Current Issues in Emerging Market Finance and their Economic Implications *

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1. Introduction

The past two to three decades have witnessed a dramatic decrease in barriers to international investment, especially in emerging markets (EMs). In general, these barriers can be classified into explicit and implicit barriers. While the explicit barriers are directly observable and quantifiable, for

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example foreign ownership restriction and discriminatory taxation, the implicit barriers are not directly observable and may arise from, for example lack of information, political risk, or fear of expropriation.

In recent years, many studies have investigated the impact of market liberalizations [see for example, Bekaert and Harvey (2000a), Errunza and Miller (2000), Henry (2000a), and Kim and Singal (2000)].

Our objective of this study is to investigate the impact of stock market liberalization on the following aspects through literature review: pricing mechanism, revaluation effect, cost of capital, stock market volatility, stock returns' correlation with world market return and economic growth.

Based on the standard International Asset Pricing Models (IAPMs), we would expect a decrease in the cost of capital after market liberalization. If we assume that market A is segmented from the world markets, the expected return (cost of capital) for firms in market A will be priced by the local market risk. If we assume that the market A becomes fully integrated after liberalization, the expected return would depend only on the world market risk. The general consensus is that the local price of risk is higher than the world price of risk and the securities are more correlated within a market than across markets (see Stulz (1999) and Errunza and Miller (2000)). Therefore, we would expect the expected return (cost of capital) to decrease and the stock price to increase subsequently (revaluation effect) after market liberalization. An alternative argument to explain this revaluation effect is that foreign portfolio investors will increase the demand for domestic securities that will subsequently increase the stock price (see Bailey and Jagitiani (1994) and Bailey, Chung and Kang (1999)).

As noted above, there are solid theoretical arguments for the revaluation effect and the cost-of-capital after stock market liberalization. However there is no established theory regarding the impacts on volatility or correlation following liberalization. It has been claimed that foreign portfolio investment makes the local stock market unstable. However, this is not supported by empirical evidence.

Diversifying investment internationally allows investors to reduce their portfolio risks without sacrificing their total returns unless international markets are perfectly correlated. The low correlation with world market return is the source of the gains from international diversification. It is generally accepted that correlation coefficient of market returns can not be used as a direct measure of market integration. It is, however, believed that the gradual removal of barriers to international investment as well as political and economic integration could lead to a progressive

increase in the international correlation of financial markets (see Solnik et al. (1996) and Longin and Solnik (1995)). Portfolio managers are of course interested if volatility and correlation increase after market liberalization which in turn affects portfolio rebalancing decisions and risk management practices. Hence, we will discuss about whether market liberalization is associated with an increase in stock market volatility and an increase in correlation with the world market.

Improved risk sharing after liberalization should decrease the cost of capital and increase investment. If this increased investment is efficient, the economic growth should increase. Moreover, foreign investors will demand better corporate governance to protect their investment. Better corporate governance and investor protection should promote financial development(La Porta et al., 1998) and hence economic growth (for example, King and Levine, 1993). However, after the recent financial crises, some economists express their doubts about the benefits of market liberalization on economic growth.

The organization of this study is as follows. In section 2, we define market liberalization and market integration with the world market. A literature review of previous studies related to financial effects of market integration, such as stock market returns, cost of capital, volatility and correlation, etc., will be provided in section 3. In section 4, we investigate the real effects of financial liberalization on economic growth. Section 5 summarizes this study.

2. Emerging Market Liberalization and Market Integration

2.1 Market Liberalization and Market Integration

Stock market liberalization is a governmental decision to allow foreign investors to participate in the domestic stock market. In a liberalized stock market, foreign investors can, without any restriction, purchase or sell domestic securities and domestic investors can purchase or sell foreign securities as well. What we assume with stock market liberalization is the immediate influx of foreign investment in the domestic stock market and our interest lies on the impact of these foreign money inflows on the domestic stock market. However, since mere governmental announcement of market opening does not necessarily induce foreign investment, and sometimes stock market

restriction may not bind, in addition to the official government announcement, several additional proxies are used in empirical studies to identify market liberalization date. For example, the introduction of depository receipts or country funds and structural break in capital flows. For example, Bekaert and Harvey (2000a) use U.S. capital flows to emerging markets since 1985 to construct an approximate measure of the ratio of U.S. ownership to market capitalization. Data are obtained from U.S. Treasury Bulletin. Henry (2000a) uses IFCI index, which is the ratio of the market capitalization of stocks that foreigners can legally hold to total market capitalization. A large jump in the index is interpreted as the evidence of market liberalization.

As all agree, it is really difficult to pin down the exact market liberalization dates. Hence, many efforts have been made to minimize the impact of imprecise dating in liberalization. For example, Bekaert and Harvey (2000a) use four different liberalization dates based on the official announcement, country funds and ADR introduction and capital flows.[1] Henry (2000a) searches for the announcement dates corresponding to the implementation dates using the database Lexis/Nexis, but finds that these obtained announcement dates are likely to be poor proxies for the date at which information about the liberalization first reaches market participants. Since it's extremely difficult to date liberalizations at the market-level, Errunza and Miller (2000) take an alternative approach and analyze changes in equity valuations at the firm level using ADR announcement dates as liberalization dates.

