

Path-dependency and Transition Strategy of Korean Financial System*

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Since the 1997 crisis, it has been widely argued that the financial system in Korea should shift towards a market-based. It seems that the transition in Korea is compulsory under global integration and that Korea cannot but complying these international standards in order to give impetus to economic growth. Previous studies, however, suggest that the primary source of economic growth is the development of overall financial system, not choice of a bank-based or a market-based. It is recommendable for Korea to shift gradually towards a market-based in company with solidifying her banking system, which is one of crucial infrastructures for the successful transition. The reckless imitation of market-based practices, without infrastructures prepared properly, may deteriorate economic growth.

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1. INTRODUCTION

Financial economists have debated comparative merits of bank-based and market-based financial systems for over a century. The primary question is about which system is superior in financing the expansion of existing firms, in promoting the establishment of new firms, as well as in improving the efficiency of allocating capital. The evaluation on which system could foster economic growth better has taken a new turn as economic situations evolve over time. The evidence of advantages that banks have over markets has centered on economic prosperity in Germany and Japan at 1980's. On the other hand, comparative merits of markets have been emphasized from experiences of the US and UK at 1990's.

Results from previous empirical studies can be summarized as follows even though it is unlikely that they can capture all the theoretically relevant nuances in the organization of financial markets. First, it is the overall development of finance that affects the economic growth, not choice of a bank- or a market-base system. Second, the level of overall financial development, not the type of financial system, has a significant impact on the ability of firms to raise external capital. Third, either bank or market is more developed in countries which are well equipped with legal systems for investor protection. Fourth, a country needs to transform its financial system as her economy evolves if she intends to sustain her growth.

The implication from previous works is that the bank-based versus market-based debate is of less importance. It is more important to ameliorate information and transaction costs by improving the ability of overall financial system (Levine, 1997). It has the second order importance whether banks or markets provide these services. Furthermore, banks and markets might act as complements in providing financial services.

Most countries, however, are under pressure to shift towards market-based systems as the global integration among financial markets accelerates. Both Japan and Germany, which had maintained bank-based systems for a long time, recently started to shift towards market-based ones. Korea also has

followed this trend since 1990's, with it as a momentum that capital market was opened to foreign investors. When assessed by the gradual rise of direct financing, the degree to which Korean system is comparatively market-based has deepened since the 1997 crisis.

It is controversial, however, to say that security markets have successfully taken the place of banks in Korea, when we look at the observation that Korean security markets do not ameliorate information asymmetry for lack of infrastructures. Indeed, Kosdaq market is so fragile to experience collapses and the transaction in bond market has been suspended often.¹⁾ The size of indirect funding implies that Korean system recurs towards a bank-based. But it is not evident either that Korean banks successfully play their genuine roles. Korean banks have sought short-term profits through reallocating funds from loans to securities, and from corporate loans to household loans. In consequence, relationship-banking activities have dwindled. The attempt for Korea to transform her financial system seems to be not that successful at this moment.

Our paper tries to figure out the reason why the transition does not work well in Korea even though the shift towards market-based system is regarded as a global standard. We focus on the path-dependency and institutional complementarity, which implies that Korea needs to follow the path that is complementary with existing systems. In other words, a desirable financial system for Korea could be designed and implemented successfully only when it is the result based on current Korean system.

For this, we investigate changes that have been observed in Korea financial system since 1980's. The remainder of this paper is organized as follows. The next section reviews experiences in developed countries. Section 3 evaluates the current status of Korean system. Section 4 suggests the direction for Korea to follow. Section 5 concludes.

¹⁾ For example, the portion of indirect financing broke through the level before the crisis after 2002 when the bankruptcy of Daewoo business group led the direct financing to shrink severely.

2. CONVERGENCE OF FINANCIAL SYSTEMS

Financial systems of countries over the world seem to converge to a certain direction even though they still show some variations due to the influence of different historical backgrounds. The convergence is fueled whenever it is regarded as a particular type could elevate the competitive power of an economy. The global integration of financial markets stimulates countries, which want to take competitive edges, to import advanced practices from developed countries.

2.1. Tendency of Convergence

Japanese financial system has been characterized by reciprocal equity investments between firms, higher leverage of firms and the absence of hostile takeovers. These traits have contrasted with those of American system which is identified by the high portion of minority shareholders in ownership structure of firms, lower leverage of firms and the presence of hostile takeovers.

This contrast, however, is not accurate any longer, even though some aspects still hold in Japan as of now. Reciprocal equity investments still represent a main portion of ownership structure of Japanese firms. In addition, hostile takeovers are still not working in Japan. However, the role of banks has dwindled in external funding of firms, since Japanese firms do not have to rely on banks as they generate large cash flows. And the opening and deregulation of financial markets enable Japanese firms to raise funds from other sources.

