CHAPTER II

LITERATURE REVIEW

2.1 Introduction

2.2 Importance of Financial Intermediation

2.3 Financial Repression and Liberalization Approach

2.4 Criticisms of Financial Liberalization

2.5 Financial Liberalization Index

2.6 Contemporary Approaches in Financial Liberalization

2.7 Financial Development and Economic Growth

2.8 Nepalese Perspectives

2.9 Conclusion

CHAPTER II

LITERATURE REVIEW

2.1 INTRODUCTION

This chapter is designed to survey and review the literatures on finance and its interaction with real sector, which covers a period from 1950s to till 2004. Following the introduction, the importance of financial intermediation is discussed in the second section, which incorporates contributions prior to 1970. It briefly discusses Keynesian approach and contributions of Gurley and Shaw, Friedman and Schwartz and Goldsmith. The third section covers financial liberalization approach. It illustrates the seminal works of McKinnon and Shaw and other contributions of the liberalization school. In the fourth section, criticisms of financial liberalization approach are studied in the light of with the market failure approach and structuralist views. Financial Liberalization Index is incorporated in fifth section, while contemporary approaches are discussed in the sixth section. Likewise, financial development and economic growth and the literature related to Nepalese perspectives are reviewed in the subsequent sections. Finally the conclusion is drawn in the last section.

Financial instruments, markets and institutions together lessen the effects of information problems on lending and transaction costs. Financial arrangements can change the incentives and constraints of economic agents and financial system has its influence on saving and investment decisions, technological innovation, hence long-run economic growth process. Large volumes of theoretical and empirical literatures have explored the mechanism linking finance and growth. Firm-level, industry-level, cross-country, growth regressions, times-series analysis, panel techniques, detailed country studies have found that financial development is positively related to economic growth. However, these empirical studies are not free of shortcomings.

Hermes (1994) has surveyed the literature and explicitly arranged contrasting ideas of different schools of thoughts with supporting empirical evidences, including their efforts to incorporate financial aspects in endogenous growth models. He has discussed these views in four different sections namely, contributions prior to 1970s to establish the importance of financial intermediation in the economic growth process; financial liberalization approach during the 1970s; neoclassical approach of the 1980s and critics of financial liberalization school (both the post-Keynesian and

favoring structuralism); and further theoretical development in the financial sector during the 1990s. Similarly, **Fry (1995), Gertler (1988), Gibson and Tsakalotos (1994)** and **Levine (1997, 2004)** have systematically surveyed the literature of theoretical and econometric models.

2.2 IMPORTANCE OF FINANCIAL INTERMEDIATION

Early contributions were focused on importance of financial intermediation in economic growth, nature of the causal relationship and empirical analysis between financial development and economic growth. They provide infrastructures for the study of finance and growth. They have modeled financial intermediation rather than financial repression.

Schumpeter (1911) has recognized the importance of bank as financier to the entrepreneurship and bank credit for the economic development. He has highlighted the role of credit as a phenomenon of development. **Fisher's (1933)** statement resembles the importance of financial system. High leverage of the borrowers during prosperity led the economy vulnerable to crisis. Poor performance of the financial markets was largely attributable for extra-ordinary economic distress during the Great Depression.

The role of financial system was largely ignored in the process of economic development until the 1950s. However, financial considerations were crucial in the Keynes's theory of investment behavior. **Keynes (1936)** has carefully distinguished 'lenders' and 'borrowers' state of confidence that the collapse of confidence may induce economic downturn. Further, the Keynesian economists concentrated on real sector than financial components to contribute in economic growth process. Rather than credit, Keynes's liquidity preference theory has emphasized on the role of money. The financial system had, thus, only an indirect role in the Keynesian economy. Thus, Keynes's General Theory ignored the importance of credit markets. However, **Hicks (1937)** and **Modigliani and Miller (1944)** have recognized an indirect role of finance to link financial markets and real sector. Money was thus, shifted on relevant financial variable to aggregate economic behavior. They used the demand for and supply of real money balances to determine real interest rate and price level. During the 1950s, a line of development economists like **Persbich (1950), Nurkse (1953)**, and **Lewis (1954)** have explored their views on allocation of finance for investment. The developing countries were lacking initial capital for investment.

The approach however, did not pay much attention in mobilizing domestic savings. This view was widely accepted in developing countries in the 1950s to 1970s.

In a time-series analysis of money output correlation, **Friedman and Anna Schwartz (1963)** found that the decline in money supply was the major cause of economic distress during the Great Depression. The quantity of money demanded was the only financial aggregate. Commercial banks were the financial institutions receiving attention (because their deposit liabilities were a major component of money supply). The study was pioneer in exploring the relationship between money and output.

Gurley and Shaw (1955) propounded the 'Debt Hypothesis' and highlighted the importance of credit supplied through financial intermediaries. Accordingly, the development of financial institutions (including both banks and non-banks) and financial markets with myriad of financial instruments, would be important in mobilizing domestic savings, promote economic activity and hence, achieve sustainable growth. They have laid emphasis on the importance of financial intermediation and institutionalization of savings and investment. They have advocated the role of credit supply process rather than that of money supply. In the industrialized countries, financial system is broader and deeper than that of developing ones. They have argued against Keynesian and monetarist view of fixed nominal money stock that could not endogenously change the demand for money. Because it ignored the reality of the functions of financial markets supplying with close money substitutes and offsets the changes in the demand and supply of money, even if the central bank keeps control over the supply of nominal money. Thus, financial sector is an important determinant in an economy. Financial intermediaries are very important to enhance financial capacity, which overcomes the impediments to the flow of funds between primary savers and ultimate investors. Borrowers are able to find larger volume of credit than direct finance. With the elaboration of the financial sector, savers do not necessarily need to become investors and investors do not need to depend on self-finance. Gurley and Shaw, thus, provided useful theoretical framework to link the financial system with the real sector.

In their series of publications, **Gurley and Shaw** (1955, 1960 and 1967) have clearly articulated the importance of financial intermediation in the development process. Further, financial structure changes with the increase in income and wealth of a country (**Gurley and Shaw,** 1967: p 257-268). Financial accumulation through a

varied number of financial assets, institutions and markets reflects the increasing level of income and wealth. Financial intermediation is one among alternative techniques to mobilize savings which is not equally attractive or effective everywhere. Rather, differences in the level of wealth and income, as well as social benefit and cost affect it. The tendency on the accumulation of financial assets depends on the level of income and wealth.

The division of labor in lending and borrowing, saving and investment, and intermediation affects the level of financial development. Income and price phenomenon related to the development of the real sector encourages financial development. Financial development depends upon various factors such as legal and social frameworks, economies of scale, technological changes, human capital development, regulatory environment etc. The demand and supply of financial assets are sensitive to the development in real sector. The demand for external finance depends upon the growth of real sector while the availability of finance affects its growth. Thus, there is a bi-directional causality between financial development and economic growth.

Gerschenkorn (1963) has focused on the key role of banking system in both short-run and long-run economic growth. The legislative impediments and the government policies associated with financial repression hinder the development of banking system and encourage the informal finance.

Patrick (1967) and Porter (1967) have elaborated the Debt Hypothesis propounded by Gurley and Shaw. Both of them have concluded that an efficient financial system can intermediate savers and borrowers to mobilize higher level of resources with efficient allocation into investment projects thus contributing on economic growth. Both the financial development and economic growth occur simultaneously. However, it is difficult to establish an exact causal relationship between them.

Porter (1967) has examined the financial market of Pakistan and found following reasons for narrowness of security market:

1. Few number of buyers and sellers,
2. Lack of position takers, and
3. Lack of spectrum of owners and ownership motives

In underdeveloped countries direct measures of monetary controls were applied to contain inflation. A high reserve requirement was regarded as an effective tool of monetary policy. Domestic banking system was an easy mean to meet government deficit cheaply. Open market operation could not function due to the narrow securities market.

Patrick (1967) has introduced the concepts of 'demand following' and 'supply leading' finance. Development of modern financial institutions, markets, instruments and services are the general outcomes of economic development process in the demand following approach. In an industrialized economy, financial innovations take place due to changes in income level and demand for new instruments and services. Conversely, supply leading approach states that the creation of financial institutions, markets, instruments and services encourage entrepreneurship and foster the process of economic development. He identified two possible causal relationships between financial development and economic growth. In the 'Demand following' approach, the demand for financial services is dependent on the growth of real output, trade and modernization of agriculture and other subsistence sectors. Thus, the creation of modern financial institutions, financial assets and liabilities and related financial services are a response to the demand for these services (**Patrick, 1967**: p.174). A rapid growth of economic activities raises the demand for external funds because entrepreneurs have fewer resources to finance the expansion of their activity from internally generated depreciation allowance and retained profits. For the same reason, with a given aggregate growth rate, the greater the variance in the growth rates among different sectors or industries, the greater will be the need for financial intermediation to transfer saving to fast-growing industries and services sectors from slow-growing sectors as well as individuals. The financial system can, thus, support and sustain the leading sectors in the process of economic growth. In this case, an expansion of the financial system is induced because of real economic growth.

'Supply leading' approach of finance implies that the creation of financial institutions and their services occur in advance of their demand. It transfers resources from the traditional, low-growth sector to the modern high-growth sector and promotes and stimulates entrepreneurial response in the modern sector (**Patrick, 1967**: p.75). Thus, the availability of financial services stimulates the demand for these services in the modern, growth-inducing sector.

Supply-leading approach is crucial, especially for the developing countries, where entrepreneurship is lacking. Patrick has stressed on the "supply leading approach" of financial development as relevant for the developing counties. It can cultivate banking habit among people on the one hand, while more importantly, encourages entrepreneurship, and educates them about the markets of their production on the other. Taiwan and other East Asian Economies are successful examples of 'supply leading' approach of finance that achieved faster growth. However, Patrick has concluded, as economic growth is achieved, supply leading finance by itself turns into demand following. Patrick's question regarding the causality between financial and economic development is subject to examine yet.

A cross-country case study by **Cameron et al (1967)**, has discussed the historical relationship between the development of banking system and the industrialization process of now-developed countries (England, France, Japan, Germany, Belgium, Russia and Scotland). The studies while evaluating the economic, legal and financial linkages between industries and banking systems, gave a wide range of reasoning on the development of financial system during pre-industrialization period, while encrypting the interactions among government policies, financial intermediaries, financial markets and industrial financing. The subjective evaluation of banking system performance concludes that banking system had played significant positive role in the industrialization process as well as its role to induce growth.

In a path breaking work, **Goldsmith** (1969) has empirically analyzed the financial structure and economic growth of 35 countries over the period 1860 to 1963. Financial structure of different countries vary with respect to the relative types of existing financial instruments and institutions, degree of concentration of financial intermediaries, volume of financial instruments relative to national wealth, national income, capital formation or savings. Financial structure changes over time and across countries, depending upon the rate of penetration of different sectors of economy and speed and character of their adaptation to changes in the economic structure.

Goldsmith explored different measures of financial development. They were:

1. Financial inter-relation ratio: It is the ratio of total financial assets to national wealth (i.e. total value of tangible assets and net foreign balance).

2. Relative size of financial structure: It is the ratios of different types of financial instruments (say, debt to equity ratio, short term to long term debt instruments, marketable to risky instruments etc).

3. Degree of penetration of different financial instruments: It is the volume of outstanding financial instruments to total financial assets or holdings of financial instruments by different sectors of economy to total financial assets.

4. Relative financial intermediation ratio: It is the share of total assets of different financial institutions to the total assets of the financial system.

5. Financial intermediation ratio: It is the share of total financial assets of individual financial institutions to total financial instruments of the financial system.

6. Financial interrelation matrix: It is the combination of breakdown of financial assets and sectors yielding financial interrelation matrix. It is the amount of total of all financial instruments (say all claims or equity securities or residential mortgages) distributed among different financial instruments.

7. Distribution of total sources funds of various sectors to various sectors of economy.

He found a positive correlation between financial development and the level of economic activity; as the size of the financial sector enlarges relative to the size of the economy, the country develops. However, he has asserted his unwillingness to draw causal relationship whether financial development causes growth from his graphical presentations and was unable to provide much cross-country evidences.

Goldsmith has pointed out several problems about his work. They were:

(1) It does not systematically control for other factors influencing economic growth.

(2) It does not examine whether financial development is associated with productivity, growth and capital accumulation.

(3) The indicator of financial development, measures the size of the financial intermediary sector, but not accurately estimates the functioning of the financial system.

(4) The close association between the size of the financial system and growth cannot identify the direction of causality.

According to **Blake (1992: 3),** financial system plays an important role in mobilization and allocation of savings from the primary lenders and ultimate borrowers. Normally (but not always) the household and external sectors remain surplus saving units (SUs) and business and government as the deficit spending units (DUs). The household sector aims to maximize utility or expected welfare of lifetime consumption stream. The SUs desire to purchase financial assets from a repository out of current saving until required to finance for future expenditure and while acquiring such assets, allocates the surplus funds across different assets in order to maximize the expected utility of the characteristics of the portfolio of assets taking care of risk aversion, liquidity and yield.

Investment can be made from retained earning of own (self finance), or from external sources. An investor can find funds from individual savers (direct finance) or from the financial intermediaries (indirect finance). Although direct finance does not require any intermediary, it is costly and time consuming for an investor to accumulate funds from savers who normally accumulate smaller amount of saving, and it is impossible to meet their preference of liquidity, risk averseness and high yield. Further investors are in need of long term financing while savers prefer liquidity of their savings.

Financial intermediaries are better able to remove the constitutional weakness between the long term investment demand and liquidity preference of the savers. Both the borrowers as well as savers benefit from the services from financial intermediaries.

2.3 FINANCIAL REPRESSION AND LIBERALIZATION APPROACH

McKinnon (1973) and Shaw (1973) have challenged the conventional theoretical proposition of state intervention and propounded model of economic development for the developing countries. They have argued that financial repression shallows financial system and distorts economic growth. Financial liberalization leads to financial deepening and promotes economic growth. McKinnon-Shaw approach is developed on the foundation of inside money and debt hypothesis of Gurley and Shaw. Financial liberalization offers real positive interest rate to the savers so that

more saving is mobilized for allocation. Financial saving may fall when inflation accelerates or the nominal interest rate is arbitrarily lowered. Further, a relatively high interest rate on lending encourages high yield projects and innovation. It is because developing countries have plenty of opportunities, but are in short of investment capital.

They have hypothesized that financial repression distorts economic growth while liberalization raises financial savings and hence contributes in economic development. Financial repression can be characterized by interest rate administration, selective credit control, high reserve requirements, and restriction on foreign financial transactions. It favors neo-classical proposition of market-clearing prices as the best mechanism for allocation of resources in an economy. Financial repression discourages savings and reduces the availability of loan-able funds whereas financial liberalization is the elimination of financial repression. Thus, it creates the favorable environment for financial development and economic growth. Government constrains the potential of financial markets in mobilizing savings for growth and development. They have postulated that an increase in holding financial assets mobilizes savings. It leads to higher levels of savings, investment, production, growth and helps in poverty alleviation.

