

The Development of Stock Markets: In Search of a Theory

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ABSTRACT: This paper aims to provide a framework for the main determinants of stock market development. Assessing stock market development requires not only an understanding of its main determinants but also a clear definition of what “stock market development” means and how progress towards it can be measured. This paper reconsiders the concept of stock market development and suggests five dimensions for assessing it. In addition, it proposes four sets of factors that shape or determine stock market development: supply factors, demand factors, institutional factors and economic policies. While both supply factors and demand factors serve as “building blocks” of the stock market, institutional factors and economic policies serve as “supporting blocks. The paper concludes by emphasizing three principles. First, stock market development is a difficult, complex, multi-faceted, and long-term process. Second, stock market development is only part of the overall development of a country’s financial system. Third, stock market development is mainly a private sector activity.

Keywords: Stock Markets Development; Measurement of Stock Market Development; Demand for Stocks; Supply of Stocks; Institutional Factors

JEL Classifications: G1; G15; G18; G19

1. Introduction

The idea that financial development promotes economic growth dates back to the works of Bagehot (1873) and Schumpeter (1912). Following their early arguments, the pioneering research of Gurley and Shaw (1955), Goldsmith (1969), McKinnon (1973) and Shaw (1973) paved the way for modeling the role of financial development in economic growth. More recently, extensive empirical research has supported the hypothesis that well-functioning financial systems augment economic growth (e.g., Levine and Zervos, 1998a, 1996; Rousseau and Wachtel, 2000)

In principal, stock markets lie at the heart of financial systems. The primary function of stock markets is to serve as a mechanism for transforming savings into financing for the real sector. From a theoretical perspective, stock markets can accelerate economic growth by mobilizing and boosting domestic savings and improving the quantity and quality of investment. Better savings mobilization may increase the rate of saving and if stock markets allocate savings to investment projects yielding higher returns, the increasing rate of return to savers will make savings more attractive. Consequently, more savings will be channeled into the corporate sector. Efficient stock markets make corporations compete on an equal basis for funds and help make investment more efficient.

Beyond this aspect of their role in the economy, stock markets perform many other important functions. Stock markets can perform an “act of magic” by permitting long-term investment to be financed by funds provided by individuals, many of whom wish to be able to withdraw them at will (Baumol, 1960). In addition, stock markets can increase the efficiency of the financial system through competition among different classes of financial instruments. This, in turn, can augment the return on savings for those who save, and can as well lower the cost of raising funds to borrowers. Stock markets also may improve accounting and tax standards as investors request more and better information in order to compare different corporations’ performance. It logically follows that, as a result, it would be in the corporation’s best interest to provide that information to facilitate thorough comparisons between competing corporations. One outstanding benefit of the existence of stock markets is the potential imposition of greater discipline in the area of economic management: being sensitive to policy changes, particularly monetary policy, stock markets, through their very existence, help enhance policy creditability.

In light of the fact that empirical research supports the premise that stock markets promote economic growth, over the past decade research has shifted to the question of the determinants of stock market development. Understanding both the dynamics and the determinants of the development of stock markets is not only crucial to understanding the relationship between finance and economic growth, but also has important policy implications as it sheds light on areas that need government action to make the economic and institutional environment conducive to stock market development.

While the question of what determines stock market development has gained considerable attention in the empirical research recently, with the exception of the attempt of Calderon-Rossell (1991), theoretical research on the issue is in the very earliest stages. Reality is complex and the dynamics behind the development of stock markets are hard to capture. Yet, it will be necessary for fruitful and well-focused future research to make use of a framework for analyzing those dynamics and to develop a financial theory of stock market development.

The main purpose of the present paper is to “search” for a comprehensive theoretical framework to explain stock market development and, it is hoped, as well, to establish a foundation for such a framework. The structure of the paper is as follows: Section II reviews the related literature; Section III discusses and reconsiders the concept of “development” from a stock market perspective; Section IV proposes a framework for stock market development, and Section V concludes the paper.

2. Literature Review

Calderon-Rossell (1991) was the first to develop a partial equilibrium model of stock market growth. To date, this model represents the most “serious” attempt to lay the foundations of a financial theory of stock market development. However, as a partial equilibrium model, it fails to take into account, for instance, the potential effects of government policies and institutional factors.

Exploring what determines stock market development has become a prominent area of research in recent years. Generally, the existing literature outlines two sets of factors affecting the development of stock / financial markets: “macroeconomic factors” and “institutional factors”. Macroeconomic factors include economic development level, inflation and capital flows, etc., while institutional factors include variables that reflect the state of regulatory and supervisory institutions, such as legal frameworks and the protection of property rights, etc. It is worth mentioning that these two sets of variables are interrelated. For instance, the evolution of the institutional environment is directly reflected in macroeconomic conditions and, by the same token, a favorable macroeconomic environment facilitates the development of institutions. Consequently, the mentioned division in the literature is, in the view of many, provisional, and does not imply alternative views on the determinants of stock/financial market development (Adarov and Tchaidze, 2011).

On the “macroeconomic factors” side of the question, the literature on stock market development has found that the more developed a country is, the more deeply entrenched will be its stock market (La Porta et al., 1997; Rajan and Zingales, 2003; La Porta et al., 2006). Several studies find that financial openness and liberalization increase stock market activity (Levine and Zervos, 1998b; Henry, 2000; Bekaert and Harvey, 2000; and Edison and Warnock, 2003). Garcia and Liu (1999) investigated the macroeconomic determinants of stock market development in a sample of Latin American and Asian countries. Their findings show that GDP growth, domestic investment and financial intermediary sector development are determinative in stock market development. Domowitz and Steil (1999) highlight the direct impact of a reduction in trading cost on turnover and the much more important indirect effects of a reduction in trading cost on the cost of equity.

Henry (2000) finds a strong relationship between the growth rate of investment and changes in stock market valuation measured by returns on the stock market, the turnover ratio, and the traded value as a share of GDP. On the other hand, McCauley and Remolona (2000) and Shah and Thomas (2001) find that the size of the economy is an important factor in the development of liquid and well-functioning securities markets. Mishkin (2001) argues that financial liberalization promotes transparency and accountability, which reduces adverse selection and moral hazard. It thus tends to reduce the cost of borrowing in stock markets, which eventually increases their liquidity and size.

A large pool of studies has investigated the impact of inflation on capital markets. An important finding of these studies has been that high levels of inflation are associated with less liquid and smaller financial markets as financial intermediaries tend to lend less and allocate less efficiently. Boyd et al. (2001) find negative effects of inflation on private credit and equity markets. Interestingly,

they argue that the relationship between financial development and inflation could be nonlinear, with a particular threshold level after which the financial sector experiences an abrupt drop in performance. Claessens et al. (2001) find that privatization programs and foreign direct investment contribute to stock market development. Further, Perotti and Oijen (2001) argue that privatization has an indirect positive impact on stock market development through political risk reduction. Naceur et al. (2007) show that macroeconomic factors such as income, saving rate, and financial intermediary development are important determinants of stock market development for a panel of countries in the MENA region. In a sample of 40 emerging markets over the period 1980-2000, El-Wassal (2005) examined the relationship between stock market growth and economic growth, financial liberalization and foreign portfolio. The findings show that economic growth, financial liberalization and foreign portfolio investments were the leading factors in the expansion of stock markets.

