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Financial Development and Economic Growth

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ABSTRACT

Financial deepening process which is expected to stimulate the incentives towards economic growth is a growing discussion area. Theoretical findings starting from 1970s underline the strong link between financial deepening and real sector growth. Main problem of the link concentrates on the definition of deepening. Major aim of this paper is to define the possible links between financial development and economic growth. A functional approach will be followed by an empirical investigation approach. Effects of a well functioning financial market on the real side of the economy is tried to be observed by viewing a number of mechanisms. Next second concern is to examine the post 1980 liberalization process for Turkey and investigate whether the financial development, through liberalization, process works on behalf of economic growth or not. Findings will guide us for further possible works on the financial liberalization and economic growth link; especially for the case of Turkey.

JEL Code: G18, O16, O50

Keywords: Financial deepening, financial liberalization, economic growth

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1. Introduction

After the introduction of the findings of neo classical theory, different dimensions of economic growth understanding earns a momentum. Starting from Solow and Swan (1956) observers try to capture the rationality behind the economic growth. Meanwhile numerous studies try to capture the bi directional effect of economic growth with the others. Literature is mainly dominated by the endogenous growth theories as to explain the issue. Actually there exists numerous links between economic growth and other variables; this study aims to concentrate on the link between economic growth and financial development. We will try to search for the possible links between financial development and economic growth. The liberalization wind of 1970-80s and their effect on the financial markets of economies have to be carefully analyzed as to realize the direct effect of the process on those economies' growth prospects.

It is widely mentioned by neo liberal economists that the theory of financial development earns importance after the contributions of McKinnon and Shaw (1973) in 1970s. However, Bagehot (1873) and Hicks (1969) already mentioned the role of financial system in the development process of England during the industry revolution. Mainly Hicks (1969) underlined that, such a capital accumulation and production boom can not be sustained in the absence of the so called financial system in England. Also Schumpeter (1912) underlines the role of banks, as a major financial intermediary, in the technological innovation. From a different perspective, Bodie and Merton (2000) by observing the main roles of financial system and the major agents in the story claimed the usefulness and effectiveness of them, via underlining the numerous problems of the markets and also its agents. Meanwhile there are also doubts and rejections about the role of financial development in the economic growth process. Mainly Lucas (1988) was one of them, claming that; role of finance is over stressed by the economists. Nicholas Stern (1989) while observing the development economies neglects the financial development effect in the analysis.

In addition to the previously mentioned discussion, when we try to realize the link between economic growth and financial development, a new discussion emerges related with the causality issue. While we are claiming that a sound well functioning financial system will help economic growth through numerous mechanism, on the contrary some argue that it is the growing and developing economy that gives courage and speed to financial development. Robinson (1952) claims that financial development is the one that follows economic growth. However, the country specific observations when combined with the results, we can, mainly for the developing world, underline that; it is usually the case in which financial development is observed to affect the economic growth patterns. Whether the pattern realizes a positive relation or not is also another concern of our discussion.

Our discussion through out the paper will concentrate on the financial development and economic growth phenomenon by building a functional approach first, and then a mechanism based approach next. In section II we will combine the findings of Levine (1997) with Miller (1998), and try to show the basic mechanism by looking at a functional explanation. Major functions of financial markets thus financial intermediation will be stressed. Then in section III we aim to develop the major mechanism by concentrating on debt markets and capital markets separately.

Starting from McKinnon and Shaw (1973) observations first rely on mainly the liberalization of a previously repressed financial system. Major indicators were the regulated interest rates-through ceilings- and reserve requirements. Following McKinnon and Shaw (1973), observations started to shift towards a separation between debt markets-banks- and the so called equity markets-stock exchanges-. Levine follows the same separation and tries to understand the relation by building up two separate mechanisms; bank based system, stock based system (2004). Levine, Demirguc-Kunt (1993) and Beck, Demirguc-Kunt, Levine (1999) observe the role of stock markets and the possible measurement techniques to capture the effect of stock markets on economic growth. Beck, Demirguc-Kunt, Levine's (1999) observations also as an extended work, tries to capture the general effect of financial development. In fact one may raise a question about the general financial liberalization issue. Actually we aim to observe the liberalization of financial markets, within the context of financial development; when we point out the main indicators of financial development we will capture the reason for behaving liberalization of the financial system as a major development issue. In reality some works, tries to separate the domestic development of the financial system and the international development (integration) of the financial system. The former in fact is treated as the financial liberalization issue. After building up the general mechanism, we aim to spend the rest of our time on a country case; Turkey, in section IV. The liberalization process of Turkey for the post 1980 period will be observed historically. First we aim to point out the general implications of the post 1980 period. Then turning back to section III we aim to observe whether the process in Turkey, goes in hand with the previously mentioned mechanisms or not.

2. Functional Approach to Financial Development and Economic Growth

Through out the section we aim to go over a number of topics that is mainly discussed by the finance theory for explaining economic growth. Main problems of markets both coming from the market itself and also from the agents in the market, in fact causes the well functioning of the general mechanism to slow down and in some cases even to collapse.

Prior to the general mechanism of McKinnon and Shaw (1973), Gurley and Shaw (1955) discussed different agents in an economy by dividing them into three categories; Agents with Balanced Budgets, Agents with Surplus Budgets and Agents with Deficit Budgets. In a simple loanable fund framework authors try to emphasize the behavior of these agents¹. Leaving the agents with balanced budgets on one side, they underline the behavior of surplus and deficit units. In a simple loanable funds context agents will behave in a way that loanable funds will be in equilibrium. Here a second question arises. The mechanism of the interaction is discusses by three major links. Self finance stands-internal finance- on one side, external finance in the form of direct and indirect finance on the other side. Concentrating on the external finance, authors underlined the importance of indirect finance over financial intermediaries, mainly commercial banks, and raise the issue of institutionalization of savings and investment. Their view in fact contradicts with the Keynesian view; the rate of debt accumulation does not have to be the same as the change in the income levels. The complex mechanism coming from indirect finance will allow a debt accumulation which is free from the income level changes.

Gertler (1988) in a general survey related with the comparison of the traditional view and the new generation view related with the finance growth link emphasized the failure of the traditional view for explaining the previously mentioned link. Possible market failures and asymmetric information problems enter Gertler's agenda in terms of halting the economic growth. Financial intermediation is observed to overcome the possible problems and asymmetries in the market. Gertler's discussion extends Gurley and Shaw (1953) by contributing how financial intermediaries may help to overcome the problems and in turn may help accumulation of funds faster than the accumulation of income.

At this point it is meaningful and necessary to start to understand the functional approach to finance economic growth link. In fact this link was mainly discussed by finance theorists; **Bodie, Merton (2000) and Miller (1998)**. They all stressed what a financial intermediary can do, and more importantly in the absence of these intermediaries how will the general market react, what will happen to the long run economic growth path. As we previously mentioned some economists are also pointing out the relation while some influential authors are neglecting the effect. Among the ones pointing out the relation, contributions of **Levine (1997) and Levine (2004)** are crucial. Here we aim to review the author's main indications and then combine with the general finance theory related with finance-growth link; overall aim is to give a clear understanding to the reader about the main functions of the

¹ For a detailed presentation of the loanable funds theory see Gardner, Mills, Cooperman Managing Financial Institutions (2005)

intermediation that courage and stimulates economic growth. Findings of the section will be combined with the general mechanisms in Section III.

Most of the economists and finance theorist previously underlined the capital allocation mechanism of finance and intermediation. As **Merton and Bodie (2000)** emphasized financial markets influence allocation of resources across time. The direct effect of financial intermediation in this view is through a better channeling of funds and capital, thus increasing efficiency of allocation. **Haque (2002)** underlined the so called effect of financial intermediation (see Box 1). As Levine (1997) also emphasized previously his findings point out a number of factors that have to be observed as to capture the overall effect of financial intermediation on economic growth. For understanding the healthy working of the savings and investment (thus economic growth) link, financial intermediation has to be observed by a functional approach. Main titles to be discussed are as follows;

"information allocation, monitoring, identification and management of risk, liquidity and maturity transformation, mobilization and pooling of savings, exchange of good and services, solutions to various asymmetric information problems."

Surplus Units Financial Intermediation

Box 1 Direct Finance versus Indirect Finance

Note that we will leave the basic mechanisms to Section III. Here we just aim to introduce those concepts and possible solutions of the intermediation to those issues.

Time allocation property of intermediation and financial system is heavily discussed and underlined by the theory of finance. The existence of financial markets, when combined with the intermediaries, individual and corporate investors manage to spread their investments over a longer life time (Merton, Bodie; 2000). The trade off between current consumption and future consumption is directly affected by the availability to borrow and lend in a simple microeconomic context.

Information acquisition is a major concern in finance and economics. Both the quality of the managers of a firm and also the quality of the firm itself is a costly process to evaluate by single investors. Forgoing such a process also may cause future losses for investors for entering or investing in risky or not well functioning firms. In fact in real world with the given frictions of markets, it will not be fair to expect for capital to flow directly towards the profitable project as Bagehot (1883) emphasized. As there are frictions in the economy, somehow firms and its managers have to be evaluated (Vincent and Carroso; 1970). Such a costly process can be in fact rebuilt with the emergence of financial intermediaries. Their cost advantages coming from their scales in turn may help individual investors to realize a better mechanism in terms of general cost structure. Both banks and stock markets can help the information acquisition process.² A costless information acquisition will help a more efficient capital allocation to prevail. As King and Levine (1993) and Schumpeter (1912) discussed such a reduction in the general cost of information acquisition will stimulate firms and investors attitude towards obtaining those in formations over financial system at a lower cost; which in turn may help the capital to accumulate towards growth enhancing projects-mainly technology based high cost requiring investments-.

Next we can discuss the *monitoring issue*. This contains both the monitoring and evaluating the general projects and operations of a firm as well as the corporate governance and control of the firm. As mentioned previously one can easily combine this sub item with the costless information acquisition. Actually similar to obtaining information, the process of monitoring is also a costly process; a physical cost plus time cost. The monitoring of the investment projects of the firm as well as the corporate structure of the firm are of concern, when we analyzed monitoring issue. Agency costs discussed in finance theory can be a major source of monitoring need. In fact agency costs also have different types. The basic one coming from the conflicting of interest between managers and owners of the firm may cause managers to decide and operate on behalf of their own wealth which in turn causes a decline in firm activities. Other than the conflict between managers and owners of the firm, another issue discussed by agency costs comes from the conflict between shareholders and debt holders of companies. As debt holders require a fixed amount of fund-a contractual obligation for the firm- and as stockholders require a variable amount of fund and overall all as stock holders receive the remaining amount after debt holders are satisfied; in usual cases we observe that stockholders act on behalf of their own wealth and try to maximize their own incomes instead of the general value of the firm. Such a behavior mainly observed as the basic selfish strategy in finance theory.³ Here we are aware of a strong assumption that share holders have the full power to decide and vote in the operation process of the company. What Levine (1997) underlines is that the information asymmetry between managers-insiders- and the ownersoutsiders- will not allow a healthy mechanism to work; stockholders asymmetric information problem will cause a decline in their ability to control the firm operations. Actually we are again observing the firstly mentioned conflict between managers and owners. The basic understanding built by Levine (2004) underlines three mechanism

² Reader may also combine this sub topic with the monitoring discussion of the same section. Actually monitoring process is also an information acquisition process. What in our view may be the basic distinction is the wide range of information acquisition over the monitoring process.

³ See Ross, Westerfield and Jaffe (2005) for detailed representation of agency costs and selfish strategies.

that financial intermediation solves monitoring issue; debt markets, banking system and stock markets. First debt markets may have an effect on the firms as to decrease the overall outstanding cash balance of the firm; which in turn may raise a question on the minds of the managers that pushes them to operate on behalf of the firm as to maximize both their own value and also the firm value (Aghion, Dewatriopont, Rey; 1999). Second banks play an important role in the monitoring process by acting as the delegated monitor of the individual investors (Diamond; 1999). Third and may be the most different implementation is the direct linking of managers salaries and premiums to the general performance of the companies shares in the stock markets. Above all these possible links we have to mention the importance of the general financial intermediation. In the absence of the possible mechanism coming from the lack of financial intermediation; one can not expect from profit maximizing agents of the general story to discipline themselves. The need for external pressure for efficient governance, both for the health of specific projects and also for the well functioning of the firm, is inevitable.