Since the market liberalization dates are somewhat different among the authors of previous studies, Table 1 provides a comparison of the liberalization dates used. Columns 2 through 4 list the market liberalization dates of Henry (2000), Bekaert and Harvey (2000a) and Kim and Singal (2000), respectively.

Market is said integrated when the assets of identical risks command the same expected return irrespective where they are traded. It is very difficult to measure the degree of market integration. Measuring integration becomes more difficult for the following reasons. Investment restrictions may not be binding. Indirect ways to access local equity market such as country fund and ADR could exist. Also, even though legal restrictions are lifted there could still exist implicit barriers such as information asymmetry.

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1) In the case of Thailand, the official liberalization date was September 1987. This was the first month of operation of the Thai Alien Board, which allowed foreigners to directly transact in Thai securities. However, foreigners could indirectly access the Thai market earlier. In July 1985, the Bangkok Fund Ltd. was launched on the London Stock Exchange, and in December 1986, Morgan Stanley launched the Thailand Fund. Thailand announced its first ADR in January 1991.

In general, barriers to international investment can be classified into two broad categories of explicit and implicit barriers. Explicit barriers arise from the different legal status of domestic and foreign investors. They are directly observable and quantifiable, for example foreign ownership restriction and discriminatory taxation. Implicit barriers are not directly observable which may arise from the lack of information, the political risk, and the fear of expropriation.

<Table 1> Liberalization Dates Comparison

Country	Henry(2000a)	Bekaert & Harvey (2000a)	Kim & Singal(2000)
Argentina	89.11	89.11	89.11
Brazil	88.3	91.5	91.5
Chile	87.5	92.1	89.10
Columbia	91.12	91.2	91.2
India	86.6	92.11	92.11
Korea	87.6	92.1	92.1
Malaysia	87.5	88.12	85.1
Mexico	89.5	89.5	89.5
Philippine	86.5	91.6	86.3
Taiwan	86.5	91.1	91.1
Thailand	88.1	87.9	88.8
Venezuela	90.1	90.1	90.1

Bekaert (1995) distinguishes barriers as follows. First are legal barriers arising from the different legal status of foreign and domestic investors with regard to, for example, foreign ownership restrictions and taxes on foreign investment. Second are indirect barriers arising from differences in available information, accounting standards, and investor protection. Third are barriers arising from emerging market specific risks(EMSRs) that discourage foreign investment and lead to de facto segmentation. EMSRs include liquidity risk, political risk, economic policy risk, and perhaps currency risk. Nishiotis(2002) uses country fund data to examine the differential pricing effects of these barriers and finds that indirect and EMSRs have often more important pricing effects than direct barriers. These results reveal the danger in measuring market integration purely by investigating the market's regulatory framework.

2.2 Theoretical approach

The international financial market structure is one of the core research subject for the international portfolio selection and capital asset pricing. For example, if we assume that capital asset price follows Sharpe-Linter CAPM, in other words asset price is determined based on the beta value, which is the ratio of the covariance of local market with the world market to the variance of the world market, market liberalization induces the cost of capital decrease and the revaluation effect.

Based on the standard IAPMs, we would expect a decrease in the cost of capital after market liberalization. If we assume that market A is segmented from the world markets, the expected return (cost of capital) for firms in market A will be priced by the local market risk. If we assume that the market A becomes fully integrated after liberalization, the expected return would depend only on the world market risk. The general consensus is that the local price of risk is higher than the world price of risk and the securities are more correlated within a market than across markets (see, for example Bekaert and Harvey (2000a), Stulz (1999) and Errunza and Miller (2000)). Therefore, we would expect the expected return (cost of capital) to decrease and the subsequent stock price to increase (revaluation effect) after market liberalization. We can think of this negative relationship using a simple pricing model assuming that the current stock price is the future cash flows discounted by the cost of capital. These relationship can be explained by using equations below.

If we assume the country i is integrated with the world then its expected return is determined based on its covariance with the world market return. Denote ri the excess returns in country I.

$$E(ri)=\lambda_w * Cov(r_{wm},\ r_i)$$

where rwm is the excess return on the world market portfolio and λw is the price of the world market risk.

On the other hand, if market i is segmented, its expected return is determined only through its variance with its market return.

$$E(r_i)=\lambda_i * Var(r_i)$$

where ri is the excess return on the country i index and λi is the price of country i risk.

The influx of foreign investment after market liberalization makes the local market move from being separated to being integrated with the world market.

The model suggests that expected returns (cost of capital) should decrease. The reason is that the volatility of emerging market returns is much higher than their covariances with the world market return. As mentioned above, in general, we would expect that the local price of risk is higher than the world price of risk and the securities are more correlated within a market than across markets. Therefore, we would expect the expected return (cost of capital) to decrease and the stock price to increase subsequently after market liberalization.