Yartey and Adjasi, (2007) found that financial intermediary sector development tended to increase stock market development in Sub-Saharan Africa, controlling for macroeconomic stability, economic development and the quality of legal and political institutions. In addition, Yartey (2008) has demonstrated that stock market development has a nonlinear relationship with banking sector development. That is, stock market development is initially supported by banking sector development through trade intermediation. Yet, as stock markets develop, they begin to compete with financial institutions in financing investment. In a later study, Andrianaivo and Yartey (2009) examined the impact of a range of macroeconomic factors on both banking sector and stock market development. Their findings show that stock market liquidity, domestic savings banking sector development and political stability are the main determinants of stock market development.

Overall, the range of economic factors underlying stock market development can be roughly aggregated to the level of economic development, the size of the economy in question, the level of financial openness, the inflation rate, privatization, domestic saving, banking sector development and economic growth.

As for the “institutional factors” side of the question, the empirical literature shows that countries with better institutional framework tend to have more developed stock markets. North and Weingast (1989) show that improved checks and balances, credible commitments and upgraded property rights in England during the seventeenth century led to the development of stable capital markets. Pagano (1993a) shows that regulatory and institutional factors could influence the efficient functioning of stock markets. That is, compulsory disclosure of reliable information and financial data on listed companies may increase investor participation, while regulations that enhance investor confidence in brokers could enhance investment and trading in stock markets.

Erb et al. (1996b) show that expected returns and the magnitude of political risk are positively related. They find that both in developing and developed countries, the lower the level of political risk, the lower the required returns. The results suggest that political risk plays an important role in investment decisions and decreases the cost of equity, and consequently may have important implications for stock market development.

La Porta et al. (1997, 1998) argue that the origin of a country’s legal system affects the level of financial development. A common law basis is more conducive to the development of capital markets than a civil law basis, as the flexibility of the common law legal system allows for protection of small investors. Moreover, they find that countries with a lower quality legal regime and poorer law enforcement exhibit smaller and narrower capital markets and that the listed companies on their stock markets are characterized by more concentrated ownership. La Porta et al. (2000, and 2002), Perotti and Van Oijen (2001), Galindo and Micco (2004) and Djankov et al. (2005) argue that strengthening property rights, credit protection and investor protection through company laws and commercial codes, as well as disclosure of companies’ activities and proper accounting rules and practices are key determinants of the development of corporate securities markets.

More recent empirical research emphasizes as well the important role of access to international markets in fostering the development of local financial markets. Capital account liberalization broadens the investor base, enhances efficiency by weeding out inefficient institutions and creates pressure to reform (Claessens et al, 2001).

Impavido et al. (2003) and Claessens et al. (2003) argue that the development and particularly the liquidity of financial markets depend also on the existence of a diversified class of institutional investors. Mutual funds, pension funds and insurance companies act as a stable source of demand for

equity and debt securities. They foster competitiveness and efficiency in primary markets and create an incentive for the establishment of a robust regulatory and supervisory framework. In this regard,, Catalan et al.(2000) examine the determinants of stock market development for OECD countries and for some emerging economies. Their findings suggest that, setting aside the issues of macro stability and legal rights, contractual savings institutions positively affect stock market development.

Yartey and Adjasi (2007) shows that political risk and institutional quality are strongly associated with growth in stock market capitalization. The results suggest that the establishment of quality institutions can be an important factor in the development of stock markets. Other institutional factors as well, such as law and order, democratic accountability and bureaucratic quality are important determinants of stock market development.

Chami et al. (2009) argue that financial markets will develop if borrowers and lenders are willing and able to enter into contracts, and liquidity providers find conditions conducive to trading created financial instruments. They also emphasize the importance of regulatory structure in supporting this process by removing obstacles that render potential borrowers, lenders and liquidity providers unwilling or unable to play their roles and by creating an appropriate incentive for each agent to fulfill their end of the bargain.

The key insight of the strand of research that emphasizes the role of institutional framework in the development of stock markets identifies the following factors: political stability, quality of legal institutions (particularly with respect to investor protection), law enforcement, disclosure of reliable information and a diversified investor base.

It is worth highlighting that while the literature has examined a variety of macroeconomic and institutional factors, the marginal impact of each individual factor is difficult to isolate as they are, of necessity, interrelated, and the causality relationship between them and stock market development is a complex process to unravel.

3. Stock Markets: The Quest for “Development”

Does a “developed” stock market mean a large or a liquid market? Does “developed” mean a “highly performing” market? Does the rapid growth of emerging stock markets, for instance, mean that these markets are– or are about to become – developed markets?

Although the term “developed” is widely used in the literature on stock markets, a precise definition of the term cannot be found. The commonly used measures to assess stock market development are stock market size and stock market liquidity indicators. But are they enough or sufficiently comprehensive to assess the development of stock markets? It is important to identify the dimensions of stock market development so that appropriate policies, measures and actions may be formulated and activated to help stock markets to “develop” and also to diagnosis existing weaknesses. However, does this not require some criterion or criteria by means of which the status of a stock market can be assessed?

Principally, it needs to be stated that growth and development are not the same thing. For a stock market to grow means that it increases in size or liquidity. To develop implies increasing or improving a stock market’s ability to satisfy an economy’s needs as stipulated among the main functions of stock markets. Stock market development is better reflected in the quality of services provided by a stock market than in its size, liquidity or its index performance. If a stock market were flooded with money, it would be more liquid but not necessarily more “developed”. On the other hand, a well-developed market can serve the economy better with its size and liquidity than one of the same size and liquidity that is less developed. This is not to say that size and liquidity are irrelevant. Large size and greater liquidity can improve the ability of a stock market to serve the economy, but they can best be utilized for this purpose via markets which are developed. Stock markets - and this is the case with many emerging stock markets-can grow too much, but can it be argued that they are capable of developing too much? Moreover, stock market growth and development do not have to conflict - they can reinforce each other. The distinction between stock market growth and stock market development is best understood by the traditional analogous distinction between economic growth and economic development.

Despite the amount of work that has been done on the development of stock markets, there is no single criterion that can be used to measure stock market development. A stock market might be large, but not liquid, or it could be quite liquid, yet trading occurs in only a small number of stocks,

which account for a considerable portion of the total market capitalization. In addition, stock markets may be large, liquid and reasonably non-concentrated but may not be linked to or may not even reflect performance in the real sector. Consequently, only one or two indicators will not be enough to capture all aspects of stock market development.