Another crucial issue is the appropriate *identification and management of the* risks coming from the environment and also the internal structure. Both uncertainty of returns of specific projects, coming from the riskiness of the project and also the general risk types of the market itself, may cause some risk sensitive projects to be foregone. Assuming that such projects and firms are infinite in the global system, neglecting these firms and project will hurt the general functioning of the real system. If we try to number out the major risk; market risk, liquidity risk, exchange rate risk, interest rate risk, operational risk, currency risk are the major ones that we can discuss. Both diversification mechanism of financial intermediaries as well as the hedging, insuring mechanism will allow a room for investors-both corporate and individual ones- to realize some solutions to the so called risks. The finance economic growth theory concentrates mainly on the *liquidity issue*; as Levine (1997) underlined and as Merton, Bodie (2000) underlined. Financial intermediation based on bank mechanism and also stock market mechanism provides useful services as to overcome the conflict. In fact the maturity and contract mismatch between agents in the market prohibited a well working funds transfer between surplus and deficit units. As discussed by Gardner, Cooperman and Mills (2005) one of the major functions of the banks is to overcome these mismatch problems. Banks collect funds from different type of investors in the market with different contractual agreements. In turn the obtained fund is transferred to the real activity part of the pool; investors with the shortage of funds again with different maturity and contract expectations. In short, the bank borrowing and lending mechanism will allow longer term project finance by short term funds flow; causing a decline in the liquidity problem. The second part of the story is coming from the capital markets; the evolution of equity transfer. In our view, the concept has to be observed by a two stage mechanism. The primary market and secondary market operations will in fact deviate from each other both from the working of the system and also from the general objective of the system. While the primary markets help corporate units to obtain large amount of funds, mainly to finance long term and capital intensive projects, secondary market evolves as to solve the major liquidity desire of the inventors. Such a mechanism in fact allows small investors to invest in those long term investment by keeping their right and ability to liquidate their account in the secondary markets. Bencivenga, Smith and Star (1995) observed the role of equity markets in capital accumulation. They underlined the effectiveness of a well working equity market; by decreasing the transaction cost a

well working equity market allows the transfer of capital ownership within investors. Actually we previously mentioned a number of risk concepts that in our view also has to be measured and managed. The derivatives market mainly serves for this objective. Future and Forward Contracts, Option Contracts, Swap Agreements are the major tools used in the process. In this paper we will not take into account the effects of these instruments and derivative market; because in our view derivative instruments and markets have a different mechanism that courage economic growth through a better managed risk and better allocated capital. Such a mechanism needs a separate analysis, which in our view is a further study area.⁴

In fact *mobilization and pooling of savings* is in the center of the theory and has a direct link with the so called efficient capital allocation mechanism. The significance of the concept can be best understood if one compares the pooling process for direct finance-without intermediation- and indirect finance-with intermediation. A saving collecting and pooling process, as stressed by the general finance theory, has to overcome to specific issue; (i) direct cost of transaction (ii) asymmetric information problems that are discouraging savers. These mentioned problems when tried to be solved by a single institution trying to borrow funds; a scale problem raises which in fact will cause a heavy burden on the institution. As Siri and Tufano (1995) to overcome and economize the cost associated with these two problems, intermediaries may evolve as to benefit from their scale advantages. Borrowers will have difficulties to overcome the increasing cost of the multiple bilateral agreements whereas financial intermediaries will solve the issue by using their scale advantage. Similarly the asymmetric information problems will be overcome by the same understanding by the intermediaries. Here reader may capture the general similarity of the so called pooling function with the effective allocation mechanism.

As discussed in the previous part the *informational problems* are the major obstacles of a well working efficient financial market-thus economic activity-. Basic problems are; adverse selection, moral hazard, principal-agent problems. Merton and Bodie (2000) discussed the so called asymmetric information problems that arise in the absence of financial intermediation. They also underline how these problems cause a distortion in economic activities. *Moral Hazard Problem* is the irrational behavior of agents because of the insurance opportunity; handling high amount of risk. *Adverse Selection Problem* on the other hand, is the basic process of the loss of one side of the flow of funds mechanism. The quality of the product in general or the fund in our case, when can not be observed efficiently; volume of high quality products/funds in the market declines up to a level which may even end up with the collapse of the specific market. Finally one of the major asymmetric information problems is the *Principal Agent Problem* that we discussed in the previous parts. The conflicting of interest between managers and owner in fact later extended to the general agency cost concern.⁵

A final concern of the theory is related with the function of intermediation as to *facilitate and stimulate exchange*. The specialization need, which is in turn expected to promote the system through learning by doing, means increasing

⁴ See Hull (2005) for further information related with derivative instruments and markets

⁵ See the previous part related with the monitoring issue.

transactions and thus increasing transaction costs. Financial intermediaries through a number of contracts, sustains greater specialization through lowering transactions costs.

To sum up, finance and economy theorists number out the basic functions discussed here as to underline the mechanism between financial intermediation and economic growth. Our view is that a well functioning financial environment, through both development and liberalization, will enhance these mechanisms which are expected to effect economic growth positively. In short the basic contribution of this so called functional approach is that, the black box between financial intermediation and economic growth is illustrated (see Box 2).





3. Developmentalist Approach - Empirical Literature -

Previous section helps reader to understand the main connection between financial intermediation and economic growth; in our view the mechanisms outlined in Section II are useful as they will be the background of the empirical models that will be discussed through out the Section III. Through out the section we will overview the concepts by following a historical approach. As we accept McKinnon and Shaw (1973) contributions as the milestone of the finance growth theory, we aim to first observe the literature and the discussion prior to their contribution. Next we aim to concentrate on McKinnon and Shaw hypothesis (1973) as to clearly understand how economies move away from financial repression towards financial liberalization. This milestone is important in the sense that historically speaking the episode of their theory coincides with the movement of economies towards more liberal policies. After observing the main findings of McKinnon and Shaw (1973) we will start to observe the new generation mechanism concentrating on the finance growth link. What we mainly observe in this historical perspective to empirical approach is that, the new generation mechanism that will be discussed in Section 3.3 seems to be the most extended one. While McKinnon and Shaw (1973) hypothesis mainly concentrates on the banking sector in the economy, new generation models extends the relation by adding the possible effects of capital markets.

3.1 From Bagehot to McKinnon-Shaw

Bagehot (1873) was one of the first who discussed the idea of finance by relating to real side of the economy. His idea mainly concentrates on England and the money market condition, function relation. His main contribution is related with the loan fund transfer capacity of England which was underestimated by economist at that time. He generally underlined that the existence of such a money market in England was of the driving force behind the mobilization of savings towards long term illiquid investment projects. Bagehot underlined that as observed England was the leading force in money markets of the period.⁶ In deed when the non bank deposits are also included, Germany and France are also observed to be significant powers of the period. However, the system that Bagehot described gives England the opportunity to attract the surplus flows of individuals. The background was the banking system of England. The Lombart Market (Street) is composed of the bankers of England. Bagehot underlined two significant facts; first the traders of England were mainly composed of individuals that are trading with borrowed capital and this gives increasing importance to the described system. Second important issue is that, other economies were also using Lambart System as the main bankers of the region. In short Lambart Street becomes the bankers of the Europe. Another contribution of Bagehot is related with the security mechanism of the system. For those times, in our view it is a significant fact that Bagehot underlined the need for reserve requirement. The case of bank run was discussed and the need for a cushion is proposed. What mainly important for the Lombart Street is the Bank of England as the whole responsible of the reserve requirement. In a case of bank run or any other problems that bakers face. Bank of England will use its reserves as to satisfy the growing need. Actually later in 1960s Hicks (1969) followed a similar understanding and conclude

⁶ Deposit volumes of England (1872), Paris (1873), New York (1873), and German Empire (1873) were £120 million, £ 13 million, £ 40 million, and £ 8 million respectively. See Bagehot 1873 p.2 for a detailed representation.

that the industrial revolution in England was hard to achieve in the absence of the financial factors; contributions.

Schumpeter (1912) in his view of economic development also puts some room for the effect of financial markets; the theory that he demonstrated underlined the innovative capabilities of economic units and the relation with the market structure.⁷ The large scale innovative activities have to be financed by somehow. Schumpeter emphasized that the monopolistic market structure evolves at the first stage as to promote entrepreneurs to earn high profit levels. The argument also builds later a second step that causes the profits generated in the monopolistic structure to satisfy the current innovative activities of the entrepreneur. Above all Schumpeter adds to the described mechanism that; such an innovative process based on technology build up thus heavy initial investments, can not be sustained in the absence of a financial intermediation that promotes the transfer of the savings of the surplus units. The mechanism that Schumpeter underlined (1912) is a basic one as to show the direction of the relation from financial intermediation development to economic growth; high and fixed investment required innovations are financed by a healthy financial mechanism, and in turn the technological developments through a set of innovations stimulates the economic growth. A simple response to Schumpeter approach came from Robinson (1952). In fact Robinson did not neglect the effect of the financial system; whether she underlined the direction of the relation emphasizing that "..... it has to be the finance which will follow the economic development of entrepreneurs not the reverse...." (1952; pp 86).⁸

Meanwhile Goldsmith's empirical analysis deviates from the previous observers; Goldsmith (1969) directly tried to observe a number of relations between financial development and economic growth by using 35 countries in his sample. Specifically speaking he aimed to answer three major concerns; development of the financial structure as the economy grow, overall impact of financial development, possible direct effect of financial structure on economic growth. First Goldsmith underlined that; as national output of economies grows banks tend to become larger. Also Goldsmith emphasizes that non bank financial intermediaries' and stock markets' importance relative to banks increases as economies expand economically. Secondly Goldsmith also captures the positive correlation between financial development of the structure and also the economic growth of the economy. However we realize that Goldsmith did not make any conclusions related with the causality of the relation. Before concluding we have to note the basic problems of the Goldsmith's empirical approach; First of all only 35 countries are used, secondly other factors that affect economic growth are neglected and finally the chosen financial development variables are criticized heavily as to be weak proxies for financial development.⁹ Above all we take the contributions of Goldsmith as important ones in the sense that, it represents the first significant empirical analysis that tried to build up a model prior to McKinnon and Shaw (1973). Actually it was Goldsmith who proposed that, one of his major aims was to open up a discussion for further study areas. Observing the following models will underline the satisfaction of Goldsmith's major objective.

⁷ See Witt (2002) for a discussion of the basic ideas of Schumpeter 1912 and Schumpeter 1942 related with the evolutionary side Schumpeter's Theory of Economic Development.

⁸ As citied by Levine (1997)

⁹ Later King and Levine (1993) modified the Goldsmith's approach by adding a number of control variables and by expanding the data set. (See the summary of King and Levine (1993) in Section 3.3)

3.2 McKinnon and Shaw Hypothesis

McKinnon and Shaw in fact observed the same interaction separately at the same time (1973). The findings of McKinnon and Shaw are so close that one can specifically call for a general hypothesis from their findings.