In Germany where banks have been major players in both corporate finance and governance, the relative importance of stock market increased recently. At the end of 2000, the total market value of German stocks amounted to 67.6% of GDP, as compared to 184% in the UK, 153 % in the US. Since 1990's, however, the number of publicly traded German companies and the total market capitalization of German stock markets have

significantly increased. It is thanks to policies for restoring stock markets, like the opening of the Neuer market. The level of German laws for investor protection and transparency has been elevated to that of international standards, as a consequence of legal reforms including a series of financial market promotion act since 1990's (Nowak, 2001).

The opening of the Neuer market in 1997 is the most important event showing the development of German stock markets. Even though Neuer market has been stagnant due to the plunge of stock prices after the recession of German economy, it listed a lot of German companies on the basis of regulations for investor protection and transparency. Following the opening of Neuer market, Deutsche Telecom was listed in stock market in 1996 and a hostile takeover of Mannesmann by Vodafone was accomplished in 2000.

There are pieces of empirical evidence that German financial system is no longer regarded as a bank-based. Wojcik (2001) shows, after analyzing the ownership structure of German firms using data from 1997 to 2000, that the concentration of ownership is greatly relieved and reciprocal equity investments among German firms start to liquidate. He also finds that the role of financial institutions including banks has shrunken in Germany.

As opposed to transitions from a bank- to a market-base system in Japan and Germany, institutional investors start to participate in the management of firms through relational investing activities in the US. The transition was fueled by the recognition that the agency problem caused by the extreme ownership dispersion led to the lack of competitiveness of American firms in 1980's. Glass-Steagall Act, which had made the role of banks in financial markets weakened before, was revised to allow the merger of banking with security business. Also hostile takeovers, which is one of features to characterize the American system, have not happened in the US since 1990's (Bebchuk *et al.*, 2002).

2.2. Obstacles to Convergence

Even though the global integration of financial markets forces every

country to import financial practices from developed countries, both path dependency and institutional complementarity make it difficult for all systems to converge to a certain type.

The institutional characteristics of a financial system exhibit path dependency. Initial conditions, which are determined by historical accidents or policy designs, can set an economy down a particular path. Following the path, efficiency considerations favor the addition of new institutions whose contribution to the system reflects not just their own incremental addition to output, but also the resulting increase in output of existing institutions to which the new institutions are complementary. For this reason, the development path evolves at each stage by selecting new institutions that are complementary with preexisting institutions, at the expense of alternatives which lack this attribute.

A complementary system is difficult to change piecemeal since the financial system's development tends to be driven, domino-like, by the linking of complementary institutions, even though institutional form is still driven by the initial starting point. As a result, complementarity has an ominous downside like leverage. The external economic changes, which counsel altering one institutional attribute, may cause the productivity of the entire system to decline dramatically since other attributes are selected to make good use of the now altered attribute. It may cause problems under some circumstances.

The policy to develop stock markets in Europe countries including Germany is a typical case in which a financial system has not changed as wanted due to path dependency and institutional complementarity. Germany has not made a big success in its attempt to foster venture capital that can expedite the growth of the economy. Even though stock markets were somewhat developed, complementary institutions, which include venture capital companies, investment bankers experienced in early-stage companies, and entrepreneurs were not set up in Germany.

2.3. Implications

The rapid change of environments since 1990's compels financial systems over the world to converge towards market-based ones. As financial markets integrate globally, institutional differentials across countries have vanished gradually. International standards which mostly reflect features of American or English system are imported into almost all countries. Typically, both Germany and Japan which have been bank-based for a long time are also incorporating securitization, deregulation and market principle into their financial systems. The influence of international standards became so powerful due to the belief that the US enjoyed the prosperity of economy at 1990's relying on this foundation. It is obvious that it is so hard for Korea to go against such a rush by sticking to a bank-based system.

Many Korean economists consent that solidifying markets could contribute to restructuring Korean bank-based system. Active stock markets could accommodate the growth driven by high technologies which banks do not have the capacity to support. However, the immediate imitation of market-based practices from developed countries would not help Korea because of path dependency and institutional complementarity. It is urgent to mature infrastructures which are prerequisite before market-based components are implanted. Legal systems, under which financial contracts can be lawfully enforced, are indispensable for external funding through markets.

3. EVALUATING THE STATUS OF KOREAN FINANCIAL SYSTEM

For a long time, Korea has maintained a bank-based system in which Korean government has often taken part in the management of banks. Banks have allocated funds across sectors in accordance with government directives, which enabled Korea to intensify economic growth. But, it is unavoidable for Korean financial system to shift towards a market-based as

the degree to which Korean economy are open to foreigners has deepened. However, whether Korean financial system is dominated by markets are indecisive at this moment and there exists some evidence to show that the transition is not successful. We conjecture that it is because of the path dependency in Korean financial system. It is assumed that institutional characteristics of a financial system can be described by a vector error correction (VEC) model, in which the degree of dependency is measured by equilibrium restorability.

