Potential Impact of the International Capital Flows on the Korean Financial Market and Real Sector: Korea's Strategic Responses

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1. Introduction

The Asian crisis began in mid-1997 with intense pressure on the Thai baht. After spending $8.7 billion in foreign exchange reserves and undertaking $23 billion in forward contracts to defend the currency, Thailand's central bank let the exchange rate float in July. By the end of year the baht had depreciated 93 percent and the stock market had fallen 34 percent in dollar terms relative to June 1997. The Thai financial crisis triggered a collapse of market confidence in the neighboring countries of Indonesia, Malaysia and the Philippines, causing their exchange rates and stock market prices to plummet in July and August 1997. The crisis then began to affect other economies in the region in October, when speculative pressures intensified against the Hong Kong dollar, the Korean won and the Taiwan dollar, accompanied by sharp falls in stock markets in these economies.

This Asian crisis is different from previous developing country crises, such as the debt crisis of the 1980s and the Mexican peso crisis of December 1994, in that private sector borrowings were the main source of difficulties. Public sector borrowing played only a minor role. Despite impressive macroeconomic performance and prudent fiscal policies, East Asian economies have become increasingly vulnerable during the 1990s, especially because of the weakness in the financial sector. Large foreign capital inflows amplified the problem of the financial sector and fueled domestic demand.

Private capital flows to developing countries increased sharply in recent years. According to the World Bank, total private capital flows to LDCs jumped from $42 billion in 1990 to $256 billion in 1997 excluding credits with maturities of less than one year, more than a six-fold increase. The stock of short-term debt by developing countries stood at $361 billion in mid-1997. When $164 billion in foreign capital flowed into Asia in 1996, many observers believed that this trend was the result of strong economic fundamentals in Asia and that the Asian region would continue to receive adequate foreign capital to supplement their ample domestic savings in financing rapid capital investment growth.

However, the foreign exchange crisis that began in Thailand with the snowballing capital outflows culminated in the 20 percent devaluation of the Thai baht on July 2, 1997, and it quickly spread to other countries in Southeast Asia and then eventually to Korea. Between June 1997 and the end of the year, the median currency devaluation in the 5 Asian countries hardest hit by the crisis – Indonesia, Korea, Malaysia, the Philippines, and Thailand – was 80 percent. The International Finance Corporation (IFC) emerging stock market index for Asian countries fell 53 percent during the same period. This was the result of panicky reaction of international banks and other investors, triggering a capital outflow of $109 billion in 1997 from the above five countries. The crisis was, therefore, partly the result of the region's high private-sector borrowing, much of which was short term and foreign-currency denominated. Despite high growth, savings in excess of 30 percent of gross domestic product (GDP) and almost no fiscal deficits, these Asian countries managed to stumble into a world-class liquidity crisis due to their failure to develop a strong and robust domestic bond markets.

As their domestic bond markets are under-developed, Asian corporations have been overly dependent upon bank loans rather than long-term bond market financing, incurring huge liquidity

and currency risks. According to Nomura Securities, bank loans in eight Asian economies – the above five countries plus Hong Kong, Singapore and Taiwan – amounted to 92 percent of GDP in 1996, while bond financing amounted to only 22 percent of GDP. Having been familiar with using short-term bank loans to finance long-term capital investments, many Asian corporations also borrowed heavily in foreign currency from international commercial banks. Foreign short-term capital flows are highly volatile in nature and at the first sign of trouble they tend to flee the country in question.

This paper studies specifically the case of the Korean capital market weakness, as it relates to the recent trend towards increased international capital flows. Section 2 describes the recent developments in international financial markets that have implications for international capital flows. Section 3 discusses various financial innovations in world capital markets that have influenced significantly the patterns of capital flows in recent years. Section 4 analyzes major components of capital flows and key factors influencing them. Section 5 explores the impact of capital flows on the Korean financial market and the real sector. Section 6 considers some of the issues dealing with capital controls and their implications and experiences. Section 7 discusses the various benefits of a strong Korean bond market and the main barriers to the development of the Korean bond market and some of the strategic issues that the Korean policy makers should consider in promoting the Korean bond market. Section 8 ends the paper with major conclusions and recommendations for the Korean policy makers.

2. Recent Developments in International Financial Markets

In the 1990s, private capital flows to developing countries have risen sharply, while official capital flows have stagnated. At the same time, a number of new developments in international financial markets have influenced the patterns of external capital flows for developing countries. New financial instruments have been developed that tend to blur the traditional distinction between debt and equity financing on the one hand and short- and long-term debt on the other. Furthermore, the explosive growth of financial derivatives has significant implications beyond the traditional contractual cash flows arising from simple debt obligations or instruments alone. In addition, the increasing popularity of off-balance sheet project financing in developing countries raises a lot more external cash flow obligations than those captured by traditional external debt statistics alone.

