

Chapter 6

Conclusions and Recommendations

6.1 Introduction

This thesis began by introducing how financial repression, through interest rate ceilings, high reserve ratios and directed credit programmes led to low savings, credit rationing and low investment. With bankers not rationing their available funds according to the marginal productivity of projects but according to their own discretion, investment suffered both in terms of quantity and quality. The McKinnon (1973) and Shaw (1973) analysis suggested liberalisation of financial markets so that as the real rate of lending adjusted to its equilibrium level the total supply of credit would expand, inducing a higher volume of investment. It was postulated that economic growth would be stimulated both through the increased investment as well as an increase in the average productivity of capital.

Following on that work has been the conclusion that to achieve efficient resource allocation, credit markets needed to be supplemented by well functioning equity markets. Equity finance, unlike bank borrowings, not being subject to adverse selection and moral hazard effects. Thus it was seen as essential for successful financial liberalisation that the substantial development of equity markets be encouraged. However, more recent research from developing country stock markets showed that these markets did not complement the effects of credit market liberalisation but in rather important respects subverted them. Developing countries that implemented credit market liberalisation and raised their real interest rates only increased the price of debt capital rather than all capital. This precipitated a share price boom in many of them. When the price of equity capital fell sharply it seriously undermined and indeed allowed large private corporations to skip altogether the main channel of high real interest rates through which the McKinnon-Shaw effects were supposed to operate.

This study used time series cointegration analysis to examine the impact of stock market development on South Africa's industrialisation and long-term economic growth - testing the thesis that stock markets spur on such growth. In this last chapter the literature reviewed is briefly summarised in the following two sections to show how the research question was arrived at. Section 6.4 outlines the methodological approach used, as well as returns to the hypothesis that was framed, while Section 6.5 recaps the results arrived at. Having done this Section 6.6 presents recommendations that may be applied in the South African context if finance is to provide the conduit for encouraging economic growth.

6.2 Repression and Liberalisation

Despite encountering scepticism from many quarters over the years, the McKinnon-Shaw analysis had a significant impact on the advisory work of the International Financial Institutions, who were keen to promote financial liberalisation as part of their overall liberalisation reforms of developing countries. Unfortunately the experience from such countries executing these reforms have been disappointing, with, in Latin America for instance, many banks even collapsing. The econometric evidence coming out of these experiments have been mixed at best.

Advocates of financial liberalisation pointed to deposit insurance (implicit and explicit), inadequate banking supervision and macroeconomic instability as reasons for why liberalisation failed where it did. They claimed that these factors created conditions for excessive risk taking by banks (a form of moral-hazard) that lead to too high real interest rates, firm bankruptcies and subsequent bank failures. This then led to the debate entering its second round, that saw, along with the traditional McKinnon-Shaw prescription, the inclusion of adequate banking supervision (aimed at ensuring banks held well diversified loan portfolios), macroeconomic stability (in terms of low and stable inflation as well as a sustainable fiscal deficit) and changes in emphasis of the channels through which interest rates affect investment and growth. The World Bank then also came to acknowledge that the effect of higher interest rates on the total amount

of saving was ambiguous as substitution and income work in opposite directions. However, they continue to maintain that financial savings are adversely affected by repression, that in turn affects investment productivity and through this, the economic growth rate. The literature review chapters of this thesis began by surveying the classical growth and development models, their extensions and their effects on saving, investment and growth. It then went on to reconsider the prerequisites for successful de-repression the first round posits were either ignored or insufficiently incorporated.

Essential to the McKinnon-Shaw model is: a saving function that responds positively to both the real rate of deposit interest as well as the real rate of output growth; an investment function that responds negatively to effective real loan interest rates and positively to growth rates; a nominal interest rate that is administratively fixed so as to hold the real rate below its equilibrium level; and finally, the inefficient non-price rationing of loanable funds. In that model rather than allocating credit according to the expected productivity of funded projects banks allocate credit according to transaction costs and perceived default risk. Also influencing allocation was the quality of collateral, political pressures, 'name', the size of the loan and even covert benefits loan officers receive. However, the model offers that even if allocation were random, the average efficiency of investment would still be reduced as the loan rate ceiling is lowered making investments with lower returns profitable. Entrepreneurs who were previously deterred from requesting bank loans, enter the market and adverse selection from a social welfare perspective occurs as interest rates are set too low – producing a disequilibrium credit rationing effect.