In their independent works, they severely criticized the conventional regime of state intervention. Various measures of repression hinder the growth process. Interest rate ceilings on both lending and deposit reduce savings and reduce the volume of loan-able funds to invest. Non-price rationing of credit hinders competition and incentive to efficient lending. Credit allocation is based on transaction costs and perceived risk of default, but not on the productivity of investment. Further, it is determined by collateral quality, loan size, name and political pressure, and devious benefits to loan officers influencing loan allocation.

Interest ceilings distort an economy from different sides. It reduces future savings and encourages current consumption. Loans are allocated to relatively low-yield priority projects. Cheap credit encourages investment in capital-intensive projects and reduces the employment opportunity. Borrowers, not finding adequate amount of credit in time and savers not getting reasonable yield would be attracted in curb market. In a financially repressed economy capital flight and transactions of foreign assets in black market is inevitable. Likewise, debtors are reluctant to pay back their loans due to less chances of getting cheap credit again.

Governments distort financial sector and impose impediments in the capital mobility by administrative control so that inflation could be controlled arbitrarily. Government restrictions on financial system were imposed on the grounds of usury prevention, control over money supply, and better allocation of scarce resources for investment. The policy of financial repression refers to the government controls over the financial sector by means of laws, regulations and informal controls, which distorts the prices of financial services – the interest rates and foreign exchange rates – and hinder the financial intermediaries to operate in their full potential. Main instruments of financial repression are a high reserve requirement, interest rate ceilings – both on lending and deposit, and directed credit to the preferred sector or borrowers. Financial repression, thus, increases the demand of cheap loans, leading to loan rationing to the high yield projects on the one hand, and creates disincentive to save. Imposition of high reserve requirements on commercial banks creates an artificial demand of government securities, while excess credit demand necessitates rationing among the competing users. Low yield on deposits causes disincentive to save with the banking system and savers become attractive to hold foreign claims in the foreign market, resulting capital flight. Savers on the one hand find reasonable yield while potential borrowers get adequate amount of credit in the curb market, where the government regulation is ineffective. As a result, curb and black market flourish in a repressed financial system.

McKinnon and **Shaw** have argued that the distortions from financial repression crowd out high-yielding investments, create a preference for capital-intensive projects, discourage future saving, and thereby reduce both the quality and quantity of investment in an economy. Financial liberalization avails more resources for investment through higher interest rate on deposit. Financial liberalization is associated with financial deepening leading to proliferation of financial instruments and improves the availability of loan-able funds for investment.

Major thrust of both **McKinnon** and **Shaw** is the interest rate liberalization. A high positive real rate of interest shifts the portfolio of private savings from non-productive assets to financial savings. Financial savings can be allocated to high yield investments. Therefore, major goal of the monetary and financial policy is the development of domestic financial market so that savings could be attracted to the financial system.

The financial liberalization approach has been further interpreted, elaborated, and reorganized by Kapur (1976), Fry (1978, 1980, 1982, 1995, 1997) Galbis (1977), Krugman (1978), Sines (1979), Molho (1986a, b), Cho (1984), Vogel (1992), Samson (1992) etc. Cole and Park (1983), Gupta (1984), Abebe (1990), Ikhide (1992) and others have empirically tested financial liberalization approach.

Kapur (1976), Galbis (1977), Mathieson (1979), and Fry (1978, 1982) have extended empirically and familiarized the McKinnon-Shaw descriptive model of financial liberalization and strongly advocated for complete liberalization of the financial markets in developing countries. According to them market forces raise the nominal interest rate (high above the inflation rate and thus maintain real interest rates positive). A high real interest rate can mobilize more savings and avails more resources for investment, which contributes for economic growth. Their model conclude:

Total savings and thereby total investment increases and hence, higher economic growth is attained; and the quality of investment improves because at a higher interest rates, low yielding investment projects are no longer viable and replaced by high yield projects, which were deprived of external resources due to credit rationing. It results increase in the average efficiency of investment in the economy.

Kapur's (1976) model assumes that there is abundant unused fixed capital in a developing economy but working capital is constraint on output level. His model is based on Harrod-Domar aggregate production function and applies abundant labour supply. Currency/money ratio is assumed to be constant. In his model,

$$\mathbf{Y = \sigma K}$$

Where, Y is real output (at constant prices),
K is total unutilized capital (consisting of both fixed and working capital but always in excess).

In his model, banking credit is used to finance all net additions to working capital. Entrepreneurs repay a fraction (θ) of bank loans before taking out new loans to finance replacement working capital. The remaining ($1-\theta$) is never paid back. He finds the changes in the supply of bank credit (in real terms) affect the rate of economic growth by linking the bank credit to the money stock. He has modeled that a higher required reserve ratio reduces the ratio of loans to money and lowers the rate

of economic growth. Thus, the supply of bank credit is key factor for net additions to working capital. Money is neutral in the absence of reserve requirement (inflation tax) and ceilings on interest. In his model, money is non-neutral due to real money demand and credit supply both change when the inflation rate changes while deposit rate is fixed; required reserve ratio imposes tax on financial intermediation; and net working capital investment is financed by bank credit and only a fraction in replacement capital. An increase in interest rate on deposit increases real money demand (and hence bank credit). Growth enhancing policy should be to increase nominal deposit rates competitive to free market level and reducing the required reserve ratio.

Galbis (1977) has constructed a two sector (traditional economy with low constant returns to capital, r_1 and modern sector with higher constant returns to capital, r_2) model using Harrod-Domar production functions of constant but varying rates of return, leading both the sector inefficient and found that financial repression cultivates economic dualism. He has explored the nature of financial constraints in the developing countries while elaborating and clarifying the McKinnon approach of financial liberalization and the relationship between financial intermediation and real development. In his model, Galbis has shown that entirely self-financed traditional economy has a low constant return of capital while external finance relying modern sector has higher constant returns to capital.

Mathieson (1979) has followed Kapur's model and assumed a fixed ratio of working capital. He has further assumed that capital is fully utilized and banks finance fixed proportion of both working and fixed capital. The supply of loan is determined by the demand for deposits and the reserve requirement. Demand for bank loans is a fixed fraction of capital stock. Mathieson has included adaptive expectations of inflation rate and a decaying stock of fixed interest bank loans as two sources of dynamic adjustment in his model.

Restrictive monetary and fiscal policies usually result in the rate of inflation and balance of payments at the expense of slower growth. Only the financial liberalization policies with trade and financial market reforms can improve on the trade off between growth and inflation. He shows, through his model, that reforms would raise the rate of growth by stimulating exports, investment, and savings and lower inflation by increasing the supplies of both foreign and domestic goods. Financial reform program as a part of structural reform encompasses structural and institutional changes and eliminates trade barriers, exchange rate depreciation, as well

as relaxation of interest rate control. He argues that the capital inflows have beneficial effects if the policies of exchange rate and interest rate decontrol coordinated carefully. As financial reforms begins with a time of rapid inflation, a low or zero growth rate and balance of payments deficit.

He has pointed four general constraints to be placed on interest rate policy for the authority to select. If domestic financial system is competitive, interest rate ceilings should be removed solely. Competitive forces can maintain the money market equilibrium, credit market equilibrium and normal level of profits in the financial system. The imposition of ceilings on interest rates (both lending and deposit) is likely to encourage monopoly or oligopoly in the financial market. The lending rates must increase to ensure reasonable level of profits for the financial system. If the interest rates are decontrolled, in a competitive financial system, the loan will rise until consistent with zero excess real profits for each of the firm in the financial system.

The exchange rate policy has a direct impact on the overall inflation rate while interest rate deregulation can reduce the rate of inflation by eliminating the shortage of real working capital and allowing the expansion of economic activities. For financial reform to become successful, inflation rate should decline with rise in output and elimination of the balance of payment deficit. He has advocated for the 'patient, anti-inflationary' policy for stability at the initial stage of the reform process in order for growth to take its momentum, against 'impatient growth oriented' policy, which may destabilize the transitional phase. He has suggested for financial reform in order to coordinate the exchange and interest rates carefully.

Fry (1982) has advocated that financial liberalization has expanded financial intermediation between savers and investors. Financial intermediation increases the incentives to save and invest, and improves the efficiency of investment. Thus, in a financially repressed economy, a low real deposit rate of interest switches savers away from the banking system and the size of the liabilities of the banking system reduce and it cannot meet the needs of investment finance.

Empirical Evaluation of Financial Liberalization Approach

A large number of empirical studies have been made to test the financial liberalization hypothesis. High positive real interest rates are considered as the proxy of financial liberalization. Different studies have endeavored to find out the relationship financial liberalization with savings, investment, investment efficiency,

financial intermediation and economic growth. **Hermes (1994)** has articulated major researches and their findings, which are explained here.

Table: 2.1

Positive Effect of Higher Real Interest Rates on Domestic Savings

S. N	Study	Sample	Result
1.	Williamson (1968)	6 Asian Countries	0
2.	Gupta (1970)	India	+
3.	Gupta (1984)	12 Asian Countries	0 / +
4.	Gupta (1986)	10 Asian Countries	+
5.	Gupta (1987)	13 Latin American Countries	0
6.	Fry (1977)	Portugal	+
7.	Fry (1978)	7 Asian Countries	+
8.	Fry (1979)	Turkey	+
9.	Fry (1980)	61 Developing Countries	+
10.	Fry (1988, 1995)	14 Asian Countries	+
11.	Fry and Mason (1982)	7 Asian Countries	+
12.	Abe et al (1977)	6 Asian Countries	+
13.	Giovannini (1983)	7 Asian Countries	0
14.	Giovannini (1985)	7 Asian Countries	0
15.	Yusuf and Peters (1984)	Korea	+
16.	de Melo and Tybout (1986)	Uruguay	0
17.	Leite and Makonnen (1986)	6 African Countries	0 / +
18.	Khatkhate (1988)	64 Developing Countries	0
19.	Rossi (1988)	49 developing Countries	+

Notes: "0" indicates the hypothesis was confirmed and the coefficients were found to be statistically significant by usual standards.

"+" indicates the hypothesis is rejected and the coefficients were not statistically significant.

Source: Hermes (1994)

Table: 2.2

Positive Effect of Higher Real Interest Rates on Investment

S. No.	Study	Sample	Result
A. Higher Real Interest Rates increase the availability of credit and stimulate investment.			
1.	Fry (1980)	61 Developing Countries	+
2.	Fry (1981a)	12 Asian Countries	+
3.	Fry (1981b)	7 Pacific Basin Countries	+
4.	Fry (1986)	14 Asian Countries	+
B. McKinnon's Complementarity Hypothesis			
5.	Akhta (1974)	Pakistan	-
6.	Abe et al (1975)	6 Asian Countries	+
7.	Fry (1978)	10 Asian Countries	-
8.	Harris (1979)	5 Asian Countries	0 / +
9.	Fischer (1983)	40 Developing Countries	+
10.	Thornton (1990)	India	+
11.	Thornton and Paudel (1990)	Nepal	+
C. Higher Real Interest Rates increase Investment Efficiency			
12.	Fry (1979)	Turkey	+
13.	Asian Development Bank (1985)	11 Asian Countries	+

Notes: "0" indicates the hypothesis was confirmed and the coefficients were found to be statistically significant by usual standards.
"+" indicates the hypothesis is rejected and the coefficients were not statistically significant.
"-" indicates the hypothesis was not confirm and the coefficients were statistically significant.
Source: Hermes (1994)

The basic McKinnon and Shaw hypothesis that savings and real interest rates are positively related has been tested with mixed results. Several studies find, although the relationship is positive for the coefficient of real interest rates, they appear to be statistically insignificant. Different factors may explain the result. They may be: Data on savings are inaccurate in developing countries; financial repression may have limited the positive effects of real interest rates on savings; the impact of international interest rates on domestic saving behaviour has been ignored in the studies; and lag effect of interest rate changes and adjustments of saving decisions have not been considered. The empirical evidence of the McKinnon and Shaw hypothesis of positive relationship between real interest rates and savings appear ambiguous.

Evidences on positive relationship between real interest rates and investment (both quantity and quality) confirm the hypothesis. However, the empirical evidences for the test of McKinnon's complementarity hypothesis are found to be ambiguous again (In contrast to the conventional approach or standard model of portfolio substitutability between money and capital, McKinnon's complementarity hypothesis emphasizes money and capital to be complementary with each other). The studies have found the efficiency of investment to be positively related with higher positive real interest rate.

Table: 2.3
Positive Effect of Higher Real Interest Rates on Financial Intermediation

S. No.	Study	Sample	Result
1.	Lanyi and Scaracoglu (1983)	21 Developing Countries	+
2.	Fry (1988, 1995)	10 Asian Countries	+
3.	Chamley and Hussain (1988)	Thailand, Indonesia and the Philippines	+
4.	Gelb (1989)	34 developing Countries	+

Notes: "+" indicates the hypothesis is rejected and the coefficients were not statistically significant.
Source: Hermes (1994)

Financial intermediation, measured by the ratio of money supply to income (either GDP or GNP) through time as indicator of financial intermediation confirm the

hypothesis of the positive relationship between higher real interest rates and growth in financial intermediation.

Empirical evidences on the positive relationship between real interest rates and economic growth are normally positive (other than two exceptions **Gupta**, 1984 and **Khatkhate**, 1988). This positive relationship exists by the increased savings and investment affecting economic growth positively. In other words,, higher interest rate is confirmed to be positively associated with the higher level of economic growth in developing countries.

Table: 2.4

Positive Effect of Higher Real Interest Rates on Economic Growth

S. No.	Study	Sample	Result
1.	Fry (1980)	7 Asian Countries	+
2.	Fry (1988)	14 Asian Countries	+
3.	Gupta (1984)	25 Asian Latin American Countries	-
4.	Gupta (1986)	India and Korea	+
5.	Lanyi and Scaracoglu (1983)	21 Developing Countries	+
6.	Gelb (1989)	34 Developing Countries	+
7.	Polak (1989)	40 Developing Countries	+
8.	Khatkhate (1988)	64 Developing countries	0

Notes: "0" indicates the hypothesis was confirmed and the coefficients were found to be statistically significant by usual standards.
"+" indicates the hypothesis is rejected and the coefficients were not statistically significant.
"-" indicates the hypothesis was not confirm and the coefficients were statistically significant.