Unlike official capital flows, private sector flows can take many formats in addition to the typical debt financing. They can also be in the form of equity financing such as GDRs (global depositary receipts) and ADRs (American depositary receipts), lease financing, structured notes, Euro MTNs (medium term notes), off-balance sheet project financing, etc. Recognizing the importance of non-debt capital flows to developing countries via global financial markets, from 1997 the World Bank has changed the name of its annual publication formerly called **World Debt Tables** to **Global Development Finance**.

Traditional Debt Instruments

Before the development of an array of innovative financial market products in recent decades, there were various ways to raise capital in the credit markets. The following is an overview of these traditional debt instruments.

Money Market Instruments

The term "money market" applies not to one but rather to a group of markets. Originally, the term was frequently used in a narrow sense to denote the market for call loans to securities brokers and dealers. In current usage, the term "money market" generally refers to the markets for short-term credit instruments such as Treasury bills, commercial paper, bankers' acceptances, negotiable CDs, loans to securities dealers, repurchase agreements, and interbank loans. Maturities may be as long as one year but usually are of 90 days or less, and sometimes span only a few days or even one day.

The market for money market instruments is extremely broad and on a given day it can absorb a large volume of transactions with relatively little effect on yields. The market is also highly efficient and allows quick, convenient, and low cost trading in virtually any volume. It is primarily a "telephone" or over-the-counter market and is easily accessible from all parts of the nation as well as foreign financial centers.

Government Obligations

Apart from the government savings bonds which are generally non-marketable obligations, the central government issues three types of debt instruments: Treasury bills with the initial issue maturity of up to one year, Treasury notes of medium maturities, and Treasury bonds with longer initial issue maturity.

State and Local Debt

A distinctive characteristic of the debt securities issued by state and local governments and their agencies is often the exemption of interest income on such debt from central government income taxation. Market convention generally distinguishes between short-term tax-exempt securities, which carry a final maturity of 13 months or less, and long-term debt issues with final maturities beyond 13 months. There are five categories of short-term tax exempt notes: urban renewal project notes, local housing authority notes, tax anticipation notes, revenue anticipation notes, and bond anticipation notes. Long-term bonds include general obligation bonds which are backed by the local government's full faith and credit. Others are special assessment bonds and revenue bonds, which are payable solely from special assessments on the residents who benefit from neighborhood improvements or from revenues received from the users or beneficiaries of the projects financed.

Corporate Long-term Debt Securities

The primary sources of long-term investment capital for companies are long-term debt, preferred stock, and common stock. Among the long-term bonds are mortgage bonds secured by specific property, collateral trust bonds backed by other securities usually held by a trustee, equipment trust certificates backed by specific pieces of equipment or machinery and issued by a trustee who hold the equipment, debenture bonds which are general obligations of the issuing firm, subordinated debentures which are junior debt, income bonds whose interest is paid only when the firm's net income is above a prespecified level, guaranteed bonds which are guaranteed by a third party, participation bonds which provide a portion of surplus earnings in addition to the fixed interest payments, joint bonds which are issued jointly by two or more corporations (usually railroads), voting bonds which give bondholders the right to vote for board directors if interest payments are not paid for a certain length of time, serial bonds with different portions of the issue maturing at different dates, etc. Some bonds have certain equity connection, such as convertible bond which are convertible into stock at a specified price, and bonds with warrants which entitle the warrant holders to exercise the call options to buy stock at a specified warrant exercise price.

Foreign Trade Financing

A number of financing methods have been developed for foreign trade. A letter of credit is an instrument issued by a bank at the request of an importer, in which the bank promises to pay a beneficiary upon presentation of documents specified in the letter of credit. A draft is the instrument normally used in international commerce to effect payment. The drawee is either the buyer or importer, in which case the draft is called a trade draft, or the buyer's bank, in which case the draft is called a bank draft. If properly drawn, drafts can become negotiable instruments. Drafts are of two types: sight draft which is payable upon presentation to the drawee, and time draft, also called usance draft, which allows a delay in payment. When a bank time draft is accepted by the drawee bank, it becomes a banker's acceptance. Factoring is sale of accounts receivable, and international factoring involves sale of trade receivables generated from open-account trade. In some export transactions, promissory notes are exchanged for the goods instead of open account credit. Forfaiting is another trade financing technique which involves a non-recourse sale by the exporter of bank-guaranteed promissory notes, bills of exchange, or similar documents received from an importer. Supplier's credits are also used to finance exports, frequently in association with export credit insurance available from or in association with government-sponsored export finance institutions.

Recent Developments in International Financial Markets

The past several decades have witnessed a phenomenal expansion of the international financial markets in terms of both volume and diversity. The modern version of the international financial markets originated in the late 1950s with the emergence of the Eurodollar market. It is true that international finance was important in providing funds for expansion of railroads and other infrastructure in many parts of the world starting from the late 19th century. However, for more than 30 years from the Great Depression until the late 1950s, international finance was in a state of hibernation.