Interest rate ceilings distort the economy as: low interest produces a bias in favour of current over future consumption, thereby reducing saving below socially optimum levels; potential lenders, instead of lending by way of bank deposits, engage in relatively low-yielding direct investment; bank borrowers choose to invest in relatively capital intensive projects as they are obtaining all the funds they want at low rates; and, entrepreneurs with low-yielding projects, who would

not wish to borrow at the higher market clearing interest rates, are contained in the pool of potential borrowers. To the extent that a bank's selection process contains an element of randomness, some projects that are financed will have yields below the threshold that market-clearing interest rates would self-impose. It thus appears logical that raising the interest rate ceiling toward its competitive market equilibrium level would increase both saving and investment. In situations of disequilibrium changes in the real interest rate follow the saving function. Also de-repression, or raising the interest rate ceiling, would deter entrepreneurs from undertaking all low yielding investments, as these would no longer be profitable at the higher real interest rate. The McKinnon-Shaw argument was that with the average return to or efficiency of investment increasing, the output growth rate that increased with it, would increase saving further. This made the real interest rate as the return to savers key to higher investment levels and, as a rationing device, to greater investment efficiency. Such an increased quantity and quality of investment would interact positively on the output growth rate. Growth in repressed economies was seen to be constrained by saving even though plentiful investment opportunities may abound. The McKinnon-Shaw prescription was that such repressed economies either raise institutional interest rates or reduce inflation.

Even if interest rate ceilings were altogether abolished, this would still not produce the optimal result of maximizing investment and raising its average efficiency because the endogenous constraints to efficient credit allocation were not addressed. Given the presence of informational costs about the riskiness of borrowers, equity finance was touted as being able to ensure the optimal allocation of investible funds. Financial liberalisation in developing countries, if the allocative efficiency of investible funds was to be maximised, would require the establishment and expansion of stock markets.

6.3 Intermediation and Stock Markets

Although most developing countries have the banking sector as their predominant organised capital market, by not dealing with its structure (often cartelised and oligopolistic) the earlier literature neglected the potential role stock markets could have for efficient capital allocation and risk sharing in liberalised environments. Despite the benefits advocates of liberalisation propose, many developing countries are hesitant to liberalise their financial systems or return to repression after short-lived attempts at liberalisation. Korea for instance, after its experience with liberalisation in 1965, returned to a repressive policy in 1972, as did Argentina ten years later. Even industrialised countries like Japan hesitated to fully liberalise their markets until the mid 1980s. Many of these developing countries had to resort to repression as they found it practically impossible to satisfy inter-temporal budget constraints with conventional tax revenue and thus had to rely on revenue from inflation tax. Repression also enabled them to reduce interest costs.

Cho (1986) was among the first to contend that full scale liberalisation of the banking sector would not achieve efficient capital allocation where well-functioning stock markets were absent, making the substantial development of these markets a necessary condition for complete financial liberalisation. He held that until a country had an active equity market it would have to settle for a second best approach to financial liberalisation in which some government intervention in the credit market, although contrary to presumptions in the literature, had to be maintained. He sparked a wide literature that demonstrated that for a given degree of imperfect information, capital would be allocated more efficiently through equity markets. Indeed, in the presence of strong informational constraints, bank liberalisation through simply eliminating interest rate ceilings and securing free competition only, would by no means assure allocative efficiency improvements. Banks, it has been demonstrated, have imperfect information in that while they may be able to distinguish between groups of borrowers they cannot distinguish among individual borrowers in the same group. With the informational uncertainty this brings, establishing and expanding equity

markets should enhance allocative efficiency since equity finance takes up those riskier yet potentially super-productive projects that particularly suffer informational asymmetries while banks concentrate on their well established, safer, borrowers.