3. Financial Effects of Market Integration

In this section, we review studies investigating the impacts of market liberalization on differential pricing mechanism, revaluation effect and the cost of capital, stock market volatility and its correlation with world market returns.

3.1. Differential Pricing Mechanism

There are several recent single country studies with a fine data set which investigate the impacts of international investment barriers on the stock price mechanism. Bailey and Jagtiani (1994) study the effects of investment barriers in the Thailand stock market, where domestic investors trade on the Main Board and foreign investors trade on the Alien board. They observe a significant price premium for Alien Board share price relative to that of Main Board share and find that this premium is correlated with the severity of foreign ownership limits, liquidity, and information availability. Bailey and Jagtiani argue that foreign investors prefer to invest in larger companies where there is greater financial disclosure and better information.

Domowitz, Glen and Madhavan (1997) examine the relationship between stock prices and market segmentation induced by foreign ownership restrictions in the Mexican market. Foreign ownership restrictions create market segmentation in the domestic equity market in the sense that there exists

an economically significant stock price premia for unrestricted shares relative to restricted ones. They also find that the price premium for unrestricted shares is positively related to foreign demand and is negatively related to the relative supply of unrestricted shares measured by the ratio of unrestricted to total shares outstanding. By contrast, a proxy for relative liquidity - the ratio of unrestricted to total trading volumes - cannot explain the observed premia indicating that the premia are not the result of differential market liquidity.

Bailey, Chung and Kang (1999) study the impact of barriers to international capital flows with stock price data from 11 countries[2] including 8 emerging markets and 3 developed markets, where some shares are restricted to only domestic investors and otherwise identical shares are available to both domestic and foreign investors. Similar to Domowitz, Glen and Madhavan (1997) results, Bailey, Chung and Kang(1999) also observe large price premiums for unrestricted shares relative to matching restricted shares and find that premiums for unrestricted shares are positively correlated with foreign investor demand and information richness reflected in press coverage, country rating and firm size. Specifically, premiums are strongly positively correlated with market capitalization and the ratio of turnover in the unrestricted market to turnover in the restricted market. Bailey, Chung and Kang(1999) interpret the former relation as indicating that larger firms are more information-rich, therefore, more appealing to foreign investors and the latter relation as measuring relative liquidity in the unrestricted versus restricted markets.

3.2. Revaluation Effect and Cost of Capital

Based on the standard IAPMs, we would expect the expected return (cost of capital) to decrease and the subsequent stock price to increase (revaluation effect) after market liberalization. We can think of this negative relationship using a simple pricing model assuming that the current stock price is the future cash flows discounted by the cost of capital.

The relationship between the expected return (cost of capital) and the realized return before, during and after market liberalization is well described by Errunza and Miller (2000) as follows :

○ High equilibrium expected returns before liberalization indicating the high cost of capital.

2) The eight emerging markets are China, Indonesia, Korea, Malaysia, Mexico, the Philippines, Taiwan and Thailand. Developed markets are Norway, Singapore and Switzerland.

- ○ Large positive returns during the liberalization period, reflecting price increases as the cost of capital falls (*the revaluation effect*). An alternative argument to explain this revaluation effect is that foreign portfolio investors will increase the demand for domestic securities which will subsequently increase the stock price (Bailey and Jagitiani (1994) and Bailey, Chung and Kang (1999)).
- ○ Normal equilibrium expected returns after liberalization, with the difference in the before - versus the after-liberalization period returns (*the change in the cost of capital*) related to the diversification potential of the firm.

Alexander, Eun and Janakiramanan (1988) study price reactions for 34 firms from six non-U.S. countries.[3] They find that the cumulative abnormal returns (CARs) for non-Canadian firms increase by 17 % in the two years before listing and fall by 33 % over the three years following listing. The CARs for Canadian firms are considerably smaller which they interpret as evidence for the market integration between Canada and the U.S.

While Bekaert and Harvey (2000a), Henry (2000a) and Kim and Singal (2000) examine this issue at the market-level, Errunza and Miller (2000) investigate the impact on the cost of capital for 126 ADR issuing firms from 32 countries. Kim and Singal (2000) investigate the effects of market liberalization on excess returns using 15 emerging market indices and find that stock returns increase immediately after market liberalization but fall afterwards. They attribute the immediate increase to the increased demand from foreign investors and the subsequent falls to the lower expected return required by foreign investors. As Kim and Singal acknowledge, however, their study is limited to the extent that it does not control for other potential confounding effects of concurrent economic reforms. For example, market liberalization is accompanied by many other reform policies. Thus, the observed changes after market liberalization may not be due to market liberalization but could be attributed to other contemporaneous events.