Several observations can be made about international finance from the late 19th century until the onset of the Great Depression in the 1930s. First, banks were engaged in two main types of international financial intermediation during that period: the underwriting and sale of foreign bonds by foreign governments and businesses, and short-term international bank loans. Underwriting activities did not require a large capital base of the banks but still generated hefty commission income for them. In many cases, short-term bank loans were used as bridge financing for the borrowers until the sale of their own bonds in international financial markets.

Second, in the absence of government-to-government loans or public international-agency loans a la World Bank and International Monetary Fund, money raised for foreign countries was mostly private funds arranged by private banks. Governments of industrialized creditor countries stayed away from foreign lending as much as possible except for wartime emergency loans. Third, defaults on foreign loans and foreign bonds were distressingly common, mainly due to frequent political turmoil and economic crises (such as commodity price collapses) and, to a lesser extent, economic mismanagement in debtor countries and unscrupulous banking practices. Bankers often pushed loans on borrowers for the sake of the commissions and other fees.

Foreign defaults showed a tendency toward bunching, and such systemic disturbances exacerbated the financial crises. In the 1870s, a worldwide recession caused massive defaults by a number of East European and Latin American governments. In the 1890s, again there were widespread defaults by many of the same governments as well as by U.S. railroads. The end of World War I, along with the Russian revolution and the breakup of the Austro-Hungarian Empire, saw another wave of international defaults. Finally, the Great Depression and deflation of the 1930s caused the most widespread defaults and bank collapses.

It is interesting to note that the biggest defaults in terms of monetary value during this period were caused not by developing countries, but by borrowers of the major industrial nations. These included the U.S. railroads in the 1890s, the Russian Empire due to the revolution at the end of World War I, and the German government in 1933. Defaults by major powers on their foreign obligations were more politically motivated than economically forced. As a way to reduce political risks, therefore, foreign loans were frequently made to the lender's colonies or to countries under its sphere of influence. Such "imperial" lending was very fashionable in the 19th and the early 20th century.

The massive foreign loan defaults and banking collapses in the early 1930s had been traumatic for international financiers, and the world economy had not fully recovered from the prolonged depression when World War II started in Europe in 1939. Unlike the case at the end of World War I, reconstruction activities after World War II were not financed by private bankers and financiers, who still remained demoralized and in a mood of extreme caution toward international financing due to their bitter experience in the 1930s. Instead, postwar reconstruction of Europe and Asia was financed by multilateral lending agencies such as the World Bank and through U.S. government aid programs such as the Marshall Plan.

Unlike the interwar period, the post-World War II economic system was protected by a number of important international agreements so as to avoid a recurrence of self-defeating protectionist economic measures and financial panics. After the War, the International Monetary Fund was established under the Bretton Woods Agreement to promote international monetary cooperation through exchange rate stability and to provide financial assistance to member countries in temporary balance-of-payments difficulty. The other Bretton Woods institution, the World Bank, was established to provide long-term loans for postwar reconstruction and for economic development of less developed countries. The General Agreement on Tariffs and Trade (GATT) became effective in 1948 to promote a free international trading system through tariffs reduction, nondiscrimination, and frequent multilateral trading consultations.

The favorable international economic and political environment in the postwar period led to a gradual increase in world trade and foreign direct investments by businesses. Western financial institutions slowly regained the confidence they had lost in the Great Depression, and they became active again in short-term trade financing. In the immediate postwar period, however, European countries and Japan suffered from lack of foreign exchange and had to maintain strict exchange controls. Only when major European currencies became convertible in late 1958, did U.S. and European banks show increased signs of vitality. Around the same time, Eurodollars became noticed by bankers in Europe who used them for trade financing and short-term international bank loans.

International financial markets have expanded rapidly from mid 1970s, outpacing the growth rate in nominal income in industrial countries. For example, net new international loans and bond issues measured in U.S. dollars and deflated by U.S. GDP deflator grew two and a half times faster than real GNP in the industrial countries during 1976-86. This trend has accelerated during the past ten years. Gross new borrowing on international financial markets increased from $384 billion in 1987 to $1,769 billion in 1997.1 One of the new trends in international borrowings is the relative decline in bank loans as compared to international bond issues. The volume of bond issued in international capital markets dramatically outstripped total lending by banks in the first half of 1998, with the volume of bank lending declining for the first time this decade. International bank lending, which has shrunk to less than half the size of the international bond issues in the past two years, is likely to decline still further as companies and governments switch to bonds as the preferred means of raising international capital. Total international bank lending declined from $186 billion in the first half of 1997 to $174 billion in the first six months of this year. In contrast, the value of bonds issued in the first half of 1998 was $475 billion, compared to $357 billion of bonds issued in the same period last year. As recently as 1995, the total volume of loans outstripped the volume of bonds issued on international markets.