In the allocation of savings to their most efficient and productive endeavours institutions of intermediation do matter. This is because more efficient resource allocation translates into increased productivity and growth through the accumulation of physical capital, improvements in intangible capital types as well as through human capacity development. To fully grasp this position requires that a more comprehensive notion of capital stock as comprising three components be accepted. The components being: productivity enhancing intangible capital, physical capital; as well as, general human capital. By definition then, the building of a superior financial system should include the establishment and expansion of capital markets. This system, by causing a permanent decrease in the cost of accumulating productivity enhancing capital, raises the rewards to investment in physical and general human capital. A new, higher, growth path, at which all factors of production are higher, is thus set into motion. This is how financial intermediation is linked first to productivity and then through this, to economic development.

A crucial issue in allocating resources to firms is to check that management undertake sensible strategies. It is here, through the provision of incentives for a large number of investors to monitor what the firm is actually doing, that stock markets provide a great advantage. Since this is a repetitive decision making process, compared with banks where checking occurs only a relatively few times, its value is evident. Banks would, in theory, be the better option, only if there is consensus on what actions management should take - their function then simply being to ensure that it takes them. In industries where there is wide disagreement on what optimal policies exist, by being able to distil the wisdom of the market place, stock markets provide superior functions to banks.

Chapter 3 looked at whether there could be benefits both for international investors and developing countries that expanded their stock markets. Diversification benefits across international financial markets are stronger than within domestic ones, leading to a lower correlation of equity returns from different countries than those from the same one. This benefit is highlighted in developing countries where stock returns have even lower correlations with those from industrialised ones. Participating in these markets is thus likely to lower overall unconditional portfolio risk. For the developing country the stock market can be an even more important vehicle for capital raising than mature markets are for their corporations. Capital markets and in particular stock markets enable investors to diversify wealth over a wide variety of assets with greater ease than is usual for most other financial markets. Since the overall risk is reduced, the risk premium is similarly reduced and the cost of capital falls. Taken as a foreign equity market, foreign investors are even more diversified and consequently able to enjoy the benefits of a lower risk premium, which may be significant.

Given what has already been mentioned about the more frequent screening and monitoring role for particular projects, stock markets as opposed to banks perform, relying on the information sets and judgements of numerous participants enables stock prices to quickly reflect changes in underlying values and indicate profitable investment opportunities. This continuous adjustment of stock prices assists in the monitoring of public corporation managers and through this could possibly improve corporate governance. Adding a foreign investment perspective to this, which brings with it international best practices and cross country experiences, may be quite useful. With the number of publicly traded companies in developing countries increasing this monitoring role should be expected to take on increased importance. Finally, it is essential, if the financial system is to function well, that the whole financial sector functions efficiently. There are important relations and complementarities among the various financial institutions from both the deficit and surplus unit's perspective. Thus a well functioning equity market may have positive externalities for the rest of the financial system.

However, it is predominantly through the creation of liquidity that expanding stock markets affects a country's economic activity. Many profitable investments require the commitment of long term capital but investors are often reluctant to relinquish control over their savings for long periods. Thus, liquid equity markets, by allowing savers to acquire an asset (equity) and sell it quickly and cheaply should they need to access their savings or to make portfolio alterations, make investment less risky and thus more attractive. At the same time companies have the benefit of permanent access to capital raised through equity issues. By facilitating these longer term and more profitable investments, liquid equity markets improve capital allocation and through this, promote long-term economic growth prospects. In addition, as these investments become less risky and more profitable it may be expected to lead to more saving and investment.

At this point some may wish to argue that expanding an emerging stock market exposes a developing country to inherently unstable short-term flows requiring policy intervention. However, when the time series properties of short and long term flows have been examined no significant differences were found. This suggests that if only their time series effects are considered, it is not possible to tell the label of a flow. Further, since there is often much substitution between the various flows, the only meaningful analysis may be of the capital account in aggregate. The inference here is that any capital control programme or other policy (such as subsidies or taxes) that aim to discourage a particular type of flow, believed to result in a volatile behaviour, may be misguided or ineffectual. More likely to be effective in dealing with volatile flows are appropriate macroeconomic policies that aim at achieving a desired capital account behaviour.