Bekaert and Harvey (2000a) investigate the impact of various market liberalizations on the cost of capital by examining the changes in stock returns and dividend yields pre (36 to 7 months prior to) and post (4 to 34 months after) market liberalizations. They exclude 9 months between pre- and post-period to remove any errors in the dating of market liberalizations. After controlling for any

3) They are Australia (7), Canada (13), Denmark (1), Japan (10), South Africa (2), United Kingdom (1). The number of securities in the sample is in parentheses that are listed on U.S. major stock exchanges (NYSE, AMEX or NASDAQ) between 1962 and 1982.

potentially confounding effects,[4] their empirical results show that dividend yields, which they consider as a superior proxy to stock returns to measure the cost of capital, decrease from 5 to 75 basis points depending on the specification they use, indicating that the cost of capital decreases after market liberalizations. On the other hand, the realized returns provide mixed results depending on the market liberalization specification.

Henry (2000a) focuses on the changes in the stock price during stock market liberalization (revaluation effect). He examines 12 emerging markets[5] using an event study with an 8-month window leading up to and including the implementation of their initial stock market liberalization and finds that stock markets experience statistically and economically significant abnormal returns of 4.7% per month and a cumulative abnormal return of 37.6%. Henry (1999) constructs a data set of economic policy reforms for these 12 emerging markets and uses these time series of economic policy changes with other macroeconomic fundamentals to control explicitly for any potential confounding effects. These controlling variables are: world stock returns, concurrent economic reforms (macroeconomic stabilization, traded liberalization, privatization and the easing of exchange controls), and macroeconomic fundamentals (domestic industrial production, the U.S. Treasury bill rate, domestic inflation, the real exchange rate, and a political stability index). After controlling for these potential effects, the impact of market liberalization falls to the average abnormal return of 3.3% per month, but it is still statistically and economically significant. Assuming constant expected future cash flows, he interprets this increase in stock price as a decrease in the cost of capital after market liberalization.

As we mentioned earlier, liberalization at the market-level occurs over a reasonably long period of time and usually follows or is accompanied by other political, economic, or social reforms, which might confound the market liberalization effect. Therefore, to assess the pure impact of market liberalization, it is important to pay attention to other events, which concurrently take place in the country.

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4) Their controlling variables fall into 4 categories: asset concentration (the number of stocks in each of IFCG index, a modified Herfindahl index of concentration), stock market development/economic integration (market capitalization relative to the country's GDP, the size of the traded sector relative to GDP, the cross-sectional standard deviation of the stock returns within each index), microstructure effects (the cross-sectional standard deviation ofthe stock returns within each index), macroeconomic influences and political risk (the standard deviation of exchange rate changes and the average inflation rates, Institutional Investor country credit rating).

5) The 12 emerging markets are 6 Latin American countries (Argentina, Brazil, Chile, Mexico, Colombia, and Venezuela) and 6 Asian countries (India, Korea, Malaysia, the Philippines, Taiwan and Thailand).

While aforementioned studies attempt to solve this problem by controlling for such potentially confounding events, Errunza and Miller (2000) take a different approach and analyze changes in the cost of capital around market liberalization at the firm level. Specifically, they study the impact of the introduction of American Depositary Receipts (ADRs) using a total of 126 firms from 32 countries including 41 ADRs from 11 emerging markets.[6] Methodologically, they use the matched sample long-horizon approach to capture the firm-specific revaluation and cost of capital effects around market liberalization. By selecting a size and country control match firm for each sample firm for benchmarking, the potential problems of confounding effects are presumably removed. Their results provide strong evidence that market liberalization decreases the cost of equity capital: significant positive returns (revaluation effect) around the announcement of ADR offerings and 42.2% decrease in long-run realized returns. Both these results hold for dividend yields, which they perform to check the robustness of their results.

3.3 Stock Market Volatility

It has been claimed that since foreign portfolio investment is mobile compared to direct investment, foreign portfolio investments increase volatility of the domestic stock markets. Policy makers have become increasingly concerned about the impact of these foreign portfolio investments on the volatility of local equity returns. In recent years, many attempts have been made to address this question.

Tesar and Warner (1995) examine whether U.S. equity flows to emerging stock markets from 1978 to 1991 contribute to stock return volatility. They simply plot volume of U.S. transactions in the foreign equity market against two market stability measures of local turnover ratio and standard deviation of excess returns and find no relationship between them. Bekaert (1995) studies whether volatility in emerging markets is related to a number of measures of market openness such as the number of country funds and cross-listed securities, foreign ownership restriction measured by the ratio of the IFC Investable index to IFC Global index. Based on the rank correlation results, he concludes no significant relationship between the openness of a market and stock return volatility.

6) They are Chile (10), India (8), Korea (5), Malaysia (2), Mexico (5), Philippines (1), Portugal (1), Taiwan (6), Thailand (1), Turkey (1), and Venezuela (1). The number of securities in the sample is in parentheses.

Using monthly data ranging from Jan. 1981 to Dec. 1996 from 17 emerging markets, Errunza (2000) plots market return volatility before and after market liberalization with four different liberalization dates from Bekaert and Harvey (2000a) and finds a slight decrease in unconditional volatility after liberalization. All these studies are based on relatively simple analysis.