To assess the status of stock market development, this paper proposes a set of indicators that capture the main aspects of stock markets, namely : i) stock market size; ii) stock market liquidity; iii) stock market performance/volatility; iv) stock market concentration; and v) stock market linkage to real sector performance. Using a variety of indicators could provide a more accurate depiction of stock market development as it is a complex and multi-faceted concept and no single measure or indicator can capture all aspects of stock market development.

3.1 Stock Market Size

There are two main indicators of stock market size: market capitalization and the number of listed companies.

(i) Market Capitalization

A common indicator for assessing stock market size is *Market capitalization/GDP*, which equals the market value of listed shares divided by the relevant GDP. This indicator has been widely used in the literature as a stable measure of stock market development for two reasons. First, it is a measure of stock market size, which is positively correlated with the ability to mobilize capital and diversify risk. Second, it is presumed to include companies' past retained profits and future growth prospects so that a higher ratio to GDP can signify growth prospects as well as stock market development (Levine and Zervos, 1998b, Bekaert et al, 2001; Rajan and Zingales, 2003). The main shortcoming of this measure is that a high ratio solely driven by the appreciated values of only a few companies with little or no change in the amount of funds raised and no change in the breadth of the stock market may be misinterpreted as stock market development (Adelegan, 2008).

(ii) The Number of Listed Companies

The number of listed companies is used as a complementary measure of stock market size. The main advantage of this measure is that it is a proxy for the breadth of the stock market and is not subject to stock market fluctuations (Bekaert et al, 2001; Rajan and Zingales, 2003; and Karolyi, 2004). Moreover, it is not tainted by possible mis-measurement of GDP, which often happens in many developing countries.

Nevertheless, this measure suffers from two main weaknesses: first, the number of listed companies is too slow-moving to fully capture high frequency changes among listed companies. The number of listed companies can also be affected by corporate restructuring, combining and merging. Second, this measure may allocate a low score to economies whose industrial structure is concentrated in the sense of having only a smaller number of large companies. It can be a noisy measure as concentration only partly reflects limited access to finance (Rajan and Zingales, 2003 and Karolyi, 2004). It is worth highlighting that while marginal differences in the number of listed companies are uninformative, extreme value can be useful.

3.2 Stock Market Liquidity

One of the most important aspects of stock market development is liquidity. Liquid markets offer a number of benefits: i) they render financial assets more attractive to investors, who can transact in them more easily. In addition, liquid markets allow investors to switch out of equity if they want to change the composition of their portfolio; ii) liquid markets permit financial institutions to accept larger asset-liability mismatches; iii) they allow companies to have permanent access to capital through equity issues; and iv) liquid markets allow a central bank to use indirect monetary instruments and generally contribute to a more stable monetary transmission mechanism (Sarr and Lybek, 2002).

With liquid markets, the initial investors do not lose access to their savings for the duration of the investment project for they can easily, quickly and cheaply sell their stake in the company. Consequently, more liquid markets could ease investment in long-term, potentially more profitable projects, thereby improving the allocation of capital and enhancing prospects for long-term growth. Put another way, the more liquid the stock market, the larger the amount of savings that are channeled through stock markets.

While economists advance many theoretical definitions of "liquidity", there is no single unambiguous, theoretically correct or universally accepted definition of liquidity (Baker, 1996). However, analysts generally use the term to refer to the ability to easily buy and sell securities. There

are five dimensions of market liquidity, which are: tightness, immediacy, depth, breadth and resiliency. Tightness refers to low transaction costs, such as the difference between buy and sell prices. Immediacy represents the speed with which orders can be executed and settled, and thus reflects among other things, the efficiency of the trading, clearing and settlement systems. Depth refers to the existence of abundant orders, either actual or easily uncovered of potential buyers and sellers, both above and below the price at which a security would be trading on the market. Breadth means that orders are both numerous and large in value with minimal impact on prices, and resiliency usually denotes the speed with which price fluctuations resulting from trades are dissipated. (Sarr and Lybek, 2002)

A comprehensive measure of liquidity would quantify all the costs associated with trading, including the time cost and the uncertainty of finding a counterpart and finalizing the transaction. Yet no single measure unequivocally measures tightness, immediacy, depth, breadth and resiliency. Due to the difficulties involved in elaborating such a measure, the most commonly used indicators of liquidity by analysts are traded value/GDP and turnover ratio.

(i) Traded Value/GDP

Traded value is a volume-based indicator. Volume-based indicators are most useful in measuring market breadth, i.e. the existence of both numerous and large orders in volume with minimal transaction price impact. Traded value/GDP equals the total value of shares traded on the stock market divided by GDP. It measures the organized trading of shares as a percentage of national output and therefore should positively reflect stock market liquidity on an economy-wide basis.

(ii) Turnover Ratio

Since traded value can be given more meaning by relating it to the value of outstanding volume of shares being considered, turnover ratio is commonly used as a second indicator of liquidity. Turnover ratio gives an indicator of the number of times the outstanding volume of shares changes hands. Turnover ratio equals the value of total shares traded divided by market capitalization.

In some sense, turnover ratio as an indicator of liquidity complements traded value/GDP. While the former captures market trading relative to the size of the economy, the latter measures trading compared with the size of the stock market. A small, liquid market will have a high turnover ratio but a small traded value/GDP ratio. A high turnover ratio is often used as an indicator of low transaction cost. However, some analysts consider turnover as a good indicator of speculative activity in a given market. As noted earlier, the turnover is derived by dividing the one-year average market capitalization by total annual traded value. A value of 100 per cent means that the two terms are equal and that, on average, each share has changed hands once during the year in question. Higher turnover ratio means that shares have frequently changed hands, which may reflect a tendency to speculation.

Finally, making use of both indicators – traded value/GDP and turnover ratio – can provide a more comprehensive picture of the liquidity of stock markets than the information provided by the use of only one of them.

3.3 Stock Market Concentration

It is possible for stock markets to be large relative to their economies, but still concentrated. That is, only a few companies dominate the given market. Consequently, market concentration may be measured by looking at the share of market capitalization accounted for by the large companies in the market. These large companies are seen by some analysts as being the leading three to five companies in the market (Maunder et al., 1991). Yet, another commonly used indicator of the degree of stock market concentration is the share of market capitalization accounted for by the ten largest stocks (e.g. International Finance Corporation, S&P).

Concentration adversely affects market development as it hampers market breadth by the concentration of capitalization within a handful of large companies, limiting the range of attractive investment opportunities and thus adversely affecting liquidity in the stock market in question. In addition, having a stock market which is driven by only a few companies could weaken the link between stock prices for non-leading companies and/or their performance and growth prospects. That is to say, the prices of stocks in non-leading companies are affected by market movements of stock prices of leading companies more than their own performance and prospects. This distorts the “signaling” function of stock markets. Market concentration also might encourage speculative activities as investment alternatives are limited and diversification possibilities are limited as well.