Source: Hermes (1994)

Thus, empirical studies tend to validate the approach that financial liberalization (positive real interest rate taken as proxy) encourages investment and hence higher economic growth is achieved. But, the relationship between savings and higher real interest rates is unclear yet. Unless the relationship between the positive real interest rates and savings is established, liberalization view cannot be confirmed as contributing to a higher economic growth. "If this relationship cannot be confirmed with strong evidence, the positive contribution of financial liberalization to growth may altogether fail. The crucial step in the path from liberalization to growth is higher savings lead to higher intermediation, efficient investment and therefore, higher growth, it may then turn out to be weaker than expected. This is especially critical for developing countries" (Hermes, 1994: 11)

Diamond and Dybvig (1983) explores the idea of liquidity constraints to test various types of interventions in the commercial banking system, deposit insurance

for example. They have modeled financial intermediation in an overlapping generation approach, considering people of living for three and two periods. Young individuals work only in the first period of their lives to earn a real wage w_t (treated exogenously) and consume in periods 2 and 3 while people of another group consume in the period 2. Utility functions of all the young people thus will be

$$U(c_1, c_2, c_3, \phi) = -(c_2 + \phi c_3)^{-\varepsilon}/\varepsilon$$

where, $\varepsilon > -1$ and ϕ equals 1 with probability π and 0 with probability $1-\pi$.

They have assumed that young individuals allocate their period 1 earnings to be allocated between currency holdings, investment in bonds and bank-deposits implying no change in their financial conditions and savings ratio. Although financial sector reforms have focused in the implementation of safety net measures like capital adequacy requirement and improved asset quality to reduce non-performing loans, there has been no theory based and integrated assessment of financial institutions or safety net policies and improved macro-model. Their framework emphasizes the importance of the banks in the provision of liquidity in the economy. Individuals face uncertain liquidity needs which are not publicly observed and incompleteness in the liquidity market. Deposit insurance offers flexibility over the timing of withdrawals to the depositors. Since banks issue liabilities which require payment on demand. Circumstances beyond the control of the banks may arise "sunspot crisis" when they cannot honor all the withdrawal claims. They have demonstrated that depositors may withdraw their deposits simply in anticipation of others withdrawal, leading to a banking panic. Panic disrupts the real activity to the extent forcing banks to liquidate even the productive project loans. They conclude that deposit insurance is justified to prevent costly liquidity crises and eliminate the deposit panic. However, the presence of deposit insurance may provide incentive to banks to lend on more risky projects.

Diamond (1984) has developed a model in which a financial intermediary improves corporate governance. The intermediary mobilizes the savings of many individuals and lends these resources to firms. This "delegated monitor" economizes on aggregate monitoring costs and eliminates the free-rider problem since the intermediary does the monitoring for all the investors. Furthermore, as financial intermediaries and firms develop long-run relationship; this can further lower information acquisition costs.

He has stated that lenders cannot observe borrows' projects freely, while financial intermediaries have that advantage. He has found high cost of bilateral verification while assuming a fixed project size and endowment pattern (borrowers are not obtaining credit from informal sector). Competitive financial institutions can economize monitoring costs. Financial institution prepares loan contracts with the borrowers and monitors them; they have a diversified portfolio; and transform assets for savers. Thus, portfolio diversification and asset transformation solve the potential incentive problem between the financial intermediaries and savers. Also, financial intermediaries avoid the duplication of monitoring cost of borrowers as they monitors the borrowers as delegated monitor on behalf of the depositors. They diversify their portfolio heavily to circumvent monitoring problems so that depositor's yield on their savings is not affected.

Roubini and Sala-i-Martin (1992) have developed a theoretical model to analyze the relationship between financial repression and growth policies. The empirical analysis of 53 countries including those of Latin America, found financial repression leading to negative real interest rates, high reserve requirement and the high inflation tax. A higher degree of financial repression has been found to be associated with lower economic growth; however their result did not imply causal relation between inflation and growth.

The model has suggested important relationship between financial repression, inflation and economic growth. Financially repressed countries have a higher inflation rate and lower per capita income than the liberalized countries. Capital accumulation is fundamental for economic growth, and financial sector intermediates a large part of savings towards productive investment. The shortsighted governments adopt the policy of financial repression to collect revenue easily in the form of higher inflation tax leading to a high inflation rate.

They have analyzed the effects of financial repression on the rate of economic growth to address theoretically and empirically, the question that the role of financial development in economic growth and whether financial repression is harmful to growth. Their model of growth, seignorage, and financial development shows that governments adopt the policy of financial repression to collect easy revenue in the form of inflation tax as well cheaper credit to the government and public enterprises. Financial repression implies public sector subsidies as well.

They have found that financial repression impairs economic growth. Financial intermediation is an important component of the aggregate production function. Financially developed economies can allocate resources better than the less developed one. They empirically found an inverse relation between growth and several measures of financial repression as well as inflation. Countries adopting financial repression policy grow less than the countries do not. The policy of financial repression reduces the amount of financial services to the whole economy and total output will be reduced (given the total stock of inputs). It reduces the asymptotic marginal product of inputs that can be accumulated in the form of private physical and human capital, consequently the steady state of growth rate.

In the McKinnon – Shaw model, deposit rate is the key tool of financial repression that is normally fixed by government authorities below the market clearing level . Banking system deposit liabilities shrinks, resulting a lack of funds for investment and reduces loan in their portfolio of assets. A lower deposit rate discourages savings, and, hence, availability of productive investment financing where it encourages current consumption and inflation hedge. In a repressed financial system, curb market flourishes and capital flight is inevitable. Thus, a low level of accumulation of capital for productive investment hinders economic growth process.

According to **Fry (1995)** a financial system performs two basic functions of administrating payment system and intermediation between the savers and investors in a country. He found some stylized facts about the financial systems in developing economies. They were:

1. The commercial banks dominate the financial system. Assets of non-bank financial intermediaries like insurance and pension companies as well as development financial institutions like agricultural and development banks are very small relative to that of commercial banks. Capital markets are emaciated whereas confined buyers to assure liquidity requirements often use government securities. The role of the capital market is very small in financial intermediation.
2. The financial system is heavily taxed in the form of reserve or high powered money. (Money holders pay the inflation tax with the erosion of its purchasing poser.)
3. Banking systems face a high-required reserve ratio.

4. Prevalence of ceilings on deposit and interest rates.

5. There is a positive link between financial and economic development.

Collier and Gunning (1999) examine the effects and costs of financial repression in some African economies. There was a shortage of creditworthy borrowers. Financial transactions are costly in an underdeveloped economy because of few financial assets and little collateral base. The costs of financial information about firms are unusually high. Accounting and auditing standard are lacking and there is no financial press as well as risk rating agencies. All these naturally raise the cost of funds from formal finance. Taxation through interest-less (without paying interest), reserve requirements and implicit taxation on financial sector further increase the costs, larger than the value added of the banks. Banking is thus, heavily taxed than exports. Poor performance of the legal system has reduced the efficacy of assets as collateral and increased the costs in the loan recovery cases. Lending practices concentrated on minimization of risks due to few creditworthy borrowers.

Public sector banks normally provide credit to the government and public enterprises through off-budget channel to finance public deficit. The public sector banks have a heavy default rates (non-performing assets) due to 'name' loans and self-lending of their managers. Interest rate spreads of the private sector banks remain very high in expense of inefficiency of the public sector banks. Due to high costs of formal finance, they shift their activity to the informal finance and trade credit.

In an underdeveloped economy, informal market is nourished due mainly to high cost of finance in the formal sector. However, informal sector does not provide substitution for the formal finance. The lack of credit particularly hits the new firms for initial capital. In such case, they need to finance themselves and eventually trade credit seems as the most important source of finance.

In a repressed financial system, financial institutions do not have information base in place, skill of risk assessment and proper lending practices, prudential regulation and supervision mechanism in place. They also lack adequate legal process for loan recovery. Financial liberalization may also create policy problem of prolonged financial repression, at least in the short run. The legacy of financial repression is the weak banking organizations, which are unable to exploit the opportunities opened by financial liberalization. In the long run, however, financial reform can be expected to improve the banks to allocate the funds efficiently.

According to **Boyd and Prescot (1986)** financial intermediaries may reduce the costs of acquiring and processing information and thereby improve resource allocation. Without intermediaries, each investor would face the large fixed cost associated with evaluating firms, managers, and economic conditions. Consequently, groups of individuals may form financial intermediaries that undertake the costly process of researching investment possibilities for others. Thus, financial intermediaries look like banks because they accept deposits and make lending.

Warman and Thrilwall (1994) have tested the financial liberalization hypothesis for Mexico (1960 – 1990), by differentiating financial savings and total savings distinctly. They came to the findings that:

1. Financial savings is positively related with real interest rate while investment is negatively associated,
2. Investment is positively related with the credit supply from the banking system,
3. Total saving remained invariant to the changes in real interest rate

They have concluded that favourable impact of financial liberalization (higher real interest rate) on economic growth must come through efficiency of investment.

2.4 CRITICISM OF FINANCIAL LIBERALIZATION

(Market Failure Approach and Structuralist Views)

Efficiency of financial markets as well as financial system are required for the growing economic activities in developing countries. The form of financial reform has been changed over time. So far financial repression hypothesis of McKinnon and Shaw argues the financial reform should be a part of overall economic liberalization and financial sector in particular. Their thrust was on interest rate liberalization (both on lending deposit), removal of entry barrier, abolition of directed control that had been resulting credit ceilings. Government interference on the pricing as well as allocation of financial resources, that they named it as financial repression, distorted financial development and the economic growth.

However, the result of financial liberalization is not uniform, i.e., positive in some countries where it was adopted gradually (in most of the cases of Asian countries) while turned to source of financial crisis in others (Latin American countries). Second generation of financial reform is concentrated on set up of

necessary institutions to support a smooth functioning of the financial system. Very recently, prudential regulation, supervision, uniform accounting and auditing standard, human skill development and legal reforms as well as restructuring and re-engineering of existing institutions are focused for successful financial system as part of the financial reform. Any time in the history of banking and finance reform, is the product of crisis thereon. It was a movement towards liberalization of the domestic markets in international level. Especially, the international institutions rich with expertise (like the International Monetary Fund, the World Bank, and the like) were advising for liberalization. Most of the developing countries were expecting a rapid economic growth with the adoption of financial liberalization policy. Most importantly, the functioning of the existing financial system was not satisfactory and required reform for them to work efficiently.

Market Failure Approach (Post Keynesian Criticism)

Post Keynesians have criticized financial liberalization on the ground of the impact on output, inflation, and growth models where price and wage rigidities are common. The existence of asymmetric information leads to credit rationing even in liberalized markets. The relationship between financial liberalization, competition, and instability in the financial market is another area of criticism. Post Keynesian models of effective demand are influenced by capital accumulation in contrast to the McKinnon-Shaw model of financial liberalization (high interest rates encourages savings mobilization, and avails funds for investment), and argue that financial liberalization may lead to fall in output and growth and further contribute instability in the financial system.

In a closed economy, financial liberalization increases excess supply of saving and loans resulting a fall in equilibrium interest rate, on the one hand, and increases in the marginal propensity to save while reducing aggregate consumption on the other (**Burkett and Dutt 1991**). It results to a fall in aggregate output, profit rate is reduced and discourages entrepreneur for further investment. Thus, the effect of financial liberalization is negative on increase in investment. The rise in deposit rate swing savings up, and the quantity and quality of investment rises. It results a high growth, which further raises savings and encourages more investment in the McKinnon-Shaw model of financial liberalization. In contrast, in the post Keynesian view, the rise in interest rates has an adverse effect on cost of borrowing funds. It leads to a rise in prices, reduces real wage, aggregate demand and capacity utilization. A fall in capital

accumulation, thus, further reduces growth of output in both the short- and long-run. Increased propensity to save reduces effective demand. In an open economy, financial liberalization often leads to over-valuation of real exchange rate, which further reinforces a squeeze in aggregate demand and cause financial instability. If banks have been involved in positive maturity transformation, liberalization could cause them large losses due to a rise in short term deposit rates, and fixed long-term loans. As the banks make loss, they are less interested to make new loans. Thus, financial liberalization may cause banking system increasingly fragile.

Government having a larger debt, may face debt servicing problem due to higher interest rate, and it will further increase budget deficit which is even greater when revenue falls due to a reduction of reserve requirement on financial sector. Reduction in public spending would additionally reduce aggregate demand and further exacerbate. Further market clearing interest rate may also be negative and a policy to increase interest rates above the inflation rate may damage or even destroy the economy due to depressed expectations or high uncertainty (**Beckerman, 1986**).

Financial liberalization (an example of neo-classical view) states that if markets are left to themselves free of intervention, they will work reasonably well. In other words, if the interest rates are left to be determined by the market forces, the demand and supply of savings (loan-able funds) will balance itself. The concept itself is not free of criticism. According to Keynesian view, markets are not necessarily stable to self equilibrate. A rise in savings does not necessarily rise in investment and so; savings and investment are not automatically equilibrated through the mechanism of interest rate. Interest rate is determined in the money market while investment is not only dependent on interest rates, but also on expectation of future demand. Financial liberalization cannot eliminate credit rationing completely. Institutional network of state, firms employers federations, trade unions, etc have a crucial role to play in developing long term and high trust relationship between market participants. Such a relationship determines the competitiveness of financial intermediation and promotes economic development.

Mishkin (1978) has analyzed the affects of financial factors sine the Great Depression and interacted them between output, consumer balance sheet and spending and found that the behaviour of household net financial positions had a significant influence on consumer demand.

Bernanke (1983) has sketched the important role of the finance in economy that the collapse of the financial system (both the banking system and stock market) was an important determinant of the Great Depression, and only the monetary forces are unable to explain it. The debt crisis reduced collateral of the borrowers and reduced their ability to obtain funds from the capital market. Thus the trouble in the credit market is important to crumple in the activity in the real sector.

King and Plosser (1984) have found that inside money had significantly more explanatory power for output than the monetary base. Information asymmetry due to market imperfection may cause inefficiencies in the financial markets.

Akerlof (1970) has illustrated how information asymmetry affects the buyers and sellers in an economy in his example of "lemons" problems. The buyers have a perception that sellers of low quality goods receive a premium at the expense of those selling high quality products. It distorts the market activity as some high quality sellers remain away from the market. Akerlof's idea of "lemon" is applied in the inefficiencies, which distorts economic activity. **Akerlof (1984)** has further explained the economic consequences of imperfect information or asymmetric information that individual agents behave selfishly in the market and usually with expectations of maximizing the individualistic selfish. All individuals are engaged in individualistic maximizing behavior on income distribution and allocation of resources. Informal and unwritten guarantees are preconditions for trade and production.

Jaffee and Russel (1976) developed the concept of information problems, which are relevant in the financial markets. Credit rationing can arise due to imperfect information about the quality of potential borrowers. They have shown that demand constraints in financial markets may exist even in the absence of government intervention. The cost of information gathering about the borrower is very high for risk investment projects. Financial contracts even allow for the borrower for the possibility of bankruptcy.

Stiglitz and Weiss (1981) have modeled that informational asymmetry motivates credit rationing where the market denies funds to potential borrowers. They assume that high-risk borrowers wish to pay the lenders a high rate of interest if the project yield is sufficiently high and pays the net yield otherwise. Due to asymmetry of information, problems of adverse selection and moral hazard may rise in investment projects. As investment projects fail, the lenders' expected return will fall.