There are more detailed studies. For example, Bekaert and Harvey (1997) estimate a time-series model for volatility for each country with the conditional mean and the conditional variance based on both world and local information to capture changes in the degree of market integration. Simple plot of average conditional variance for two years before against that of after market liberalization shows a reduction in stock return volatility after market opening: only one increase in stock return volatility (Pakistan) out of 17 countries. Particularly dramatic decreases in conditional volatility are found for countries like Brazil, Mexico, Taiwan and Portugal. Even after controlling for all of the potential influence on the time-series and cross-section of volatility, they find the capital market liberalizations decrease volatility in emerging markets.

Applying the same estimation method as Bekaert and Harvey (1997), but with longer sample period Bekaert and Harvey (2000a) obtain series of conditional volatility for emerging markets and examine the impact of market liberalization on return volatility by running the pooled time-series and cross-sectional regression. They find that volatility increases after major capital market liberalization. After controlling for various financial and macroeconomic development indicators, these increased volatility is offset by a considerable decrease in volatility attributed to the financial and macroeconomic development.

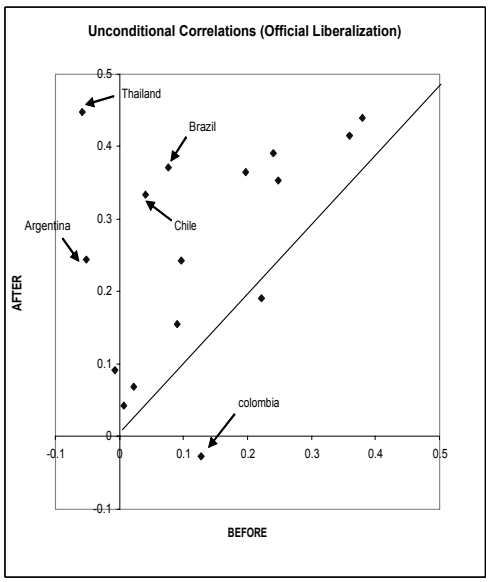
De Santis and Imrohoroglu (1997) apply a GARCH (generalized autoregressive conditional heteroskedasticity) model to fit volatility country by country. Because of data constraints they have to limit themselves to only the 5 countries of India, Taiwan, Argentina, Brazil and Colombia out of the original 15 emerging markets. Using the weekly series from the last week of Dec. 1988 to the second week of May 1996, for a total of 384 observations, they find no supportive evidence of a systematic effect of market liberalization on stock return volatility.

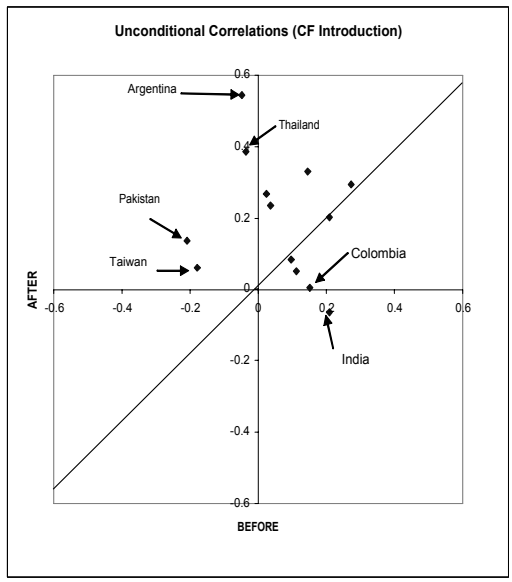
Kim and Singal (2000) use ARCH and GARCH models to fit the volatilities for emerging markets. They find mixed results: a significant reduction in volatility for some countries and a significant increase for others. Overall, aggregated across all countries, there is a marginally significant decrease in volatility after the market opening to foreign investors. They conclude that contrary to the popular belief, foreign investors do not add to stock return volatility. The bottom line of these studies is that the claim that liberalization increases volatility is not supported by empirical evidence.

3.4 Correlation with world market return

Simple unconditional correlations of a group of emerging markets with Morgan Stanley Corporation International (MSCI) world index (The World Index) before and after market liberalization are plotted below. Two liberalization dates are applied: "official liberalization date"and Country Fund (CF) introduction date from Bekaert and Harvey (2000a). Given the importance of substitute availability, CFs introduction dates are also used.

With official liberalization date, 14 out of 16 countries show increased correlatons and 2 countries show decreases with one marginal decrease. In case of CF introduction date, among 13 countries we observe 7 increases, 3 no changes, 1 marginal decrease and 2 decreases.