3.1. VEC-model

The model used in this paper estimates stable long-run cointegrating vectors among GDP and financial assets. Previous empirical studies focus on the size of bank assets or market capitalization as indicators to show the type of financial system.²⁾ Since those figures reflect limited aspects of a whole system, we look up all asset categories to get a broad picture about how Korean system has evolved over time.

Financial assets are classified into three groups -- banking sector, market sector, and trading sector. The banking sector contains Loans (LOA), Deposits (DEP), and Insurance (INS). The market sector consists of Long-term Securities (LTS), Stocks (STO), and Short-term Securities (STS). The trading sector includes Trading Credits (TRA), Foreign Claims (FOR), and Currency (CUR). All variables are logged but non-seasonally adjusted. Cointegrating vectors can be considered to be long-run relations. We

²⁾ According to the literature on financial development and economic growth such as Levine (1997) and Demirguc-Kunt and Levine (2001), measures of financial intermediaries include the followings (relative to GDP): *liquid liabilities*, *bank assets*, *claims of deposit money banks on private sector*, and *claims of other financial institutions on private sector*. For stock markets, the following measures (relative GDP) are used: *market capitalization* to measure market size, *total value traded* to measure market activity, and *turnover ratio* to measure market efficiency. A question may arise as to whether the findings as summarized above are specific to the non-conventional measures used in the paper. It would be interesting to see whether the results are robust to the conventional measures of financial development in Korea.

assume that there exist three long-run relations: GDP-Banking, GDP-Market, and GDP-Trading.

The Johansen-Juselius (1990) methodology is used to estimate the long-run cointegrating vectors from a VEC-model of the form

$$\Delta X_t = AB'X_{t-1} + C(L)\Delta X_t + D'Z_t, \quad (1)$$

where $X_t = (gdp_t, x_{B,t}, x_{M,t}, x_{T,t})$ is a vector of endogenous variables in logged form. $x_{B,t}$ consists of assets for Banking sector, $x_{M,t}$ for Market sector, and $x_{T,t}$ for Trading sector such as

$$x_{B,t} = (dep_t, loa_t, ins_t), \quad (2)$$

$$x_{M,t} = (lts_t, sto_t, sts_t), \quad (3)$$

$$x_{T,t} = (tra_t, for_t, cur_t). \quad (4)$$

$C(L)$ is a matrix of parameters for a second-order lag process. Z_t is a matrix of seasonal dummies, and D is the matrix of parameters associated with seasonal dummies.

The $A = (\alpha_B', \alpha_M', \alpha_T)'$ is a matrix containing three error correction coefficient vectors α_i , each of which measures the speed at which the variables in the system adjust to restore the corresponding long-run relationship. The $B = (\beta_B', \beta_M', \beta_T)'$ is a matrix made up of three cointegrating vector β_i which represents an equilibrium path for long-run economic relationship. The cointegrating relation

$$y_{B,t} = \beta_B' X_t, \quad (5)$$

captures a disequilibrium error deviated from equilibrium path between GDP and Banking sector. Likewise, $y_{M,t}(y_{T,t})$ corresponds to Market sector

(Trading sector), respectively. If the economy stays on a equilibrium path, then the followings hold.

$$y_{i,t} = 0 \quad \text{for all } i. \quad (6)$$

To identify three cointegrating relationships, we impose restrictions on B such as

$$\beta_B = (1, \beta_{B1}, \beta_{B2}, \beta_{B3}, 0, 0, 0, 0, 0, 0)', \quad (7)$$

$$\beta_M = (1, 0, 0, 0, \beta_{M1}, \beta_{M2}, \beta_{M3}, 0, 0, 0)', \quad (8)$$

$$\beta_T = (1, 0, 0, 0, 0, 0, 0, \beta_{T1}, \beta_{T2}, \beta_{T3})'. \quad (9)$$

Now, (1) can be rewritten as

$$\begin{aligned} \Delta X_t &= \alpha_{B,t} y_{t-1} + \alpha_{M,t} y_{t-1} + \alpha_{T,t} y_{t-1} + C(L)\Delta X_t + D'Z_t \\ &= \alpha_{B,t} \beta_B X_{t-1} + \alpha_{M,t} \beta_M X_{t-1} + \alpha_{T,t} \beta_T X_{t-1} + C(L)\Delta X_t + D'Z_t. \end{aligned} \quad (10)$$

The model (10) is an error-correction model in that deviations $y_{i,t}$ from long-run relations among growth rates of financial assets are assumed to be corrected by error correction coefficient α_i in the long run. For instance, the relation β_B is considered as an underlying economic relation between economic growth and Banking sector growth. And it is assumed that agents react to a disequilibrium error $y_{B,t}$ through the adjustment coefficient α_B to restore equilibrium; that is, they satisfy the economic relation.