International borrowers have discovered that international securities such as bonds are a more flexible way to raise funds internationally as part of the global market trend towards securitization. Marketable securities are more liquid and versatile than traditional bank loans. At the same time, banks have learned that simple loans are not an efficient use of their financial

1 OECD, Financial Market Trends, Paris, February 1998, p. 5.

resources, as they emphasize the strategic targets for improving their return on capital. Instead, banks are focusing more on providing value-added transactions such as leveraged, acquisitions, and project finance. Conventional loans are considered by many banks to be an increasingly inefficient use of capital. Such a development has significant implications for developing countries which are also considering to promote the growth of their own bond markets. International financial markets have discovered that securities markets such as bond markets are far superior in allocating financial resources to commercial banks.

3. Financial Innovations in World Capital Markets

The world financial markets have experienced a sharp acceleration in the pace of financial innovation during the past decade. Major new financial instruments have either been created or have dramatically increased their role in the markets, transforming in the process the international financial system in important ways. In many respects, these innovations have improved the efficiency of international financial markets by offering a broader and more flexible range of instruments for various participants in the markets. At the same time, some of the innovations, including a variety of off-balance-sheet commitments, have raised a new concern for increased risks in the international financial system.

The extensive changes in financial instruments and financial institutions in recent decades have been especially pronounced in the international financial markets, commonly known as the Euromarkets. Both the richness and complexity of international funding sources bear a testimony to the robust spirit of financial innovations that has pervaded the Euromarkets. Some of the innovations turned out to be faddish, but others have gained wide acceptance and made valuable contribution to the growth of Euromarkets. Both the development of markets for new financial instruments and the expansion and deepening of markets for the pre-existing instruments are the results of the innovative spirit in the Euromarkets. Viewed in this way, however, the very existence of the Euromarkets is founded on this spirit of financial innovation from the beginning. The emergence of various Euromarket instruments since the early 1960s has been the result of financial innovation designed to meet the special needs of long-term international borrowers and investors.

The recent rapid expansion of Euromarkets has been promoted by further institutional innovations. The private use of both the European Currency Unit (ECU) and the Special Drawing Right (SDR) was first practiced for Eurobonds and then their use was extended to bank deposits and Eurocredits. New clearing house mechanisms for international bonds and Euro CDs have greatly facilitated secondary market trading of these instruments. Grey market trading was pioneered in the Eurobond market and it still remains a unique feature of the market. Development of floating-rate notes (FRNs), Eurocredits and other floating-rate instruments in the 1970s is another example of Euromarket innovation.

Financial innovation involves more than development and diversification of new borrowing sources. It affects the entire range of financial intermediation, both domestic and international.

In fact, the variety of services offered by financial intermediaries has been equally impressive on the liability side of their balance sheets. Liability management of modern financial institutions has become an important part of their integrated approach to financial intermediation. Innovations on the liability side have especially significant policy implications for monetary authorities.

Classification of Financial Innovations

During the past two decades, the pace of financial innovations has accelerated precipitously. In connection with this paper, it may be instructive to divide these innovations into two categories: those related to various financial derivatives (swaps, futures, options, caps, floors, collars, etc.) and those related to various long-term funding techniques for project financing, such as BOT (Build, Operate and Transfer), BOO (Build, Own and Operate), project leasing, structured notes, indexed bonds, etc.

The total outstanding volume of financial derivatives (in terms of their notional principal amounts) are estimated at $64 trillion as of early 1995. In April 1995, the BIS coordinated the first ever survey by central banks in 26 countries of over-the-counter (OTC) and exchange-traded derivatives markets. This survey provides the most comprehensive accounting to the markets to date, capturing about 90 percent of the intermediaries active in the derivatives markets.[2] The findings of the survey are striking. The estimated notional value of outstanding OTC derivatives contracts totaled $47.5 trillion (after adjusting for double counting and including estimated gaps in reporting) at the end of March 1995. In addition to the OTC derivatives, intermediaries involved in the survey held a further $16.6 trillion in notional principal of exchange-traded derivatives.

There are four types of financial transactions: spot (cash market), forwards, futures and options. Except for spot and forward transactions which have been around since the beginning of the market economy, both futures and options have been around only for the past couple of decades. The first financial futures contract was offered in 1972 in the form of currency futures at the Chicago Mercantile Exchange. Both forward and futures contracts are similar in that the delivery takes place sometime in the future. However, forward contracts are tailor-made, individualized contracts traded over the counter, while futures are standardized forward contracts which are traded only on organized futures exchanges such as the Chicago Mercantile Exchange, Chicago Board of Trade, London International Financial Futures and Options Exchange (LIFFE), Singapore International Monetary Exchange (SIMEX), etc. Unlike spot, forward and futures contracts, all of which are symmetric contracts in that the buyer as well as the seller have both the right and obligation to buy or sell, the options contracts are asymmetric in the sense that only the option buyer (or option holder) has the right to buy or sell, while the option seller

[2]Bank for International Settlements, Central Bank Survey of Foreign Exchange and Derivatives Market Activity, 1995, Basle, May 1996.