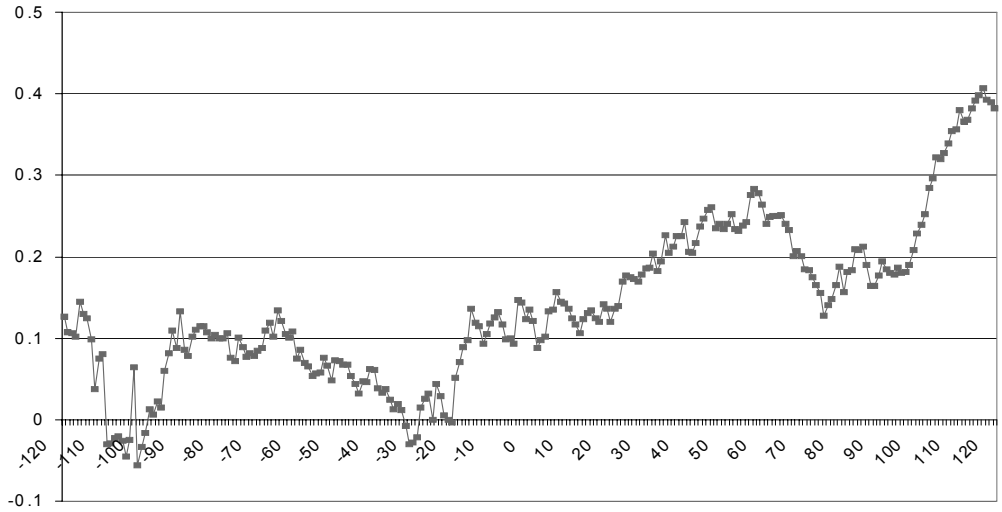


After controlling for the potentially confounding effects from other factors which might affect correlations, Bekaert and Harvey (2000a) also analyze the behavior of emerging market correlation with world market returns around liberalization. They find that in all tests correlations increase and countries which start out with low correlations experience much higher correlation increases. For example, from pre to post for their official liberalization date, correlation increases by 4.2%, which is significant at the 1% level. They argue, however, the increased correlation is not large enough to deter any foreign investors seeking foreign diversification benefits.

To see a trend across the countries, we compute the cross-country average of correlation coefficient, using a 36-month rolling window basis. The results are depicted in Figure 1. In order to obtain the average correlation of 12 emerging markets with the world market return, first the correlation coefficient of each emerging market with MSCI world index return is computed over a 36-month moving window and then the cross-country average correlation coefficient at relative time t is estimated as follows :

$$\overline{\rho}_t = \frac{1}{N}\sum_{i=1}^{N}\rho_{iw,t}$$

where *N(=12)* is the number of countries, *t* is relative time (-120,-119,...,0,...119,120 : Month 0 refers to the market liberalization date) and the correlation coefficient of IFCG index returns in country *i* with MSCI world index return *w* at relative time *t*, $\rho_{iw,t}$, is computed using 36-month rolling window basis in each country *i*. Figure 1 shows that the average correlation coefficient appears to be time-varying and increasing after market opening at relative time t=0.



<Figure 1> Aggregated correlation coefficients of emerging markets with the world

It is generally accepted that the correlation coefficient of market returns can not be used as a direct measure of market integration. For example, Errunza, Hogan and Hung (1999) show that

using correlations of market-wide index return as a measure of market integration would underestimate the actual degree of integration given the ability of investors to achieve "home-made" diversification.[7] They examine whether portfolios of domestically traded securities can mimic foreign indices so that investment in assets that trade only abroad is not necessary to exhaust the gains from international diversification.

It is, however, believed that the gradual removal of barriers to international investment as well as political and economic integration could lead to a progressive increase in the international correlation of financial markets. For example, Solnik et al. (1996) attribute the increase of correlation coefficient of British market with the U.S. market to the deregulation and opening of the British economy initiated by the former Prime Minister Thatcher.

Longin and Solnik (1995) study the correlation of monthly excess returns for 7 major countries and find that the cross-country covariance and correlation are changing overtime. They report increased correlations among 7 markets over the past 30 years. As they admit, with the correlation alone we cannot conclude whether the market is integrated to the world market and an IAPM must be explicitly applied to test the market integration.

Even though correlation coefficient of market returns is not a direct measure of market integration, it is often used to investigate the interdependence between markets. Actually, the low correlation between home and foreign market returns is the source of much of the gains to international diversification.

In this section, we have looked at the impact of market liberalization (barriers)on various aspects: differential pricing mechanism, revaluation effect, cost of capital, stock market volatility and correlation with world market return. Empirical studies on the impacts of these barriers support the theoretical prediction of a differential pricing mechanism induced by such barriers. The unrestricted securities are priced with a premium on the restricted ones. The premium for unrestricted stocks is positively related to foreign investment demand and information richness indicating that foreign investors prefer information-rich securities and drive up domestic stock prices. As the standard IAPMs predict, empirical studies show significant positive returns around market liberalization

7) They distinguish the difference between international diversification and home-made international diversification as follows: international diversification has involved foreign assets that only trade abroad and home-made international diversification includes claims on foreign assets that trade in the home market. Since their analysis is based on the viewpoint of U.S. investors, the home-made diversification portfolios are constructed by using U.S. market indices, 12 U.S. industry portfolios, 30 multinational corporation (MNC) stocks, closed-end country funds (CFs) and American Depository Receipts (ADRs).