We focus three aspects to interpret estimates of VECM. First, we check whether our VEC-model works properly. For this, the condition under which equilibrium error decreases over time

$$|B'(X_{t-1} + AB'X_{t-1})| < |B'X_{t-1}|, \quad (11)$$

should hold. And it can be shown that the followings

$$-2 < \alpha_i' \beta_i < 0 \quad \text{for all } i = B, M, T, \quad (12)$$

are sufficient for (11) to hold.

Second, we check $|\alpha_{ij}|$ to measure the degree by which j -th financial asset is exogenous to i -th long-run relationship. The test of weak exogeneity j -th variable of X_t for i -th relation determines whether $\alpha_{ij} = 0$. Weak exogeneity means that there is no information about B in the marginal model or that the variables $X_{j,t}$ do not react to a disequilibrium.

Third, we evaluate the strength of equilibrium restorability by

$$k_i = -\frac{(\alpha_i, \beta_i)}{\|\alpha_i \beta_i\|} \quad \text{for all } i = B, M, T, \quad (13)$$

where (a, b) represents the inner product of two vectors a and b , and $\|a\|$ means the norm from the origin. Note that condition $(\alpha_i, \beta_i) < 0$ holds from the error correction condition.

3.2. Results

The stability of economic relations which are assumed between economic growth and banking sector, market sector, and trading sector, are tested by cointegration tests. The results are shown in table 1. Both Trace test and Max-eigenvalue test indicates more than one cointegrating equations at the 0.05 level as for each of $x_{B,t}$, $x_{M,t}$, and $x_{T,t}$.³⁾ It implies that there exist a stable economic relation between economic growth and each sector in the long run.

³⁾ There is no significant difference from Johansen's test.

Table 1 Cointegration Rank Tests

Rank	λ_{trace}	p-value	λ_{max}	p-value
$x_{B,t}$	66.411	0.0004	31.879	0.0131
	34.532	0.0132	17.309	0.1579
$x_{M,t}$	62.459	0.0012	27.207	0.0558
	35.252	0.0106	22.518	0.0317
$x_{T,t}$	62.498	0.0012	34.482	0.0056
	28.017	0.0791	16.246	0.2108

Note: MacKinnon-Haug-Michelis (1999) p-values.

The cointegrating relationships estimated from VEC-model are as follows.
As for the relation with Banking sector,

$$y_{B,t} = gdp_t - 0.3663dep_t - 0.9133loa_t + 0.2369ins_t + 2.3074. \quad (14)$$

(- 5.7650) (- 8.0864) (5.3542)

As for the relation with Market sector,

$$y_{M,t} = gdp_t - 0.2400lts_t + 1.1358sto_t - 0.6093sts_t + 10.8119. \quad (15)$$

(-10.5703) (5.9966) (- 3.9045)

As for the relation with Trading sector,

$$y_{T,t} = gdp_t + 0.6762tra_t + 0.3168for_t - 0.7710cur_t - 13.5396. \quad (16)$$

(2.6596) (3.3542) (- 4.7010)

Next, each of estimated cointegrating relation satisfies the condition under

Table 2 Feasibility of Error Correction

	$y_{B,t}$	$y_{M,t}$	$y_{T,t}$
$\alpha_i' \beta_i$	-0.5745	-0.4585	-0.1729

Table 3 Weak Exogeneity

	$y_{B,t}$	$y_{M,t}$	$y_{T,t}$
Δgdp_t	0.5659	0.0324	0.1835
Δdep_t	0.1216	0.0117	0.0136
Δloa_t	0.1009	0.0163	0.0085
Δins_t	0.1648	0.0097	0.0316
Δlts_t	0.2329	0.1172	0.1635
Δsto_t	0.1209	0.0788	0.1823
Δsts_t	0.6668	0.0907	0.0217
Δtra_t	0.0188	0.0079	0.0080
Δfor_t	0.7284	0.0641	0.0237
Δcur_t	0.3033	0.0185	0.0030

which the error correction towards corresponding equilibrium path works properly (see table 2). It implies that economic relations postulated by estimated cointegrating vectors absorb disequilibrium errors to restore an economic equilibrium.