The textbook theory advanced thus far, has been challenged by many who believe that while stock markets are potent symbols of capitalism, capitalism may in fact flourish better without them. They argue that stock market expansion in developing countries and the capital inflows that result may hinder rather than promote long-run growth as: problems of asymmetric information, moral hazard

and adverse selection lead to missing and incomplete markets to which financial markets are particularly prone; investment inflows into these countries are often speculative with investors simply following the herd rather than basing decisions on fundamentals; the wild expectations that internal liberalisation generates may lead to an over-borrowing syndrome; external liberalisation and the expansion of stock markets force the interaction between equity and foreign exchange markets both of which are highly unstable particularly in developing countries; foreign investors require liquidity in what are essentially high risk markets resulting in foreign capital flows that are short-term in nature while late industrialisation requires patient long-term finance; and finally, under developing country conditions, the critical deficiencies of the pricing and takeover mechanisms are accentuated.

Given these two conflicting views of the potential impact stock market expansion may have, especially for developing countries, it is important for South African policymakers and businesses to have the research question of what effect the expansion of our stock exchange has had for our economic development answered.

6.4 Methodology

While there are two essentially divergent views on the role of stock markets in promoting growth, there are also primarily two different econometric methodologies - cross country regressions and time series regressions. In relation to cross country regressions a great deal of scepticism exists, with even the users of the technique acknowledging the result sensitivity themselves. First, the heterogeneity of slope coefficients across countries create problems; then, as the estimated coefficient on the convergence term contains asymptotic bias, convergence tests obtained from these regressions are likely to mislead; the technique is built on a belief in the existence of stable growth paths though recent research shows that long-run growth patterns are unstable, making result variation difficult to interpret; and finally, cross country regressions can only refer to the 'average effect' of a variable across countries and differences in causality

patterns across them is likely. [While there has been some attempt at using simultaneous equations these same criticisms would apply as the systems are normally estimated by pooling data across countries. Also, these systems may suffer from the problem of dynamic heterogeneity inevitably leading to inconsistent parameter estimates].

Since it is concerned with the South African experience alone, this study accepted that a time series analysis would yield deeper insights into the relationship between financial development and real output than a cross country regression. The null hypothesis being that as far as the financial architecture in South Africa is concerned the development of the JSE Securities Exchange has stimulated the country's economic growth.

The mainstream literature surveyed and the hypothesis advanced, together suggests a reasonable basis for believing that a causal relationship between stock market development and economic growth does exist. A model that incorporates indicators for economic, banking sector and stock market development as well as stock price volatility was built. A battery of tests such as the Engle-Granger ordinary least squares and Johansen maximum likelihood tests were executed on these indicators within a bivariate framework in order that directionality and causality be assessed. While not a perfect and limitation-free methodology, bringing with it the attendant difficulties of incomplete variables, finite data sets, lag length arbitrariness and data mining, Granger causality it is proposed, may still adequately though conditionally be assessed from the indicators chosen.

6.5 Results and Discussion

The earlier discussion in this study pointed to the essential elements of financial infrastructure needed to facilitate economic performance in developing countries. Infrastructure should be important for growth due to its role in effectively mobilising savings into capital and channelling that capital into its most productive uses. The model advanced in the methodology of this study

incorporated indicators for economic growth as well as banking sector and stock market development. To that model an indicator of market volatility was also added. Immediately it is obvious that the relative merits of market-based versus bank-based economies needed to be understood. To do this use was made of the information feedback function of markets. A primary feature of financial markets is that equilibrium prices formed within them provide valuable information concerning the prospects of investment opportunities to the real decisions firms make. How important the given financial architecture is (*i.e.*, whether it is market based or bank based) should depend on how effectively markets perform that feedback function (supply side argument) and the impact that market information has for the firm's decision making (demand side argument).