If interest rate on loans increases, borrowers may choose to undertake a high return investment projects with a higher rate of return. In the mean time, there will be higher uncertainty of recovery of loans. In other words, good loans may turn bad risk. As a result the probability of bankruptcy increases and expected return on portfolio of the lender may fall.

Main theme of the imperfect information theory is the lack of perfect information on financial markets. Even the market determined rate of interest rate cannot bring an optimal allocation of resources and investment. A rise in interest rate lowers the borrower's quality, consequently the safe borrowers drop out. At a high rate of interest potential borrowers are arbitrarily denied for credit whereas more loans are demanded by high risk borrowers. Thus, credit rationing will be inevitable and there will be excess demand for loans in the market. They have concluded that incentive problems distort the market equilibrium towards under-lending and quantity of lending is more sensitive for exogenous disturbances.

Mankew's (1986) analysis for credit markets has shown that a small rise in riskless interest rate leads to a large fall in lending because it forces the loan rate up and reduces the quality of borrowers. This ultimately forces the market vulnerable to collapse. Rapid of financial innovation changes the structures of the financial markets. Financial markets true for today need not be true for tomorrow. Real world financial arrangements are largely endogenous outcomes in the interaction between the real and financial sectors.

Townsend (1979) has derived conditions of optimal standard of risky debt contracts or loan agreement. He argues for a costly state verification that the lender must pay a fixed cost to observe the borrower's projects and the borrower does not have enough collateral to secure the loan. Borrower, if not monitored, has incentives to misreport the project outcome. Lenders cannot monitor borrowers' behavior without any cost. Therefore, he stated the costly state of verification. Information problem thus, constrains an entrepreneur's input demands, because of marginal cost of funds including the default risk. An optimal financial contract on the other hand reduces the probability of default and increases the input demand of the firms.

Townsend (2002) has suggested an alternative safety net strategy, which explicitly incorporates the diversity of shocks. He has used the theory of an optimal

allocation of risk bearing as a bench mark to evaluate the financial sector reforms and safety net policies useful in both crisis period as well as in the long run.

He has applied linear probability model as an approximation to the true non-linear membership equation (as in Probit). Predicted probability are not bound to 0 and 1, the linear regression is free from normality assumptions about the error terms. He has applied impact risk sharing equation two stage least squares regression and estimated the impact of that extends credit for agricultural sector and has its impact more in rural areas) to be positive though not significant. He has analyzed the role played by the financial institutions and safety nets in stabilizing consumption and investment from idiosynchratic shocks taking as given the realized paths of macro aggregates, by using data from Agricultural Bank of Thailand.

Fama (1980) has analyzed frictionless competitive market by applying Modiglani-Miller theorem and concluded that financial structure was irrelevant. Against this conclusion, **Fama (1985)** has stressed on the importance of the financial intermediaries (commercial banks in particular). In an open market, credit is not available as a perfect substitute of bank finance for certain class of borrowers. Borrowers obtaining bank loans typically pay a higher return than the market rate and initial investment is causal scrutiny. Banks develop comparative advantages in information accumulation from the borrowers, which is important to ameliorate informational distortions.

On the prevalence of market failures, **Stiglitz (1996)** has criticized financial liberalization and suggests for government interventions to make the market function better and improve the performance of the economy. He further argues that the government has an important role to play in the financial system. Collecting, processing, and disseminating information is the important function of the financial market. According to **Stiglitz**, costly information creates market failures. Information is public good and monitoring is costly for individuals. It is because; information about the management and solvency of financial institutions is the matter of concern of the state. As depositors cannot monitor the financial institutions, the managers have incentive to take more risky ventures with the deposits they have.

Even if the financial institutions are competitive, they are likely to be inefficient in a market of imperfect information. He claims for government intervention could improve welfare. Depositors can change easily from one bank to

another, but not the borrowers due mainly to a fixed cost involvement. A new bank would again incur cost on getting information as a prospective borrower before extending loan. Further, it would charge a high interest rate or deny lending if finds the borrower not having a good credit risk.

He describes how costly information produce externalities. As a bank fails, the depositors may think that their bank is also prone to failure, because all the banks are working within the similar environment. They react at a time to withdraw even their bank is sound enough. Similarly, the provision of bank loan makes a firm easy to raise its equity capital. Because getting bank loan indicates the firm to be sound, (otherwise bank would not lend) and prospective investors expect for the bank monitoring over the firm activities.

The government cannot ignore the collapse major financial institutions, because they produce externalities. Banks assume that the government is there to ensure them effectively and they do take greater risks as well, but similar to that others. Because they also know, the government may ignore the problems of a single bank. Unlike individuals, banks cannot shop around for alternative deposit insurance.

He justified the government intervention amidst the existence of increasing market failures around the globe. It is because the government has power to compel and prosecute that private sector does not have. In the mean time, its limitations and constraints make them less effective. He has articulated some principles for appropriate government interventions:

1. The government should insure the financial system, implicitly or explicitly, while reducing the problem of moral hazard by increasing capital requirements (risk weighted capital adequacy ratio).
2. Given information imperfections, mild financial repression (**Stiglitz, 2002**) can improve investment efficiency. (Low interest rate improves the average quality of investment; increases firm equity due to low cost of capital; improves export performance; and encourage lending to high technological sectors).

Stiglitz (1996) on his interpretive article based on case studies, econometric data and economic theory, lists out the interactive ingredients that have contributed the miraculous success of the East Asian Countries (Japan, South Korea, Singapore, Malaysia, Indonesia, Hong Kong, Taiwan and Thailand) and finds out whether other

developing countries can replicate those policies to stimulate equally rapid growth. The involvement of the government together with the private sector is the clue of their success.

The positive role of the government and accommodative policies helped make them successful. He finds government maintaining political and economic stability, adaptive government policies and supportive to investment, government as market maker but enabled them work effectively, promotion of physical and human capital, and cooperative approach between different economic units are the major ingredients of high economic growth with less income inequality. **Stiglitz** (1996:174) stresses ".. mild financial repression had a positive effect on economic growth. Risk sharing reduced the effective cost of capital, thus stimulating investment." He concluded a combination of policies together is the key to success. Real miracle of East Asia is due to political commitment rather than economic.

"The governments intervened actively in the market, but used, complemented, regulated, and indeed created markets, rather than supplanted them." Government created conducive environment to save more, promoted exports, education, and technological development. Further, cooperation between the government and business, employers and workers and large and small firms remained crucial to create such an environment to attain high growth rate.

Financial repression depresses saving in financial institutions. But financial restraint (moderate repression) actually increases saving. Low interest rates transfers saving from households to corporate sector and aggregate saving increases. Financial policy regarding savings promotion through postal saving and provident funds, restriction on consumer credit, prudential regulation and financial restraints; macroeconomic stability with low stability and low inflation; regulating banks and non-banks to keep their financial health sound, lending restriction on real estate and consumer credit; protecting banks from competition; and directed credit to priority areas remained quite helpful to attain high economic growth (**Stiglitz and Uy, 1996**).

Stiglitz and Greenwald (2003) have presented a fundamentally new approach to monetary economics based on Information Economics, focusing on the role of money on facilitating transactions and that of credit in facilitating economic activities broadly. They emphasize on the demand for and supply of loanable funds requiring an understanding of how banks and other institutions process information to evaluate the

credit worthiness about their borrowers. They explain the factors determining the willingness and ability of banks to provide credit, explore the consequences of credit inter-linkages within the economy describe the implication of conduct of policy and analyze the changes in the economic structure (like the effectiveness of monetary policy, and economic stability). They conclude that the monetary policy alone is likely ineffective in restoring full employment.

Their basic theory uses a portfolio approach to explain banks decision on lending, and changes in regulation as well as economic circumstances. Both the balance sheets of banks and borrowers and risks sensitivity in an economy affect the supply of credit. They provide a better guide to addresses the issues of liberalization and handle crisis.

The developing countries are characterized by lack of adequate supply of securities (either that of government or corporate sector securities). Factors limiting the development of the securities markets are: (a) lack of adequate supply of public utilities remains constraint for the expansion of economic activities (industrial, commercial or others). Family owned small-scale businesses or foreign owned companies generally not having interest to raise local capital, relationship banking of the firms, small size business and limited horizon do not wish to go to the securities markets; (b) limited demand for securities; (c) underdeveloped financial system; (d) price uncertainty; (e) a high cost of acquiring information.

Structuralist Criticism

Van Wijnbergen (1982, 1983a, 1983b,) **Taylor** (1983), **Buffie** (1984), **Kohasaka** (1984) have criticized McKinnon-Shaw approach of financial liberalization by using a mark up pricing framework, a cost push inflation model and Keynesian adjustment mechanisms. The neo-structuralists models predict the opposite effects of financial development and liberalization in contrast to that of the MS models. In the neo-Structuralist models, the nominal interest rate, which is, determined in the curb or non-institutional credit market, adjust to equate the demand for and supply of money and credit. Income adjusts to equilibrate the demand and supply in the goods market.

1. Corporate savings may decline by more than rise in the savings of the household sector due to the rise of real institutional interest rates;

2. Household savings would decline if credit constrained households are able to borrow after liberalization;
3. Higher real interest rates reduce investment due to high cost of funds;
4. Higher real interest rates increase production costs, lower wages and cause stagflation;
5. Financial liberalization could reduce both prices and output.

Neo-structuralists criticisms are based on five fundamental assumptions that differ fundamentally to that of McKinnon-Shaw school of financial liberalization **(Fry, 1995: 110)**.

1. Wages are determined institutionally or through class conflict;
2. Inflation is determined by the relative power of capitalists and workers;
3. Savings takes place only out of profits and not wages;
4. Price level is determined by the fixed mark ups over cost of labour, imports and interest rates (on working capital);
5. Developing countries have a critical need for imports of raw materials, capital equipments, and intermediate goods.

Informal markets comprising of indigenous bankers and moneylenders, according to neo-structuralists are crucial in intermediating the savers and investors. Those markets are competitive and individuals have an easy access. Further, there is no provision of legal reserve requirements for leakages of savings in the intermediation process. Neo-structuralists models are based on Tobin's portfolio allocation approach of household assets.

In contrast to McKinnon-Shaw school, **Van Wijnbergen** (1982, 1983a, 1983b, 1985) advocates the vital role of curb market in monetary models of developing economies. His argument is corporate sectors depend on external finance for working capital in developing economies with a high debt equity ratio. While analyzing the effects of financial liberalization, unlike McKinnon and Shaw, **Van Wijnbergen** (1983a) assumes three types of assets (namely, gold and money; bank deposit; and curb market loans) in the Tobin's portfolio framework. Household allocate their real wealth in either of the assets. Bank loan to the business sector depends on their demand for excess reserve, the level of deposits and required reserve

ratio. The government fixes lending rate in the banking system at below market-rate where it is free to find its market-clearing level in the curb market.

The effect in the money market is due to required reserve ratio and relative elasticity of demand for currency and curb market loan with respect to the interest rate in time deposit. Curb market provides one-for-one intermediation but banks can provide partially because of the reserve requirement **Van Wijnbergen** (1983a: 439). He finds that initial decrease in financial deepening is due to higher curb market rate that declines over time. Tight monetary policy reduces the rate of growth by reducing the availability of total credit.

In his analysis of the effect of increasing deposit rates, **Taylor** (1983) also found the result similar to **Van Wijnbergen** (1983) that informal market works without any reserve requirement. In his model, an increase in the curb market rate raises the price level through cost-push effect in working capital. An increase in the interest rate increases savings while discourages investment and hence reduces the rate of economic growth. A tight monetary policy, if pursued, curb market interest rate increases with the increase in demand for money (an upward shift in money demand function), investment and, hence, economic growth declines.

Existence of market inefficiencies (particularly price rigidities, at least in the short run) is the most important factor for the economic backwardness of developing countries. The structuralists emphasize on the existence of informal financial markets and their role in intermediating financial resources between the savers and borrowers. Adjustment in the Structuralist model takes place through a change in output rather than prices, which are determined mark-up over-costs.

Taylor (1983) has criticized McKinnon and Shaw hypothesis for two reasons. Firstly, following the Keynesian approach, an increased desire to save reduces the aggregate demand and it may lead to economic contraction. Secondly, higher interest rates may not encourage savers to reallocate their wealth portfolio to interest bearing financial assets and away from unproductive assets towards financial assets. If saving turns to financial assets from the informal credit market, the supply of total credit would not increase in the economy. Rather, it may contract because the deposits are subject to reserve requirements, whereas informal markets do not need to meet reserve requirements. Enhanced capacity utilization and creation of an environment of

confidence can encourage for the increase in capital accumulation in developing countries.

Chang and Jung (1984) have introduced two alternative curb markets competitive one very close to the banking system in terms of both the demand and supply side and the other primitive type uncompetitive and fragmented operating independently. Taking only time deposit as alternate asset to currency, they find curb market as providing important opportunity for investment. They argue further that substitutability between time deposits and curb market loans may not be high for large savers to increase due to much different risk features.

Balasssa (1988) has examined the impact of policy imposed (endogenous) distortions on resource allocation, resulted from market imperfections. The market distortions have undesirable effect on the efficiency of resource allocation and employment in developing countries. He has shown that policy imposed distortions in the product markets tend to aggravate these adverse affects in the economy of the low-income countries. Capital markets are distorted by both the financial policies and tax policies.

Balassa (1990a: 60) doubts with the arguments of Structuralists that most of the informal markets are scattered extremely and small scale in operation, and hence they are less efficient in the allocation of resources. Thus, it is unreasonable to assume loans from the formal and informal sectors lead to investment projects with comparable rates of return.

Wai (1972) has focused on the importance of informal financial market in the developing countries due mainly to the tradition, trend, and culture. Inability of rural people to have an access to formal finance has also helped to flourish informal finance on the one hand, and rural farmers exploited from the moneylenders and big farmers in rural Africa. Despite their highly descriptive theoretical underpinnings and clear as well as simple policy conclusions, financial liberalization view has remained a matter of criticism due to its relevancy of ideas for developing counties under the following grounds.

1. The approach is rather mechanical and based on rigid assumptions of high real interest rates to lead a higher degree of institutionalization of savings and investment automatically.

2. Liberalization view ignores the social, political, cultural trend and values whereas they have a critical role in the process of formulation and implementation of financial policy and even creation of financial structure as well as saving and lending operation.

3. Unlike their view of inefficient informal markets, several studies have shown that informal financial arrangement is critically important in the developing countries. Nepal Rural Credit Survey (1994) reports only 20 percent of household have their access to formal finance (see also, Cole and Park, 1984; World Bank 1989).