Next, market sector is most endogenous to our VEC-model in that the weak exogeneity measured by $|\alpha_{ij}|$ appears the smallest.⁴⁾ As shown table 3, error correction coefficients of cointegrating relations $y_{B,t}$, $y_{M,t}$, and $y_{T,t}$ in equations for $\Delta x_{M,t}$ are larger than in equations for $\Delta x_{B,t}$ or $\Delta x_{T,t}$. It implies that the growth rates $\Delta x_{M,t}$ of market sector do react to disequilibrium more sensitively.

⁴⁾ The Wu-Hausman test of exogeneity can be used to supplement evaluation based on the size of error correction coefficient. See Wu (1973) and Hausman (1978) for details.

Table 4 Equilibrium Restorability

	$y_{B,t}$	$y_{M,t}$	$y_{T,t}$
k	0.2838	0.0544	0.0804

Last, the economic growth has a strong relation with the growth of banking sector, trading sector, and market sector. The relative strength of these relations can be measured by estimated equilibrium restorability of VEC-model as shown in table 4. Disequilibrium error is adjusted at triple speed towards the equilibrium path $y_{B,t} = 0$ relevant to Banking sector, compared with the adjustment speed towards other paths $y_{M,t} = 0$ or $y_{T,t} = 0$. It can be said that Korean financial system is bank-based in that the relation between economic growth and banking sector is more robust against economic shocks.

4. DESIGNING A SOUND SYSTEM IN KOREA

4.1. Reasons to Shift towards the Market-based System

According to studies on comparative merits of financial systems, any well developed financial system positively influences economic growth. It is relatively unimportant whether overall financial development is achieved through banks or markets. For example, according to a recent study by Beck and Levine (2002) using panel data set (including Korea) for the period 1976-1998 and applying GMM techniques, both banks and stock markets development always enter jointly significant in all the system panel estimators that they employ. Rather, the legal systems play a leading role in promoting financial services and thereby determining the level of growth. As well as the efficient enforcement of contracts, the legal protection of minority rights is critical for financial development.

It is inevitable, however, that Korea would continuously shift towards the

market-based system for the following reasons. First, the global integration among financial markets over the world will force Korea to import a market-based practices. Korean banks are required to meet international business standards if they are to boost their credit standing and thereby get higher credit ratings from international agencies. The experience from developed countries confirms that it is inevitable for an economy to follow global trend to sustain its growth.

Second, a market-based system would help Korea bring up high technologies including information communication and life science. Stock prices tend to reflect more efficiently informations about business prospects when the ability of banks to evaluate the profitability of projects is limited due to diverse informations as an economy advances, as observed in Korea.

Third, the transition towards a market-based system would contribute to make Korean banking system successfully restructured by resulting in more efficient capital allocation. A well developed capital market would stabilize banking system because Korean banks are released from taking risk exposure led by maturity mismatch when firms can fund their long-term capital through security markets. This aspect may have critical implications in Korea since Korean banks have operated as a major channel for long-term funding.

4.2. Concerns for a Successful Transformation

Steps to accelerate the transition towards the market-based system make no success in Korea. The gradual rise of direct financing since the 1997 crisis was considered as an evidence for a successful transition. The Daewoo group bankruptcy and “Buy Korea” boom, however, undermined the confidence of investors on security markets so that indirect financing resurged up to the level before the crisis. More significantly, the lack of financial infrastructures has led to transaction suspensions in both Kosdaq and bond market. All together, the current status of financial markets in Korean is not sound enough to alleviate information asymmetry.

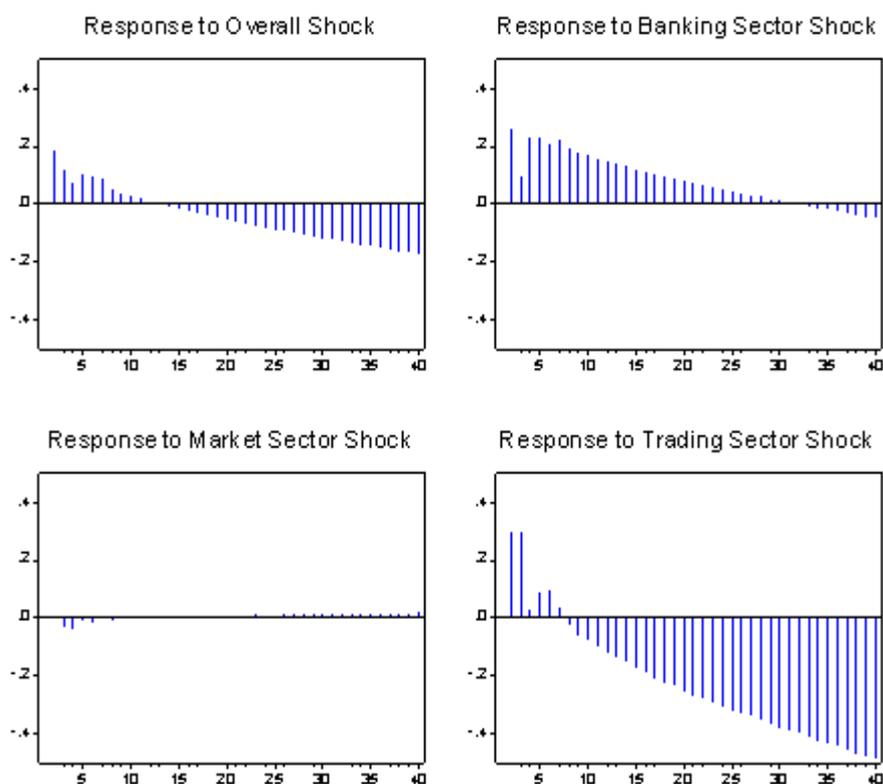
From the perspective of path dependency and institutional complementarity, Korea still has the bank-based system although it is hard to evaluate Korean system as a genuine bank-based. It is clear that Korean banks do not satisfactorily play their unique roles -- i.e. monitoring firms, producing private information, and maintaining long-term relationships. But, the following impulse-response analysis provides some evidence that Korean system is subject to the path dependency and institutional complementarity towards the bank-based system.