Starting from *Shaw* (1973) the distinction between financially repressed economies and financial reformed-liberalized-economies is remarked. Shaw emphasized the clear distinction between shallow finance and financial deepening by underlining the most significant property of financial services; "...*utilizing inputs of productive factors according to relevant technologies.*"(Shaw: 1973 pp: 3). Shaw in fact in his influential book marks the possible measures of financial deepening. The reserve requirements and the so called implementations towards distorting interest rates are observed as the main obstacles of the economy; causing a repressed financial environment. On a separate book *McKinnon* (1973) also tried to realize the conditions of financial repression and liberalization. He argued that; "...*monetary controls in the form of interest rate ceilings, increased reserve requirements, limited rediscount tranches and so on will have other unexpected effect on the long run economic growth"* (McKinnon; 1973: pp86-87)

Actually Shaw and McKinnon (1973) were two of the first authors that observed financial liberalization and development as a prerequisite in the economic growth process; through a better working saving allocation mechanism. Through out the observations; they first discuss the rationality behind financial repression, and then pass towards reform implementations for economies to liberalize financial systems. They argue that financial repression will tend to reduce the economic growth as well as the overall size of the financial sector relative to non financial sectors. Their understanding in fact underlines that; investment opportunities are available however; the funds accumulation to satisfy the desired investments can not be sustained. The background of this conflict lies in the basic explanation of The McKinnon and Shaw observations;

- (i) Saving function is positively related with the real interest rates on deposits.
- (ii) Investment function is negatively related with the effective real loan rate.
- (iii) Both savings and investment function responds positively to the real rate of growth
- (iv) A financially repressed economy is observed as a one with interest rate ceilings and high reserve requirements.

Overall what McKinnon and Shaw emphasized is directly the costs of financial repression. Real growth in financially repressed economies is observed to be limiting savings and investment opportunities. Here in our view McKinnon's markings are crucial. From the start of the discussion, like Shaw (1973), McKinnon (1973) underlined the complementarities of money and capital. They expect a shrinking real cash balances whenever real interest rates declines; moreover such a repressed environment will also cause a decline in investment and output growth. McKinnon's findings for Japan and Germany can be a promising case study. An extended observation can be reached from Figure 1. Note that other than the developed industrial economies of the period, we add Turkey as an economy with a shallow financial market (as explained by Shaw; 1973). In terms of McKinnon and

Shaw's literature developed industrial economies seem to have deeper financial markets. In fact real growth figures also support the findings of McKinnon and Shaw.



Figure 1 M2/GNP Ratios of Selected Economies (1953-1970)¹⁰

In our view Figure 1 just shows a distinction between the industrial economies of the period and Turkey as a developing economy with shallow financial markets. Actually figure 2 can be more influential; we aim to compare a number of developing economies for the post 1970 period. In line with the theory we also include the per capita GDP growth into our observations. Results are striking that developing economies show similar patterns of financial deepening, in terms of McKinnon and Shaw hypothesis (1973) up 1990s; and we observe a small dispersion after 1990s; South Korea and Philippines are the ones that seem to move away from the others.

Figure 2 Financial Deepening in Developing Economies (M2/GDP)



Source: WDI, 2004

Source: McKinnon; 1973

¹⁰ See McKinnon (1973) pp 93-96 for detailed representation.

However the effect of this deepening on economic growth can be questionable and one can capture the so called effect from the following figure (figure 3). When we observe the M2/GDP growth and per capita GDP growth in two selected developing economies the positive impact versus crowding out effect of the deepening can not captured directly. We will return to this discussion in Section IV.



Figure 3 Per Capita GDP Growth in Turkey And South Korea

To sum up; McKinnon and Shaw Hypothesis, underlined the benefits of financial liberalization. They underline that increasing interest rates towards market clearing level, when combined with the other measures of the financial intermediation; savings will be allocated towards profitable areas. The existing investment opportunities will be funded and the economy will realize a rapid real growth. One may capture the property of the hypothesis as to concentrate on a broad number of measures for observing the general relation. Effects of capital markets and debt instruments other than banking instruments are not taken into account. In fact as one may remember from the findings of Goldsmith (1969) that there has to be other measures that have to be taken into account. Actually the models following McKinnon and Shaw (1973) happen to close the missing gap in the literature. Next sub section tries to overview the new generation models; at the end reader will have a clear understanding about the possible measures that have to be taken finance and growth.

3.3 New Generation Mechanisms

In fact one can blame the weak empirical sides of the McKinnon and Shaw Hypothesis (1973), however in our view the hypothesis seem influential since even just criticizing the weak sides (or the insufficient sides) helps an observer to call for extra measures to be accounted for in the financial development and economic growth link. In fact historical developments after the McKinnon-Shaw (1973) period support our understanding. Here in this sub section we will go over the basic (chosen) mechanisms that in our view seem to affect the so called finance growth link mostly.¹¹ In addition to that we also want to concentrate on the observed models' variables for the case of Turkey in Section IV. Also we have to note at the moment that, the post

Source: WDI, 2004

¹¹ See Levine 1997, Levine 2004 for a brief survey.

McKinnon-Shaw (1973) period also witnessed the separate analysis of the debt and stock markets.

If we aim to start the discussion of the section, we should start with the traditional claims related with the importance of banking system in the capital allocation mechanism. Bencivenga and Smith (1991) propose the importance of banking system and the major roles of individual banks in the traditional context; (i) Overall the need for so called self finance (discussed in Section II) diminishes with the existence of a well functioning banking system, (ii) Banks' major aim is to collect funds from individuals in the form of deposits, (iii) Banks hold liquid reserves to protect the mechanism against emergency withdrawals, (iv) Banks issue liabilities that are more liquid (more volatile) then their assets. Bencivenga and Smith (1991) in fact by using the main determinants of the functional approach underlined that a well functioning banking system by aiming to satisfy its major four objectives; in turn will cause a better capital accumulation of the invested funds and directly increasing real growth of the economy. However in the absence of the so called healthy mechanism the rise of the self finance will bring the possible problems with itself which may halt the desired economic growth. The theoretical findings of Bencivenga and Smith (1991) related with the liquidity growth link of the banking system and also the delegated monitoring approach of Diamond (1984) enters the agenda of many of the empirical observations.

Another study by *Bencivenga, Smith and Star (1995)* observe the mechanism of the stock market system. The liquidity effect of stock markets is crucial in the sense that Bencivenga et al. (1995) discuss. In the following sub sections we will spend more time on these models.

3.3.1 Bank Based Approach

When we observe the post 1973 period we come to realize the contributions of *King and Levine (1993)* as a starting point. They extend the Goldsmith (1969) approach and followed an empirical way as to observe the relation between financial development and economic growth. As we emphasized in the previous section with a number of significant contributions, Goldsmith (1969) approach has several problems. The most important one in our view was the neglected determinants of economic growth. Goldsmith in the observations does not take into account the non financial variables that affect economic growth. King-Levine (1993) corrects the missing relation and observes the relation by adding a number of other determinants. In addition to that, King-Levine observation extends the financial indicators that McKinnon-Shaw hypothesis covers.

They observe four main indicators to account for the development size of financial markets; (i) Liquid Liabilities to GDP to account for financial depth¹²(LLY), (ii) Bank Credit to Bank Credit plus Central Bank Credit to measure the weight of CB and commercial banks in the credit market (BANK), (iii) Credit (used by non financial private sector) to total domestic credit (excluding credit to money banks) (PRIVATE), (iv) Private Credit to GDP (PRIVY). Their observations cover the period of 1969-

¹² King and Levine (1993) proposes that; liquid liabilities is captured as M3 or line 551 from International Financial Statistics, when line 551 is not available they use M2.

1980. They construct a cross country study and observe 80 countries. On the economic growth side King and Levine used 4 major indicators (1993); (i) per capita real GDP growth (GDP GROWTH), (ii) growth in capital stock per person (CAPITAL GROWTH), (iii) total factor productivity (TFP-Solow Residual) (EFFICIENCY), (iv) average annual investment to GDP (INVESTMENT).

	GDP GROWTH	CAPITAL GROWTH	EFFICIENCY	INVESTMENT
LLY	0.55	0.69	0.46	0.54
BANK	0.44	0.57	0.36	0.58
PRIVATE	0.37	0.5	0.3	0.51
PRIVY	0.5	0.65	0.42	0.48

 Table 1 Correlation Between Financial Development and Economic Growth

Source: King, Levine (1993)

Table 1 figure out the findings of King and Levine (1993). Both four growth measures and the four basic financial development indicators seem to be positively and significantly (1% significance level) correlated with the four financial development indicators of King-Levine.¹³ To test the relevance of the results of Table 1, King and Levine run a regression that also accounts for a number of other non financial determinants that are also observed to affect economic growth: logarithm of initial income (LYO), the logarithm of the initial secondary school enrolment (LSEC), the ratio of trade (export and imports) to GDP (TRD), the ratio of government spending to GDP (GOV) and the average rate of inflation (PI). Findings of King-Levine (1993) regression support the expectations; the four financial development indicators enter positively and significantly to the regression. Deeper financial markets, high percentage share of commercial banks, high percentage share of private firm credits in the overall credit pool and high percentage share of credits in the GDP, all associated with increase in capital accumulation, increase in average investment, increase in overall productivity and increase in economic growth.

Later *Levine (1997)* in a survey reviewed the model of King-Levine (1993) and underlined the importance of bank based mechanism in the financial growth and economic development link. The major contribution of the Levine (1997) lies in the other measures taken into account related with stock markets.¹⁴ Before we proceed to the Stock Market Based models we aim to see the latest contributions of Beck, Demirgüç-Kunt, Levine (1999); they reviewed the main indicators of financial development, and added a number of other significant determinants that can be observed as to understand the finance growth link.¹⁵

Beck, Demirgüç-Kunt, Levine (1999) underlines a number of measures related with the <u>size</u> of the financial system. They also replicate the previous measure used in King-Levine (1993); Ratio of Deposit Money Bank Assets to sum of Deposit Money and Central Bank Assets and M2 to GDP;

- Central Bank Assets to Total Financial Assets
- Deposit Money Bank Assets to Total Financial Assets
- Other Financial Institutions Assets to Total Financial Assets

¹³ See King-Levine (1993, p 723-724) for the full representation of the correlations.

¹⁴ See section 3.4 for the Levine's contributions (1997) related with stock markets effect.

¹⁵ See Beck, Demirgüç-Kunt, Levine (1999) for the full list of the variables. In this sub section we will review the ones related with banking side of the financial system, we will leave the stock market variables to the following sub section.

- Central Bank Assets to GDP
- Deposit Money Bank Assets to GDP
- Other Financial Institutions Assets to GDP

Next after the size measures they introduced the <u>activity</u> measures, by aiming to capture the credit allocation mechanism;

- Private Credit by Deposit Banks to GDP
- Private Credit by Deposit Money Banks and Other Financial Institutions to GDP

After understanding the size and activity measures, Beck, Demirgüç-Kunt and Levine (1999) observed the <u>efficiency</u> and <u>structure</u> of the commercial banks. We use the first two ratios below, as to measure the efficiency of the channeling of funds from savers to investors. Following three measures below aims to measure the concentration of the banking sector-market structure. A bank is defined as a foreign bank if 50% of the equity is owned by foreign investors, and a bank will be defined as a publicly owned one if 50% of the equity is held by the government or another public institution;

- Accounting Value of a Bank's Interest Revenues as a Share of its Total Assets (Net Interest Margin)
- Accounting Value of a Bank's overhead cost as a Share of its Total Assets (Overhead Costs)
- Number of Foreign Banks in Total Share (Foreign Bank Share)
- Foreign Bank Assets in Total Banking Sector Assets (Foreign Bank Share-Asset Based)
- Publicly owned Commercial Bank's Assets in Total Commercial Bank Assets (Public Share)

Overall if we review the indicators of financial development related with the banking system, we can capture the basic contributions of Beck, Demirgüc-Kunt and Levine (1999). The new variable set allows one to observe the one side of the relation (finance growth relation) more deeply. Note that this section when combined with the preceding one (emphasizing the role of stock markets), we will have some room to observe the post liberalization period of Turkey (a new era for deepening of financial markets in Turkey) in Section IV.

