margin, which is basically gap between lending and borrowing rate of financial institutions, particularly banks.

Figure 5.1
Trend in Real Deposit and Lending Rate



Source: Statistics Department, Bangladesh Bank

It is evident from the figure 5.1 that the spread between the lending and deposit rate is persisting at a higher level over the years.

However, the table illustrates that a decreasing trend in IRS has been observed since 2004. IRS was 6.72 percent in 2001, and it has been decreased about 1 (one) percent during last 8 years.

Table 5.1
Tend in Interest Rate Spread in Banking Sector

Year	IRS
2001	6.72
2002	6.42
2003	6.48
2004	5.36
2005	5.31
2006	5.38
2007	5.92
2008	5.75

Source: Statistics Department, Bangladesh Bank

Table 5.1 exhibits that there has been achieved some improvement in reducing intermediation cost (IRS) in Bangladesh, but still the spread is higher than its neighbouring countries, for example, India. Table 5.2 depicts the trend in IRS of selected South Asian countries.

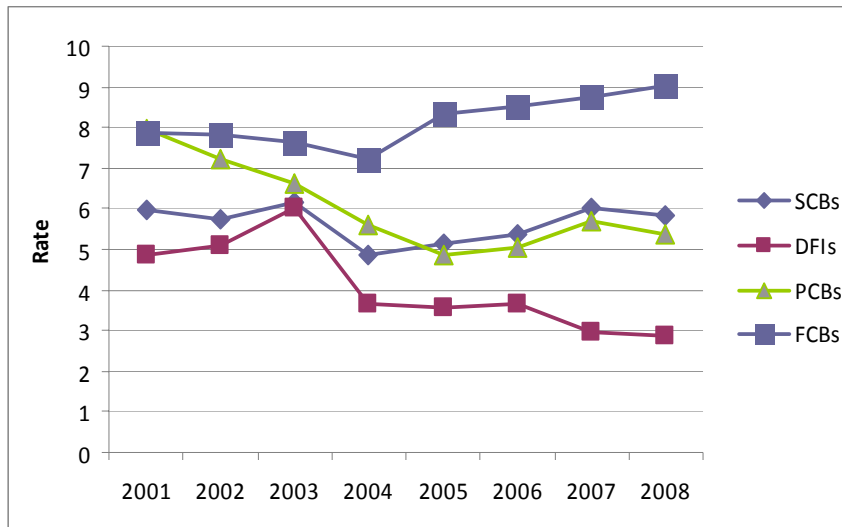
Table 5.2
Interest Rate Spread of Selected South Asian Countries

Year	India	Sri Lanka	Bangladesh	Pakistan
2003	6.09	3.68	6.11	6.63
2004	5.17	4.86	5.27	5.46
2005	4.50	5.93	5.38	6.83
2006	4.75	7.14	5.61	6.43
2007	4.25	...	5.98	5.14

Source: Publications of respective Central Bank

However, financial intermediation cost differs across the categories of banks in Bangladesh. Figure 5.2 shows the trend of IRS in different types of banks over the years.

Figure 5.2
Interest Rate Spread by Types of Banks



Source: Statistics Department, Bangladesh Bank

Note: NCBs= Nationalized Commercial Banks, PCBs= Private Commercial Banks, FCBs= Foreign Commercial Banks, DFIs= State-owned Specialized (Development) Banks

Figure 5.2 exhibits that IRS in private sector banks, both foreign (FCBs) and domestic (PCBs) commercial banks, is higher than state-owned specialized (development) banks (DFIs), where IRS is the lowest. It reveals that though financial liberalization advocates for privatization of state-owned development banks, but still the intermediation cost is minimum in these banks since they charge less for investment finance compared to private sector commercial banks.

5.2 Allocative Efficiency

Allocative efficiency depends on the efficient allocation of financial resources to productive sector. The question here about allocative efficiency is whether more lending has been going to productive activity, particularly after the financial reform took place in 1990.