A shock to one of financial assets not only directly affects itself but is also transmitted to all of the other assets and GDP through the dynamic structure of economy. An impulse response function of VECM traces the effect of a one-time shock to one of financial assets on current and future values of GDP. Four types of shocks are designed: overall shock, banking sector shock, market sector shock, and trading sector shock. For instance, positive one unit shock to DEP, LOA, and INS is applied simultaneously as for the banking sector shock: a third shock to each category. Other three shocks are specified in similar ways.

Figure 1 shows the response of GDP growth rate to four types of impulses. All types of shocks except market sector shock have positive impact on economic growth in the short run, while the long-run effect turns around to be negative over time. The response to market sector shock goes the other way: negative in the short run but positive in the long run. The magnitude of response of economic growth is in the order of overall, trading sector, banking sector, and market sector shock.

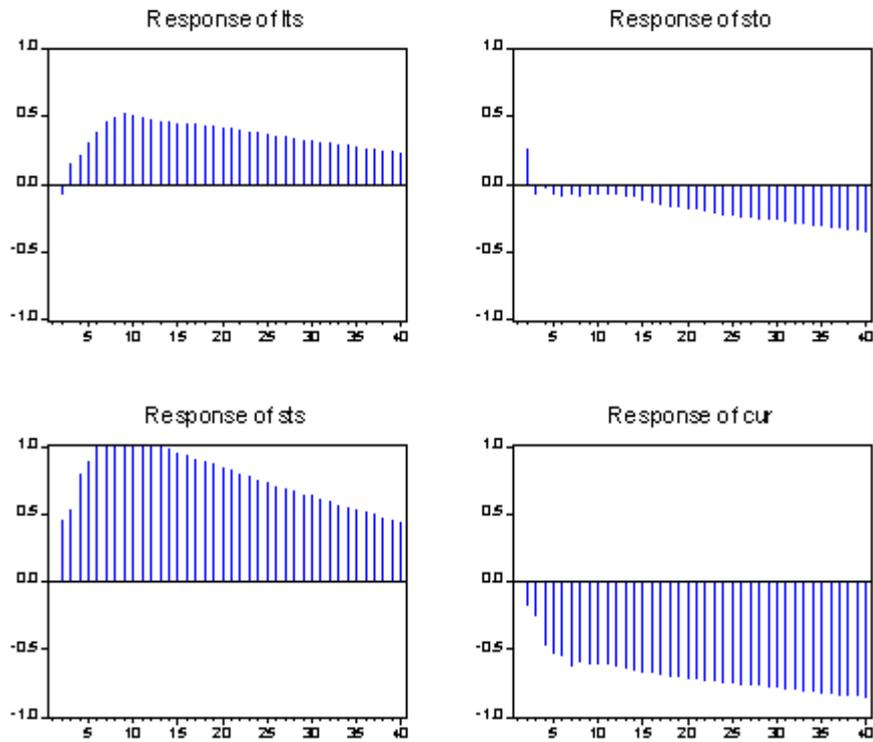
As a result, the growth of banking sector would be superior to the growth of other sectors in that an expansion of banking sector is likely to have a long-lasting positive effect on the economic growth. The growth of trading sector asks the economy to bear the negative effect as time passes although it may lead larger enhancement of economic growth in the short run. The market sector shock has little impact on the economic growth.