4. They do not elaborate the interrelations with other aspects of economic policy than saving mobilization through higher rate of reward to the savers. Developing countries experiences show that positive contribution impact of financial liberalization has been limited due to the lack of co-ordination with other economic policies. "Big-bang" approach of financial liberalization brought into financial crisis and economic stability in some of the countries during early 1980s (and Russia recently). All these led to reconsider the views of financial liberalization to suit it to the requirement of developing countries.

The critics of liberalization do not criticize the market-oriented reform; rather, they are concerned with further improvements. Because, liberalization has declined in the government expenses and neglected the human face, especially to protect the poor. The performance of the East Asian countries also shows that government is necessary for the economic growth. Sustained macroeconomic stability, high level of initial level of (and investment in) education and training, sound government and market institutions, and a basic reliance on private markets and production all generate consensus and are as important in explaining the government interventions. The government should have economic objectives and pursue them by selective trade protection, subsidized credit, and industrial policy, but liberalization ignored it. Further, the outcome of any policy depends on the ability of the government to implement it. For an example, under the condition of an infant industry, tariff can improve welfare while still recommending a uniform tariff. If the government's ability to identify infants correctly (and kick them out of the nest when mature) and to resist the lobbying pressures that always accompany a policy of differentiated tariffs is limited, it is possible that the optimal tariff is not non-uniform but that the optimal implementable tariff is non-uniform. However, the same policies of high savings,

investment incentives, directed credit and selective protection that worked well in East Asia could not become successful in other countries like Nepal and India.

Lack of private investment and weak financial markets may be serious problems (while inadequate demand or uncertainty over the course of reform may be the other obstacles. Policies would have been better in the long run rather than piecemeal reforms.

2.5 FINANCIAL LIBERALIZATION INDEX

Not all households have access to credit markets, and hence, some households have no ability to smooth consumption over time. Thus, for the liquidity constrained households, consumption decisions are entirely determined by current income. On theoretical grounds, it has been shown that a relaxation of liquidity constraints will be associated with a consumption boom and a decline in aggregate saving. Furthermore, the more binding the initial constraints, the greater the consumption boom that can be expected. Many of the past liberalization episodes unleashed a period of rapid growth in bank lending, asset price booms, and increases in consumption that often coincided with a decline in private saving rates. Many of those episodes also ended in a full-fledged financial crisis. Hence, no analysis of saving is complete without an assessment of the pervasiveness of liquidity constraints.

The tests for the presence of liquidity constraints have often been linked to a credit channel in explaining the behavior of consumption/saving. Studies using reduced-form saving equations have tested for liquidity constraints by introducing credit (either its growth rate or as a ratio to GDP) as a regressor. The premise is that greater access to credit reduces saving. Hence, the anticipated coefficient on the credit variable is negative.

Quinn (1997) has developed a comprehensive measure of financial liberalization with detailed description for each country in the text of the AREAER summary table. The quantitative financial liberalization indices based on each country's qualitative text and degree of restrictions on international financial transactions and useful tools in the assessment of various economic effects financial liberalization, including growth. He reviewed the legal limitations of private payments and receipts for economic transactions in foreign currencies like exchanging restriction, mandatory surrender of export proceeds, licensing requirement for foreign direct investments.

Quinn has assessed a country's financial restriction by adding 0.5 on each scale of additional financial openness from 0 to 2. Quinn's coding system for a country's financial restriction of exchange payments and receipts on current and capital account It included the country's international agreements on its ability to restrict exchange and capital flow and related laws.

Garrett, (1995), has used the AREAER summary tables of the IMF sum up four categories to construct an index to measure the extent of government restriction on international financial flows:

1. Restriction on capital account,
2. Bilateral payments with members,
3. Bilateral payments with non-members, and
4. Import deposits

In the index for 15 countries, three dummy variables 0, 1 and 2 are assumed to gauge the intensity of capital control. A value zero notes for no control, while two for an intensive control of the capital. Control in between the two, goes to one.

Demirguc-Kunt and Detragiache (1998) have explored empirically whether financial liberalization enhances higher output growth through financial development on cross-country data of 53 developed and developing countries for a period 1980 – 1995. They found financial crisis is more prone to financial liberalization and it has negative effect on liberalization process. Financial fragility is aggravated by unpleasant economic development, inappropriate economic policies and balance of payment problems. Strong institutional development with effective legal enforcement, prudential regulation in place, efficient bureaucracy and low level of corruption can minimize the negative impacts of liberalization in the financial system. However, institution building can be done only over time, they suggest to pursue liberalization only after designing and implementing prudential regulation and supervision.

Bekaert, Havery and Lundblad (2000) have attempted to obtain a measure of financial liberalization and construct liberalization indicators by taking a simulated sample and randomly dating the time when the country removed the restrictions on finance. The indicator takes a value between zero (pre-reform period) and one (post-reform period).

Reinhart and Toktladis (2001) have compared the impact of financial liberalization in 50 countries over the period 1970 – 1998 by using annual data series of gross national savings, gross investment, current account balance, foreign direct investment, GDP growth, consumption, real interest rates, ratios of narrow to broad money (M1/M2), credit to private sector and spread between lending and deposit rates. They have allowed changes in variances for each indicator by adopting pre- and post- liberalization examination approach. They have found that financial liberalization, as measured by M2/GDP and credit to the private sector, delivers financial deepening. Savings increased following liberalization. Unlike the industrialized countries, financial liberalization however, does not appear to show clear signs of such benefits of higher saving and more productive uses of resources (investment).

Bandiera, Caprio, Honohan, and Schiantarelli (2000) have analyzed the impacts of financial liberalization in Chile, Ghana, Indonesia, Korea, Malaysia, Mexico, Turkey, Zimbabwe by using data over 1970-94. They have constructed an index of financial liberalization on the basis of eight different components: interest rates; pro-competition measures; reserve requirements; directed credit; bank ownership; prudential regulation; securities markets deregulation; and capital account liberalization.

The study found no systematic and reliable real interest rate effect on saving, while the effects of liberalization have a mixed record. Rather they found negative relationship in most of the cases. Furthermore, the effects of the financial liberalization index on saving are mixed: negative and significant in Korea and Mexico, positive and significant in Turkey and Ghana. The long run impact of liberalization is sizeable. Corresponding to the realized change in the index, the estimated model indicates a permanent decline in the saving rate of 12% and 6% in Korea and Mexico, and a rise of 13% and 6% in Turkey and Ghana. Excluding the interest rate and inflation and adjusting for capital gains and losses leaves the results unchanged.

Their panel results indicate that a likelihood ratio test that imposes the equality of coefficients in the pre- and post- liberalization periods can be rejected at conventional levels. The real interest rate has a significant and positive effect and the aggregate index of liberalization has a negative effect on saving. The effect of the aggregate financial liberalization index (which is significantly negative), is large

enough to offset the estimated positive effect of the increases in real interest rates.

Results from the estimation of augmented Euler equations indicate the evidence of the presence of liquidity constraints. The Euler equation results may suggest, at best, that financial liberalization has had little impact on the amount of credit available to consumers through the formal financial sector.

Bandiera, Caprio, Honohan and **Schiantarelli (1998)** have constructed a 25-year time series index of financial liberalization for each of eight developing countries: Chile, Ghana, Indonesia, Korea, Malaysia, Mexico, Turkey and Zimbabwe and conduct an econometric analysis, by using Principal Components.

They find that the pattern of effects differ across countries. Liberalization appears to have had a significant positive direct effect on saving in Ghana and Turkey, and a negative effect in Korea and Mexico. They could not find a clear visible effect in other countries. There is no evidence of significant, positive and sizeable interest rate effects. However their results should be taken as an indication of no firm evidence of financial liberalization to increase saving, because, in Korea and Mexico, liberalization has been associated with a fall in saving. They conclude that only financial liberalization cannot bring in an increase in private savings as the channel to increase growth. Financial liberalization must recognize other dimensions than interest rate deregulation like increased access to consumer credit or housing finance, which reduce savings of the individual household.

Belford and Greenidge (2003) have constructed a set of financial indices for 12 countries which are consistent with a-priori knowledge of financial liberalization existing in specific countries. Their index captures financial liberalization of those countries for a period of 23 years from 1979 to 1999, and assessed the government policies regulating inward and outward financial transactions. The index includes capital payment and receipts; payments for imports and invisibles; and receipts for indivisibles and exports. They have analyzed and included both the capital and current account liberalization in their total liberalization index, while comparing the type and intensity of regulation across different time and space, consistent with the observed financial changes in individual countries.

Edwards (2001) has noted, however, the IMF summary based indices have limitations that they do not distinguish between different intensities of capital

controls. In other words, the indices fail to distinguish between the types of flow being restricted and frequent circumvention of legal restriction.

2.6 CONTEMPORARY APPROACHES IN FINANCIAL LIBERALIZATION

Bayoumi (1993) has examined the effects of financial deregulation on personal saving. Within an overlapping generations framework and has found that deregulation produces an exogenous short-run fall in saving, some of which is recouped over time. Also, deregulation increases the sensitivity of saving to wealth, current income, real interest rates and demographic factors. The model is tested using data on the eleven standard regions of the United Kingdom. He has found that decline in household saving is associated with financial innovation. Saving is also sensitive to wealth, real interest rates and current income. Though the results imply that much of the decline in savings in the 1980's was caused by the rise in wealth, financial deregulation also played a significant direct role.

Alexander, Baliño and Enoch (1995) have discussed the indirect instruments of monetary policy in the context of financial liberalization. Interest liberalization or elimination of credit controls may destabilize money or credit aggregate and control over them may become impossible in a liberalized financial system. Interest rates and exchange rates may become interdependent. Similarly, capital account opening reduces the influence over the real interest rate. The mix of direct and indirect instruments depends upon the level of financial development and its structure in a country (p: 15-16):

1. The instruments used like money, credit and interest rates, should be predictable and under the control of monetary authority. If the instruments are flexible, and monetary effects can be changed quickly, the ability to control can be enhanced. Although credit controls on each bank is highly effective in the aggregate level of credit, it can also lead to financial disintermediation, slow down the market development and distort resources allocation. Therefore the mix of instruments should contribute overall financial development of the country and stability of the financial system. The open market operation of the central bank controls the amount of excess liquidity and more importantly, it encourages the development of financial markets of short-term government debt instruments.

2. The central bank can use the instruments to solve the bank specific problems as well. Effective use of a mix of monetary policy instruments, selected by the central bank according as the need of the economy, requires coordination between them while maintaining the overall level of liquidity.

Several structural and macroeconomic factors reflect diversity in the operation of monetary policy such as historical circumstances, general economic environment, characteristics of inter-bank money markets, price competition among banking and securities markets, reliability and efficiency of the clearing and settlement system of payments, aggregate and bank-by-bank level of excess reserves and sources, magnitude and expected duration of changes in bank reserves.

With an experience of 24 countries, which have initiated financial reforms during 1980s and 1990s, **Claudia Dziobek and Ceyla Pazarbasioglu (1998)** have found that the problem of systemic crises is caused by weak banking supervision, political interference, inadequate capital and outmoded domestic banking system etc. A fall in the export and rising prices may worsen the situation to crisis as the external reason. Bank performance can be improved by systemic bank restructuring to restore solvency, profitability and offer financial intermediation to both the savers and investors while improving public confidence on the banking system. Financial restructuring improves the balance sheet of a bank by raising capital or reducing the liabilities or revaluing the assets so that bank insolvency is restored.

Sundararajan and Johnston (1999) have reviewed the practical experiences of financial reforms in Argentina, Chile, Indonesia, Korea, the Philippines and other 40 IMF member countries since the late 1970s. An orderly and well-supported financial sector reform could lead to higher; sustainable economic growth while inadequately supported, and inappropriately sequenced reform leads to trouble. They pointed out that the challenge of financial reform in strategic improvement of financial sector efficiency while achieving and maintaining stability in the financial system. Properly managed financial reforms could contribute to strong improvements in economic growth and efficiency. The financial sector has a potential role in improving economic performance. Financial sector reforms should seek to reduce the chances of economic downturn of the economy that is due to poorly sequenced and poorly managed reforms. They claimed that control in the financial system is costly in terms of low savings mobilization and capital flight, lack of monetary control and inefficient allocation of resources. Therefore, maintaining financial stability and

improving efficiency in the financial sector is the main challenge for financial reform. Lessons learned from previous reforms in the financial sector suggests that the linkages between various components of the financial sector is important They pointed any successful reform include an increase in real interest rates, management of credit growth following reforms, improvements in banking efficiency in the post-reform period.

Mutually supporting reforms, in a number of areas need for a successful financial sector reform. Reforms in monetary and exchange rate systems, by introducing indirect instruments of monetary control, should follow strengthening the financial institutions and implementing the prudential regulation and effective supervision. The study found that capital account liberalization should be followed after trade liberalization and maintaining stability in the financial system in proper.

Honohan (2003) discusses the implicit and explicit taxes in the financial sector including reserve requirements and seignorage as well as directed credit. He argues that some financial sector taxation have unanticipated large and damaging effects and they should be moderated. Financial sector should not be tax-exempted but should be so designed so that vulnerabilities of sensitivity to arbitrage and sustainability to inflation could be safeguarded.

Extending VAT would be better than imposing transaction tax imposition. Taxes, which are more sensitive to inflation, should be avoided and replaced by inflation-neutral taxes. Since all the taxes are passed through to the depositors, particular efforts are needed to isolate them.

Classens, Klingbel and Laeven (2004) have analyzed the role of institutions in resolving systemic banking crises for a broad sample of countries. Banking crises are fiscally costly, especially when policies of substantial liquidity support, explicit government guarantees on the liabilities of financial institutions and forbearance from prudential regulations are used widely. Higher fiscal outlays do not accelerate the recovery from a crisis. Better institutions including less corruption, improved law and order, legal system, and bureaucracy reduce the likelihood of occurrence of crisis. Their findings are relatively robust to estimation techniques, including controlling for the effects of a poor institutional environment on the likelihood of financial crisis and the size of fiscal costs.

They have suggested for the use of strict policies to resolve a crisis and use the crisis as an opportunity to implement medium-term structural reforms, to avoid systemic crises in the future.

Demirguc-Kunt et al (2003) have examined the impact of bank regulations, concentration, inflation and national institutions on bank net interest margins by controlling bank specific characteristics of 1400 banks of 72 countries for a period 1995 – 1999. They have found that tighter regulation on bank entry, activities and inflation boost net interest margins. Concentration is positively associated with net interest margins. Bank regulations become insignificant in the absence of freedom on economic activity and protection through property rights. Bank regulations cannot be examined in isolation with competition and private property approach.

They assessed the impact of bank regulations, market structure and national institutions on bank net interest margins by entering into the policy dialogue while controlling bank-specific characteristics and the macroeconomic and financial environment. A high concentration of banks signals to be uncompetitive and inefficient market. Other way, more efficient banks have lower costs and garner market share. Competitive environments may produce concentrated and efficient banking systems.