Private Sector Credit

Credit flow into the private sector³⁴ has pivotal role in economic growth. Table 5.3 shows the trend in private sector credit flow during the period, FY1990-2008

Table 5.3
Private Sector Credit as a percentage of GDP

FY	Private Sector Credit/ GDP
1990	22.8
1992	15.1
1994	16.7
1996	22.3
1998	23.9
2000	25.1
2002	29.3
2004	31.1
2006	34.9
2008	38.0

Source: Statistics Department, Bangladesh Bank

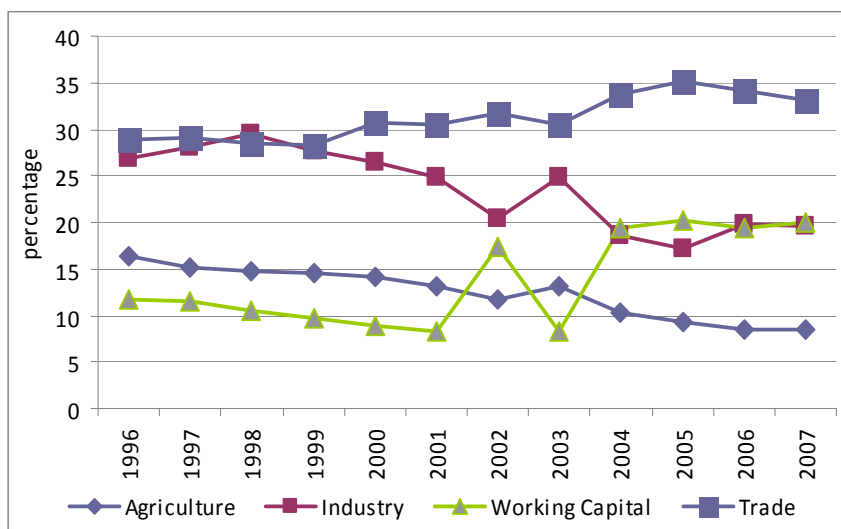
Table 5.3 reveals that private sector credit as a percentage of GDP remained at a low level during the 90s, though the financial liberalization programme was initiated in 1990. Until 2004, the ratio was under 30 percent. However, the ratio has gradually been increasing over the years.

The most important point for examining allocative efficiency is to investigate whether this credit goes to productive sector or short-term speculative purpose.

Figure 5.3 illustrates the trend of sectoral credit flows during the period, 1996-2007:

³⁴ Private sector credit to the productive manufacturing sector

Figure 5.3
Sectoral Distribution of Credit to Private Sector



Source: Statistics Department, Bangladesh Bank

It is evident from the figure 5.3 that the majority of the credit goes to trade finance and working capital. On the other hand, long term finance to the industrial sector shows a decreasing trend over the years as a proportion of total private sector credit.

Term Loans to the Productive (industrial) Sector

Term loan as a percentage of total loan portfolios of the banking sector has been only around 4 to 5 percent until 2007. However, the proportion has increased to 7.86 percent in 2008. The trend is enumerated in the table 5.4 below:

Table 5.4
Term Loan in Total Loan Portfolio

FY	Term loan/ Total Credit
2003	2.81
2004	4.35
2005	4.97
2006	4.29
2007	5.43
2008	7.86

Source: Statistics Department, Bangladesh Bank

Further more, for an appropriate analysis of allocative efficiency; term loan should be disaggregated in respect of its length of tenure to observe the availability of loanable funds for long term productive sector. But due to the

lack of adequate data on the duration (tenor) of the term loan, this feature can not be explained.

However, Table 5.5 demonstrates the trend in allocation of loan portfolio for industrial and trade finance by the banking sector during the period, 1980-2007.