3.3.2 Stock Market Based Approach

This sub section aims to discuss the additional links and possible indicators that may be significant for economic growth. The growing discussion related with the role of stock markets in financial intermediation and direct indirect effects on economic growth lies to late 1980s. The discussion concentrates on two different channels. <u>First</u>, the most popular one underlines the role of stock markets for providing liquidity for investors. *Bencivenga, Smith and Star (1995)* emphasized the major contribution of the stock (equity) markets. They followed Hicks' (1969) view; in the absence of well functioning financial markets, the industrial revolution would not evolve, meaning that industrial revolution had to wait until the financial revolution. Bencivenga, Smith and Star (1995) concentrated on the stock markets and emphasized that if stock market's work efficiently then the transaction costs in the secondary equity markets will diminish which will encourage the investment of

projects requiring high capital investments. The place of the liquid well working equity market lies in the transfer of the capital ownership. Actually as most of the capital intensive and more profitable projects of real side agencies requires high initial costs and their payoff to the investors requires longer maturities; there seems to be a maturity mismatch between investors and entrepreneurs. The initial funds that the firm expected to generate from stock markets (by issuing common stocks) will satisfy the buyers (investors) in the form of profit distribution at a longer date at maturity. In terms of the investors' point of view, such a mechanism seems less desirable in the absence of a general market that allows the liquidation of the owned funds before the date of profit distribution. At this point we may review our comment and extend it as follows; such a mechanism may discriminate the investors with more risk aversion and high liquidity desire because of wealth constraints. This in turn will result in a narrow class of investors (with higher wealth) holding the common stocks of the entrepreneurs. Second, our concern is to observe the overall volume of funds used directly by the entrepreneurs. Observing the primary issue of securities seems to be significant. In our view the primary issue determinant is mainly neglected, we observe that there seems to be an over concentration on the liquidity of stock markets. Both the trading volume and the trading speed are explained as to effect the economic growth. However in our view, the primary issue volumes seem to be a neglected one, which in the last part of the paper we aim to observe. Observing the increases in the funds that are raised in the primary market (both with respect to previous periods and also with respect to economic growth) has something to say about the capacity of stock markets to generate funds directly.

Discussion related with the role and performance of stock markets and equity transactions first starts with the discussion for the place of stock markets in the financial intermediation process. Demirguc-Kunt, Levine (1993), Demirguc-Kunt, *Levine* (1995) both emphasized the positive relation between stock market development and financial intermediation. After the influential contributions of Demirguc-Kunt and Levine (1993 and 1995), we observe two direct observations between stock markets and economic growth; Arestis, Demetriades (1997) and Levine, Zervos (1998). We have to note here that; both works clearly relied on the findings of Demirguc-Kunt, Levine (1993,1995) and also Bencivenga, Smith, Star (1995). In fact Demirguc-Kunt, Levine, Beck (1999) briefly capturing the effects of these models summarizes and extends the major indicators for financial development. Recently a number of new works are followed as to capture the bi directional effect of financial liberalization and stock markets, by relying heavily on the adverse effects. While these discussion heavily blamed the financial liberalization implantations for the adverse effects, neither of them aims to criticize the financial development and economic growth link; instead heavy emphasize is given on the wrong implementations. We will return to this discussion in while discussing the liberalization process of Turkey in the next section (IV).

If we start to the discussion for finding a specific place for stock market and equity transfer in the financial development and economic growth link, we also may replicate the findings of *Demirguc-Kunt, Levine (1993, 1995)* to understand stock market as a significant contributor to financial intermediation.¹⁶ Actually we basically

¹⁶ Actually indicators classified in Demiggüç-Kunt, Levine (1993, 1995) can be captured as the universal indicators, though they are replicated and observed for different country studies by different authors.

discussed the possible links in the previous section while describing the functional approach to financial development and economic growth link. However observing the models for the relation between equity transfer and financial intermediation may be crucial at this point. Both of the papers relied on the same concern; "Can stock market be a significant complementary to financial intermediation?" In fact both papers (1993 and 1995) are useful to capture the brief list of the indicators to be discussed for emphasizing the role of stocks markets. (i) Market Size Measures: Two indicators are used as to measure the market size: number of listed companies, market capitalization. Number of listed companies only gives one a one shot observation related with the general size; neglecting the details (a company may be listed only as to benefit from the tax advantages available for the listed firms; Levine 1993). Market Capitalization indicators seems to be a better indicators and can be computed by simply dividing the total value of the listed shares by the GDP. However both measures may give misleading conclusions in the absence of supporting indicators. (ii) Liquidity Measures: A deep stock market in terms of size does not necessarily mean that, market realizes high liquidity thus diminishing transaction costs. To account for the liquidity effects we need other measures. One important measure is the total value traded divided by GDP. The ratio measures the organized trading of equity shares relative to the national output.¹⁷ A second indicator that can be calculated is the total value traded divided by market capitalization-turnover ratio-. Aim of the second liquidity measure is directly to account for a possible divergence between market size and market liquidity: although the general market capitalization is large, the low trading volume may reflect a big but a slow less liquid equity market. Actually the indicators labeled in (ii) aim to complement the ones in (i); a small equity market may be liquid while a bigger equity market can be less liquid (having smaller value traded to GDP ratio and a high turnover ratio in the small equity market may sustain this finding). (iii) Volatility: Calculating the volatility of the stock market returns is an extension. In fact the indicators in part (i) and (ii) are mainly the so called traditional indicators. Demirguc-Kunt and Levine (1995) used twelve month rolling standard deviation estimate based on market returns to account for the volatility. (iv) Concentration: The indicator aims to observe the structure of the stocks market. Demirguc-Kunt and Levine in their second paper in 1995 underlined that; to measure the market concentration we should compute the share of market capitalization accounted for by the ten largest stocks. This measure seems to be significant as to compare the sizes and market structures of stocks markets. Demirgüc-Kunt and Levine (1995) emphasized that while US. and Japan have big market sizes, countries with smaller market size such as Venezuela and Argentina have higher concentration. (v) Asset Pricing: To account for the efficiency level of stock markets, Demirgüc-Kunt and Levine (1993, 1995) followed the basic pricing models in finance theory. The concern is to observe whether markets measure the risk efficiently. As emphasized by Demirgüc-Kunt, Levine (1995), observers agree that, countries that are more integrated into world capital markets and price risk more efficiently, can be underlined as more developed. To observe this effect two pricing models of finance theory is observed: Capital Asset Pricing Model (CAPM), Arbitrage Pricing Theory (APT).¹⁸ Here we do not aim to enter the technical discussion related with the CAPM and APT model. If we try to capture the general

¹⁷ Demirgüç-Kunt, Levien (1993) observed Total Value Traded other than the relative measures which seems to be also another significant method.

¹⁸ See Korajczyk, Viallet (1989). Also a brief technical representation of APT, CAPM, ICAPM models can be observed from Demirgüç-Kunt, Levine (1993).

idea behind these two models; there is no room for arbitrage opportunities in a well developed, frictionless stock market, meaning that different types of risks should be priced equally across assets within a country (domestic version of APT and CAPM) and also across assets in different countries (international version of APT and CAPM). If a mispricing occurs then in the frictionless environment with no asymmetric information problems, arbitrage opportunities emerges, which are quickly eliminated by agents in the market. However, if there exists frictions and informational problems, then arbitrage opportunities can not be eliminated by the agents. In short economies with greater mispricing (divergence between the models' returns and actual returns), are observed to be markets that are poorly reflecting the information sets about firms, markets with high transaction costs and markets with high barriers to international asset trading. (vi) Institution and Regulation Concerns: Institutional indicators were first emphasized by Demirgüç-Kunt, Levine (1993) in the stock market, financial intermediation and growth context. They were aware of the obstacles for quantifying such measures. Demirgüc-Kunt, Levine in their first paper (1993) underlined that importance of legal and accounting rules and the overall regulation level as a major indicator to stock market development. In their following work (1995) they specifically marked the basic institutional and regulative concerns; Availability of price earnings information (publish), applicability of accounting standards, quality of investor protection laws, existence of a securities and exchange board, restrictions on dividend repatriation by foreign investors & capital repatriation by foreign investors and domestic investments by foreigners. These qualitative indicators are some how quantified by Demirgüc-Kunt, Levine (1995) and an index to measure the average institutional level of different stock markets.

In our view, Demirgüc-Kunt, Levine (1993, 1995) approach is useful. They concentrated on identifying the major indicators of stock market developments and then passed to the possible link with financial intermediation. In short they underlined that stock market development and financial intermediary development goes hand in hand. However as the major concern of this sub section is to discuss the link between stock market development and economic growth, we move towards a way as to mechanize the stock markets and economic growth. The influential works of *Arestis, Demetriades (1997) and Levine, Zervos (1998)* observed the major indicators underlined by Demirgüç-Kunt and Levine (1993, 1995).

Arestis, Demetriades (1997) in their time series work, questioning the financial development growth link, try to understand whether stock markets have a role in economic growth through possible ways that are discussed by Demirgüç-Kunt, Levine (1993, 1995). Their impulsive force was the over concentration on the traditional approach towards the link between bank based measures (for financial development and economic growth). Authors underlined that stocks market provide different financial services from banks. By taking into account the major stock market development indicators; market capitalization, turnover ratio, volatility, asset pricing efficiency and also controlling for a number of variables (initial conditions, various economic and political conditions) they search for the link between financial development, capital accumulation). Overall their results underline that financial development and economic growth has a direct linkage. Their extension is that in the constructed linkage stock markets have a separate and significant place.

Levine, Zervos (1998) build up a general model to search for the relation between financial development and economic growth. In fact the idea and the mechanism were similar to the one that is constructed in King, Levine (1993). However, the major extension is the role of stock markets that is taken into account in Levine, Zervos (1998). Their model can be summarized as follows;

- For measuring the size of the stock market, market capitalization measures are used, for measuring the liquidity of the stock markets, value traded relative to GDP and value traded relative to market capitalization measures are used. For measuring the level of international integration two pricing models APT, CAPM are used. Finally volatility measure enters the relation of Levine and Zervos (1998); as 12 month rolling standard deviation estimate based on market returns.
- For measuring the banking development; Bank Credit measure (loans made by commercial banks and other deposit taking institutions divided by GDP) is calculated.
- For measuring the real side of the economy; output growth, capital stock growth, savings and productivity growth measures are used.
- Correlation results can be captured from Table 2. Data covers 47 countries over 1976-1993 periods. Data set is averaged over the period and correlation between financial development indicators and economic growth indicators are compared. Two points evolve striking from Table 2. Banking development measure and stock market liquidity measures are highly correlated with the four measures of real economic activity.¹⁹
- Cross country regression results are also crucial. Other than the mentioned indicators; initial output (logarithmic form), secondary school enrolment rate (logarithmic form), political instability measures (number of coups and revolutions), initial value of government consumption to GDP, the rate of inflation, initial value of black market premium are also included.
- A number of regressions are run keeping the four growth indicators as the dependent variables. Banking development, liquidity measures and size measures of stocks market are found to be statistically significant for the three growth indicators except the savings indicator. In addition to that volatility and international integration measures are not closely linked with economic growth in neither of the indicators.²⁰

¹⁹ Levine and Zervos (1998) by following the same concerns of Demirgüç-Kunt, Levine (1993, 1995) observe the correlation between the financial indicators. They end up with the conclusion that Bank Credit indicator is highly correlated with size measure of the equity markets. This underlines the general view that it is not an easy task to distinguish between the size of equity markets and the role of banking system.

²⁰ Levine and Zervos (1998) extended the regression for international capital market integration by using pooled cross country regressions. Results indicate the positive and significant relation between integration measures and growth indicators.

	clations between		t and Economic Orom	11
	Output Growth	Capital Stock Growth	Productivity Growth	Savings
Capitalization	0.037	0.203	0.222	-0.0792
Value Traded	0.522	0.425	0.417	0.1601
Turnover	0.487	0.356	0.444	0.447
CAPM Integration	0.343	0.228	0.277	-0.1394
APT Integration	0.28	0.182	0.209	-0.3504
Volatility	-0.08	-0.104	-0.169	0.1189
Bank Credit	0.347	0.324	0.372	0.1189

Table 2 Correlations Between Financial Development and Economic Growth

Source: Levine, Zervos (1998)

Demirgüç-Kunt, Beck and Levine (1999) in their work for extending the indicators of finance economic growth link, also discussed the stock market indicators. Actually the only new indicator that they introduce also matches with our concern; *Primary Equity Issues to GDP*. Although some authors underline that; as mainly in developing economies and also even in developed economies, the share of public ownership is limited, such a measure will not tell a lot we still concern about the funds raised in the primary market as those funds are the ones that are directly used to finance investment activities thus real activities.