3.4 Stock Markets and Economic Activity

The relationship between stock prices and real economic activity is circular. On the one hand, stock prices depend on a company's performance and its growth prospects so that to the degree that a company's performance improves and the rate of return increases, stock prices rise in turn. On the other hand, stock prices should reflect the present discounted value of expected future dividends or expected future growth. From this perspective, stock prices serve as a leading indicator of future changes in real economic activity. Generally, there are three main channels whereby stock prices can affect real economic activity: i) the wealth effect: under the life cycle/permanent income, higher stock prices and increased wealth in stocks lead investors to increase their consumption. This increase in consumption will be more significant in countries where the stock ownership base is large; ii) cost of capital: with stock prices increasing, the cost of new capital relative to existing capital decreases, more companies go public and raise funds for investment through public offerings. In addition, a good performance on the stock market might attract foreign capital, which would allow interest rates to go down (*ceteris paribus*); and iii) the confidence effect/expectation effect: a highly performing stock market might improve overall expectations, which might induce economic growth through more investment as part of a positive feedback effect. Moreover, stock prices signal faster growth of companies and as a result a possible growth of future real individuals' income might also induce more consumption (Morck et al, 1990). Although these factors/channels are hard to quantify, it is important to accurately assess the strength of the link between stock markets and real economic activity.

3.5 Stock Market Volatility

Stock prices are supposed to serve as signals for resource allocation. Yet, excessive volatility which does not reflect economic fundamentals would distort the "signaling" function of stock markets. Although it is theoretically difficult to identify a clear criterion for defining the degree of "excessiveness", many analysts argue that less volatility reflects greater stock market development. However, a certain degree of stock market volatility is unavoidable, even desirable, as stock price movements indicate changing values across economic activities so resources can be better allocated.

There are significant implications surrounding stock market volatility, given that it affects incentives to save and to invest. Theoretically, all other things being equal, the more volatile the stock market, the fewer savers will save and hence the less investment there will be. Excessive stock market volatility would lead investors to demand a higher risk premium, increasing the cost of capital which in turn would impede investment and hamper economic growth. In addition, this volatility might lead to a shift of funds to less risky assets which –once again – will cause companies to pay more for access to capital. (Zuliu, 1995; Levine and Zervos, 1996; and Arestis et al, 2001).

Stock market volatility might result from the volatility of underlying economic fundamentals, in particular, the volatility of the real output flow whose present discount value that the stock price is supposed to reflect should matter. Black and Scholes (1973) argue that a higher leverage ratio may induce companies' managers to undertake riskier projects than they otherwise would. In addition, uncertainty of macroeconomic policies may also result in stock market volatility. (e.g. volatility of exchange rates, or volatility of the inflation rate). Stock market volatility may also be caused by the arrival of new, unanticipated information that alters expected returns on stocks (Engle and Ng, 1993).

In light of the above discussion, one could define a "developed" stock market as *"a market that is sufficiently large and liquid - relative to the size of its economy - possessing a non-concentrated market capitalization and demonstrating adequate linkage to the performance of the real economic sector"*.

It is worth highlighting that the previous discussion does not cover other important dimensions of stock market development, namely, institutional factors. Yet the status of institutional and all other factors are indeed reflected in the five aspects we have discussed. Finally, it would be possible to establish a stock market development index by elaborating a weighted average comprising market size, liquidity, volatility, linkage to real sector and market concentration. However, the weight to be assigned to each individual factor could be an issue of some contention.

4. A Framework for Stock Market Development

The stock market is a "market" and at the simplest level, the term "market" means an arena for supply and demand. Generally speaking, stock markets grow as a result of participation by both issuers (supply), and investors (demand). Issuers and investors will participate in a stock market if they

expect economic benefits (e.g., a lower cost of finance for issuers and a better return-risk structure for investors.) Further, participation will occur where a fairly comprehensive range of economic and institutional factors exist. Put differently, supply and demand may be considered the “building blocks” of any market. However, the mere presence of supply and demand does not guarantee that the market will function efficiently. For such a market to prosper, there should be what might be called “supporting blocks”. These supporting blocks could include factors such as economic policies conducive to investment and an adequate institutional context. If the supporting blocks are inadequate, the market may exist, but most likely it will not function well and will not become a developed market.

This paper proposes that there are four broad factors which influence the development of stock markets: supply factors, demand factors, institutional factors, and economic policies (Chart 1).

4.1 Supply of Shares

The cost of financing is the main determinant of “going public” for a firm. According to the “pecking order” theory of capital structure, internal financing should be the first choice of the firm, with debt being the second choice. Debt is in second place as it is more costly than internal financing because of both the interest costs and the costs associated with issuing debt. Equity issuing comes third among the choices available to the firm for financing as it is even more costly than debt. Generally, there are three main types of cost commonly associated with issuing shares. First, there is the cost of distributing dividends to shareholders, which is generally done on a continuous basis, in contrast to a debt contract (e.g. issuing bonds). Second, since equities are among the riskiest assets, investors will not hold shares unless the expected return is significantly higher compared to other investment alternatives. Third, equity issuance is more costly than debt due to the underwriting commission¹ and the cost of information (Chami et al, 2009). In short, issuing equity would be considered the last resort for financing a firm. Further, to raise capital in stock markets, companies must meet the listing requirements of stock exchanges for publicly traded companies as well as the financial reporting and control requirements imposed by securities market regulations. The explicit compliance cost of these requirements is significantly high. More to the point, raising capital in stock markets has several costly implications for corporate governance: i) decisions and actions of the company’s managers become more visible as the company’s financial data is disclosed through financial statements and other required filings; ii) another layer of management is imposed on the firm, namely representatives of shareholders on the board of directors; and iii) time and effort must be devoted by the firm to managing its relationship with shareholders. These requirements and responsibilities imply both a significant cost and a certain loss of control for both owners and managers of the company (Chami et al, 2009).

Although firms may be the only source of issued shares, which in light of the above discussion might imply that the cost of financing could be the most significant or even the only determinant of the supply of shares, it should be pointed out that in general, there are a number of macroeconomic factors that significantly affect the supply of shares and thereby the development of stock markets.

(i) Stage of Economic Development

Broadly speaking, economic development is expected to positively affect stock markets. Underdeveloped economies usually have a volatile investment environment, weak institutional and legal frameworks, poor governance, lack of transparency, and above all low levels of per capita income. All these factors impede stock market development and at times even make the establishment of a stock market superfluous.