(revaluation effect) and decreases in the cost of capital after market liberalization. Contrary to general concerns, the claim that market liberalization increases stock market volatility is not supported by empirical evidences. In general, the empirical results show a small increase in correlation with world market returns after market liberalization.

4. Real Effects of Financial Market Integration on Economic Growth[8)]

4.1 Why would financial liberalization affect economic growth?

There are a number of channels through which financial liberalization may affect economic growth. First, foreign investors, benefiting from improved diversification opportunities, will drive up local equity prices, thereby reducing the cost of equity capital. Consequently, the real variable most sensitive to the cost of capital should be real investment. Bekaert and Harvey(2000a), Bekaert, Harvey and Lundblad(2005) and Henry(2000b) all find that investment increases after equity market liberalization. Foreign investors may demand better corporate governance to protect their investments. Improved corporate governance may lead to lower costs of capital and increased investment(Dahlquist et al. 2003). If this additional investment is efficient, then economic growth should increase. However, in the aftermath of the recent financial crises, some economists feel that foreign capital has been wasted on frivolous consumption and inefficient investment, undermining the benefits of financial liberalization.

Second, there is now a large literature on how developed financial markets and intermediation can enhance growth and how well-functioning equity markets may promote financial development [see, for example, Levine(1991); King and Levine(1993); Levine and Zervos(1996, 1998a,b); Levine et al.(2000)]. Furthermore, foreign investors may also demand better corporate governance to protect their investments which may coincide with security law reforms that enforce better corporate

8) Main part of this section comes from Bekaert and Harvey, 2003, Emerging market finance, Journal of Empirical Finance 10, 3-55.

governance. Bekaert, harvey and Lundblad(2003) find that the enforcement of insider trading laws has a positive effect on growth. Bekaert, harvey and Lundblad(2001) find larger liberalization effects for countries with an Anglo-Saxon legal system, which are thought to have better corporate governance systems(Shleifer and Vishny 1997). Claessens and Laeven (2003) also show that more secure property rights lead to better capital accumulation and higher growth. There is a large and growing literature on how the relaxation of financing constraints improves the allocation of capital and promotes growth [see Rajan and Zingales (1998); Wurgler (2000)]. Lins et al.(2001) shows that firms in emerging markets listing on the U.S. exchanges are able to relax financing constraints. Since ADRs can be viewed as firm-specific investment liberalizations, this research directly established a link between liberalization and financing constraints. Galindo et al.(2001) show that financial liberalization improves the efficiency of capital allocation for individual firms in 12 developing countries.

4.2. Measuring the liberalization effect on economic growth

Bekaert, Harvey and Lundblad(2001) propose a time series panel methodology that fully exploits all the available data to measure how much an equity market liberalization increases growth. They regress future growth, averaged over periods ranging from 3 to 7 years, on a number of predetermined determinants of long-run steady state per capita GDP, including secondary school enrollment, the size of the government sector, inflation, trade openness, and on initial GDP in 1980. The right-hand side variables also include an indicator of liberalization based primarily on an analysis of regulatory reforms in Bekaert and Harvey(2000a). Bekaert, Harvey and Lundblad(2001) consider the liberalization effect in a small sample of 30 emerging and frontier markets as defined by the IFC and found that economic growth increased by 0.7% to 1.4% per year post liberalization. Bekaert, Harvey and Lundblad(2005) expand the sample to 95 countries, including to countries that may not even have financial markets, as well as to developed countries. The growth between segmented and financial open countries, as well as a temporal component. Expanding the sample of countries strengthens the results. Taken by itself, financial liberalization leads to an increase in average annual per capital GDP growth of 1.5 to 2.3 % per year. When they factor in a host of other variables that might also boost economic performance, improvements associated with financial liberalization still remain strong, 0.7% to 1.4% per year. The results are robust to both alternative

liberalization dates and a number of different samples.

There are possible problems in measuring real liberalization effect. First, it is possible that financial liberalizations typically coincide with other macroeconomic reforms which are the source of economic growth and not the financial liberalizatioins. However, when Bekaert, harvey and Lundblad(2005) add variables capturing macroeconomic reforms, such as inflation, trade openness, fiscal deficits and the black market premium, the liberalization effect remains intact. In some specifications, it does weaken somewhat suggesting that macroeconomic reforms may, indeed, account for some of the liberalization effect.