Table 5.5
Industrial and Trade Finance in Total Loan Portfolio

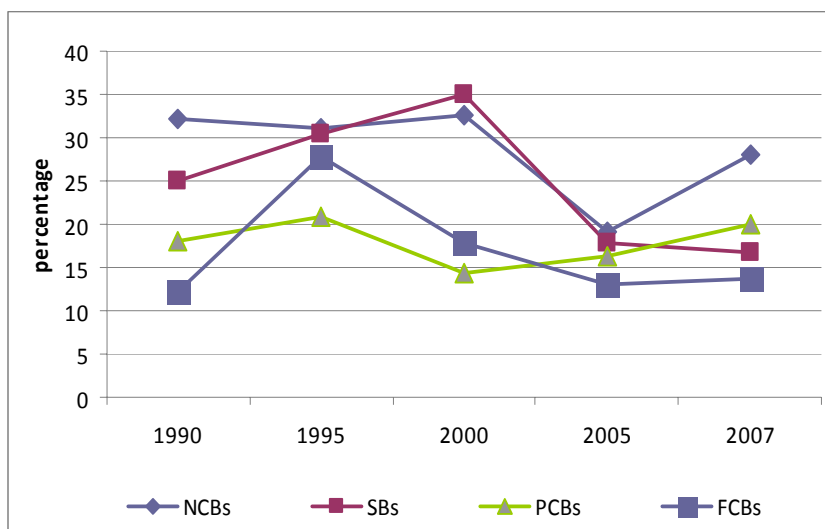
	Industrial Finance	Trade Finance
1980	41.0	25.3
1985	22.6	36.7
2005	26.5	30.9
2006	28.2	29.6
2007	26.5	30.7

Source: Statistics Department, Bangladesh Bank

Table 5.5 exhibits that the share of long term industrial finance in total loan portfolio has been decreasing over the years. On the other hand, the share of trade finance is increasing. It is noticeable that though a good number of banking institutions, particularly private sector banks came into operation after the liberalization of the financial sector, still industrial finance has become scarce with the passage of time.

Figure 5.4 illustrates the trend in term loan disbursement by the different categories of banks in Bangladesh during the period, 1990-2007:

Figure 5.4
Term loan by Types of Banks



Source: Statistics Department, Bangladesh Bank

Note: NCBs= Nationalized Commercial Banks, PCBs= Private Commercial Banks, FCBs= Foreign Commercial Banks, SBIs= State-owned Specialized (Development) Banks

The disaggregated data on term loan disbursement by the types of banks reveals that state owned development banks are mainly providing term loans to productive investment compared to private sector banks, particularly foreign and multinational banks (FCBs), which hardly disburse term loan to the productive sector.

5.3 Chapter Conclusion

It is evident that private sector banking could not ensure either low intermediation cost (IRS)³⁵ or allocate financial resources to the productive sector. It has been observed (figure 5.2) that intermediation cost in the foreign banks is higher compared to state-owned development and commercial banks, which exhibits that these banks are charging more on banking transaction and investment finance as well. Moreover, private sector banks, particularly foreign banks hardly disburse term loan to productive sector (figure 5.4).

³⁵ IRS= Interest Rate Spread

Chapter 6

Conclusion and Policy Implication

In answering the research question, what has been achieved in the financial sector in Bangladesh since the reform initiatives in 1990, the study arguably finds that the goals of financial liberalization are far away from achievement.

Regarding one of the main objectives of the financial liberalization thesis, to promote domestic private savings for investment finance, it is evident from the exploratory analysis that no systematic relationship has been observed between real deposit interest rate and domestic private savings. The econometric results are also found in line with this since no statistically significant positive relationship has been observed. Therefore, financial liberalization did not deliver what it was supposed to do.

Several possible explanations could be suggested for interpreting the saving behaviour. As discussed in the analytical chapter, Kaldor argued that savings may occur out of profit. On the other hand, Thirlwall interpreted the phenomenon as substitution between financial and real assets, for example, gold holding.

In respect to the other objectives of the thesis; to improve the efficiency in intermediation process, it has been observed that persisting higher interest rate spread (IRS), particularly in the private sector banking suggests no efficiency gains of the sector.

On the other hand, allocative efficiency of the banking sector has yet to be improved. Only 4 to 5 percent of the total credit portfolio has been disbursed as term loan until 2007, and private sector banks, particularly foreign banks hardly disburse term loan to productive sector.

Though financial liberalization advocates privatization and opening up the financial market for private sector banking, still the evidence suggests that state owned banks, particularly development banks are vital in providing investment finance to the productive sector.