3.3.3 Some Extensions

The previously reviewed mechanism as the reader can capture heavily relies on banking system and equity transfer system through stocks market. However there are also other channels which can affect the so called finance growth link. Below we list a number of them as also discussed in Demirgüç-Kunt, Beck, Levine (1999). We also add the role of derivatives market as a further study area.

- As we previously mentioned effects of derivatives market is one of them. Mainly after the globalization of financial markets and the development all over the world, new instruments start to evolve. The <u>derivatives instruments</u> are one group.
- <u>Bank like-non bank- financial institutions</u> such as savings bank, cooperative banks, mortgage banks, building societies and finance companies (Demirgüç-Kunt, Beck, Levine; 1999)
- Insurance companies thus general insurance systems that include life and other types of private insurance companies.
- Private pension and provident funds.
- > Pooled investment Schemes and Development banks.

4. Turkey and the so called Financial Deepening of 1980s

After having a clear understanding of the possible mechanism which can directly or indirectly build up a link between financial development and economic growth, in this section we aim to discuss the developments of the Turkish finance sector after the 1980 era. Actually the impulsive force will be again the relation between finance sector and the economic growth. We aim to observe whether the liberalization process of the post 1980 era managed to deepen the markets and in turn Turkish Economy managed to realize the desired capital formation and economic growth or not.

In fact the liberalization of financial markets are observed as the relaxation of the controls on the interest rates and reserve requirements by McKinnon (1973) and Shaw (1973). As discussed in the previous section a financially repressed economy will have difficulty to mobilize the savings of the individuals towards the use of private sector. Bandiera, Caprio, Honohan (1998) discuss that financial liberalization will have some effects on savings. Here the implementations are important in the sense that; a sound risk return trade off in the markets can be done by rational identification of lenders. Saving system somehow has to identify each lender and try to capture the surplus funds, which in turn will be the background of the credit pool. Bandiera et al. (1998) underlined that with the developments in financial markets, individuals with surplus funds will attempt to choose other non bank and even non financial instruments to save and invest. Here authors are underlining the increasing competition in the financial markets between a set of institutions (main intermediaries). So whenever the liberalization is supported by correct policy measures and whenever banks manage to absorb the required funds by implementing flexible return rates, then financial liberalization has to spur savings.

However, the theory after a set of developments underline that other measure also have to be taken into account. Some of the new emerging dimensions of financial liberalization can be counted as follows: credit allocation, bank ownership, prudential regulation, security markets and openness of the capital account. Kaminsky. Schmukler (2001) as a discussion try to observe the financial liberalization process. In line with the influential work of **Demirgüç-Kunt**, **Detraigiach (1998)** they also underline that the date of interest deregulation can be the benchmark point for financial liberalization. However as the traditional approach may have a number of problems (reversal of the policies) new measures to account for full liberalization of three specific items are underlined; (i) Liberalization of Capital Account, (ii) Liberalization of Domestic Financial Sector, (iii) Liberalization of the Stock Markets-Capital Markets-. Timing of these processes in fact are flexible and out of our concern for this paper, however it is a fact that while most of the developed economies liberalized their stock markets first, members of the developing world such as Asian Economies (and Turkey for our case) liberalized their domestic financial markets first. If we combine the real income disparities between developed and developing cases, such an experiment related with the timing of the liberalization process also seems as a good study area.

4.1 Historical Developments of Turkey for the post 1980 Era

In this sub section we will go over the developments in the pre and post 1980 liberalization period. Investigation of the deepening and economic growth will be left to the following sub section.

The pre 1980 period is a typical import substitution era for Turkey. Actually the basic reflections can also be observed in the financial markets. The protective attitude of the policy makers towards domestic market causes financial markets to be used as a policy instrument. If we summarize the conditions of financial markets in the pre 1980 period, deposit and credit interest rates were both controlled and the flow of funds mechanism was typically a repressed one; as defined by McKinnon (1973). Banks have limitations on their FX transactions and positions, individual investors were not allowed to hold FX in their portfolios, the protective attitude of the policy makers, which aim to subsidize the domestic producers by a set of instruments, causes incentive credits to be applied to selected industries²¹. In addition to those titles, heavy tax burden on income generated from any form of financial transaction when combined with the lack of corporate structure of the financial sector, entering the domestic financial system becomes less attractive. During the import substitution period policy makers accept the banking system as the sole source of funding. The problem is the inefficient usage of the system. In addition to that the entry barriers to the system, both domestically and also internationally, cause the oligopolistic system to work inefficiently. Again as discussed by the McKinnon and Shaw Hypothesis (1973) the high reserve requirements were also present in Turkey in the post 1980 era. Overall we realize that two major findings of McKinnon and Shaw Hypothesis (1973) is present for the case of Turkey in the pre 1980 era; Interest Rate Ceilings (causing even negative interest rates) and High Reserve Requirements. The McKinnon and Shaw Hypothesis (1973) call such an economy as a one which is highly repressed in terms of financial markets. It is accurate that other forces of Turkev for the pre 1980 period supports the repression of the domestic market, hence the significance of these indicators of McKinnon and Shaw (1973) lies in the universally accepted principle of interest rate deregulation and decline in reserve requirements as the date of liberalization in financial markets (mainly by the traditional view of financial liberalization).²²

Starting from 24 January decisions (1980) Turkey start to implement more liberal outward oriented policies. Restrictions on the goods market are abolished which is followed by liberalization of imports (1981-1985) and the start of promotion of exports. As we emphasized previously with the liberalization wind of 1970s and the constructed hypothesis of McKinnon and Shaw (1973), IMF's and WB's attitude towards developing economies signal the relaxation of the restricted measures in the financial markets as well as goods market by implementing more liberal policies. 24 January 1980 stabilization program was in fact tied to the liberal policies. The start of the export oriented approach in goods market is combined with the orthodox policy implementations signaled by the McKinnon and Shaw Hypothesis (1973) in financial

²¹ Actually the selectivity issue is questionable; the pre 1980 period also witnessed the inefficient distribution of credits as well as incentive contracts. See Yenturk, Kepenek (2004) for a detailed discussion.

²² See Kaminsky, Schukler (2001) for a brief observation of the traditional and new approach to financial liberalization's specifications.

markets. The post 24 January period is crucial in the sense that financial markets of Turkey start to realize a transformation process starting from 1980. In fact as signaled by Bandiera et al. (1998) the liberalization process that Turkey followed is a three stage one.

As Demirguç-Kunt, Detraigiach (1998), Bandiera et al. (1998), McKinnon (1973) and Shaw (1973) defined interest rate deregulation as a significant step of financial liberalization; liberalization of the financial system in Turkey starts with the deregulation of interest rates in 1980. First attempt was to increase the ceilings on interest rates, which is followed by the fully abolishment of the interest rate ceiling in 1981. Between 1981 and 1983 the oligopolistic structure of the banking system give some room for banks to keep interest rates at low even negative rates (by a private agreement: Gentlemen's Agreement), however increasing competition coming from a number of small and medium type banks (the so called bankers) the agreement is broken by the mid 1981s (Yülek; 1998). Interest rates become positive and start to rise in real terms. It did not take too much for new problems to evolve and after the collapse of a number of small and medium size bankers, the default of Banker Kastelli in mid 1982 was the major one, credibility of the financial system started to decline. Policy makers decide to give the large nine banks of Turkey the right to determine the interest rates. With the expectation of declining inflation rate, banks reduce the interest rates which in turn cause an intervention which is observed as the first significant reversal of the post 1980 era. In December 1983, Central Bank is authorized to determine the interest rates. This process continued until the mid 1987 in which one year interest rates were liberalized. The second deregulation process that started in the mid 1987 but unfortunately again lasted with the introduction of interest rate ceilings once more. Above all policy makers can not resist the pressures and the danger of currency substitution and in 1988 October interest rates are liberalized for the third time. The result was a jump in interest rates, which is one more time stopped by the ceiling implementations in November 1988. The next deregulation process starts in 1991 which can be implemented up to 1994s. As one can see the interest rate liberalization process is not a one shot process, there remains a number of reversals, but above all one can easily observe the change in the attitude of the policy makers towards a more liberal less repressed financial system.

Other than the deregulation of the interest rates a number of significant legislative developments occur in the post 1980s era, aiming to support the liberalization of the financial market by forming the institutional prerequisites as well as introducing new instruments. These measures are in fact in line with the emphasizes of Demirguc-Kunt et al. (1999) who call for the significance of regulative and legislative measures as significant determinants of finance economic growth link. In **1981 Capital Market Law (CML)** is declared with a first implementation to form **Capital Market Board (CMB) in 1982**. These background operations prepare the way for the opening of **Istanbul Stock Exchanges (ISE) in 1986**, which starts its operations in 1987. Aim is to offer an alternative funding way to the corporate firms at the same time allowing surplus units to be invested in more liquid markets. In 1983 **Protype Banking Law** is declared which is in effect up to 1985 in which **The New Banking Law** is declared. In 1986 Interbank Money Market starts and Central Bank starts Open Market Operations.

Prior to 1980, commercial firms have limited ability to issue commercial papers. After 1987 firms are allowed to **issue commercial papers**. On the opposite,

the public side, terms of <u>Government Bonds</u> are renewed and <u>Treasury bill</u> issue starts. The previous maturity of Government Bonds varies between 1 year and 10 years, after the implementations (1984) Government Bonds are started to be issued with a maturity of 1 year. In addition to that <u>Treasury Bills</u> are started to be issued on continuous basis (3,6, 9 months with auctions). A number of tax advantages and legislative measures are put as to promote investment in government papers.²³ In the following section we will observe the distribution of the financial assets, but right now we can comment on the increasing diversity of the financial instruments.

<u>Medium Term Rediscount Credit</u> (MTRC) which is applied by the Central Bank, was abolished in 1989. Previous aim was to satisfy the lack of medium and long term fund desire of the market. However such an objective made the Central Bank a major development bank which in turn causes dispersion from the major role of the Central Bank. In 1992 regulations on Repo, Reverse Repo and Asset Backed Security issues are announced and in 1993 operations start at ISE.

Finally if we observe the developments in the capital account and exchange rate regime, we capture a number of significant milestones for Turkey. First of all, the stabilization program of 1980 starts with a devaluation of Turkish Lira. Devaluation continues up to 1981 and after 1981 Central Bank starts to announce nominal rates daily. First leg of the implementations is successful in the sense that, implementations eliminate the multiple exchange rates (official exchange rate and the black market rate). The next important step is observed in 1984; Residents of foreign countries are allowed to invest in Turkish private securities, residents of foreign countries are allowed to transfer capital to engage in commercial activities, Turkish residents are allowed to carry foreign currencies and open FX accounts freely, domestic commercial banks are allowed to determine their own exchange rate within a given band (within a band of 6% of the rate determined by the Central Bank, 8% if effective). In addition to those measures banks are allowed to raise foreign currency dominated credits, Turkish Banks and residents are allowed to obtain credit from foreign sources.²⁴ The liberalization process of the capital account and the exchange rate regime is finalized in 1989 1990 period. First full convertibility of Turkish Lira and the abolishment of ceilings on private purchases of foreign currency are sustained. More importantly; residents of foreign countries are allowed to invest and trade in ISE. In addition to that foreign residents are given the right to transfer the income generated in Turkey through the banking system. Also Turkish citizens are allowed to invest in other foreign stock exchanges. For the Government Papers and Treasury Bills the same procedure is copied; foreign residents can invest in Turkish Government Papers and also Turkish citizens are allowed to invest in foreign countries' government papers. Finally foreign residents are allowed to open TL deposit accounts in Turkey. In each case transfer of principal and the interest amount is allowed.