The descriptive statistics in Chapter 5 showed that while South Africa has a relatively large stock market, measured by market capitalisation, it is a thinly traded one. Thus, while the conglomerate stock market development index was made up by three equally weighted variables of size, integration with world capital markets and liquidity, multiple regression revealed that it was liquidity that had the greatest influence on that variable. This helps explain why, when the model as a whole was put through an ordinary least squares regression, a negative and statistically significant relation between stock market development and growth was uncovered. This contrasted sharply with the positive relation the regression held for the link between bank credit extension to the private sector and economic growth. Cointegration analysis detected only one significant vector normalized on economic growth and Granger causality subsequently showed that the greatest probability was that growth caused bank credit extension.

This general finding of reverse causation for the South African economy has been reported previously by Demetriades & Hussein (1996). While their study wasn't concerned essentially with financial architecture, it did ask the question of whether financial development causes economic growth of 16 countries. To measure financial deepening use was made of two ratios. The first was the ratio

of bank deposit liabilities to nominal GDP, which it was thought, by excluding currency in circulation from the broad money stock, would be a more representative measure than M2 for instance. This is in line with the McKinnon-Shaw school as well as the literature on endogenous growth which maintains that a large component of the broad money stock in developing countries is currency held outside the banking system. The latter having more to do with the extent to which transactions are monetised than with an increase in the volume of bank deposits. The second ratio they used was that of bank claims on the private sector to nominal GDP. Similar to the logic applied in this study they felt that as it is the supply of credit to the private sector that the McKinnon-Shaw inside money model holds as being responsible for the quantity and quality of investment and in turn for economic growth, this variable may be expected to exert a causal influence on real GDP per capita.

Changes in a financial development stage, the authors believed, would show up in one or both of their ratios. And, using both ratios in their analysis would help them provide more refined information regarding competing theoretical explanations (*ie.*, McKinnon's outside money model *viz.* Shaw's debt intermediation hypothesis and McKinnon-Shaw *viz.* post-Keynesian views). Their first set of causality tests was based on the levels VAR approach and for South Africa their test statistic suggested that financial development causes real output growth. The authors themselves discounted this possible conclusion as the result was obtained with the second financial indicator for which none of their test statistics showed clear evidence of cointegration. However, when they subjected the first indicator of bank deposit liabilities to nominal GDP to the Engle-Granger Error Correction Model test, not only was cointegration detected but also reverse causality between it and growth as well, clearly refuting their initial hypothesis that finance is a leading stimulant for growth in South Africa.

In this current study, concerned as it is for the impact of stock market expansion on South Africa's economic development, with the ordinary least squares regression showing a statistically significant negative relationship between that

expansion and output over the 13 year period under consideration and causality tests on the ability of that expansion to cause growth being inconclusive, the null hypothesis could not be supported.

6.6 Recommendations

While it is true that this study found inconclusive the ability of bank credit extension to Granger cause economic growth, the fact that the OLS regression held a positive relation between the two and that being part of a cointegrating relation implies that they are stationary, the role it could play in stimulating growth should not too hastily be relegated. What is important is that the conclusions arrived at should help policymakers design appropriate financial sector reform strategies. Levine (2002) considered countries with very different financial systems and growth rates and used a dataset that measured the size, activity and efficiency of various components of the financial system, including banks, securities markets and nonbank financial intermediaries for a wide assortment of developed and developing countries. The study measured financial structure by using new data on the regulatory restrictions bank activities are subject to, as well as their ability to own and control firms.

That study found there to be no cross-country empirical support for either the market-based or bank-based views. Neither architecture was found to be particularly more effective at growth promotion and these results were robust to an extensive array of sensitivity analyses that employed different measures of financial structure, alternative statistical procedures as well as different datasets. The evidence that Levine (2002) uncovered is consistent with what is coming to be known as the financial services view. Essentially this view maintains that while better-developed financial systems positively influence economic growth, it is relatively unimportant for economic growth whether that financial deepening stems from bank or market development. Given that South African policymakers need to be guided as to how they should go about developing the country's financial architecture so as to capture the benefits overall financial sector

development brings, the recommendation made here is that greater attention be given to banking-sector development than to the expansion of the stock market.