Policy Stance

The context of present global financial crisis, nationalization and rescue initiatives by the advanced countries with a view to restore the confidence on the banking and financial system has put forward the agenda regarding rethinking of the deregulation and liberalization policies. In this connection, the up coming G-20 summit in Washington D.C. on November 15, 2008 might be an entry point to a new era with improved supervision at banks and large cross boarder financial institutions.

Against this back drop, appropriate care needs to be taken in the financial sector in Bangladesh, particularly in the banking sector, since evidences on Bangladesh perspective suggest that financial liberalization did not work as predicted, rather may simply have made the financial system more prone to instability in the manner of advanced countries.

It is clear that privatization, and elimination of state control over development banks are not the solution for promoting savings and investment, rather it would reduce the term finance to productive sector since the private sector banks are basically lending to trade finance on short term basis, and hardly disburse term loan to productive sector.

Hence, one may have to rethink how the goals of financial liberalization could be realized. Is it simply more regulations with liberalization or even reversal of liberalization in certain important areas- such as development banking?

An alternative view could be to pay attention to the development banking with sophisticated state regulation, being aware of the political interference and corruption. Apart from the state-based development banking, improved efficiency and congenial environment in state regulated commercial banking is desirable with appropriate supervision.

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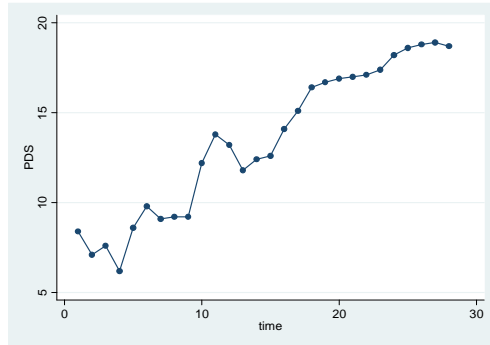
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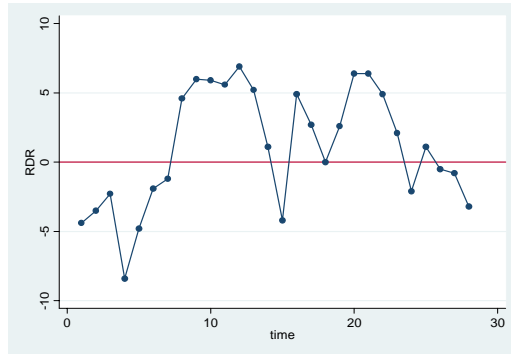
Appendix A

Variables in Labels

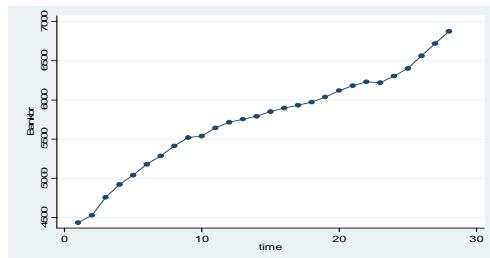
Non Stationary Process of Private Domestic Savings/GDP