²³ Banks are asked to hold 65% of the public deposits held by them plus 12% of their liabilities in the form of government paper. Banks also have to hold government paper as collateral to their transactions in the interbank market which also starts in 1986.

²⁴ Actually in 1984 Foreign Exchange Risk Insurance Scheme (FERIS) is build as to promote domestic private industrial companies to use foreign credit for financing fixed capital investments (Yülek;1998)

4.2 Results of the post 1980 Implementations

In this final sub section we aim to discuss the implementations and the results of the post 1980 period. For instance we want to start with first identifying our liberalization era. Next we will divide our discussion into two sections. We will combine the traditional ideas of McKinnon and Shaw hypothesis (1973) with the follower new generation models on bank based approach. Finally we aim to discuss the importance of capital markets in Turkey by following the new generation models that are capturing the basic objectives of stock market intermediation. In the following sections reader has to note that, we will deviate from the models in some cases; the major reason for using other indicators is to account for the country specific properties of Turkey. In fact those measures, which will be underlined later, aim to support the general discussion. End of the section will give a brief comparison of the major indicators under discussion.

4.2.1 Interest Rates and Reserve Requirements

As mentioned by Demirguç-Kunt, Detraigiach (1998), Bandiera et al. (1998), McKinnon (1973) and Shaw (1973) first emphasis should be given to the interest rate deregulation and the reserve requirements. Also underlined by Kaminsky, Schmukler (2001) although those measures are traditional and have to be supported by a set of other measures, the process that Turkey passed over during 1980s calls for the need for starting with the observation of the interest rates and reserve requirements. If we observe the reserve requirement ratios for the post liberalization era we can clearly capture the relaxation from Table 3. We can clearly see the high reserve requirement ratio at the start of the liberalization period, however as time goes there seems to be a clear decline in the reserve requirements both dominated in TRL and also in FX accounts.

Also combining the findings of Table 3 with the following figure may be meaningful. As demonstrated by figure 4, after the high increase in the banking system reserves to overall assets, the post liberalization period witnessed a declining trend in the reserve requirement to asset ratio. One can clearly estimate the significance of reserve requirements, since this ratio is a binding constraint against banks as to free up the funds collected from numerous lenders (depositors). The repressed system does not allow the sound transfer of savings of individuals to borrowers in the form of bank credits. However one should not call such a decline in the reserve requirements as a decline in the regulation of the system; whether a more efficient protection mechanism is tried to be sustained.

-		RequiredRe	eserveRatio	FXDepositsReserveR.			
	%	Sight	Time	Sight	Time		
	1980	35,0	30,0	0,0	0,0		
	1981	35,0	30,0	0,0	0,0		
	1982	35,0	30,0	0,0	0,0		
	1983	25,0	25,0	0,0	0,0		
	1984	25,0	25,0	0,0	0,0		
	1985	19,0	19,0	20,0	20,0		
	1986	15,0	15,0	20,0	20,0		
	1987	14,0	14,0	20,0	20,0		
	1988	25,0	14,0	20,0	20,0		
	1989	20,0	10,0	20,0	20,0		
	1990	19,0	9,0	15,0	18,0		
	1991	16,0	7,5	9,5	11,5		
	1992	16,0	7,5	9,5	11,5		
	1993	16,0	7,5	9,5	11,5		
	1994	16,0	7,5	8,0	11,5		
	1995	17,0	8,5	8,0	12,5		
	1996	8,0	8,0	11,0	11,0		
	1997	8,0	8,0	11,0	11,0		
	1998	8,0	8,0	11,0	11,0		
	1999	6,0	6,0	11,0	11,0		
	2000	4,0	4,0	11,0	11,0		
	2001	4,0	4,0	11,0	11,0		
	2002	6,0	6,0	11,0	11,0		
	2003	6,0	6,0	11,0	11,0		

Table 3 Reserve Requirements for TRL and FX Deposits

Source: Turkish Treasury





Source: WDI, 2004

Next if we try to capture the repression of the financial markets coming from repressed interest rates we come to realize that domestic deposit rates stood at 9% between 1970 and 1977. Moving towards 1980s we realize a movement in the deposit savings rate to 12%, 20%, and 33% in 1978, 1979, and 1980 respectively. As underlined in the previous section, liberalization of interest rates is not a one shot

process in Turkey; a number of reversals occur. However as Figure 5 indicates mainly after 1980s the previously repressed interest rates start to increase towards the market clearing rate. If savings deposit rates are observed from figure 5, one can easily underline the major mechanism of the banking system for generating the desired funds for the use of real side of the economy. Increasing interest rates will attract the surplus funds available but previously located outside the system, which in turn help a fund accumulation available for the use of units with deficits. However, we are aware of the numerous prerequisites and also supporting measures for this system to work. Actually we highly recommend for the reader to wait until the end of Section IV to capture the overall picture related with the effects of the implementations of the post 1980 period.



Figure 5 Interest Rates

Source: CBTR

In general as Yülek (1998) emphasized we capture the common increasing trend in the saving deposit rates from the above measures. However, a further observation seems to be promising at this point. We aim to compare the saving deposit interest rates and also the government oriented issued papers' interest rates. As deposit accounts are riskier than the government papers, we expect the average yield of the saving deposits to be higher than the government paper's yields. Following figure helps us to make a comparison between the average annual saving deposit rates and the average annual domestic borrowing rate of the Treasury. Figure 6 indicates that the risk premium, meaning the excess return that investors expect to earn by investing in the riskier instruments which is saving deposits for our case, is negative. For the post 1989 period we capture the fact that borrowing rate of the treasury is higher than the overall savings rate of the deposit accounts. Such a finding may be a source to critisize the well working of the McKinnon and Shaw Hypothesis (1973), which calls for increasing saving deposit rates as to attract the surplus units, the savings, of individuals. Such a saving accumulation will be transferred to capital accumulation and allocation by the sound banking system. Similar findings are also underlined by Yülek (1998, p 28). Yülek observes different government papers with different maturities. Later compare those instruments with deposits with identical frequencies. Results also indicate the negative risk premium between government papers and deposit accounts. ²⁵ Actually figure 6 tells a lot to an observer. Later when observing the composition of financial assets for Turkey, our current findings will be supported by the composition of financial assets. At this point before proceeding to the observation of the major indicators, we are faced with some possible problems that are expected to be detrimental to the finance economic growth link.



Figure 6 Comparison of Domestic Borrowing and Domestic Deposit Savings

Source: Turkish Treasury, SPO

4.2.2 Deposit and Credit Link

For capturing the savings accumulation we need to observe the deepening in the monetary indicators. First we aim to see the deposit volume and composition after the 1980 period. We aim to compare these indicators between the pre and post liberalization era. In our view as McKinnon and Shaw (1973) and later Levine and King (1993) emphasized other then the liquidity of the economy measured by the basic money indicators, distribution of the funds within domestic economy also seems significant. One striking figure in our view is the maturity distribution of the deposit accounts. In our view individuals and corporates attitude towards longer term investments in deposit accounts may be a source of long term finance for real side of the economy. When we observe the distribution of deposit accounts in terms of their maturities we come to realize that the share of time deposits as percentage of GNP tends to increase (see table 4). Findings indicate the increasing capacity of the system to generate and accumulate savings with longer durations. As Levine, King (1993) emphasized and as Merton Bodie (2000) emphasized such a process; increasing deposit share as a percentage of national income and also increasing duration seems favorable for long term capital budgeting cases. Note that such a view is applicable to the Schumpeter (1912) approach which underlines the necessity for long term finance for profitable capital intensive investments. Essentially at the start of 1980s the share of time deposits in the overall deposit pool was around 50%. Remaining volume was shared by time deposits with 1-year deposits with a share of 6.8%. However when we come to the end of 1980s; the share of demand deposits stood at 30% and time

²⁵ At this point we will stop and move on to composition of deposits and the allocated credits. Note that later we aim to combine the composition of deposits and other form of financial instruments. Further studies will be followed as to observe the weight of governmentally issued instruments' weight in the overall fund pool.

deposits with maturity of 1 year at 16% (both including the foreign exchange deposits).

Table + Distribution of De	posit m	ccounts as	a /0 01 01	1		
	1970,0	1980-1985	1986-1990	1991-1995	1996-2000	2001-2004
FOREIGN EXCH. DEPOSITS	0,0	1,7	6,3	11,8	19,6	24,4
TOTAL TL DEPOSITS	17,3	18,4	19,1	14,7	21,9	23,1
TOTAL SAVING DEPOSITS	12,0	10,1	10,8	8,4	13,2	13,7
- Demand Deposits	8,2	2,5	1,6	1,0	0,8	1,0
- Time Deposits	3,8	7,6	9,2	7,4	12,4	12,7
COMMERCIAL DEPOSITS	3,4	5,6	5,3	3,0	3,9	4,7
OTHER DEPOSITS	1,9	2,8	3,0	3,4	4,8	4,6
TOTAL DEPOSITS	17,3	20,1	25,4	26,5	41,5	48,0

Table 4 Distribution of Deposit Accounts as a% of GNP

Source: SPO

Next when we compare the composition of deposit accounts between Turkish Lira dominated ones and the foreign exchange dominated ones, figures are striking. After the mid 1980s, with the ability of Turkish citizens to hold FX and open FX accounts, we realize a clear change in the composition. Actually comparing the basic money indicators may be influential at this point.

Table 5 Basic Money Indicators

		1970-1975	1976-1980	1981-1985	1986-1990	1991-1995	1996-2000	2001-2004
M2 / GNP		21,75	19,71	24,09	21,37	16,42	19,31	24,33
M2Y / GNP		21,75	19,71	24,78	27,55	27,66	41,02	48,06
~	979							

Source: SIS

Actually figures indicate the move of the general level of money supply when we compare the pre and post liberalization era. However the gap between M2 and M2Y which indicates a simple currency substitution increases mainly after 1990s.²⁶ This indicates that savings of agents in Turkish financial markets move away from the national currency towards foreign dominated currencies. Yeldan called such a process as a simple dollarization attempt in Turkey for the post liberalization era (2001; p 133).

For a better representation of the composition of the deposit accounts following figure may be helpful. As captured from figure 7 both commercial deposit and other forms of deposits have a very small share. The striking finding of the figure is the increasing share of deposits (as % of GNP); however more importantly the increasing share of Foreign Exchange Deposit accounts can also be captured from the figure.

²⁶ Reader may compare the figure with the one in the previous one that we calculated for World Bank data. One may easily remember the variable M2Y; the reason is the classification of World Bank. WDI uses M2Y as the broadest money indicator definition before M3Y. So those measures include the FX dominated deposits.





Source: SIS

Next we aim to discuss the credit side of the mechanisms and the effects of the liberalization period to the credit generation capacity of the system. Actually as discussed by Levine, King (1993) the deposit volume increase is a sign of liquidity increase and also availability increase for financing the real side activities. Following figures will guide us to capture the other side of the mechanism.