(options writer) has only obligations and no right to buy or sell. The following table summarizes the various financial transactions.

FOUR TYPES OF FINANCIAL TRANSACTIONS

* Spot

* Forward - Foreign Exchange Forwards

FRAs (Forward Rate Agreements)

* Futures - Currency Futures (1972)
Interest Futures (1975)
Index Futures (1982)
Pollution Futures (SO-2) (1992)

* Options

(a) Options on Physicals
Stock Options (1973)
Currency Options (1982)
Interest Options (1982)
Index Options (1983)

(b) Options on Futures (1984)
Options on Currency Futures
Options on Interest Futures
Options on Index Futures

© Options on Swaps (Swaptions) (1986)
Currency Swaptions
Interest Swaptions

In addition to the above financial derivatives, during the past two decades financial swaps have become an important derivatives innovation. These financial swaps have become important tools for hedging against various financial risks. Financial swaps can be classified into four broad categories: assets swaps, liabilities swaps, interest rate swaps, and commodity swaps which do not involve swaps of any physical commodities but simply swaps of commodity prices (between spot price of a commodity and a long-term fixed price). The following table summarizes the various financial swaps and the year when each swap first appeared.

FINANCIAL SWAPS

ASSETS SWAPS (1980's)

- Loan Swap
- Debt/Equity Swap
- Equity Swap
- Debt for Nature Swap
- Debt for Export Swap
- Debt for Charity Swap
- Debt for Development Swap
- Debt for Scholarship Swap
- Debt for Bond Swap
- Bond for Bond Swap

LIABILITIES SWAPS

- Currency Swap (1981)
  (Cross-Currency Long-term Debt Swap)

INTEREST RATE SWAPS (1982)

- Coupon Swap
- Basis Swap
- Yield Curve Swap
- Amortizing vs. Non-Amortizing (Bullet) Swap
- Accreting Swap
- Forward Swap
- Extension Swap
- Extendable Swap
- Non-LIBOR Swap
- Zero-Coupon Swap
- Off-Market (or Non-Par) Swap
- Par Value Swap

Synthetic Swap

COMMODITY SWAPS (1987)

Copper Swap
Oil Swap

In addition to the financial derivatives, the recent decades have witnessed an explosive growth of various new funding and project financing techniques. Of particular interest are various off-balance sheet project financing techniques such as:

Build, Operate and Transfer (BOT)
Build, Own and Operate (BOO)
Lease, Operate and Transfer (LOT)
Build, Lease and Transfer (BLT)
Build, Lease and Own (BLO)

The above techniques involve some forms of contractual agreements under which the contractor (usually a private sector firm) undertakes the construction, financing, operation and maintenance of an infrastructure facility for a given period of time, termed as the concession period. During this concession period, the contractor is allowed to charge the users of the facility a toll or other fees sufficient to recover the costs and earn a risk adjusted return on his investment. Other off-balance sheet project financing techniques involve the new innovative uses of leasing, such as project lease, export lease, cross-border lease, etc.

In recent years, many countries have been moving towards the use of limited-recourse project financing techniques as a way to avoid the risks involved in major new project developments. The popularity of these techniques lies in the belief that they might prevent losses and reduce the danger of piling up large debts. The trend marks a definite move away from recourse deals financed mainly by conventional credits. Limited recourse financing techniques are part of off-balance-sheet project financing, which also includes various forms of lease as well as the take-or-pay contracts. In an operating lease the lessor not only keeps the title but also carries out routine upkeep such as maintenance and repairs of the leased property. In a financial lease, however, these tasks are performed by the lessee, who also pays the property tax and insurance premium to protect the leased property. If the lessee has the right to purchase the leased property at the end of the lease period, such a financial lease is also called a hire purchase. However, some countries do not permit this type of lease. Another type of financial lease is project lease, in which the facility to be leased is financed by conventional bridge financing during its construction period. Only when the construction process is complete, the project lease comes into effect. Similar to the project lease is a sale-and-lease-back, under which a facility that has been in operation is sold to the lessor and leased back to the former owner.

The take-or-pay contract, typical in a large pipeline construction project, is signed, for example, between a pipeline company (the project entity) and a group of oil or gas companies which will actually utilize the pipeline. Under the contract, the users agree to pay the project entity a fixed sum per annum for an extended period of time regardless of whether the full pipeline capacity is utilized or not. The fixed payment is set at such a level sufficient to service the long-term debt incurred by the project entity to finance the pipeline construction as well as an adequate return on equity for the project sponsors. The debt financing is on a non-recourse basis, collateralized by the long-term take-or-pay contract.