Another possibility is that financial liberalization is the natural outcome of a financial development process, and that, consistent with the endogenous growth theories, it is financial development that leads to increased growth. As an empirical evidence, Bekaert, harvey and Lundblad(2005) find that financial liberalization predicts additional financial development, but that the decision to liberalize does not seem to be affected by the degree of financial development. Hence, it is likely that one channel through which financial liberalization increases growth is by its impact on financial development.[9)]

4.3 Other real effects of financial liberalization

From the perspective of a large literature focusing on the detrimental effects of financial liberalization, the positive growth effects are very surprising. The consensus view is that financial integration naturally leads to increased capital inflows. This, in turn, increases asset prices (either rationally and irrationally), improves liquidity, and triggers a rapid expansion in bank credit. The lending boom then leads to a consumption binge, and potentially a real estate bubble. Apart from the appreciation in asset prices, the real exchange rate appreciates as well, aggravating macroeconomic vulnerability. A weak and inadequately regulated banking sector may aggravate this process by lending for speculative purposes, consumption and frivolous investments, including the fuelling of a construction boom. When inflated assets are used as collateral to justify further borrowing, a boom-bust cycle is clearly in the making. The consensus view appears to be that liberalization dramatically increases financial sector vulnerability in many countries and that a weak

9) see Beck et al.(2000a,b), Demirguc-Kunt and Levine(1996), Demirguc-Kung and Maksimovic(1996) Rajan and Zingales(2001)

banking sector played a large role in both the Mexican and Asian crises.

While this interpretation of how foreign capital can wreak havoc in the real economy of developing countries is widely accepted, it is surprising that empirical evidence for this view is very scarce. Bekaert and harvey(2000b) test for changes in a number of variables, finding a larger trade sector, less long-term country debt, lower inflation and lower foreign exchange volatility. They also test whether the real exchange rate appreciates after the equity inflows and find that it does in 9 of 16 countries. However, there is a significant depreciation in 4 countries. Hence, the empirical evidence for the real appreciation is not as strong as typically believed.

Finally, there is a sense that increased volatility in financial market post liberalization (for which the empirical evidence is tenuous) also translates into real variability. Bekaert, Harvey and Lundblad(2002) test this prediction directly. They find that the volatility of consumption and GDP growth did not significantly increase post-liberalization. When they focus on the years preceding the recent Asian crisis, volatility actually decreases, which is especially true for the volatility of consumption growth. When they include the crises years (1997-2000), this strong result is weakened. However, even with the crises' years, in no case volatility significantly increase.

5. Summary

It is well recognized that the structure of the international capital market has important implications for international finance theory and practice. Here we focus on the effect of barriers to international investment on investors' portfolio choice and asset pricing. Empirical studies in general support the theoretical prediction of mild segmentation models that world markets are neither completely segmented nor fully integrated. The degree to which the local market is integrated to the rest of world markets seems to be changing over time.

Empirical studies on the impacts of market liberalization support the theoretical prediction that there exists a differential pricing mechanism induced by barriers. The unrestricted securities are priced with a premium on the restricted ones. As the standard IAPMs predict, the cost of capital decreases after market liberalization: a significant positive return around market liberalization (revaluation effect) and a decrease in the proxy for the cost of capital for example, long run realized

returns or dividend yields. This decrease could represent a decrease in the cost of capital or an improvement in growth opportunities. Bekaert, Harvey and Lundblad(2001, 2005) find that economic growth increases post liberalization by about 1% per year on average over a 5-year period. Bekaert and Harvey (2000a), Henry(2000a), and Bekaert, harvey and Lundblad(2005) all find that aggregate investment increases significantly after liberalizations, providing one channel for this increased growth.

In general, the empirical results show a small increase in emerging market correlation with world market return after liberalization. With a number of recent crises in emerging markets, the role of foreign capital in developing countries is again under intense scrutiny. Although policy makers often complain about foreigners inducing excess volatility in local markets, we have so far failed to find negative effects of foreign investment on emerging markets.

Issues discussed above are not exhaustive in emerging market finance. There remain many questions to be answered in further studies. For example, currency crises and contagion effect, corporate governance and market microstructure are among others.

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<국문초록>

이머징마켓 금융시장의 현행이슈와 경제적 시사점

정 현 철 *

본 연구는 이머징마켓의 최근 이슈에 관련된 연구들을 조사/정리하였다. 자본자산 가격결정 메커니즘, 자본비용, 주가상승효과, 변동성, 연동성 및 경제성장에 이르는 다양한 주제를 다루고 있다. 투자장벽의 존재로 인하여 가격결정 메커니즘이 변하고, 국제자본자산가격결정모형이 예측하는 바와 같이 자본자유화 이후에 자본비용이 감소하고 가격상승효과가 일어나고 있는 것으로 나타났다. 이러한 자본비용의 감소는 투자증가를 유도하고, 이는 경제성장의 기회로 작용할 수 있다는 주장과 함께, Bekaert, Harvey and Lundblad(2001, 2005)는 자본자유화 이후 연평균 1%의 경제성장을 보이는 분석결과를 내놓고 있다. 또한 일반적 인식과 마찬가지로 자본자유화 이후에 이머징마켓의 세계시장과의 연동성이 증가하는 것으로 나타나고 있다. 반면, 일반적인 우려와는 달리 자본자유화가 이머징마켓의 변동성을 증가시킨다는 주장은 실증분석 결과가 지지하지 않는 것으로 나타났다.

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