While one of the major reasons that market-development has been encouraged thus far has been its ability to quickly and publicly reveal information, this may in fact reduce the incentives for individual investors to acquire information in the first place. In this regard, since banks form long-run relationships with firms and do not reveal information immediately in public markets they may mitigate this problem. Further, seen as coordinated coalitions of investors they are better than uncoordinated markets at monitoring firms and reducing postlending moral hazard (asset substitution). The alternative, of seeking to make the JSE Securities Exchange more liquid by enabling investors to inexpensively sell their shares, may actually reduce the incentives they have to exert rigorous corporate governance. Through hindering corporate control, economic growth could be stifled as a result.

Merton & Bodie (1995) and Levine (1997) in advancing the financial services view, minimize the importance of the bank-based versus market-based debate. Rather they stress that financial arrangements – contracts, markets and intermediaries – arise to ameliorate market imperfections and provide financial services. These arrangements come about to assess potential investment opportunities, exert corporate control, facilitate risk management and ease savings mobilization. Different financial systems promote economic growth to a greater or lesser degree through the provision of these services more or less effectively. The emphasis thus shifts from simply banks or markets to the creation of an environment in which those intermediaries are able to provide sound financial services. The starting point of which must be the financial architecture that exists at present.

Recently there has been a growing acknowledgement among policymakers that South Africa comprises two economies in dual simultaneous Pareto-rankable

equilibria. The first economy has a high equilibrium sustained by the self-fulfilling expectation that participants need to be globally competitive and highly innovative, while the second economy is characterised by the (also self-perpetuating) belief that the pace of industrialisation is necessarily slow. Now while there is a socio-political history that may explain why the second economy has come to find itself stuck in the lower equilibrium there has been almost no attention paid to which institutions may remedy the coordination failure that is maintaining that low equilibrium.

Da Rin & Hellmann (2002) in looking at the evidence from three continental European countries that experienced periods of rapid industrialisation: Belgium (from 1830 to 1850), Germany (from 1850 to 1870) and Italy (from 1894 to 1914) focused on what role the banks of those countries played in their industrialisation. They uncovered several very interesting common patterns. In each of the countries a small number of banks accounted for the bulk of investments in the industries that generated rapid economic growth. They invested in a portfolio of firms that depended on each other and that together pioneered new markets and industries. From the very beginning of the rapid-growth periods the banks were large oligopolists that held powerful market positions and offered universal banking services, much like the banking situation that currently exists in South Africa with its four main banks.

The starting point defending this recommendation is a generic big-push model where two Pareto-rankable equilibria exist. Within this environment banks may help induce the second economy to move from the low to the high equilibrium by mobilizing a critical mass of firms (*i.e.*, by investing in a set of firms and by so doing inducing other banks and firms to invest in the second economy as well). However, since a bank will only invest in such a critical mass if it expects to recover its losses, this requires that the bank be able to make profits on some additional firms outside the critical mass, probably in the high equilibrium economy. Simply put, banks will only play a catalytic role if they are sufficiently large to invest in a critical mass of firms and they will need enough market power

to recoup the costs of mobilising that critical mass. The banking system as it is currently arranged in South Africa places the four major banking groups in just this kind of position.

In Belgium critical to the successful industrialisation of its economy was the action of the *Société Générale pour favoriser l'industrie nationale*, the world's first joint-stock investment bank, which became active in industrial finance from the early 1830s. As well as the *Banque de Belgique* which, founded in 1835, engaged in industrial finance from the outset. These two banks accounted for about two thirds of the capitalisation of all industrial credit banks and were financed mainly with their own capital, until 1850 their deposits never accounting for more than 25 per cent of their liabilities. They assisted and actively encouraged firms in fast growing industries to adopt the corporate form in order to raise large amounts of external finance. Between 1835 and 1838 alone, the *Société Générale* organised 31 industrial joint-stock companies and the *Banque de Belgique* 24. A large share of their own capital was invested in industrial equity 31 per cent for the *Société Générale* and 26 per cent for the *Banque de Belgique*. They identified industries with high growth potential to which they extended credit and in which they acquired equity participations. In so doing they enhanced the coordination of investment decisions by otherwise scattered entrepreneurs. Bank managers consulted their clients on business strategies and sometimes even acted as their financial managers. Through this banks carried out intense coordination of industrial activities.