Net interest margin of banks is interest income less interest expenses divided by interest bearing assets. The net interest margin measures the gap between the interest paid to the savers and earned from the borrowers focusing the traditional banking operations of lending and borrowing (as primary dependent variable).

Since the model includes country-specific variables, they use generalized least squares estimator with random effects with the following measures:

1. Net interest margin,
2. Bank concentration,
3. Data on bank-specific characteristics that may influence interest margins,
4. Regulatory policies,
5. Variables to control for cross-country differences in the macroeconomic environment and the level of stock market development, and

6. Indicators of institutional development, e.g., the degree to which broad, national institutions support private property rights and promote economic openness and competition in general

Menkhoff (2000) has mentioned that weak financial institutions played a decisive role to cause financial crisis. Liberalization process has produced inadequately addressed risk in the banking sector characterized to the systemic default than individual banks to lead to crisis. The risk adhered were underestimated due to structural weaknesses in the financial sector. Imprudent lending practice and inability to price and manage risk are major reason of the crisis.

He has characterized bad banking as:

1. Weak financial institutions,
2. Fragility of financial system,
3. Structural weaknesses in the financial sector to price and manage risks properly,
4. Imprudent lending associated with relationship and corrupt practice.
5. Bad banking created excessive credit growth, over-investment and asset price bubble.

Demirgüç-Kunt and Maksimovic (1998) have examined how external growth-financing of the firms are affected by the variegated legal and financial systems. They have found that in countries with an efficient legal system the firms use long-term external financing; active and large stock market and a large banking sector are also associated with externally financed firm growth. Established firms rely on more external financing where the institutions are well functioning at a lower profit rates. Conflicts of interest and informational asymmetries between the insiders and the investors may constrain the firms in their ability to fund investment projects. The magnitude of these imperfections depends in part on the effectiveness of the legal and financial systems in different countries. They have analyzed the underdevelopment of legal and a financial system does prevent firms in some countries from investing in potentially profitable growth opportunities, particularly, long-term debt or external equity to fund growth.

They have compared firms' financial structures in 32 developed and developing countries and found the greatest difference to be in the provision of the

long term credit by estimating a financial planning model to obtain a maximum growth rate that each firm in their country sample could attain without access to long-term financing. The predicted growth rates are compared with rates realized by firms in countries with the differing degrees of development in their legal and financial system. Specific characteristics of the legal and financial systems are associated with long term financing of firm growth. Their approach directly identified firms that could not internally fund their investment by estimating the excess growth made possible by external financing for each firm in their cross-country sample of 30 countries.

They explored the links between financial markets and institutions and firms' ability to obtain debt and equity financing by using stock market liquidity, legal system or government subsidies and firm specific data; they estimate the external financing need of each individual firm in their sample separating the long-term and short-term financing needs while focusing on direct effects of access to external financing on firms.

They found that firms whose financing needs exceed their internal resources may be severely constrained. A firm's external financing need depends on the magnitude of its internal cash flows to its investment opportunities. Both the firms' cash flow and its optimal investment level are endogenous, and their ratio may differ systematically across the countries even for firms employing the same technology, (capital intensive or labour intensive).

Wong (1997) has showed that the more risk-averse banks set higher optimal spreads. The study revealed that under decreasing absolute risk aversion, bank optimal interest spreads would increase with an increase in the marginal administrative cost of loans. First, a marginal increase in the administrative cost makes loans more costly to grant. This induces the bank to reduce the amount of loans by charging a higher loan rate, *ceteris paribus*. Second, it decreases the bank's profit in every possible state. This induces the bank to raise its loan rate, as it becomes more risk averse and thus, less willing to take on more risky loans. Wong shows that an increase in the bank's equity capital has a negative impact on the spread when the bank faces little or no interest rate risk; otherwise, the effect is ambiguous. This author argued that in the presence of decreasing absolute risk aversion, an increase in equity capital provides an incentive for a bank to extend more risky loans by lowering the loan rate. However, the enlarged capital base also allowed the bank to issue more variable rate deposits while still meeting the capital adequacy requirement. The

resulting increase in the variability of the bank's profits then induced the bank to extend less risky loans by raising the loan rate.

Using bank level data from 80 countries (developed and developing) during the period 1988-1995, **Demirguc-Kunt and Huizinga (1998)** have found that differences in interest margins reflect a variety of determinants: bank characteristics, macroeconomic conditions, taxation, deposit insurance regulation, market structure and legal and institutional factors. Banks in countries with a more competitive banking sector have smaller margins and are less profitable. Higher degrees of bank concentration and capital ratios are associated with higher interest margins. Banks that rely heavily on deposits are less profitable due to high operating expenses of branch networks. Domestic banks have lower margins and profits compared to foreign banks in developing countries, while the opposite holds true in industrially developed countries. The corporate tax burden is fully reflected in high margins, and variations in interest margins reflect variations in operating costs. Inflation is associated with higher realized interest margins and greater profitability. Efficiency in the legal system and lack of corruption are both associated with lower realized interest margins and lower profitability. An explicit deposit insurance scheme also lowers Net Interest Margins.

Christopoulos and Tsionas (2001) have provided a quantitative estimate of technical and allocative inefficiency measures in the deregulation era by using annual data from the balance sheet and income statements of the 19 banks of the Greek banking system over the period of 7 years (1993-1998). They have used labor, capital and deposits as the input variables and loans investment and liquid assets as the output variables for banks specific efficiency measuring over the deregulation period. They have generalized the heteroscedasticstochastic frontier models to measure both the technical and allocative efficiency in such models and found that both the components profitability and competitiveness can be improved drastically in the deregulation period.

Barajas, Steiner and Salazar (1999) have used a reduced form equation of a bank profit maximization model to examine why interest rate spreads in Colombia were not significantly reduced by the economic reform program which was started in the 1990s. Their results indicated that the Colombian system on the whole was not competitive throughout the 1970s and 1980s, charging for loans using an average mark-up of 29 percent over marginal costs. However, although the average spread did

not change between the pre-liberalisation (1974-88) and post-liberalisation (1991-96) periods, its composition did, with a significant reduction in market power and an increase in the responsiveness to loan quality. Non-performing loans were a significant factor in widening the spread, especially in the post-liberalisation period, which reflected a more prudent behavior towards credit risk and/or an improvement in reporting of nonperforming loans.

According to **Vittas, Dimitri (1995)**, insurance sector covers financial risk and mobilize long-term savings in an economy which is important in developing the private sector as well as modernizing the capital market. A framework of stable, efficiency-incentive regulation allowing innovation relatively free entry and exit the market requires the insurance sector to flourish. Controls over new entrants, rigid regulation and captive insurance reserve funding for public deficit as well as state domination of ownership of insurance firms hinder the development of insurance industry. Similarly restriction on foreign ownership and high local retention ratios are other obstacles.

In order to promote the insurance industry, structural problems like prudential regulation and standard needs to be in equally applied to all the insurance companies, whether state-owned or privately owned. He has suggested that capital deficient companies need be recapitalized and restructured, privatization of state-owned companies, insurance market open to the foreign-owners as well. He emphasized on strong supervision while equitable and forceful corrective measure in place. Development of insurance sector could help mobilize long-term savings and allocate for long term investment projects.

Beck, Demirguc-Kunt and Maksimovic (2003) have enlightened the importance of legal system and financial institutions for the financial decisions of firms like capital structure and dividend policies. The financial intermediaries and legal system provide some of the key functions of resources mobilization for investment, monitoring their performance, and resolving the conflicts of interest among different parties involved. In the empirical analysis of the relationship between firm size and the development of financial institutions and legal protection of investors, of 44 countries (both developed and developing) for a period 1988 – 1997, they found a positive relationship between banking system development and firm size and weaker relationship between firm size and stock market capitalization. Where there is concentrated banking system, there is incentive for monitoring and long term

relationship and firm size grow larger. In countries with efficient legal system, firm size is larger (for relying on external financing).

Demirguc-Kunt and Detragiache (2000) have tested whether the deposit insurance system has probability of banking crisis, by using multivariate logit econometric model. Zero-one dummy variable have been used for the presence of explicit deposit insurance, has significant coefficient. Their model uses a panel data from 61 countries over a period 1980 – 1987. They defined systemic crisis as a situation when a large segments of the banking sector cannot operate without special assistance of the monetary authority and becomes insolvent or illiquid. They have found that explicit deposit insurance is detrimental to bank stability particularly when interest rate is liberalized but institutional environment is weak. In other words, appropriate institutions and effective prudential regulations and supervision can offset the adverse affects of deposit insurance and stability in the banking system. It is very costly and almost impossible for depositors to monitor the quality of banks' assets individually and other stakeholders do not have incentive to supervise as well.

In an empirical analysis of 16 developing Asian-Pacific Countries for 1970 – 1988 period, **Fry (1997)** has examined saving, investment ratios and export and output growth rates by using real deposit rate and black market rate as proxies for financial distortions. He found:

1. Financial distortions (squared real interest rate and black market exchange rate premium) reduce investment ratios and export growth and in turn, output growth;
2. Both very high and very low real rates of interest reduce national savings (mainly through the effects of these interest rates on output growth);
3. Government policies toward undistorted financial and foreign exchange markets and conducive financial environment have important role in producing the virtuous circle of high saving, investment, export and output growth in an economy.

He has concluded that financial repression reduces economic growth and very high positive real interest rate could be damaging. Financial liberalization must be accompanied by macroeconomic stability as well as sound prudential regulation and supervision of the banking sector.

In a survey of 15 developing countries (which have adopted integrated supervision), **Martinez and Rose (2003)** have analyzed recent development of financial sector regulation and supervision. They examined the reasons for establishing an integrated supervisory agency, their scope and power, harmonization of regulatory and supervisory practices and practical problems faced by the policy makers. They found that the groups of integrated supervisory agencies differ with respect to scope of delegated regulatory and supervisory power. Harmonization of prudential regulation and supervision across financial intermediaries is limited across financial intermediaries.

Levine and Zervos (1996) have analyzed the data for 16 developing countries and found that Capital markets become more volatile after liberalization of capital control and dividends flows while they become more liquid, lager and integrate more with the international markets; information access becomes easier with the growth in size and liquidity of the stock markets. Substantially better functioning stock markets could not be found in countries, which have officially adopted of international accounting standard and laws regarding investors' protection than the countries do not have.

Gelos and Roldos (2002) have discussed the main forces shaping the bank consolidation and its pattern of consolidation and concentration in emerging markets. In order to assess changes in the competitive structure they employed Panzar and Rosse (1987) methodology based on the relationship between revenue and marginal costs, to cross-sectional data from the developing countries, following the consolidation process of the second half of the 1990s (1994 to 2000). They followed panel data approach for assessing changes in market structure over time in order to provide estimates that are more reliable. They found that the number of banks has fallen in emerging markets, which does not show an increase in concentration. It is because state-owned banks have been loosing their share to more dynamic medium size banks in Europe while bank restructuring in Asia led to a reduction in the number of banks while the degree of concentration remained stable relatively. Bank concentration in Latin America is high because the reduction of bank number due to the crises occurrence earlier. They have suggested that lowering the entry barrier and allowing foreign participation in the banking industry has offset adverse effects on competition intensity to some extent.

Galindo et al (2002) has examined whether financial liberalization reduces the cost of external finance to firms and promotes growth by using data from 28 countries during 1973 to 1998. They found that financial development by allowing cheaper funds stimulated growth of economic sectors depending upon external finance. Financial liberalization is an instrument which under certain conditions (structural reform to support financial markets behave properly and creditors right protection) promotes financial sector development and stimulates growth. If legal set up regarding creditors' protection and prudential regulation in place financial liberalization can help promote growth notably. Capital account liberalization does not boost economic growth.

Kamansky and Schmulker (2002) have examined the dynamic effects of both the domestic and external liberalization on financial markets. They constructed a comprehensive chronology of financial liberalization in 28 countries encompassing the evolution of restrictions on domestic financial institutions, capital account and foreign access to the domestic capital market. They found that financial liberalization may trigger financial excesses in short run; it also triggers better functioning financial markets by supporting institutions.

Cooray (2003) has reviewed the regulatory reforms in the financial sector of Sri Lanka and evaluated the effects of policy reforms. He measured the width of the financial sector by the presence of number of financial instruments and markets, depth by the volume of deposits, and resilience by the ability to bounce back from a price change. The process of reforms though is incomplete; he showd a significant development in the financial sector.

After the initiation of financial reform in 1977, Sri Lankan financial system has developed wide and deep. Public sector dominated financial system prior to reform was of oligopolistic structure and lacked competition and innovation. Financial liberalization brought in an introduction of new financial institutions in the private sector and more financial instruments and markets came into operation. Interest deregulation, relaxation on credit and foreign exchange control, and lifting the directed credit widened the financial system with a large number of financial institutions. He examined two phases of the Sri Lankan financial reform (pre- and post- 1989 periods). The first phase focused on the exchange rate and banking reform while the second phase was more rigorous in the stabilization and further relaxation of remaining restrictions. He finds, as per expectation, financial reform has not only

increased the width and depth of the financial system, but also increased competition, and mitigated constraints on resource allocation. Operational and allocative efficiency in the credit market has increased and the financial sector has become resilient. Fiscal discipline is promoted and ratios of investment, national savings, as well as domestic savings have been increased after adopting the measures of reforms in the financial sector. Despite the potential risks of the financial deregulation, Sri Lankan economy has gained an overall effectiveness of macro-economic policies.

All the endogenous growth models of financial development ignore the dynamic process of financial liberalization and do not attempt to combine short-run stabilization with long run growth.

Stulz (1999), (2000) has examined the effects of a country's financial structure on economic growth through the impacts on different financial activities of raising and managing funds for investment at a point of time. Efficiency to encouraging entrepreneurship differs with different financial structures. He concluded that financial intermediaries are to the economic growth for the financial structure allows specialized capital development. He comprehensively examined the effects of a country's financial structure on economic growth with entrepreneurs' perspectives. He found no direct relationship between a country's financial structure and economic development. Policies could affect the financial infrastructure directly, but they affect financial development indirectly.

He has concluded that financial intermediaries are crucial to economic growth for financial structure allows specialized capital development.

According to **Fry (1997)** financial systems in developing countries are dominated by commercial banks, contractual saving institutions like insurance companies and provident funds and development financial institutions. In an empirical analysis of 16 developing Asian-Pacific Countries for 1970 – 1988 periods, Fry (1997) has examined the saving, investment ratios and export and output growth rates by using real deposit rate and black market rate as proxies for financial distortions. He found that; financial distortions (squared real interest rate and black market exchange rate premium) reduce investment ratios and export growth and in turn, output growth; both very high and very low real rates of interest reduce national savings (mainly through the effects of these interest rates on output growth); government policies toward undistorted financial and foreign exchange markets and

conducive financial environment have important role in producing the virtuous circle of high saving, investment, export and output growth in an economy. He came to conclusion that financial repression reduces economic growth and very high positive real interest rate could be damaging. Financial liberalization must be accompanied by macroeconomic stability as well as sound prudential regulation and supervision of the banking sector.