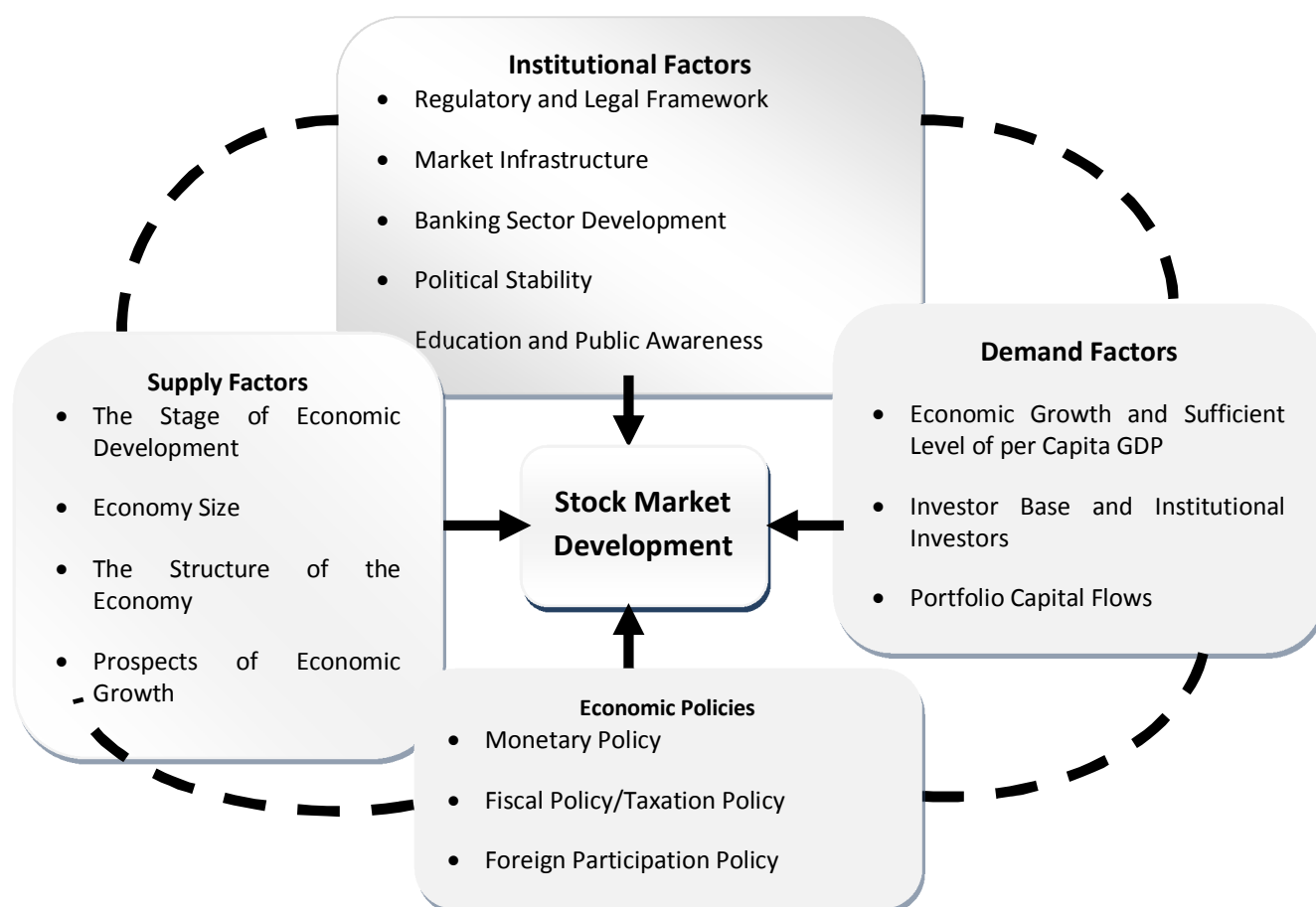
(ii) Size of the Economy

An economy large enough to support a stock market is a necessary prerequisite for the development of a stock market. Without a sufficient supply of shares, trading will be limited and the market may not be economically viable. A small size economy most likely would not have a deep, liquid stock market as such economies are usually characterized by price volatility. In addition, it may be that small economies do not have deep stock markets since they lack efficiency of scale. Consequently, the amount of capital raised from issuance may be too small to attract potential issuers,

¹ For example, a common commission rate in the U.S. for share underwriting is seven per cent of the value of the issue.

portfolio managers, or even a reasonable base of local investors to justify inclusion by leading investment funds (Adelegan and Radzewicz-Back, 2009).

Chart 1. A Framework for the Development of Stock Markets



(iii) The Structure of the Economy

The structure of the economy – the relative proportion of shares representing the primary, industrial and service sectors – is an influential determinant of stock market development. In addition, whether the industrial base is dominated by large companies or dominated by small and medium-sized companies has significant implications for the supply of equity (Roc, 1996). Primary sector-driven economies and/or economies with an industrial base dominated by small enterprises would most likely not have active stock markets due to the limited capital requirements of such enterprises. This in turn makes it easier and cheaper for them to raise capital through banking finance, which ultimately limits the supply of equity. However, economies with a large manufacturing base dominated by relatively large companies are more likely to have a sufficient supply of shares.

(iv) Prospects for Economic Growth

The literature on initial public offerings (IPOs) emphasizes the importance of growth opportunities in explaining capital-raising behavior. Companies usually increase investment and expand productive capacity to meet future expected demand for their products. Put differently, sustainable positive rates of economic growth lead to new markets as well as greater opportunities for companies to grow and make profits (Sudweeks, 1989). This serves as an inducement for companies to obtain financing by raising equity to expand operations. Consequently, the supply of equity is more likely to increase. In addition, a low number of listed companies induces speculative activity as the limited number of shares actually available for trading is considered an “open invitation” to speculators.

4.2 Demand for Shares

The demand for equity (investors) is the second building block of the stock market. Potential shareholders/investors have preferences over risk-return combinations for the funds they invest in – some prefer high risk-high return combinations, while others prefer low risk-low return. In general, these investors have three main concerns. First, since equity is one of the most risky investment alternatives, shareholders invariably expect a higher return. Second, shareholders need to monitor the use of their funds and require a disclosure of information that enables them to make sure that the management runs the firm in a way that maximizes their returns on investments. Third, investors are always keen to be able to liquidate their shares at any point in time. Still, investors will be willing to hold shares with a higher expected return in a liquid and informative stock market.

From the macroeconomic point of view, there are a number of other factors that significantly affect the demand for shares and, in turn, the development of stock markets.

(i) Economic Growth and a Sufficient Level of per capita GDP

Economic growth and per capita GDP are crucial –and strongly linked – determinants of stock market development. Higher economic growth rates allow more people to invest in shares. A rise in per capita income increases an individual's ability to save or invest. However, the increase in per capita income should be considered with caution, for individuals will only invest after satisfying their basic needs. That is to say that a sizeable per capita increase in income – if realized from a low base – will be largely directed toward more consumption, and thus will not significantly increase investment, if it does so at all (Roc, 1996). In other words, it is not only the increase in per capita GDP that matters, but also – and perhaps even to a greater extent - the level of the per capita GDP.

Greater individual financial wealth and positive economic prospects bring about changes in saving and investment habits as well as in risk-sharing behavior of individual households. In their search for higher returns, individuals may shift from deposits into bank accounts to investment in shares. In this regard, Ayling (1986) argues that financial markets in less-developed countries are likely to remain small unless economic growth in these countries can catch up with the rest of the world. Calderon-Rossell also concluded that “*in general, economic progress in all regions, with a few exceptions, was the fundamental force behind stock market growth*”. One might argue –keeping other factors constant– that there may be some sort of “multiplier” effect between economic growth and stock market growth. That is, the higher the per capita GDP and the greater the wealth per capita, the more investment there will be in stock markets, and the more liquid that market will be. Greater liquidity will induce more companies to list their shares because of the increase in price per share. Ultimately, higher levels of investment and growth will be attained.