Table 6 Credit Composition of Turkey as a % of GNP

	1970	1980	1985	1986-1990	1991-1995	1996-2000	2001-2004
CENTRAL BANK CREDITS	7,70	12,35	3,68	3,80	3,99	0,83	0,15
DEPOSIT BANKS CREDITS	17,81	14,90	15,75	18,17	16,36	21,50	15,36
DEV. AND INVEST. BANKS CREDITS	7,22	3,34	1,83	1,78	1,66	1,33	1,27
NET CREDITS VOLUME	28,87	25,51	20,17	22,49	21,21	23,56	16,63

Source: SIS, SPO

Table 6 includes the traditional measures that can be used as to observe the financial depth of the markets as well as a number of new measures that are underlined by the new mechanisms of Demirguc-Kunt, Levine and Beck (1999). These extensions underline that basic problem of the liberalization experience of Turkey. Although overall deposit volume is managed to be increased (as a % of GNP) we capture the stability (and in some periods even decline) of the credit volume of the economy. Overall one can easily realize the decline in the overall credit share but more importantly the table also underlines the decreasing role of Central Bank as to sustain fund to the market. In addition to those measures the weight of development banks in the credit pool declined from 7% to a drastic level of 1.2% in 2000s. Another item that needs attention is the general credit of the deposit banks which does not show a significant movement through out the period. When we add figure 8 to our discussion we can capture the pattern more clearly. Figure 8 can be useful as to capture the path of credits in Turkey for the pre and post liberalization period of 1980s. Two measures are observed; overall domestic credit provided by the banking sector and the domestic credit by the banking sector for the use of private sector. First of all we come to realize that for both measures of credit base, we can not observe a change that is expected by the McKinnon and Shaw Hypothesis (1973). As mentioned in the first part of this sub section, the liberalization process somehow managed to increase the deposit volume. However we can clearly note here that both table 7 and

figure 8 indicates the failure of the system to transfer the savings of the economy into investment thus real side activities. Mainly the domestic credit to GDP measure is a significant one; after 1980 there exists a small upwards movement in the share of domestic credits to private sector, however this measure is far away from the move in the deposit volumes which show an increase after the liberalization era. A final comment related with the maturity of the credits can be captured from Yülek (1998). A medium and long term credit to GNP ratio was 5% in 1981. The ratio stood at 2.8% in 1994 and the trend between 1981 and 1994 is clearly a downward one.

If we aim to sum up the effects of the liberalization period in terms of the accumulation of savings and transfer of these savings for investment activities figures can be observed as follows; first of all there occurs an increase in the overall deposit volume, although this increase is still not a sufficient one, we can underline the success of the first implementations as to capture the savings of the agents. When we observe the composition of these savings we realize the increasing share of time deposits which seems to be a positive development for the finance of the long term projects. The problematic part of the composition comes from the increasing currency substitution after 1985 as Turkish citizens are allowed to open FX dominated deposit accounts. When we aim to combine the figure of savings with the real side of the mechanism, we aim to concentrate on credit base of the economy. Figures are drastic in the sense that although a very small increase is observed in the credit base after the liberalization start up, the movement in the credit base is observed to be away from the accumulation coming from the savings of individuals.



Figure 8 Credits provided by Banking Sector (as % of GDP)

4.2.3 Financial Asset Composition

Actually the composition of financial assets and the possible effects on capital allocation is a neglected fact by the observations prior to Demirguc-Kunt, Levine, Beck (1999). Neither McKinnon - Shaw (1973) nor Levine and King (1993) do not take into account other financial assets. As we review in section III, extensions of Demirguc-Kunt et.al. (1999) calls for observations related with the financial assets other than the deposits in the system. In fact Yeldan (2001) and Yülek (1998) underlined the importance of the composition of financial assets in Turkey for capturing the full effect of the liberalization era. One of the most significant claims of

Source: WDI, 2004

the authors is related with the unhealthy mechanism of the public sector. In fact reader can remember our conclusion in the previous sub sections related with the average yield measures of public borrowing and saving deposits. In this sub section we will continue our claims related with the conflict between the average yields of those instruments and search for the identifications of Yeldan (2001) and Yülek (1998).

as % of GNP	1980	1985	1988-1993	1994-1999
Securities	2,10	5,50	13,62	28,93
Gov.Bonds	1,20	1,80	5,24	9,22
Treasury Bills	0,20	3,30	6,50	18,33
Private Sector Stocks	0,40	0,30	0,58	0,75
Private Sector Others	0,30	0,10	1,30	0,63
Deposits	9,80	18,70	19,70	29,03
Demand Deposits	7,60	4,80	3,28	0,72
Time Deposits	2,20	11,80	9,16	10,58
FED	-	2,10	7,26	17,73

Table 7 Pe	ost Lib	eralization	Period	and Financia	il A	sset (Compositio
------------	---------	-------------	--------	--------------	------	--------	------------

Source: SPO, Yeldan (2004)

Table 7 indicates the developments of the post 1980 era. By taking into account the financial assets we can capture the deepening coming from increasing diversity of new financial instruments. Overall share of securities which stood at 2.1% of GNP in 1980 comes to a level of 29% in 1999. Similarly the deposit volume of 9.8% in 1980 becomes 30% in 1999. Both measures indicate the move of the surplus funds into the financial markets by a set of different instruments. However the distribution of the financial assets when observed carefully we come to realize the out of the 30% of securities 27% is dominated by governmentally issued papers. In fact the distribution of the financial assets can be capture from figure 9 better. If we combine table 7 and figure 9 we can realize the major property of the liberalization period in Turkey. Although financial system seems to deepen when the security and the deposit composition is observed; for the distribution of securities we realize the heavy weight of public which is an indication of the need for public finance instead of real side activities.²⁷ Like the conflict between deposit accumulation and credit distribution, securities market when observed show us an unhealthy picture. The theory that is demonstrated in the previous sections calls for a new source of financing through different sources; such as private sector bonds and private sector stocks. The mechanism is explained in the previous section and we will discuss the developments in more details in the following sub section. However at this point it is worthwhile to note that the share of private sector instruments which are expected to generate the desired funds of the private sector stays at very low levels. When we combine the problem of credit accumulation we end up with a number of doubts to be discussed under the context of economic growth in the conclusion of this section.

²⁷ Reader has to note that findings of this section can be combined with the indicators discussed in the previous sub sections related with the average yield figures of the basic indicators.





Source: SPO, SIS

Both measures indicate that, financial instruments' diversity increases with respect to GNP, however a more careful observation underlines that this illusionary deepening in the financial markets mainly resulted from the accumulation of public instruments. Yeldan (2004) underlines that such an increasing weight of public in the financial asset pool have three possible shortfalls; "(*i*) Public Finance Policy starts to substitute the role of central bank's monetary policies which gives unlimited source of funds for the use of public sector, (*ii*) Treasury becomes the monopoly of the credit pool which is a major source of inefficiency in the usage of credits, (*ii*) Public Sector Borrowing Requirement (PSBR) in turn causes public (Treasury) to enter financial markets with instable frequencies, resulting in increasing uncertainty." (Yeldan; 2004, p. 132).

Actually increasing PSBR which is reflected in the above figures can also be a determinant to the conflict between deposit volumes and credit volumes. As we emphasized previously although the economy manage to increase the deposit volume as a percentage of GNP, we can not realize an increase in the credit base by the same amount. When the behavior of the banking sector for the post 1987 period observed, figures can be more meaningful. In our view Yeldan's calculations (2001) are informative in the sense that figure 10 puts the picture clearly that banks become the major customer of the public sector. Actually figure 10 is a good measure to show the behavior of the banking sector. The finance theory and also McKinnon and Shaw Hypothesis (1973) call for a flow mechanism for banks as to transfer the surplus savings of depositors into real side activities. However figure 10 is informative for showing the behavior of banking system that is not desired by the theory. The increasing deposit and stable low credit level conflict can be meaningful after observing the findings of Yeldan (2004).



Figure 10 Public Sector Borrowing Distribution in terms of Receivers

Source: Yeldan (2004)

4.2.4 Stock Market Developments

In this final sub section, for observing the liberalization era for Turkey we aim to observe the stock markets of Turkey. As indicated in the previous section ISE was reopened in 1986. Here reader can also realize our move towards the most extended mechanisms of finance growth link. Here as Yeldan (2001) underlined the weight of stocks as fixed income securities never exceed 1% of the GNP. Figure can be captured from table 7 and table 8 in fact. Measures in table 8 are calculated from CMB and SPO data sets (where 1994=100). Table indicates the low volume rose from the capital markets. Only in 2000 the fund raised from the stock issue exceeds 2%. This signals the insufficiency of ISE to satisfy Demirguc-Kunt, Levine (1993, 1995). Demirguc, Levine (1993, 1995) underlined the role of stocks market as to perform the basic financial intermediaries' role. Also Demirguc-Kunt et al. (1999) underlined the significance of primary issues. Both view when applied for Turkey and ISE, we come to realize the insufficiency. Stocks market in Turkey seems to fail to facility a financial intermediary role as expected by Demirgu-Kunt, Levine (1993, 1995) However we insist on observing the developments of Turkish Stock Markets. We aim to observe the basic indicators that Arestis, Demetriades (1997) and Levine, Zervos (1998) discussed. Turning back to traditional indicators we aim to observe the size and liquidity of ISE. After observing these measures we will make a general comparison of ISE and a number of other stock exchanges as to decide the relative position of ISE.

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
PI/GNP*	0,21%	0,27%	0,29%	0,43%	1,05%	0,70%	0,49%	0,48%	0,97%	0,65%	0,67%	1,01%	1,25%	0,78%	2,16%	0,56%
		Source	: CMB	, SPO												

*PI: Primary Issues in ISE

If we start our discussion related with the performance of the stock markets after 1987 following figure may be informative. As Arestis, Demetriades (1997) and Levine, Zervos (1998) use in their empirical observations and as Demirguc-Kunt, Levine (1993, 1995) discussed in their financial intermediation work, we demonstrate the size and liquidity measures of ISE in the figure 11.



Figure 11 Basic Indicators of Stock Market Development for ISE

Source: WDI, 2004

As clearly capture from the above figure we can easily realize the shallowness of stocks market in terms of the size measure. Although the size of the stocks market is higher than the primary issue volume (which represents the general primary funds raised), the market capitalization (meaning the value generated by the secondary markets) measure does not seem to realize any significant upwards movement. Other than 1999 we realize that the ratio stood at levels less than 20% historically. However when we observe the liquidity of stock markets we realize the success of Turkey mainly in terms of turn over ratio. If we combine the findings of Levine, Zervos (1998), which are discussed in the previous section, we may underline the expected significant contributions of the ISE. Also discussed by Bencivenga, Smith and Star (1995), equity market's increasing liquidity will decrease the transaction cost and in turn will stimulate short term savings to finance long term investments. The question in our mind is the conflict between the liquidity measures and the size measures (mainly the general fund raised in the primary markets). Bencivenga et al. (1995) underline that increasing liquidity in the stocks market will attract both sides of the capital markets; corporate firms and individual investors. As the stocks market becomes more liquid individual investors will find more attractive to enter the exchange, though they have the ability to close their position by trading in the market before the distribution of profit. On the other hand, corporate firms have to be faced with increasing demand for their claims because of the liquidity. However although ISE seems to look like a very liquid stock market (mainly with respect to middle income countries) the desired volume of funds can not be raised historically. Above all these are the expectations of the stock market based approach to finance growth link. Before proceeding, we aim to observe the relative position of Turkey in terms of stock market development.

Karan, Karacabey (2003) observed the capital market's soundness in Turkey and significantly underlined the place of ISE between the emerging markets. We aim to first observe the traditional measures of stock based approach to finance economic growth link. Actually Karan, Karacabey (2003) also followed the traditional indicators but instead of observing the relative values with respect to national income they try to observe the level effect of the traditional indicators. They reviewed the position of ISE between the emerging markets and end up with the following measures. First of all they observed the number of firms quoted to the stock exchange and next demonstrate the increase in this number between the periods of 1990-2000. Both measures although shows improvements we come to realize that Turkey lag behind most of the emerging economies. In fact this figure is also supported by the overall market capitalization of Turkey. The absolute market capitalization of Turkey gives a place in the middle of the emerging economies. Next when the liquidity of the stock markets is observed we realize the success of Turkey in the emerging economies. Turkey stood to be the fifth country for value traded measure and also for turnover measure in 2001 (see S&P Emerging Markets Review). Actually these three measures which are observed at a single point in time are supported by our historical analysis above. Overall the stocks market in Turkey although seems to be small with respect to other emerging and middle income economies, its liquidity seems to significant.