Drake (1977) has suggested introducing and promoting securities markets in the LDCs in order to develop an efficient financial system, mobilize domestic resources as complementary to the savings in the tangible form. Securities market development could benefit financial development by eliminating economic and financial dualism. He has stated that securities market is beneficial to increase savings ratio, encourage international capital inflows, and, allocation of investible resources efficiently. Securities markets reduce the cost of funds due to less cost involved in its operation.

2.7 FINANCIAL DEVELOPMENT AND ECONOMIC GROWTH

Causal Relationship between Finance and Growth

Gupta (1984), Jung (1986) and **St. Hill** (1992) have used Granger causality test to find empirical evidence for the direction of causal relationship between financial development and economic growth. We have tabulated the results in the previous section (Empirical Evaluation of Financial Liberalization Approach). Causal relationship between the two is varied across countries.

Greenwood and Jovanovic (1990) and **Bencivenga and Smith** (1992) have given a new impetus to the relationship between financial development and growth as these models postulate that savings behavior directly influences not only equilibrium income levels but also growth rates. Thus, financial markets can have a strong impact on real economic activity. On the other hand, **Murinde and Eng** (1994) and **Luintel and Khan** (1999) have used endogenous growth models to show a two-way relationship between financial development and economic growth. However, despite the emergence of new growth theories, the debate on the direction of causality between financial development and economic growth remains apparent yet.

Greenwood and Jovanovic (1990) have addressed the context of financial structure and economic development to show causal relationship between financial

development and economic growth in Pareto-optimal competitive model. Economic growth provides the development of financial structure and, in turn, allows for higher growth through efficiency in investment. Assuming that many entrepreneurs solicit capital and that capital is scarce, financial intermediaries produce better information on firms, thereby fund firms to more promising and induce a more efficient allocation of capital.

Their work is particularly novel because it formally models the dynamic interactions between finance and growth. Financial intermediaries produce better information, improve resource allocation, and foster growth. There is a cost for the excess on financial intermediaries, however. Growth means that more individuals can afford to join financial intermediaries, which improves the ability of financial intermediaries to produce better information with positive ramifications on growth. There is causal relationship between financial development and economic growth. Economic growth provides the development of financial structure and, in turn, allows for higher growth through efficiency in investment.

In the early stages of development, financial intermediation is less organized and growth is slow. With the rise in income level, financial structure becomes more extensive, economic growth gains a rapid momentum (income inequality between the rich and the poor also widens). In maturity, financial structure gets well developed, and a stable income distribution among people takes place and higher growth is achieved than its infancy.

In a 'general steady state equilibrium' model of three period-lived overlapping generations, **Bencivenga and Smith (1992)** have found that high reserve requirement is associated with coexistence of informal financial sector. They have analyzed the impact of interest rate ceilings, reserve requirement, inflation rate as well as capital investment and output level in a closed economy model. Domestic financial liberalization would simply shift funds from the informal to formal financial sectors. Due to greater risk sharing ability of financial intermediaries, liberalizations is always welfare enhancing, whereas financial repression is never optimal due to the existence of informal financial markets. However, in a deficit economy financial repression may be desirable on welfare grounds to some extent. Changes in the degree of financial repression cannot affect the overall saving behavior of the economy. Thus, their work is noteworthy for bringing the struturalists together with the liberalization view. Further, they have shown that financial intermediaries improve corporate

governance by economizing on monitoring costs, which reduced credit rationing and thereby boost productivity, capital accumulation, and growth.

Gibson and Tsakalotos (1994) have argued that market failures discourage the liberalization process. The designing of appropriate financial institutions and serious exhuming of the existing ones should be done before or at least at the beginning of financial reform as a part of reform strategy so that problems of information asymmetry and market failure can be solved in a timely manner. They have suggested for an alternative strategy for effective liberalization with the development of appropriate financial institutions better able to serve the real sector of the economy. It is because the real sector can meet its needs of external finance only through the liberalization of the financial sector. Reforms of existing financial markets are necessary to increase their efficiency and to develop new markets so that the financial system can offer service to the economy better. Not all forms of government interventions should be characterized as financial repression, they cautiously argue. For liberalization to be successful, the governments need to formulate strategies and develop existing or new institutions to co-ordinate the reform process.

They have examined the empirical evidences and experiences of financial liberalization in Chile, Korea, and other countries, and suggest further the sequences of economic reforms. Liberalization of domestic financial system should follow the real sector reforms for setting up market price system, removal of both implicit and explicit taxes as well as subsidies on firms, lifting up the entry barriers for the private sector. Trade barriers should be removed at the third stage along with current account convertibility. Capital account should be liberalized only after institutional set up in place. The designing of appropriate institutions should precede or at least begin before financial reform as a part of strategy so that problems of information asymmetry and market failure can be solved in a timely manner. They have emphasized institutional set up for regulating the markets prudently in order to ensure financial stability while proceeding for further reforms. They concluded that government intervention also leads to the failure of public administration and rent seeking behaviour and suggested for reform of public administration but not returning to the activity of the market.

King and Levine (1993a, 1993b, 1993c) have found that besides identifying the best production technologies, financial intermediaries may also boost the rate of

technological innovation by identifying those entrepreneurs with the best chances of successfully initiating new goods and production processes.

King and Levine (1993a) have examined the capital accumulation and productivity growth channels of 77 countries over the period 1960-1989, by systematically controlling for other factors affecting long-run growth, they construct additional measures of the level of financial development, and analyze whether the level of financial development predicts long-run economic growth, capital accumulation, and productivity growth. They found very consistent results across the different financial development indicators. They however, simply found the potentially large long-term growth effects from changes in financial development.

They have used following indicators as proxy for financial development

1. Financial depth (DEPTH) is a simple measure of the size of financial intermediaries. It equals liquid liabilities of the financial system (currency plus demand and interest-bearing liabilities of banks and non-bank financial intermediaries) divided by GDP.

2. The relative degree to which the central bank and commercial banks allocate credit (BANK) is the second measure of financial development. It is the ratio of domestic assets of commercial banks divided by the sum of domestic assets of commercial banks and central bank. The intuition underlying this measure is that banks are more likely to provide the five financial functions than central banks. However, there were two notable weaknesses with that measure.

3. Credit issued to the private sector as share of total loans and advances of commercial banks (PRIVATE), is the third measure of financial development. However, banks are not the only financial intermediaries providing valuable financial functions and banks may simply lend to the government or public enterprises.

4. Credit to private sector as share of GDP (PRIVY) as the fourth measure of financial development. The assumption underlying this measure is that financial systems that allocate more credit to private firms are more engaged in researching firms, exerting corporate control, providing risk management services, mobilizing savings, and facilitating transactions than financial systems that simply funnel credit to the government or state owned enterprises. While BANK and PRIVY seek to improve upon DEPTH by capturing, who is allocating and to whom society's savings is flowing.

Further they assessed the strength of the empirical relationship between each of these indicators of the level of financial development with three growth indicators, both averaged over the 1960-1989 period, as pointed below:

1. The average rate of real per capita GDP growth,
2. The average rate of growth in the capital stock per person, and
3. Total productivity growth, which is a "Solow residual" defined as real per capita GDP growth minus (0.3) times the growth rate of the capital stock per person.

They have estimated the relationship between economic growth and financial development by following regression model:

$$G(j) = \alpha + \beta F(i) + \gamma X + \varepsilon$$

where, F(i) represents the value of the *i*th indicator of financial development averaged over the period 1960-1989, G(*j*) represents the value of the *j*th growth indicator (per capita GDP growth, per capita capital stock growth, or productivity growth) averaged over the period 1960-1989, and *X* represents a matrix of conditioning information to control for other factors associated with economic growth (e.g., income per capita, education, political stability, indicators of exchange rate, trade, fiscal, and monetary policy).

They found that there is a strong positive relationship between each of the financial development indicators, F(*i*), and the three growth indicators G(*i*), long-run real per capita growth rates, capital accumulation and productivity growth. The sizes of the coefficients are economically large.

Levine and Zervos (1996) analyze the data for 16 developing countries and find that Capital markets become more volatile after capital account liberalization while they become more liquid, lager and integrate more with the international markets; information access becomes easier with the growth in size and liquidity of the stock markets. Substantially better functioning stock markets cannot be found in countries that have officially adopted of international accounting standard and laws regarding investors' protection than the countries do not have. **Levine and Zervos** (1996, 8) empirically evaluate the relationship between stock market development and long-term growth. The data suggest that stock market development is positively associated with economic growth. Moreover, instrumental variables procedures

indicate a strong connection between the predetermined component of stock market development and economic growth in the long run. While cross-country regressions imply a strong link between stock market development and economic growth, the results should he viewed as suggestive partial correlation that stimulate additional research rather than conclusive findings.

Levine (1997) has assessed theoretical and empirical evidences on finance-growth nexus that the financial system that active role in the economic growth. Development of financial institutions and markets are crucial for the long run growth process. The development in the non-financial (i.e. real) sector, information and technological changes, innovations of computer, financial and monetary and other economic policy, legal and political system and institutions etc have a direct influence in the development of the financial system.

Empirical studies show that

1. Both financial intermediaries and stock markets become larger relative to the GDP.
2. Banks assets grow relative to that of the central bank
3. Non-banks grow importantly as a country become richer over time.

Due to different factors of production, financial structure develops overtime. Both the market-based and bank-based systems contribute to economic growth and dichotomy between them is not appropriate. Important overlapping and interactions between the services reflects simultaneous emergence of stock markets and banks in a well doing financial system.

Further, **Levine (2004**:3) has suggested that the countries with better functioning financial system (whether bank-based or market-based), grow faster and it eases constrains on external finance.

He has stressed on co-evolution of finance and growth. Technological innovation may foster growth in the presence of a well functioning financial system. It also affects the operation of financial systems by transforming the acquisition, processing, and dissemination of information. Importantly, the financial system may provide different services at different stages of economic development, so that the financial system promotes growth.

Barnard and Thomsen (2002) discuss the importance of the financial sector reforms relative to other reforms. While discussing the prevailing situation of less monetization and credit constraints to the small and medium enterprises in Russia and recent changes, they discuss the priority for the financial sector reforms as well as the potential problems in implementing the financial sector reform programs. They argue that failure to accelerate to financial sector reforms can pose potentially serious threat to macroeconomic stability. It is because of the fact that the basis for economic growth is fragile and vulnerable to a crop in oil price. Reform is thus, important to place a stronger base for economic growth in Russia. A weak an underdeveloped financial sector is further to remain underdeveloped due to lack trust among the ordinary people, depositors, borrowers, foreign counterparts as well as among banks with each other.

They suggested promoting privately owned banks, restructuring and privatizing state-owned banks by means of deposit insurance, implementing international accounting standards and disclosure norms while strengthening regulation and supervision. Strengthening creditor rights, combating money laundering, improvement of bank capital, bankruptcy procedures as well as establishment of credit information bureau are important in achieving financial stability.

Lehmussaari (1990) has examined household saving and consumption behavior in the Nordic countries by using standard life-cycle model. Their findings indicate that household consumption and saving have changed after the introduction of financial deregulation. For Finland and Denmark, and to a lesser extent, Norway, it appears that earlier structural relationships break down after the deregulation.

Wealth effects seemed to have played an important role in determining consumption. After deregulation, the consumers' response to changes in real wealth is apparently increasing. Prior to deregulation low after tax interest rates were mitigated by credit rationing--after deregulation, a surge in household demand for credit was not fully countered by an increase in nominal interest rates.

The direct effects of financial liberalization are detrimental to private saving rates. The real interest rate has a negative impact on the private saving rate (**Loayza, Schmidt-Hebbel, and Serven's 2000**). Its income effect probably outweighs the sum of its substitution and human wealth effects. A 1% increase in the real interest rate

reduces the private saving rate by 0.25% in the short run. (There is a strong negative correlation between inflation and the real interest rate. The authors suggested then that their measure of the real interest rate may reflect more the action of nominal interest rate controls rather than the intertemporal rate of substitution of consumers).

The indicator of financial depth (M2/GNP) had a small and statistically insignificant impact on the private saving rate. The flow of private domestic credit relative to income had a negative and significant coefficient; relaxing credit constraints reduces the private saving rate. When the flow of private credit rises by 1%, the private saving rate, on impact, declines by 0.32%. The authors suggested that though they do not find direct positive effects of financial liberalization on the saving rate, if financial reforms have a positive impact on growth; it has a potentially important indirect positive effect on the saving rate.

Honohan and Atiyas (1993) have used data on intersectoral financial flows in developing countries to examine the elasticity of financial flows to and from different sectors and examined whether the business or the household sector are more responsive to shifts in the availability of funds in the economy.

Using a simple model of intersectoral financial interactions, and with data mainly from the early 80's they have found empirical support for a "business spending crowding-out" scenario. A change in the flow of funds from the foreign and government sectors causes, at most, a small response in the flow from the household sector by comparison to the response of the business sector. Exogenous swings in the availability of foreign finance or in the government's surplus are absorbed, almost entirely, by changes in the rate of investment by the business sector. The household sector does not come forward, to any large extent, with additional financial saving to compensate for the shortfall in foreign financing or government borrowing. To research and identify profitable ventures, monitor and control managers, ease risk management and facilitate resource mobilization, **Levine, Loyaza and Beck (2000)** have constructed an indicator of financial intermediaries (in order to capture both the depth and breadth of financial intermediation in the society).

There is no direct measure of the financial services, especially not of the access to and breadth of financial services. Therefore traditional measure of financial intermediary development (which is used extensively in the finance growth literature) measure has been used.

PRIVATE CREDIT is the value of credit by financial intermediaries to the private sector divided by GDP. This measure excludes credits issued by the central bank and development banks. Furthermore, it excludes credit to the public sector and cross claims of one group o intermediaries to another. PRIVATE CREDIT is thus a comparatively comprehensive measure of credit issuing intermediaries since it includes the credit of financial intermediaries that are not considered deposit money banks. They showed a robust causal link from private credit to GDP per capita and productivity per capita growth.

Impact of financial development on growth is evaluated first by using the regression

$$(y_{i,p,t} - yp_{i,p,t-n})/n = \alpha y_{i,p,t-n} + \beta FD_i + \gamma X_i + \varepsilon_I$$

where $y_{i,p,t}$ is the log of real GDP per capita of the poorest income quintile in country i in year t, FD is private credit and X is a set of conditioning information.

They control for educational attainment, macroeconomic policies and indicators of trade openness to investigate, whether finance is pro-poor.

1. Control for the average years of schooling (as an indicator of human capital stock in the economy);
2. Inflation rate and the ratio of government expenditure to GDP as indicators of macro-economic stability; and
3. Sum of exports and imports as share of GDP (in order to capture the degree of openness in he economy).