It is worth noting that income inequalities may weaken the link and the possible multiplier effect between economic growth and stock market development. Put differently, the larger the share of the population living at the subsistence level, the smaller will be the percentage of the population economically able to participate in the stock market (Roc, 1996). To account for the possibility of having a low per capita GDP base along with income inequalities, the saving rate could be used as a reasonably good proxy for the relationship between economic growth and per capita income and the individual's ability to invest in stock markets.

(ii) Investor Base and Institutional Investors

Stock market development requires a deep and diverse investor base. The lack of a diversified investor base and heavy reliance on captive sources of funding are two of the main factors behind the shallowness and insufficient liquidity of stock markets. The investor base should be diversified and composed of institutional investors (e.g. mutual funds, pension funds and insurance companies) and other financial institutions dealing in different levels of risk and targeting different economic sectors. These institutional investors can play a crucial role in the accumulation of funds and their channeling into stock markets. Institutional investors are, in fact, usually the largest investors in stock markets in developed economies.

In general, institutional investors can support the development of stock markets in various ways: i) they enhance market competition and act as a balancing influence in bank-dominated financial systems and represent an alternative savings vehicle to banks for individual investors; ii) institutional investors also help to address the problem of information asymmetry between company management and individual investors as they impose discipline on company management via transactions in company stocks; iii) institutional investors may encourage more issuance of shares,

which in itself increases the liquidity of the market; iv) a wide range of investors who differ in their risk preferences and expectations results in rapid price discovery from trading and reduces vulnerability to shocks that would otherwise destabilize the market; and v) institutional investors also support the emergence of market makers, which improves market liquidity (Iorgova and Ong, 2008). However, institutional investors should not be so large that they dwarf and dominate the market but large enough to take risks and position themselves advantageously.

The development of a diversified investor base is a complex process which is related to fundamental public policy issues such as pension funds policy (Árvai and Heenan, 2008). In other words, generating significant changes in the composition of the investor base is critically dependent on public policy decisions and requires structural and fiscal changes as well as regulatory incentives and stock market development strategies, all of which are closely linked to the state of development and sophistication of a country's financial system.

(iii) Portfolio Capital Flows

Foreign participation in stock markets enhances domestic demand for shares. In addition, the long-term impact of foreign capital inflows on the development of stock markets is broader than the benefits from initial flows and increased investor participation, since foreign investment is usually associated with institutional and regulatory reforms, adequate disclosure and listing requirements and fair trading practices. Improvements in informational and operational efficiency are expected to inspire greater confidence in domestic markets (Errunza, 1983).

Restrictions on foreign participation in stock markets may contribute to insufficient depth and liquidity in the market, particularly in the absence of a strong and diversified domestic investor base. However, the mode and the sequencing of the entry of foreign investors has to be carefully considered, as experience has shown that there is considerable risk associated with participation by nonresidents, who have access to alternative investments and thus may manifest more volatile demand.

Finally, over and above these determinants, there are two further economic factors that affect both demand for and supply of shares: the extent of development of the banking sector and an operating bond market. The development of the banking sector has a significant impact on the development of a country's stock market. At the early stages of its creation, the banking sector can enhance stock market development and a complementary relationship exists as support services from the banking system contribute significantly to the development of the stock market. In addition, having an operating bond market is important for a developing stock market since it implies that the country has a "capital market culture" with supporting institutions, issuers with disclosure experience, and investors with an understanding of what it means to invest in securities.

4.3 Institutional Factors

Institutional factors represent the first supporting block of stock market development. These include a wide range of factors such as regulations affecting public issuers of securities, market intermediaries, asset management, supervision and enforcement tools, trading payments and settlement systems and corporate governance and transparency. An adequate institutional framework is expected to have a significant positive impact on the development of a stock market. On the one hand, investors will feel more confident regarding property rights and information transparency, which could encourage them to invest in stock markets. On the other hand, by reducing the cost of transactions and increasing market liquidity, equity would be a more attractive source of financing for firms.

"Institutions" is a term which refers either to the set of rules and norms that shape the social, political, and economic interactions among the members of a society or to organizational institutions such as political, economic, social and educational bodies (North, 2001). Good institutions may positively affect the development of stock markets through at least two channels. First, adequate institutions augment economic growth by enhancing market fundamentals, promoting trust, and facilitating exchange. Second, better institutions means better protection of property rights, less corruption and more transparency, all of which foster investor confidence and ultimately increase the demand for securities (Billmeier and Massa, 2007).

With reference to stock market development, institutional factors may be grouped into three components: the legal and regulatory framework, market infrastructure and "other" factors. Yet, it is always hard to draw definite lines between these three categories.

(i) Regulatory and Legal Framework

An adequate regulatory framework is crucial to the development of stock markets. A strong and transparent regulatory and legal framework needs to be developed for public issuers of securities, market intermediaries, asset management products, payment and settlement processes and transparency requirements. Regulations need to address asymmetries of information between issuers and investors, clients and financial intermediaries and between counterparties to transactions; and should ensure smooth functioning of trading and clearing as well as settlement mechanisms that will prevent market disruption and foster investor confidence (Carvajal and Elliott, 2007).

The core of regulating public issuers is to ensure full timely and accurate disclosure of relevant information to investors so as to enable them to make informed decisions. Disclosure obligations should be imposed on issuers both at the moment of authorization for public offering and on an ongoing basis. One of the main responsibilities of the regulator is to ensure that mechanisms are put in place to ensure the reliability of the information provided by issuers. In this regard, adequate corporate governance is needed to ensure effective accountability of management to shareholders. (Claessens et al, 2007)

The main purpose of regulating market intermediaries is to ensure that brokers, dealers, and financial analysts enter and exit the market without disruption, conduct their business with their clients with due care, and conduct fair trade using stock markets. Tools for regulating intermediaries include licensing requirements and market business conduct obligations (Carvajal and Elliott, 2007).

Regulation of asset management seeks to ensure professional management and adequate disclosure of investments to the investors. In addition, stock market regulations should ensure the smooth functioning of the market by ensuring fair access to adequate price formation, by limiting the disruptive effects that the failure of an intermediary could have on the market, and by ensuring that market participants settle their trading obligations in an orderly and timely manner. (Carvajal and Elliott, 2007)

A distinction can be made between the three essential elements of securities regulations: the legal framework itself, supervision of the legal framework and enforcement of relevant laws. Supervision and enforcement are tools used to assure compliance with the legal framework. Compliance refers to adherence to laws, rules and regulations, while supervision aims to detect non-compliance with laws and rules, and enforcement seeks to detect and punish non-compliance. Taken together, both supervision and enforcement seek to promote implementation of laws, rules and regulations.