Limited-recourse financing was first pioneered in the early 1970s for developing the North Sea oil fields. It took some elements of risk off the balance sheets of the oil companies and handed them to the creditor banks. For a number of smaller companies, without the assets to back conventional loans, financing off the back of the future proceeds of their oil was the only way of raising the necessary capital. The concept of limited recourse financing, which relies more on the project's future cash flows than on the creditworthiness of a project entity, has since been applied to other revenue-generating projects, including certain infrastructure projects. As privatization has become more fashionable, limited-recourse infrastructure projects have also gained popularity.

As part of financial innovations, many financial institutions have engaged in a variety of off-balance sheet activities in recent years. Not only the types of activities have been expanded but also their volume has increased exponentially. The aggregate size of total contingent liabilities generated by off-balance sheet activities among the top 10 U.S. banks are estimated at almost seven times their combined balance sheet assets as of end-1995. "Off-balance sheet activities" is not a phrase that refers to a precisely delineated group of activities. Rather, off-balance sheet activities are a somewhat amorphous collection of income-generating businesses that do not appear on a bank's balance sheet. Off-balance sheet activities are also not new. Income-generating activities that do not create additions to banks' balance sheets have been a long-standing part of the banking industry's products and services. The holding of assets in trust for a fee is an example of a long-standing bank off-balance sheet activity. What is new is the explosive growth in their volume and their variety. An increasing number of new off-balance sheet activities create contingent assets or liabilities. The introduction of terms such as interest rate swaps and currency swaps serves to highlight an important point: the subject of off-balance sheet activities is receiving considerable attention not only because of the growing involvement of banks in traditional off-balance sheet activities but also because of the rapid development of new off-balance sheet activities. There are four categories of off-balance sheet activities. The first consists of guarantees and similar contingent liabilities. The second consists of commitments. The third consists of market-related transactions. And the fourth consists of advisory, management, and underwriting functions. Contingent liabilities arise when a bank underwrites the current obligations of a third party. Commitments arise when a bank has no immediate credit exposure but could become exposed at a future date. Some of the newer instruments in the off-balance sheet field defy easy categorization.

Chronological Evolution of International Financial Markets and Instruments

1927 American depository receipts (ADRs) created by Morgan Bank
1957 The Eurodollar market
1960 Marketable CDs in the U.S. market
1963 The Eurobond market
1966 Eurodollar CDs
1970 SDRs; Euro commercial paper; Samurai bonds; and FRNs
1972 Currency futures market at the Chicago Mercantile Exchange; and U.S. MTNs
1973 The Eurocredit market; and stock options
1975 Interest rate futures market at the Chicago Board of Trade
1977 Floating-rate CDs
1979 ECUs
1981 New currency swaps; and Euronotes with RUF, etc.
1982 Interest rate and currency options; interest rate swaps; and index futures
1983 Index options
1984 Options on futures
1985 Geisha (or Shogun) bonds
1986 Options on swaps (swaptions); and Euro MTNs
1987 Commodity swaps; and Daimyo bonds
1989 Global bonds
1990 Brady bonds; and global depository receipts (GDRs)
1993 Credit derivatives

Financial Innovations Corresponding Their Rationales

To manage interest rate risks:
- Interest rate futures
- Forward rate agreements (FRAs)
- Interest rate options
- Interest rate swaps
- Options on interest rate futures
- Options on interest rate swaps (interest rate swaptions)

To manage currency risks:
- Foreign exchange forwards
- Currency futures
- Currency options
- Currency swaps
- Options on currency futures
- Options on currency swaps (currency swaptions)
- ECU-denominated bonds and other credit instruments
- SDR-denominated bonds and other credit instruments

Dual-currency bonds
Exchange rate-indexed bonds

To manage stock market risks:
Stock options
Stock index futures
Options on stock index futures

To manage commodity market risks:
Commodity futures
Commodity options
Commodity swaps
Commodity price-indexed bonds

To manage funding cost risks for credit intermediaries:
Floating-rate notes (FRNs)
Floating-rate CDs
Floating-rate Eurocredits

To reduce funding costs for borrowers:
Euronotes
Eurodollar CDs
Swap-driven bond issues

To reduce regulatory costs and/or to circumvent regulatory barriers:
Eurocurrency markets
Eurobonds

To diversify and increase funding sources for borrowers:
Global bonds
Foreign bonds
Eurobonds
Floating-rate notes
Euro commercial paper
Euro CDs
Euro MTNs

To lengthen obligation maturity:
Floating-rate notes
Short-term Euronotes with long-term NIFs, RUFs, etc.
Perpetual FRNs

To reduce credit risks:
Credit spread forwards
Credit spread options
Credit event swaps