Non Stationary Process of Real Deposit Rate



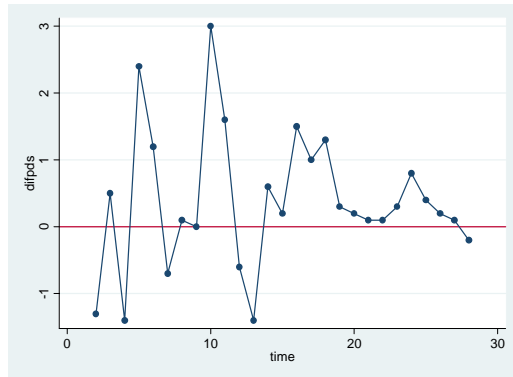
Non Stationary Process of Bankbr



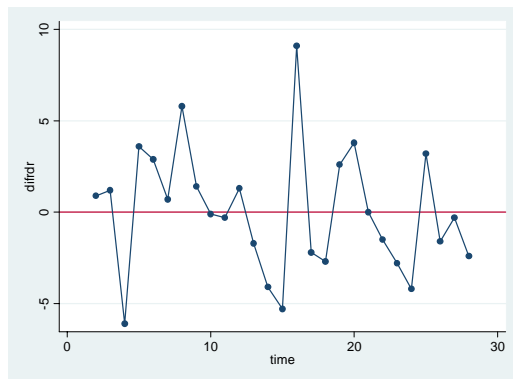
Appendix B

Variables in first difference

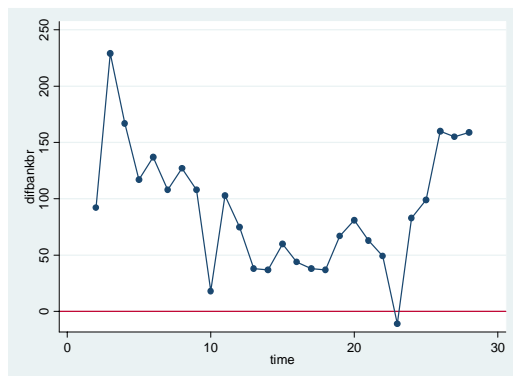
Stationary Process of Private Domestic Savings/GDP



Stationary Process of Real Deposit Rate



Stationary Process of Bankbr



Annex I

Unit Root Test (ADF Test)

Before modelling the relationship (equation 2), the test is used to investigate the data generating process of the variables (existence of unit roots) with Augmented Dicky Fuller (ADF) Test. The null hypothesis (H_0) is that variables under investigation have a unit root; means series is a non stationary process, against the alternative (H_1) is stationary.

Table A I
Unit root test results (ADF Test)

Variables	levels	levels (with trend)	First Difference(Δ)
PDS	-0.566	-3.305*	-5.001***
RDR	-2.326	-2.053	-5.516***
Bankbr	-1.613	-2.411	-2.347

Note: (1) Critical values of ADF statistic for levels at 1%, 5% and 10% significance are (-) 3.736, (-) 2.994, and (-) 2.628 (without trend) respectively.

(2) Critical values of ADF statistic for levels at 1%, 5% and 10% significance are (-) 4.362, (-) 3.592, and (-) 3.235 (with trend) respectively. (3) * means 10%, ** is 5% and *** is 1% level of significance

The above mentioned Table reveals that the hypothesis (H_0) of unit roots in the variables in levels can not be rejected at 1% and 5% level of significance, which proves non stationary process of the variables in levels. On the other hand, ADF tests for unit roots for all the variables in first difference (except the variable Bankbr) are integrated of order zero (i.e., stationary process) since they are statistically significant at 1% and 5% level of significance. If we plot the variables in levels and first difference we get the graphs (Appendix I and II).

Annex II

Co-integration Analysis: Engle and Granger (1987) Technique

We estimate equation (2) applying OLS method and predict the residual. After doing the unit root test (ADF test) of the predicted residual, which is found stationary at 10 percent level of significance (since p-value is .05)

Table A II
Unit root test results (ADF Test)

	Test Statistic	P- value
Predicted residual (error term)	-2.882	0.05*

Note: (1) Critical values of ADF statistic for levels at 1%, 5% and 10% significance are (-) 3.736, (-) 2.994, and (-) 2.6 (without trend) respectively.

(2) * means 10%, ** is 5% and *** is 1% level of significance

Since the predicted residual for the linear relationship (equation-2) of the variable is stationary at 10 percent level of significance (p-value is .05), the variables are co integrated and there exists a weak long-run relationship between private domestic saving (as a percentage of GDP) and the other explanatory variables.

Annex III

Error Correction Model (ECM)

Short run dynamics using Error Correction Model (ECM), regressing private domestic savings on lagged values of explanatory variables and lag (one period) residual.