Germany, often cited as the quintessential case of bank-driven development experienced between 1850 and 1870 a quick industrialisation that allowed it to become the first economic power on the continent. Its industrial credit banks, *Kreditbanken*, by combining commercial and investment banking activities and nurturing close relations with industry, played an active role in that development. Most of the industrial credit activities were carried out by four banks: the *Schaaffhausen Bankverein*, the *Disconto Gesellschaft*, the *Bank für Handel und Industrie* and the *Berliner Handelsgesellschaft*, whose capitalisation accounted

for nearly half of all industrial credit banks (of which there were 40) and they were also much larger than the locally operating unincorporated industrial credit banks (Privatbanken). These four banks whose average founding capital was 33 million Marks compared to only 1 million for the average Rhenish Privatbankier, mainly used their own capital as a source of finance. The Prussian state government granted incorporations discretionally and entry as a Kreditbank was restricted. The credit channelled by Kreditbanken increased at an average yearly rate of 19,4 per cent between 1852 and 1870 from 20 to 492 million Marks and between 1851 and 1870 they helped 259 firms to incorporate up from 102 in the 25 years preceding this. The Kreditbanken acted as universal banks, providing loans and issuance of securities for their clients but also and importantly retaining equity positions in those firms. Such equity holdings absorbed much of the bank's capital: from the 13 per cent of the Schaaffhausen Bankverein to the 50 per cent of the Bank für Handel und Industrie. While many of these equity holdings arose from illiquid loans during the 1857 economic slump, with time several of them became profitable. The personal nature of their business relationships allowed them to elicit and circulate information effectively and to have a strong influence on investment decisions. The contribution of German bankers to the mobilisation of capital operated not only on the supply side but also on the demand side; by organising and allying themselves so closely with industrial enterprises, bankers both strengthened and represented the demand for investment funds.

Private industrial credit banks (*banche di credito ordinario*) played a key role in channelling savings toward industrial high growth sectors and in influencing the direction and timing of investments in Italy. The Banca Commerciale was founded in 1894 and the Credito Italiano in 1895 and together they controlled nearly two-thirds of the assets of all industrial credit banks. Their funding came from their own capital rather than deposits, which typically accounted for less than a quarter of liabilities. Between 1900 and 1913 Italian joint stock companies grew from 848 to 3069 and between 1900 and 1907 they raised about 2,7 billion Lire on the stock exchange. In 1897 there were 30 companies listed on the Milan

Stock Exchange, by 1908 this number had grown to 169. Both the Banca Commerciale and the Credito Italiano played a major role in planning and financing these operation, encouraging firms to incorporate and then helping them issue equity and bonds. Between 1894 and 1906 the Banca Commerciale took part in 145 capital market operations and the Credito Italiano in 84. Investments in industrial securities (equity and bonds) by the Banca Commerciale and the Credito Italiano ranged from five per cent to ten per cent of assets between 1895 and 1906 and contributed a corresponding share of net income. Large loans to large industrial firms accounted for another 20 to 30 percent of assets and income. The net income of Banca Commerciale Italiana rose from 1,3 million Lira in 1895 to 12,7 million in 1913 and that of Credito Italiano from 0,9 to 5,4 respectively. In both cases income growth was steady and accelerating. Like Belgian banks with investment trusts, Italian banks managed their industrial participation through subsidiaries, but unlike their Belgian counterparts they did so by acquiring control in industrial companies which served as holding companies. Not only capital but a great deal of entrepreneurial guidance was channelled to the expanding enterprises. The bankers maintained an intimate connection with the industrial enterprise and nursed it for quite a while before introducing it to the capital market.