One important aspect of the regulatory and legal framework is establishing a supportive infrastructure for contract enforcement and dispute resolution. This infrastructure has many features that collectively are known as the “rule of law”. Luis Rubio (2001) argues that there are three key features of the rule of law in financial markets. First, it includes both political and legal guarantees of civil liberties and property rights. Second, the rule of law presumes an efficient judicial system that cuts transaction costs and limits predatory behavior. Third, it establishes legal security, meaning that under this rule of law citizens can plan their future courses of action and execute these plans in a context of well-known rules that will not be changed arbitrarily

The International Finance Corporation (IFC) has introduced seven regulatory indicators to assess regulatory frameworks of stock markets. These indicators address the following areas: whether companies listed in a stock market publish price-earnings information, accounting standards, the quality of investor protection, whether the country has a securities and exchange commission or not, restrictions on dividend repatriation by foreign investors, restrictions on capital repatriation by foreign investors and restrictions on domestic investment by foreigners.

Finally, it must be noted that excessive regulation can stifle stock market development. In principle, stock markets should not be over-regulated in areas where free market forces should be prevalent and should not be under-regulated where a normal regulatory framework should be in place to support market confidence.

Shareholder Protection

The fact that shares are transferable obligations and represent contractual relationships makes them highly sensitive to all aspects of the legal rights involving transactions. Investors need to be protected against stock manipulation and improper practices by insiders (e.g. management and major shareholders). In addition, adequate standards of professional conduct by brokers, underwriters and

accountants must be established to avoid excessive speculation caused by rumors circulating about the market.

One of the key regulatory determinants of stock market development is the level of shareholder protection in publicly traded companies, as stipulated in laws regulating companies or securities (Shleifer and Vishny, 1986). In other words, stock market development is more likely in countries with strong shareholder protection because investors do not fear expropriation. By using indicators of the quality of shareholder protection, La Porta et al (1999) provide evidence of the importance of rights protection for minority shareholders.

Corporate Governance and Transparency

In general, corporate governance refers to the structure, rules and institutions that determine the extent to which managers act in the best interest of shareholders (Claessens et al, 2007). Corporate governance entails the adoption and implementation of well-developed securities and bankruptcy laws, credible accounting and auditing standards, and enhanced regulation and supervision as well as stronger enforcement of private contracts. Strong corporate governance and financial transparency are critical for the development of stock markets due to the fact that they enhance investor confidence and increase equity investment.

(ii) Market Infrastructure

The provision of a robust financial infrastructure for trading, clearing and settlement of transactions is generally considered to be a public good (IMF, 2003). The absence of a sound and efficient market infrastructure linking the counterparties in securities transactions makes the development of stock markets unlikely. An inefficient securities settlement structure is a fundamental impediment to stock market development as it raises settlement and operator risk, increases transaction costs, hinders price discovery and may restrict the range of participants in the market (Árvai and Heenan, 2008). The government may play a crucial role in providing the infrastructure needed to facilitate the flow of information along with the price discovery process to support the development of stock markets that are both competitive and efficient. There are various types of infrastructure that governments need to build. These would include the following elements: a modern payment system for clearing and settling securities transactions, retail payments and large value payments as well as a physical infrastructure for the operation of primary and secondary markets.

Dealers and Brokers (Intermediaries)

One of the most important elements of the infrastructure required for stock market development is the existence of experienced “dealers”. The activities of dealers and brokers make equity significantly more attractive to investors and companies as they facilitate the exchange of shares.

Market conditions are critical in attracting dealers and brokers. Particularly, three conditions must be satisfied. First, both supply and demand for shares should be sufficiently large: a larger number of buyers and sellers means more opportunities for brokers and dealers to serve as intermediaries and make profits. As well, stock market regulations and rules must be conducive to trading. Thirdly, an efficient trading mechanism must be in place, a mechanism that supports a clearing and settlement system which reduces transaction costs (Chami et al., 2009).

Trading System

Stock markets can be differentiated by their trading systems. Trading systems vary in the way transactions are handled, types of transactions made, types of information available to market participants, and the process of matching orders to sell and buy (Glen, 1994). Electronic trading systems can increase liquidity and improve efficiency by reducing transaction costs and increasing information availability. Modern trading systems may also attract new pools of liquidity by providing affordable remote access to investors. Based on data from stock exchanges in 120 countries, Jain (2005) finds that the introduction of electronic trading systems enhances liquidity and leads to a reduction in the cost of capital.

Credit-Rating Agencies

Credit-Rating Agencies (CRAs) can provide valuable information to investors which enables them to make informed investment decisions. However, CRAs need to be credible, independent, and able to obtain information if they are to function properly. Further, they also need to be profitable; otherwise, they will not survive (Árvai and Heenan, 2008). To earn profits, CRAs need enough deal flow or they will have to charge high fees which will discourage companies from using CRA services.

(iii) Other Institutional Factors

Political Stability

Political instability negatively affects the development of stock markets. In countries with unsettled political conditions, there is little interest in investing in shares because equity is usually a medium-to long-term form of investment (Sudweeks, 1989). Political risks influence equity investment in two main ways. First, a fear of restrictions on the repatriation of funds and expropriation discourages investment. Second, political instability hampers economic growth because companies postpone investments and attempt to move critical activities to more stable countries, a move which in turn dampens equity investment attractiveness (Roc, 1996). Further, political instability encourages alternative forms of savings. So it can be seen that political instability affects stock markets through its direct impact on investors' confidence as well as its indirect impact on economic performance.

Education and Public Awareness

Poor understanding of issues on the part of the public discourages potential investors from participation in stock markets. Roc (1996) argues that the propensity to invest in shares rises with the level of education. That is, a higher level of education increases confidence in stock markets by contributing to a higher level of knowledge concerning financial activities. Without an educated public which understands the fundamental rules, benefits, and potential pitfalls of participating in financial investment, stock markets may not be able to develop. Further, an educated population can increase the number of available professionals (e.g. financial analysts, accountants and regulatory analysts) necessary for the development of an institutional and regulatory framework.

Availability and Quality of Information

The availability and quality of information is essential for building investor confidence. Uncertainty resulting from limited or poor quality information may be a major disincentive to investment in stock markets. Four main factors may contribute to insufficient and/or poor quality information: i) lack of standards governing tight and effective financial disclosure requirements; ii) inadequate or inactive accounting standards and lax auditing practices; iii) the absence of a competent stock broking industry, which limits available research on stocks and markets; and iv) the lack of competition between firms. When demand for equities outstrips supply, companies are not obliged to provide extensive information in order to place their shares (Roc, 1996). However, Dickie and Layman (1988) argue that inadequate financial information should not be overestimated as typical small investors usually are unable to understand financial reports. Yet, adequate information is highly required for institutional and other investors.

It is worth recalling that lack of confidence imposes a significant explicit cost on publicly listed companies as they must offer high dividend rates in order to offer competitive investments. To meet the investor's requirement for high returns, companies might have high payout ratio, which aggravates companies' financial positions and further discourages them from issuing shares.