Default swaps
Various credit enhancement facilities
Derivatives product companies (DPCs)
Bilateral or multilateral netting arrangements

To tap international equity markets:
American depository receipts (ADRs)
American depository shares (ADS)
Global depository receipts (GDRs)
International depository receipts (IDRs)

To reduce transaction and settlement risks:
Real-time gross settlement systems such as Fedwire and the European TARGET system
CHIPS (Clearing House Interbank Payments System)
CHAPS (Clearing House Automated Payments System)
SWIFT (Society for Worldwide Interbank Financial Telecommunication)

To increase overall flexibility of financial management:
Liquid yield option notes (LYON)
Liquid yield note exchange (LYNX)
Leverage FRNs
Inverse FRNs
Capped FRNs
Mini-max FRNs
Ratchet FRNs
Step-up recovery floaters (SURFs)
Stock-linked CDs
College tuition CDs
Synthetic interest rate futures
Exotic and/or imbedded options

To reduce tax liability:
Retirement CDs
Monthly income preferred shares (MIPS)

To take advantage of capital markets through securitization:
CATS (Certificates of accrual on Treasury securities)
TIGRs (Treasury Investment Growth Receipts)
ZEBRAS
CARs (Certificates on automobile receivables)
CARDs (Certificates for amortizing revolving debts)
CMOs (Collateralized mortgage obligations)
STRIPS (Separate trading of registered interest and principal securities)

Major Categories of Off-Balance Sheet Items

1. Credit guarantees and similar contingent liabilities:
   - Line of credits and other loan commitments
   - Commercial letter of credits
   - Standby letter of credits
   - Confirmation of a third-party letter of credit

2. Commitments:
   - Forwards
   - Futures
   - Short option positions
   - Swaps

3. Off-balance sheet payment obligations:
   - Non-capitalized lease contracts
   - Take-or-pay contracts

4. Contingent credit availability guarantees:
   - RUF (revolving underwriting facility)
   - NIF (note issuance facility)
   - GNF (global note facility)
   - MOF (multiple options facility)

4. Patterns of Capital Flows to Developing Countries

Capital flows to developing countries have taken place broadly in two types: official development finance and private capital flows. Total annual capital flows more than tripled in volume from $98 billion in 1990 to $300 billion in 1997. However, the volume of official development finance actually shrank in size during that period from $56 billion in 1990 to only $44 billion in 1997, while total private flows increased more than six times from $42 billion in 1990 to $256 billion in 1997.

Net Long-term Resource Flows to Developing Countries, 1990-97
(*billions of U.S. dollars)*

Type of flow	*1990*	*1995*	*1996*	*1997**
Official development finance	56.4	64.0	34.7	44.2
Total private flows	41.9	189.1	246.9	256.0
Debt flows	15.0	55.1	82.2	103.2
Foreign direct investment	23.7	101.5	119.0	120.4
Portfolio equity flows	3.2	32.5	45.8	32.5

Note: Developing countries are defined as low- and middle-income countries with 1995 per capita incomes of less than $765 (low) and $9,385 (middle).
*Preliminary.
Source: World Bank, Global Development Finance, Washington, 1998.

Official development finance has been declining in response to budgetary constraints in donor countries and the surge in private capital flows to developing countries. Furthermore, some developing countries are shifting from their previous reliance on official concessional financing toward direct borrowing in international capital markets, which can provide a wider choice of financing alternatives. Official agencies also are adopting a number of innovations to support long-term private capital flows to developing countries, such as increased use of guarantees, as reflected in the rise in export credit commitments and in the provision of investment insurance and other guarantee structures for project finance. These innovative approaches to guarantees, along with the increased volumes, are strengthening the private sector in developing countries and increasing their integration with the global economy.

Private capital flows have played an increasingly important role in long-term resource flows to developing countries in the 1990s. There are three types of private flows: debt financing, foreign direct investment (FDI), and portfolio equity flows. The most important of them has been foreign direct investment, which increased more than five fold from $23.7 billion in 1990 to $120.4 billion in 1997. However, their relative share in total private capital flows has declined from 56.6% in 1990 to 47.0% in 1997. Foreign direct investment is most favorable for recipient countries, since it is mostly likely to create additional investment. In addition, it is less likely to result in sudden outflows in response to the changes in foreign investor sentiment. Foreign direct investment is also the oldest form of foreign capital flows. Funds are directly linked to construction, operation, or both of a project in the recipient country, either wholly owned or owned jointly with public or private local interests. In contrast to bank loans, the foreign direct investor shares the risk and benefits only if the enterprise turns a profit.