Finally we also make a contribution to Karan, Karacabey (2003) by observing the measures relative to national incomes. Note that authors choose to observe the absolute levels of the basic indicators. For a starting point we try to observe the position of Turkey within the middle income countries.²⁸



Figure 12 Stock Turnover Ratio (%) in 2002

Actually figure 12 indicates the liquidity of Turkish Stock Exchange with respect to a number of middle income countries. Note that because of lack of data some of the economies are removed from the sample. Reader can also combine figure 12 with figure 13, both indicating the high liquidity of ISE. As observed historically from figure 11 mainly turnover ratio seems to improve over time. This can be directly associated with leadership of Turkey in our sample of middle income countries.

Source: WDI, 2004

²⁸ See World Bank Development Indicators for a brief classification. Turkey is classified as a middle income country at the low end of the sample. We will try to realize the relative position of Turkey within the low middle income countries first. Note that following the first representations we will also compare the position of Turkey with respect to a number of developed economies.

Before we move on and observe the market capitalization of Turkey figure 13 can also be informative. For 2002 and 2003 the liquidity measure of exchanges are observed with respect to the national incomes. Results are demonstrated in figure 13. Turkey's leading place in this indicator is also observable.



Figure 13 Stock Traded (% of GDP) of Middle Income Countries

Finally we observe the market capitalization position of Turkey within the middle income countries. Results are demonstrated in figure 14. Note that figure 14 unlike table 8, observes the values of the secondary market. Overall one can also capture figure 14 as the general cumulative market values of the firms quoted to ISE. Figures indicate that Turkey stood at the low end of the sample with a ratio of 20% approximately (in 2002). For observing the deepness of the stock exchange the measure can indicate the small size of the stock markets in Turkey with respect to the middle income countries. After capturing the relative position of Turkey and ISE, in the middle income countries, we aim to extend our observations by capturing the relative place of Turkey in the industrial countries. Note that like the previous discussion we will concentrate on the current place of Turkey. Results of our comparison can be observed in the appendix. Market capitalization measure indicates the insufficiency of ISE. The figure seems to be worse than the one demonstrated for middle income countries. The liquidity measures which are indicated as the strong side of ISE between the middle income countries underline that Turkey managed to outperform some of the industrial economies in terms of stock market liquidity However again the figures do not put Turkey to the leading ones as realized in the middle income sample.

Source: WDI, 2004





Source: WDI, 2004

In short both the middle income sample and also the industrial economies sample underline the liquidity of ISE with a low market size. The liquid feature of the ISE seems to be far away from the findings of Bencivenga et al. (1995), who called for increasing fund transfer to the stock exchange under a case of liquid stock markets. At this point we accept the possible doubts to the mechanism but leave the issue for further investigation.

4.2.5 Growth and Capital Formation after the Liberalization Era

In this final sub section we aim to observe the real side of the economy. Both measures of money market including the capital markets indicate similar findings. Turkey stood as a more liberal economy with deeper financial markets for each of the measures observed with respect to the previous era. However, reader has to be aware of the insufficiency of these measures to satisfy the major indicators of McKinnon, Shaw (1973) and also its followers Levine, King (1993) and Levine, Zervos (1998).

As we emphasized, the starting point is the McKinnon and Shaw (1973) for understanding the effects of liberalization of financial markets. However the process that we follow, as the reader can capture, mainly relies on the development path of the financial markets. As one may remember, the liberalization era is the period for Turkey that the major developments are observed. In line with McKinnon and Shaw (1973) we also follow Levine, King (1993) as to have a broader view of financial markets. Actually Levine, King (1993) is the most extended version of McKinnon, Shaw (1973) before the models that include the stock market effect. Following patterns may help one to observe the behavior of the real side of Turkish economy for the period in which Turkish Financial Markets realize its significant transformation (the liberalization era).

	1950-1960	1961-1970	1971-1975	1976-1980	1981-1985	1986-1990	1991-1995	1996-2001
GNP Growth	6,39	5,67	6,09	1,99	4,70	5,80	3,35	3,90
GFI/GNP	19,47	23,04	20,49	22,59	23,71	24,83	19,46	18,40
Source	SD()							

Table 9 Periodical Average GNP Growth Rates and Gross Fixed Inv. (% GNP)

Source: SPO

If McKinnon and Shaw Hypothesis (1973) can be an applicable theory for Turkey, as it is applicable for developed economies (demonstrated by McKinnon (1973)), we expect to see a rise in the national growth rate of the economy after the turning point of the financial markets²⁹. We can remember from the previous section that after the liberalization era the overall deposit volume of Turkey (as % of GNP) has an increase in the early years (see table 5). However as one can capture from Table 9 that; excluding the 1976-1980 period (the very low growth rates is the result of the contraction in 1979 and 1980 with -0.5% and -2.8% respectively) Turkish economy have an average growth rate of 5%. Theory indicates post liberalization era has to realize higher growth rates for the economy. Table 9 gives the picture clear that; the post liberalization era seems to be below the pre liberalization era's measures in terms of GNP growth. In addition to the national growth rates, we can also capture the investment figures. What McKinnon and Shaw Hypothesis (1973) expect that, a more liberal financial system will increase the savings first and then with the effective allocation of these savings through the system, an increase in the investment figures are also expected. However table 9 gives us the impression of the insufficiency of the system to realize the jump in the investment figures with respect to the previous era. The basic reason behind this measure can be captured when we more from McKinnon, Shaw (1973) to Levine, King (1993).

Actually as emphasized in the previous section, when we move from McKinnon, Shaw (1973) to Levine, King (1993), we can capture the problem of Turkey. What McKinnon, Shaw indicates is just a small part of its followers. Levine, King (1993) underlines that other than the deposit volume and composition, it seems to be crucial for the economy; how those funds are used. As underlined in the functional approach in section II, one of the major functions of banking system is to transfer the savings of individuals and corporate (in the form of deposits) into real activity based investment opportunities (in the form of credits). What we mostly observed for Turkey is that; the rise in deposit volumes can not be matched with an equal increase in the credit pool. In addition to that although the share of time deposits increase, signaling the availability of longer term fund usage for private sector, credits provided to private sector does not change its volume (as % of total credits). Post 1980s era, when observed the major indicators of M2 and M2Y satisfied the McKinnon and Shaw (1973) hypothesis. Although measures seem to lag behind developed and even some developing economies, we come to realize the increase clearly. The problem for McKinnon and Shaw (1973) to explain the Turkish case is that neither the investment figures nor the national income growth figures show a significant change with respect to the previous non liberal repressed era. Actually as

²⁹ As emphasized in section 3; with the abolishment of the restrictions in financial markets, economy is expected to realize a mechanism between financial side and the real side. As McKinnon and Shaw (1973) emphasized the removal of interest rate ceilings and the decline in reserve rate requirements will directly stimulate the growth rate of economies.

emphasized previously it seems to be informative to observe the major determinants of Levine, King (1993) as to understand the story. The extended measures of Levine, King (1993) can not be satisfied by Turkey for the post liberalization era. Actually the discussion followed in the previous sub sections related with the deposit and credit volumes may give the reader a hint about the weak side of the Turkish Financial Liberalization.

When we go one step further and observe the composition of financial assets, as *Demirguc-Kunt et al. (1999)* remarks the significance of the composition, we observe the unhealthy distribution of the financial assets. We realize the heavy weight of government oriented assets in the financial markets. Both debt and equity instruments of private firms seem to have a very small share in the overall financial asset volume. Remember that the finance theory underlines the need for different financing strategies for corporate firms. Other than the credit channels of banks and other lending organizations, corporate firms have the ability to raise funds through the capital markets by issuing debt (bonds) and equity (stocks) instruments. However the figure that we point out in the previous sub section (table 7) shows clearly that, Turkish private corporate firms' debt and equity claims (as a different source of funding) has a very low volume in the overall financial assets. Actually in terms of Demirguc-Kunt et al. (1999) the slow growth rate of economy can not be rationalized; Turkey seems to fail to generate the desired financial asset distribution as Demirguc-Kunt et al. (1999) emphasized.

Finally if we aim to observe the most extended model to observe our major question; we are faced with an interesting figure. As Yeldan (2004) emphasized the low significance of stocks market in Turkey (ISE) causes a negligible expected effect on the economic growth. While we agree with Yeldan (2004) we insist on the observation of the stock markets. Again we observe the similar results like the previous observations. As Levine, Zervos (1998) emphasized the liquidity measures of stock markets is a good proxy for measuring the effects of stocks market development on economic growth. They underline the weak effect of stock market capitalization on the economic growth. Surprisingly Turkey stood as a very liquid stocks market with a low and stable market capitalization. However the figures can not signal a one way relation between the liquidity increases and the economic activities. We conclude that Levine, Zervos (1998) model can not be an applicable one when the case of Turkey is observed. The liquid feature of the stock markets in Turkey does not encourage the gross fixed investment. Remember that theory of stock market development and economic growth indicates that; as stock markets become more liquid the transaction costs will decline which increase the possibility to finance long term investments with short term savings of the individuals (Bencivenga et al. 1995). However this seems not to be the case in Turkey.

To sum up, we realize that the real side of the economy can not sustain the desired movement of the finance growth theory. Even when we observe the most extended models, we come to realize the unhealthy features of Turkey. Although Turkey realizes a transformation after 1980s, the effects of this transformation seem to be far away from the expectations. We are also aware that the unhealthy structure of the financial markets calls for a separate analysis of the liberalization and development implementations' criticism. However in line with the major aim of this

study, we will finalize here and number out the basic problems of the post 1980 era by reviewing the models discussed above.

"First of all although a volume of savings is absorbed from the markets by abolishing the controls on the interest rates, Turkish Banking Sector can not transfer the surplus to the real economy. Secondly although the diversity of the financial assets increases after the 1980 liberalization, we realize the low share of private sector instruments. The majority of the volume is captured by public financial assets, coming from the increasing borrowing needs of the Treasury. Third and finally stocks market although seems to satisfy the prerequisites of the theory, we come to realize the negligible contribution of the stocks market to the real side of the economy."

5. Conclusion

The relation between finance and economic growth is tried to be rationalized by following a theoretical functional approach first and an empirical one next. The historical developments on the literature of finance and economic growth underline the move from a narrow definition towards broader one. What the functional approach in short underlines is just the background of the empirical approach. Overall we come to realize two specific models after the contributions of McKinnon and Shaw (1973); (i) Bank Based Approach, (ii) Stock Market Based Approach. Generally speaking the contributions of Levine, King (1993) and Levine, Zervos (1998) can not be rationalized in the absence of a number of influential studies; Bencivenga, Star (1993) and Bencivenga et al. (1995) are the basic micro models that followed the functional approach as to build up a way for further empirical analysis. After reviewing those models we come to realize the significance of the following indicators in the finance economic growth theory; deposits volume representing the liquidity, credit volume representing the transferability of savings, financial asset composition representing the diversity, liquidity of stocks market representing the transaction cost of the equity transfer, market capitalization representing the overall value of the stock exchange, primary issue volume representing the success of the equity transfer as to accumulate the desired capital base.

When we apply the previous understanding for a developing economy, Turkey; we come to realize a number of facts that seems crucial for making policy lessons for mainly developing economies. In addition to that markings of the study also suggest further attention of a developing economy against the possible threats coming from the globalization of financial markets and increasing innovation capacity of the global financial markets. As markets and instruments start to become more complex, it also becomes more complex to control these mechanisms.

We note to the reader that the models discussed in the first two parts of the study is the impulsive force behind the observation followed in section IV. It is accurate that different approaches and methods can be used for examining the post 1980era for Turkey; however in our understating discussing the mechanisms outlined in the first two sections is informative in the sense that, new policy measures can be constructed for developing economies at the start of their financial transition.

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Appendix





Source: WDI, 2004



Figure 16 Stocks traded, total value (% GDP) of Industrial Countries and TUR

Source: WDI 2004



Figure 17 Stocks traded, turnover ratio (%) of Industrial Countries and TUR

Source: WDI, 2004