Family Businesses

The costs of going public are considerable to family businesses as they generally value control and privacy. In other words, family businesses may be wary of allowing "outsiders", or non-family members into the management of the firm (Chami et al., 2009). The dominance of family businesses on business community limits the supply of shares and consequently deters stock market development.

Finally, indigenous entrepreneurs are important contributors to the development of stock markets as there is a need for a continuous supply of new companies coming onto the market (Sudweeks, 1989).

4.4 Economic Policies

A stable macroeconomic environment is crucial for the development of stock markets. Rational and predictable macroeconomic policies enhance investors' confidence in the market and create an environment conducive to investment decisions. In addition, corporate profitability can be affected by changes in monetary, fiscal, and exchange rate policies.

(i) Monetary Policies

Prudent monetary policies can facilitate stock market development. Rational management of monetary policies ensures greater confidence in the stability of the economy as macroeconomic volatility magnifies the asymmetric information problem. First, interest rates have a critical effect on the desirability of shares in an individual's portfolio of assets. Investors are concerned with real returns, not just nominal returns. Consequently, momentary policies should insure an attractive long-

term yield for equities compared to other domestic and foreign investment alternatives. Negative real interest rates force investors to shift to other less risky assets or countries. That is to say, low and predictable rates of inflation are more likely to contribute to stock market development. Both domestic and foreign investors will be unwilling to invest in a stock market in which high levels of inflation are expected (Yartey and Adjasi, 2007). Second, the stability of the short-term interest rate increases investor confidence in long-term securities, including equities, and promotes maturity transformation by financial intermediaries. Third, effective implementation of monetary policies ensures adequate liquidity to market makers which may reduce the volatility of stock markets. It is also worth mentioning that attracting foreign portfolio investment requires rational exchange rate policies.

(ii) Fiscal/Taxation Policies

Taxation policies have a great influence on investor participation in stock markets since investors are concerned with the after-tax real return on investment. Unequal taxation favoring other alternative forms of investment such as bank deposits would shift investor interest from investing in equities. In many countries, equities are subject to double and even triple taxation. First, there is taxation at the corporate level before the distribution of dividends. Second, there may be taxation at the individual level and if returns on equities are taxed, there may be triple taxation. (Sudweeks, 1989)

Prudent corporate tax policies help to develop stock markets since high corporate taxation can limit the after-tax profit available for dividends distribution, which may in turn negatively affect investors' willingness to invest.

Tax policies not only affect investor participation in the market, but also affect the supply of equities. That is, tax incentives to going public could encourage companies to go public and thus increase the supply of equities.

(iii) Institutional Investors Policy

Institutional investors may play a determining role in stock market development. Yet, this role in turn is significantly influenced by institutional investors' policies. For instance, limiting the possible range of financial assets for mutual funds, pension funds, and insurance companies to low-yield government securities or imposing a high percentage of government securities could be a major deterrent to stock market development (Sudweeks, 1989). A reasonable and active level of participation by institutional investors is of great importance for a stock market. It is also important to note that a stock market without institutional investors is prone to greater risk from individual speculators. However, a balance between the two goals is required. On the one hand, institutional investors must have a significant and active presence in order for stock market development. On the other hand, the interest of investors in mutual funds and pension funds (e.g. retirees) should be protected from high-risk investments.

(iv) Foreign Participation Policy

There is consensus on the important role played by foreign portfolio investment in stock markets. While it has played only a minor role in most developing economies, it does play an important role in countries such as Hong Kong and Mexico (Sudweeks, 1989). International asset pricing models suggest that the integration with world financial markets should lead to a reduction in the cost of capital (Stulz, 1981; 1999). Stock market liberalization increases the pool of capital available to local companies and broadens the investor base, which could lead to increased liquidity. It could as well improve the quantity and quality of information available to market participants. In addition, the scrutiny of foreign investors and analysts may increase transparency and promote the adoption of better corporate governance practices as well as reducing agency problems (Stulz, 1999 and Errunza, 2001). Therefore, stock market liberalization is expected to lead to deeper and more efficient stock markets.

Empirical research finds evidence of an increase in share prices as well as a reduction in the cost of capital at around the date of liberalization (Kim and Singal, 2000 and Edison and Warnock, 2003). Other studies find significant increases in investment and economic growth following stock market liberalization. In addition, Bekaert et al (2001) found that liberalization had a positive impact on domestic trading listings. Bae et al (2006) found that stock market liberalization improved the information environment in emerging stock markets.

One of the important issues in foreign portfolio investment is that foreign investors need assurance that they can repatriate their funds and profits. However, recipient countries are usually concerned about the outflow of local currency. To minimize the risk of such a problem, a number of

countries, such as Brazil, Greece, Korea, Malaysia and Thailand, make use of country funds. Country funds have encouraged foreign investment and brought additional funds to the market without the worries of traditional international portfolio investment. This move has been considered an important intermediary step to internationalization of the market in many countries. In addition, foreign investors have generally been favorable to these funds, which have often sold at high premiums to net asset value (Sudweeks, 1989).

Finally, allowing or requiring domestic companies to list internationally may provide an additional source of funds and help spread the investor base and improve the pricing efficiency of the company.

5. Concluding Remarks

This paper has outlined a framework for the main determinants of stock market development. Assessing stock market development requires not only an understanding of its main determinants but also a clear definition of what “stock market development” means and how progress toward it can be measured. This paper reconsiders the concept of stock market development. Being large and liquid is not enough for a stock market to be developed. In addition to being large and liquid relative to the economy, the market should not be overly concentrated, yet should be strongly linked to the real sector, and should grow in proportion to economic activities.

This paper proposes that four sets of factors shape or determine stock market development: supply factors, demand factors, institutional factors and economic policies. Demand factors are those that affect investors’ decisions regarding investment in stock markets while supply factors are those that affect companies’ decisions to issue shares. Taken together, both sets of factors serve as “building blocks” of the stock market.

Without a demand for and a supply of equity, there would not be a stock market. Yet, the existence of supply and demand alone cannot guarantee the existence of a developed stock market. For a stock market to be developed, certain “supporting blocks” should be in place. These supporting blocks include mainly institutional factors and economic policies. High quality institutions are, as well, important determinants of stock market development: well-established institutions enhance investor confidence just as appropriate economic policies are conducive to the development of stock markets.

Finally, three principles concerning stock market development are worth highlighting. First, stock market development is a difficult, complex, multi-faceted, and long-term process. History has shown that the stock market will most likely be the last market among financial markets to develop. For investors, shares are the riskiest of the standard financial assets while for companies, issuing shares is the costliest way to raise funds. Not surprisingly, stock market development may take a long time. Secondly, stock market development is part of a process of development of a financial system. A stock market cannot be developed in the absence of a financial system that is both developed and balanced. Third, the development of a stock market is primarily a private sector activity. Still, it must be remembered that the supporting role of the government is crucial for a market to develop. The experience of stock markets in developed countries shows that the development of a stock market cannot be isolated from solid institutional structures.

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