Returning to the fundamental big-push model, the introduction of banks does not immediately change its fundamental insights. With perfectly competitive financial markets, the model continues to have two equilibria. Thus a catalyst as an agent whose actions precipitate a change of equilibrium has to be introduced. For banks to act as catalyst requires that they have sufficient market power, comprised of both a cost advantage to recover the losses from mobilising the critical mass as well as be sufficiently large so as to mobilise that mass. Equity of course would lower the cost of mobilising that mass if the intuition of constraint elimination is accepted. At lower off-the-equilibrium profits, firms are just willing to invest, in equilibrium however, higher profits obtain. With a pure debt contract, the firm would receive the entire difference between these two payoffs. Taking an equity stake thus allows a bank to share in this difference which reduces the cost

of mobilising the mass. Hence the elimination constraint prefers equity over debt. Thus being a catalyst would not be driven by government intervention but by the bank's goal of profit maximisation. The role that is being recommended here stems not from the banks ability to intermediate savings but rather on its preparedness to make investments. In this sense while it matters that the bank has enough funds to finance a large number of firms it is not prescriptive whether these are depositor funds or arise from other sources.

For policymakers then the task should be one of ensuring that the right conditions exist where banks can play this catalytic function. Governments can do this by encouraging banking groups to further their universal banking initiatives, as these banks should have a competitive advantage over banks restricted to pure loan financing. As well as by allowing them to hold equity positions as the minimum size of a catalytic bank is lower if it can make equity investments.

In South Africa the four main banking groups are sufficiently large and have enough market power to act as catalysts. They are also sufficiently networked to reach a diverse set of complementary firms and influence their investment decisions. Regulations should therefore allow them to remain large and powerful if they agree to take up that role. While this means that although, at least for the medium term, the South African banking sector would remain relatively oligopolistic, the current comparative advantage these four main banks enjoy should not require specific protection, for instance, through barriers to entry. In exchange these bank's responsibilities would then be to actively seek out new firms, underwrite their stock, finance potential shareholders, hold stock in their own names, place officers on the boards of directors of the companies they are promoting and minister to their needs for both working capital as well as new capital for expansion. Guiding the financial system along this path may be just the stimulus our country needs.

6.7 Implications for Further Research

Financial markets comprise both money markets where short-term debt securities are bought and sold as well as capital markets which deal with long-term instruments. Although this study has been concerned with the South African capital market and its effect on real output, it has made recommendations that many participants in both the money markets and capital markets may be uncomfortable with. The recommendations of course, came from the fact that there was cointegration between growth and the measure of banking sector development and that cross-country experience holds that countries are better off reforming and expanding their group banking systems than expanding stock markets. This, because reforming the system absorbs fewer resources directly and is an easier option in terms of institutional capacity required. However, the recommendations advanced here should not be taken as being the last words on financial sector development in South Africa.

This study has noted the absence of any significant causal relation between stock market development and growth and indeed suggested that the relationship may even be negative. In the main it has ascribed this to the low liquidity of the market. Capital market proponents may offer that emerging countries in many parts of the world have had much success increasing the liquidity of their markets through mechanisms such as the elimination of marketable securities tax on secondary market trading and securities lending and borrowing transactions. As well as increasing the use of securitization, special purpose asset vehicles and personal equity and retirement accounts which also involve elements to rationalize taxation on the creation of new financial schemes, instruments and taxes. Such measures they argue, would go a long way toward providing a more levelled playing field for participants and by eliminating impediments for transactions and trading, encourage liquidity in the market.

This study has also advocated that the South African banking system continue to remain relatively cartelised, provided they agree to play the universal bank function and act as coordinated investment groups. However, several money-

market participants would argue that unless a greater amount of competition is introduced, the spreads between depositing and lending rates will remain internationally skewed and, the significantly greater bank fees and charges levied would not be pressurised. Together, this will not foster a culture of saving among South Africans that is also vital for economic development.

These arguments are certainly valid and deserve further study. In particular it may help to examine those developing countries that have implemented these reforms and then create statistical simulations of what impact they could likely have for the economy, if implemented here. Financial sector development is a process and as such there will always be alternate avenues to explore. The recommendations that have been made in this study simply acknowledge that often it is more realistic and achievable to begin with what already is and build from there.