One of the important issues to design a sound and stable financial system is whether the banking sector and the market sector are complementing or

Figure 1 Response of GDP to Increase of Financial Assets

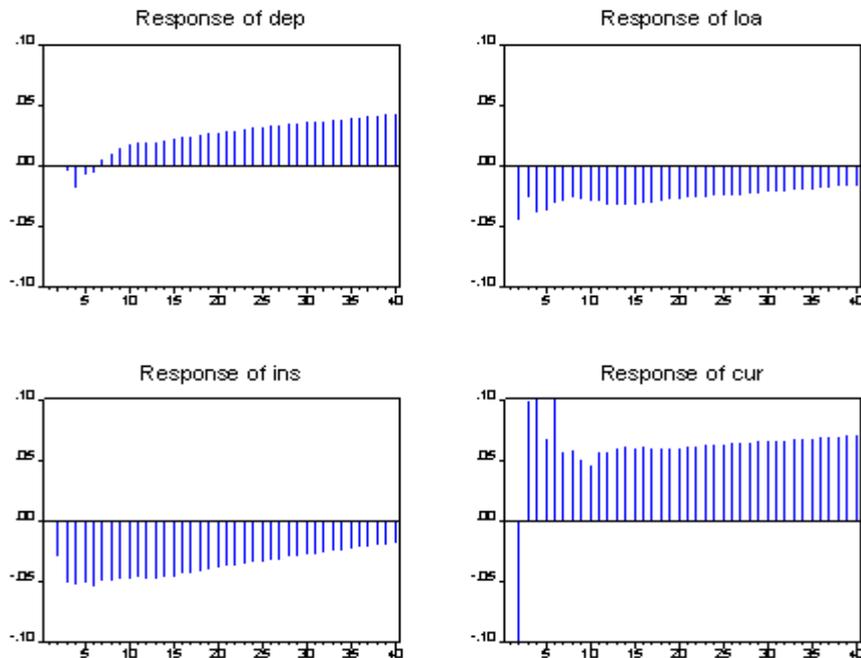
substituting each other. It is observed that the market sector becomes more important as the economy grows over time. The question is whether the growing importance of the market sector is at the expense of the banking sector or not. As the financial services view asserts, the banking sector and the market sector might act as complements in providing financial services: assessing potential investment opportunities, exerting corporate control, facilitating risk management and enhancing liquidity. Or it might hold, as pointed out in Allen and Gale (2001), that some services by intermediaries is ruled out by competition from financial markets.

Figure 2 shows responses of market sector to a banking sector shock in

Figure 2 Response of Market Sector to Banking Sector Shock

Korean economy. When the banking sector increases by one positive shock (or DEP, LOA, and INS simultaneously grow by one third positive unit), LTS and STS also increase whereas STO decreases over time. As a result, the banking sector shock is complementing the bond market but substituting the stock market. The response of CUR to a banking sector shock is also reported together for a reference.

As shown in figure 3, DEP responds positively while LOA and INS respond negatively for the market sector shock by one positive unit (or LTS, STO, and STS simultaneously grow by one third positive unit). It implies that the market sector shock is complementing the borrowing of financial intermediaries but substituting the lending of financial intermediaries.

Figure 3 Response of Banking Sector to Market Sector Shock

Overall, the growth of banking sector would drive the growth of market sector in the same direction. In contrast, the growth of market sector would drive the growth of banking sector in the opposite direction. This findings suggests that both the financial services view and Allen-Gale argument can be supported by Korean data. It might be better to pursue the growth of banking sector during the course to design a sound and stable financial system in Korea.

4.3. Strategies

Without a doubt, Korean financial system evolves towards a format which best suits Korean economy. The notion that a financial system transfers resources between households and firms is, however, a simplification. Governments usually play a significant role in the operation of financial

systems. In addition to their roles as borrowers or savers, governments usually play a number of other important roles. Central banks typically issue fiat money and are extensively involved in the payments system. Governments also intervene in a significant way in the financial system in order to eliminate financial crises. Central banks or some other regulatory authority are charged with regulating the banking system and other intermediaries, such as insurance companies. All together, the political system, which determines the government and its policies, is closely relevant for the financial system.

A financial system is much more than all of this. The law, typically, plays an important role in most financial systems. It determines what kinds of contracts are feasible, what kinds of governance mechanisms can be used for corporations, the restrictions that can be placed on securities and so forth. Hence, the legal system is an crucial component of a financial system so that the absence of a well-defined legal system destroys reputation in which financial markets and institutions may operate.

Two strategies, which cannot but being implemented by government intervention and the law, are suggested to design a sound and stable financial system in Korea. First, it is asked to restore unique functions of banks. Second, it is requested to consolidate infrastructures for security markets to operate properly on.