Beck, Levine and Loyaza (2000) have assessed the empirical relationship between the level of financial intermediary development and (i) economic growth, (ii) total factor productivity growth, (iii) physical capital accumulation, and (iv) private savings rate by using pure cross-country instrumental variable estimator to extract the exogenous component of financial intermediary development, and a new panel technique to control for biases associated with simultaneity and unobserved country-specific effects. They found (after controlling for potential biases) that; financial intermediaries exert a large positive impact on total factor productivity growth (which feeds through to overall GDP growth, and the long run links between financial intermediary development and both physical capital growth and private savings rates are weak.

Rajan and Zigales (1998) have discussed how the financial development affect the growth on the basis of 36 industries across 42 countries where U.S. is dropped from the analyses since it is used to identify external dependence.. More developed financial system can minimize the effects of moral hazard and adverse selection problems as well as overcome market frictions, and hence, reduce the costs of funds. A reduced cost on funds encourages enterprises more investment on their productive economic activities allowing faster growth. It allowed isolating the effect of financial liberalization on growth from the other reforms.

The basis of their test is the presumption that the development of financial systems (both markets and institutions) reduces the cost of external finance by reducing the problems associated with moral hazard and adverse selection. Thus, firms relying more on external finance will be more affected than those relying on their sources of internal finance. By using firm level data in the USA, Rajan and Zigales find the need for external finance to the firm. They assume that technological demands for external capital would apply in other countries once market distortions are removed.

Using identification technique, they have estimated several measures of financial development and interact with industry specific characteristics and industry demands for external funds proxy in a cross-country-industry growth regression with country. Omitted variables a problem is significantly reduced by controlling those specific factors. A country with a higher level of financial development has a high average level of real rate of growth. They assume that

1. Financial markets in the U.S. are relatively frictionless,
2. Technological factors influence the industries more to use external finance in a frictionless financial system, and
3. Technological factors to influence external finance are reasonably constant across countries

Thus, they study the mechanism of external finance rather than simply assessing the links between finance and growth and exploit differences concerning industries. They develop a new methodology to examine the finance growth relationship:

$$Groth_{i,k} = \sum_j \alpha_j Country_j + \sum \beta_i Industry_i + \gamma Share_{i,k} + \delta(External_k * FD_i + \varepsilon_{i,k}$$

$Growth_{i,k}$ is the average annual growth rate of value added or the growth in the number of establishments, in industry k and country i, over the period 1980-90. *Country* and *Industry* are country and industry dummies, respectively. $Share_{i,k}$ is the share of industry in manufacturing in country i in 1980. $External_k$ is the fraction of capital expenditures not financed with internal funds for U.S. firms in the industry k between 1980-90. FD_i is an indicator of financial development for country i. In order to measure financial development, they have examined:

1. Total capitalization (sum of stock market capitalization and domestic credit as a share of GDP)
2. Accounting standards (as a rating of the quality of annual reports issued by companies within a country highest value being 90). Accounting standard measure is a positive signal of the ease with which firms can raise external funds. But accounting standards is not a direct measure of the actual amount of external funds raised.

An increase in financial development disproportionately boosts the growth of industries that are naturally heavy users of external finance. Since the financial system influences the use society's savings, political forces cannot be neglected because of their role in formulation of financial sector policies as well as the operation of the financial system around the globe.

La Porta et al (2002) have generated an alternative indicator of financial development by using the degree of public ownership of banks to find that publicly owned banks are less effective at facilitating transactions, mobilizing savings, acquiring information about firms, managing risk, exerting corporate governance and credit allocation. They have provided direct evidence on connection between economic growth and the services provided by the financial intermediaries. They have shown that higher degree of public ownership is associated with lower levels of financial development and slower economic growth.

They further addressed many of the weaknesses in earlier work, cross-country growth that regressions do not eliminate them. They do not deal formally with the issue of causality but they improve upon past measures of financial development, that they have used to focus only on one segment of the financial system, banks, and their indicators do not directly measure the degree to which financial systems ameliorate information and transaction costs.

Highly concentrated ownership can distort corporate decisions and national policies in ways that curtail innovation, encourage rent-seeking, and stymie economic growth. The growth-maximizing mixture of markets and intermediaries may depend on legal, regulatory, political, and other factors that have not been adequately incorporated into current theoretical or empirical research.

Levine et al (2000) have examined influences of financial development on economic growth and the impact of legal and accounting systems like creditors rights, contract enforcement in the level of financial development by using pooled cross-country and time series data of 74 countries for the period 1960 to 1995. Applying General Method of Moments (GMM) dynamic panel estimators, based on the use of lagged observation of explanatory variables and cross-sectional instrumental variable estimator's techniques, they found financial development positively associated with economic growth. Their analysis on legal rights of creditors, efficiency of contract enforcement, standard accounting system, prudential regulation and enforcement mechanism determine the level of financial development which could ensure lenders' confidence and widen access to formal finance and ultimately help promote economic growth.

Angadi (2003) has examined for a possible link between financial structure and economic activities and defined financial infrastructure as the complex of financial system, accounting standards and payment and settlement system. The financial system itself consists of financial institutions, markets, and instruments. He has discussed a direct and symbiotic relationship between sound and efficient financial infrastructure and economic development. He stated that financial systems tend to become more market oriented as a country becomes richer.

Beck, Dimirguc-Kunt and Levine (2004) have assessed direct relationship between financial intermediary development and changes in income distribution by using averaged data from 52 countries, both developing and developed, over the period 1960 – 1999. The relationship is important to know the linkage between financial development and poverty alleviation. It is because poverty reduction is measured in terms of growth of mean income and changes in income distribution in any country. Deeper and more competitive financial markets enable access of large part of population and not only the rich and incumbents. It facilitates new enterprises and reduces their dependence on self-finance.

They have found financial development to be pro-poor. Countries with better-developed financial system, the income of the lowest income group grows faster than average GDP per capita and inequality in income falls more rapidly. Since finance has a positive impact on long-run economic growth, and income distribution is also affected favorably to establish the fact that financial development is pro-poor. However, they cannot suggest how the financial development fosters and broaden the access to financial services.

Demrgic-Kunt and Levine (2001) have studied the relationship between financial structure and economic development of 150 countries. Their study provided an international comparison of economic development and the development of bank and non-bank financial institutions as well as stock market. They have compared economic development of countries with bank-based and market-based financial system, and their legal, regulatory, tax and macro-economic determinants of financial structure. They have found:

1. Banks, non-banks and stock markets are larger, more active and efficient in richer countries. Financial systems are more developed in richer countries than in developing countries on average.
2. Stock markets are found more active and efficient relative to banks in richer countries.
3. Financial systems tend to become more market oriented as a country becomes richer.

Stulz (1999) has examined the effects of a country's financial structure on economic growth through the impacts on different financial activities of raising and managing funds for investment at a point of time. Efficiency of encouraging entrepreneurship differs with different financial structures. He has concluded that financial intermediaries are prerequisite for economic growth.

Calderon and Liu (2003) have examined pooled data of 109 countries to examine the direction of causality between financial development and economic growth by employing Gewke Decomposition test. They found the five distinct results as:

1. Financial Development generally leads economic growth.
2. Bi-directional causality between financial development and economic growth.

3. In developing countries, financial deepening causes more to growth than industrial countries (supply leading supportive)
4. Financial development has larger effect on economic growth in long run.
5. Financial deepening contributes economic growth through more rapid capital accumulation and productivity growth.

Christopoulos and Tsionas (2004) have examined the long run relationship between financial depth and economic development for 10 developing countries over the period 1970 to 2000 by using panel unit root test and dynamic panel cointegration analysis, threshold cointegration test and dynamic panel data estimation with fully modified OLS to find that there is a single equilibrium relation between financial depth, growth and ancillary variables. There is only cointegrating relation implying unidirectional causality from financial depth to growth.

Blundell-Wingel et al (1995) have examined whether excess sensitivity of consumption of current income has fallen over time as a result of financial liberalization in eight OECD countries (Australia, Canada, France, Germany, Italy, Japan, UK and the USA) by using two models (standard Euler equation and error correction model). To allow for the effect for financial liberalization, both models were estimated for different sub-samples (1960s to 1970s and 1980s to 1990s). In the majority of cases (except for Australia and Germany) they found liquidity constraints have declined over time in line with the process of financial deregulation.

Jappeli and Pagano (1994) have compared the incidence of liquidity constraints between underdeveloped countries with imperfect financial market and highly competitive markets of Greece, Italy, Japan, Spain, Sweden, UK and the USA. They have found that higher level of financial development significantly associated with lower liquidity constraints (Greece 0.54, Italy 0.58, Spain 0.52 were relatively higher to Japan 0.34, UK 0.4 and USA 0.21 except Sweden where liquidity constraints was not significantly different from zero). Relative degree of liberalization is associated with lower level of liquidity constraints. They have concluded, further, that the inability to borrow from the capital markets would result in high excess sensitivity of consumption of current income.

Further, they have investigated the role of capital market imperfections on aggregate saving and growth by using a panel of OECD countries for the 1960 to 1987 period, with the use of a simple overlapping-generations model. They have used

simple over-lapping-generations model showing liquidity constraints on households (but not firms) and investigate the role of capital market imperfections on aggregate savings and growth. Percentage of home-owners in certain age-group, the interest rate wedge on consumer and mortgage loans and the rate of delinquencies are used as the proxy measures of the prevalence of credit constraints.

They have shown that liquidity constraints on households (but not on firms) can raise the saving rate; strengthen the effect of growth on saving; increase the growth rate if productivity growth is endogenous; and increase welfare. They have, further, suggested that financial deregulation in the 1980's has contributed to the decline in national saving and growth.

2.8 NEPALESE PERSPECTIVE

Adhikary (1989) has pointed out three reasons motivating financial deregulations in Nepal. First, financial resources were unevenly distributed among different financial institutions. Some of the financial institutions were abundant of financial resources while the others were facing scarcity. It was due to interest rate rigidity that different financial institutions could not attract resources reflecting their scarce prices. Second, there was a wide interest spread between lending and deposit rates of interest, preventing the development of competitive financial market. And, the third, the introduction of joint venture banks (i.e., foreign investment with domestic participation) obliged the Nepal Rastra Bank to offer competitive financial environment for the activities of commercial banking in Nepal.

Kafle (1990) has analyzed the process of monetary and financial sector reform in Nepal by dividing the two broad periods: (i) before and (ii) after the implementation of the Structural Adjustment Programme in 1987.

Reforms before the implementation of the SAP were categorized as:

1. Interest rate reform,
2. Exchange rate reform,
3. Entry of the joint venture banks, and
4. Branches of Agricultural Development Bank allowed for commercial banking activities.

The main objectives of the monetary and financial sector reform under the structural adjustment programme were:

1. To increase the mobilization of domestic resources,
2. To improve the utilization of foreign aid, and
3. To promote a more efficient allocation of resources.

A comprehensive set monetary and financial sector reforms under the SAP in co-ordination with other macro-economic policies were aimed to contribute on the acceleration of the pace of economic development. Monetary and financial sector reform measures have been implemented to maintain external as well as internal stability of the economy and to correct structural constraints for improving allocative efficiency of the economy.

Basyal (2002) has analyzed the prospects and challenges of capital account convertibility in the context small-open economy of Nepal. Capital account convertibility (CAC) is associated to free movement of domestic or foreign financial assets, market-determined exchange rates, introduction of new financial instruments and techniques as well as new sources of funds and more participants in domestic financial market. Openness is a prerequisite for CAC so that international banks and financial institutions can enter the domestic markets and compete therein. Competition would lead to efficiency gains. Residents can hold an internationally diversified portfolio reducing the vulnerability in the income streams and wealth to domestic real and financial shocks.

Thornton and Poudyal (1990), have estimated the demand for money and saving functions by using two stage least square estimates in the case of Nepal. They found both the functions to be positive and statistically significant. Their analysis found that inflation and income variables have statistically significant with expected sign whereas saving mobilization appeared to take place independent to the movements in income variables; either due to fluctuations and absence of real trend in per capita income and its growth. The result is consistent and complimentary to tangible assets in developing countries.

Demitriades and Luintel (1996) have examined the effects of banking sector policies on the process of financial development and economic growth of Nepal over the period of 1960-1992 by using unrestricted error correction model (UECM). The dynamics between financial development and economic growth are examined by

exogeneity tests. They have also constructed the index of financial repression by using principal component method to quantify the influences of banking sector policies on financial development, independently of the interest rate. They could not find support for real interest rate as determinant of financial development. They have jointly determined financial development and economic growth. In other words, policies determining financial depth also influence economic growth and vice-versa.

Khanal (2003) has criticized economic reforms in Nepal for an abrupt initiation. Critics are for accepting conditions of donor agencies, even if they were impossible to implement. Externally dictated reforms could not generate national consensus among working political parties as well. Reforms are criticized for no assessments of the existing domestic conditions, absence of participatory process to enlist cooperation of the stakeholders. As a result of reforms, there was a massive devaluation of domestic currency, tariff rates at the lowest in South Asia, eased portfolio investment and foreign direct investment. Further, it lacked prioritization and sequencing of policies. It could not address structural and institutional weaknesses and ignored reforms in agricultural sector. Further reforms are criticized for unbalanced liberalization where reform in some areas was far ahead without achieving concrete positive outcomes. Lack of effective policy monitoring, inadequate accounting standards and auditing practices, obsolete book keeping and inaccurate reporting of statements and above all weak supervisory mechanism, corruption and rent seeking behaviour reduced the benefits of reforms by itself. A visionary, dynamic, sincere and committed government is the key for the success of reforms.

2.9 CONCLUSION

The study of finance was almost neglected prior to the pioneer works of Gurley and Shaw. Cameron, Patrick, and others shed light on the importance of the financial intermediation. Goldsmith initiated a detailed cross-country study and established the fact that financial intermediaries play crucial role in the process of economic development. An increase in financial intermediation, the ratio of a country's financial assets to its national income, accompanies growth necessarily. Governments in developing countries tended to adopt policy to increase financial savings by increasing the interest rates on deposit during the 1960s and 1970s. Therefore, McKinnon and Shaw advocated for higher real rate of interest to expand financial savings.

Preliminary works on the financial literature stresses on advances in methodology while recent works prefer to explain the existence and structure of intermediaries and describe how these institutions interact with activity in real sector of the economy. Financial institutions have important role in overcoming market imperfections while transferring funds from the savers to the borrowers (**Gertler**, 1988). Various studies have found that financial liberalization improves the allocation of capital by enhancing competition, reducing transaction costs, and reinforcing the distribution of information and skills (**Harms et al.** 2003: 86). A greater propensity to liberalization and financial sector reforms is correlated with greater macroeconomic stability, conducive legal environment, prudential regulation and effective supervision followed by corporate governance and standard accounting and auditing practices. However, macroeconomic instability and regulatory inadequacy may reluctant the government to liberalize. It can create uncertainty about openness of the economy.