Table A III
Dependent Variable: Private Domestic Savings

	Coefficient (Standard Error)	t statistic (p value)
α_0	0.68 (0.35)	1.97 (0.06)
α_1	0.07 (0.05)	1.36 (0.19)
α_2	-0.003 (0.003)	-0.94 (0.36)
error correction coefficient	-0.34 (0.13)	-2.65 (0.01)
R-squared	0.33	
No. of obs.	27	

Note: Results are obtained using STATA software

The above mentioned Table reveals very weak relationship between real deposit rate and domestic private savings (since the magnitude of the coefficient, $\beta_2 = -0.07$) and also corresponding t statistic and p value suggest that the relationship is statistically insignificant (p value is 0.19). The model however, explains 33% of the total variation in annual domestic private savings (R-squared= 0.33).

Annex IV

Unit Root Test (ADF Test)

Before modelling the relationship (equation 1), the test is used to investigate the data generating process of the variables (existence of unit roots) with Augmented Dicky Fuller (ADF) Test. The null hypothesis (H_0) is that variables under investigation have a unit root; means series is a non stationary process, against the alternative (H_1) is stationary.

Table A IV
Unit root test results (ADF Test)

Variables	levels	levels (with trend)	First Difference(Δ)
PDS	-0.566	-3.305*	-5.001***
RDR	-2.326	-2.053	-5.516***
M2GDP	1.514	-0.555	-3.066**

Note : (1) Critical values of ADF statistic for levels at 1%, 5% and 10% significance are (-)3.736, (-)2.994, and (-)2.628 (without trend) respectively.

(2) Critical values of ADF statistic for levels at 1%, 5% and 10% significance are (-)4.362, (-)3.592, and (-) 3.235 (with trend) respectively. (3) * means 10%, ** is 5% and *** is 1% level of significance

The above mentioned Table reveals that the hypothesis (H_0) of unit roots in the variables in levels can not be rejected at 1% and 5% level of significance, which proves non stationary process of the variables in levels. On the other hand, ADF tests for unit roots for all the variables in first difference are integrated of order zero (i.e., stationary process) since they are statistically significant at 1% and 5% level of significance. If we plot the variables in levels and first difference we get the graphs (Appendix I and II).

Annex V

CO-integration Analysis: Engle and Granger (1987) Technique

One of the popular testing procedures for co integration relationship is the Engle and Granger (1987) technique. This is a two step procedure, which enables determination of whether a long-run relationship exists among two or more non-stationary variables. First the best possible linear equation (applying OLS method) is estimated and residual is predicted. Then a unit root test is done to test whether predicted residual is stationary. If the predicted residual is stationary, then a long-run equilibrium relationship exists.

Table A V
Unit root test results (ADF Test)

	Test Statistic	P- value
Predicted residual (error term)	-2.667	0.08*

Note: (1) Critical values of ADF statistic for levels at 1%, 5% and 10% significance are (-) 3.736, (-) 2.994, and (-) 2.6 (without trend) respectively.

(2) * means 10%, ** is 5% and *** is 1% level of significance

Since the predicted residual for the linear relationship (equation-1) of the variable is stationary at 10 percent level of significance (p-value is .08), the variables are co integrated and there exists a weak long-run relationship between private domestic saving (as a percentage of GDP) and the other explanatory variables.

Annex VI

Error Correction Model (ECM)

Short run dynamics using Error Correction Model (ECM), regressing private domestic savings on lagged values of explanatory variables and lag (one period) residual.

Table A VI
Dependent Variable: Private Domestic Savings

	Coefficient (Standard Error)	t statistic (p value)
β_0	0.69 (0.32)	2.16 (0.04)
β_1	0.09 (0.06)	1.62 (0.12)
β_2	-0.25 (0.22)	-1.14 (0.26)
error correction coefficient	-0.31 (0.14)	-2.16 (0.04)
R-squared	0.29	
No. of obs.	27	

Note: Results are obtained using STATA software

The above mentioned Table reveals very weak relationship between real deposit rate and domestic private savings (since the magnitude of the coefficient, $\beta_2 = -0.09$) and also corresponding t statistic and p value suggest that the relationship is statistically insignificant (p value is 0.12). The model however, explains 29% of the total variation in annual domestic private savings (R-squared= 0.29).

Notes