4.3.1. Solidification of Banking

When it is considered that banks are complementary with markets, Korean banking system needs to be solidified for the successful transition towards a market-based. The transition could be achieved in smooth water when the banking system is stable because banks do not only supply funds for firms but also provide payment settlement services for non-bank institutions who are important market participants. Financial markets will be flourishing when information about firms is produced sufficiently by banks.

The participation of commercial banks in investment banking would give an impetus to the fortification of banks in Korea. If banks could internalize

the function of markets through universal banking, side effects during the transition period may be alleviated to a certain extent. Indeed, the benefit from a balanced development between banks and markets has been observed in Germany. French banks also played the role of market makers successfully during the transition. The implication is that a gradual shift together with the solidification of banks, rather than the reckless import of market-based practices from developed countries, is likely to be beneficial for Korea.

Path dependency is another rationale that Korea needs urgently to normalize banks' roles. In Korea, the government-controlled banking, which has contributed a lot to economic growth once, would raise an obstacle to the transition towards a market-based. Under the government-controlled banking, Korean banks have not actively intervened corporate governance or to produce information about firms. It is a paramount mission for Korea to overcome government-controlled practices if she intends to shift successfully towards a market-based system.

4.3.2. Consolidation of Infrastructure

Korea needs in advance to prepare infrastructures for a market-based, if she wants to reduce the cost of transition. The expansion of financial markets would disturb external funding of firms severely when an economy is not equipped with sound infrastructures. It is reckless for Korea to give an imitation of developed countries without being equipped with relevant infrastructures. Nurturing market makers (i.e. investment banks, credit rating agencies and private pension funds) is quite important as observed in the US or the UK. In addition, software infrastructures (i.e. investor protection, transparency of accounting and disclosure) are so important as hardware.

Especially, sound legal systems are essential because financial markets can not operate in a reasonable manner without proper protection of investors. The weak investor protection leads to the stronger tendency that stock prices are synchronized, which is more apparent in developing countries (Morck *et*

al., 1999). Since the risk imbedded in stock trading would be high without proper protections, investors are not willing to trade even when they possess valuable information. As a result, stock prices which do not reflect those information timely are not efficient any longer.

Minority investors, for instance, are less likely to trade on their information if they doubt whether they can be protected appropriately from insiders. If outsiders are driven out of financial markets, capital allocation through financial markets can not rely on sufficient information. In order to avoid this type of market failure, it is quite crucial for Korea to take steps to correct opaque accounting as well as interest conflicts between minorities and controlling shareholders. Even though minority rights in Korea can be exercised more easily now, the degree to which minority investors are protected is not high enough.

With regard to disclosure system, it is recommended to strengthen disciplinary punishment against inaccurate disclosures. Korean disclosure principles, which appear similar to those of developed countries, still have lots of loopholes in operation. Steps to promote information flow from firms to investors are not effective because the punishment imposed against inaccurate disclosures is so light. As for transparent accounting, it is also urgent for Korea to eradicate practices of make-up accounting which are widely routinized.

5. CONCLUSIONS

The force of global competition among financial markets over the world would compel Korea to adopt a market-based system. Recent studies, however, show that the financial development necessarily relies on the current economic situation. Korea needs to pursue a market-based system with reservations if she is to restructure her financial system successfully. From reviewing discussions about path dependency and complementarity, two strategies are recommended to consider.

First, Korea needs to pursue the transition towards a market-based system along with consolidating banking system. It is advisable for Korea to keep capital flows stable by making banks recover their genuine functions. Thus, Korea has better solidify banks as well as nurture financial markets.

Second, Korea needs to establish infrastructures for financial markets to operate in a smooth way. Attempts impetuously to expand financial markets would result in market failures for the lack of infrastructures. As for infrastructures, it is important not only to construct hardware, but also to improve software. The legal system to protect minority rights and to enforce contracts is one of primary elements.

These strategies may take long time because they involve structural changes. Together with long-term strategies, there exist urgent tactics to set about immediately.

First, the most urgent task at this point is to mobilize Korean financial system by bolstering compliance between financial institutions and companies. It would be essential to support venture capital investments through enhancing the function and capability of investment banks.

Secondly, the long-term investment needs to be fostered by restructuring financial institutions and corporations thoroughly. The growth and stability of Korean economy can be accomplished only through the establishment of a market principle, reinforcing compliance, and advance in credit risk analysis.

Thirdly, it is critical to make the balance between domestic investors and foreigners in capital markets. Foreign companies, which prioritize short-term returns over long-term investment, are not good candidates to bolster cooperation and the financial sector. It is necessary to put in practice the revised Basic Fund Management Act so that domestic investors hold larger stakes in capital markets.

Forth, nurturing well-trained financial professionals such as bankers is crucial for an effective financial system, as the experience of Eastern Europe demonstrates. It would be impossible for any of tactics mentioned above to operate effectively without significant amounts of human capital.

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