Increased capital flows to developing countries in the form of FDI can be credited to policy reforms and expected high rates of economic growth in recipient countries. Low wage rates, opening up of new markets, and the promise of stable economies constitute the basic attraction for foreign direct investors. Continued trade liberalization under the GATT and the successor World Trade Organization (WTO) and the inclusion of more developing countries in international trade institutions have further helped internationalize corporate horizons and increase investment in low-cost countries as part of increasing globalization of business operations. As in the 19th century, there is again a great deal of interest in foreign direct investment in infrastructure in developing countries, but with regional differences. In Latin America and, to a lesser extent, Eastern Europe much of the infrastructure investment consists of purchasing existing firms or utilities in the process of privatization. In East Asia there is greater interest in FDI in new infrastructure projects. The needs for infrastructure investments are vast; it is estimated

that developing countries would spend about $1.5 trillion in infrastructure investment in the next ten years.

East Asian economies have clearly increased their receptiveness to FDI, in large part because of their greater reliance on market forces and exports. Until the current Asian crisis emerged, they had also been the most attractive targets for foreign direct investors due to their high economic growth rates. The East Asia and Pacific region was still the largest recipient region, surpassing the Latin America and Caribbean region. In 1975, the Latin America and Caribbean region captured 44% of all FDI flows to developing countries, compared to only 14% for the East Asia and Pacific region. By 1996, however, the fortune was reversed, with the East Asia and Pacific region capturing more than half of all FDI flows while the Latin America and Caribbean region received only a quarter of the total. After growing strongly for several years, FDI globally leveled off in 1997 at $120 billion, compared to $119 billion in 1996. The largest reversal in the upward trend occurred in East Asia and the Pacific, where flows declined 9 percent to $53 billion in 1997 due to the Asian financial crisis. By contrast, flows to Latin America and the Caribbean region rose 10 percent to $42 billion in 1997.

During the 1990s, active privatization programs in many developing countries generated a steady stream of FDI inflows, attracting some $60 billion, of which $15 billion was invested in 1997 alone. FDI also flowed heavily into services during the 1990s. Developing countries are lucrative markets for multinational service providers, and many services firms need a physical presence in the market to compete effectively. Services have also become more attractive now that advances in communications technology allow separated-service providers (data processing, software development, etc.) to reap the cost advantages of developing countries. The medium-term prospects for FDI flows to developing countries remain good despite the current Asian financial crisis. FDI flows are likely to be supported by strong growth in developing countries' output and exports, greater economic integration and globalization of production, and continued liberalization of investment rules.

Debt flows to developing countries can be divided into commercial bank loans and bonds. In the 1970s and 1980s commercial bank lending in the form of syndicated loans were the most common form of private-source capital flows to developing countries. Initially denominated in dollars, these loans are now available in a variety of major currencies. They are typically for terms of five to ten years, with floating interest rates tied to the London or Singapore interbank offered rate (LIBOR or SIBOR) plus a spread. These spreads typically range from 50 to 600 basis points, depending on the credit standing of the borrower, the special features of the loan, and the competitiveness of the market. These loans are relatively easy to arrange through a lead bank. They are not subject to a broad market test as in the case of a public bond issue, but the lead bank must be able to syndicate the loan to other banks. In recent years, the proportion of commercial bank loans have declined in comparison with other forms of debt flows, especially bonds. An increasing number of developing country borrowers have discovered the flexibility and liquidity features of bond issues. As a result, more bond issues have been floated by developing country borrowers than commercial bank loans

during the past five years. In the 1993-97 period, the total commercial bank loans to developing countries amounted to $116 billion, while the comparable figure for bonds was $183 billion.

International bond markets have become more important to developing countries as new sovereign borrowers, sub-sovereign borrowers such as municipalities, and corporate borrowers have issued international bonds. And there was increased diversification and expanded use of more sophisticated finance instruments. International bonds issued by developing countries have greater currency diversification, such as a recent Mexican issue denominated in Euros in advance of the introduction of the European single currency. The growth in bond issuance has been aided by market innovations, such as collateralized bond obligations and other asset-backed securities. Under this structure, unrated developing country bonds or loans are packaged together and used as collateral for medium-term notes. The notes can be enhanced by issuing notes of lesser dollar value than the collateralized assets or by using guarantees such as standby letters of credit. The notes also qualify for a higher credit rating than individual bonds because they are more diversified. This structure has enabled certain institutional investors such as pension funds and insurance companies that are restricted to only highly rated debt securities to invest also in developing country securities.

The growing use of derivative instruments also demonstrates the greater depth and sophistication of emerging market bonds. Use of currency and interest rate swaps has allowed these borrowers to hedge against long-term interest rate and currency risks by issuing bonds in combination of such swaps. Some estimates put swap-driven international bond issues as more than half of all issues. Foreign exchange and interest rate derivatives are probably more important to developing country borrowers than equity derivatives, since a wide variety of investors, traders, and other market participants are exposed daily to currency and interest rate risks. Commodity derivatives are one area that those developing country borrowers with commodity production or marketing can explore still further. Commodity swaps and commodity-indexed bonds can be a useful tool for these borrowers.

Although portfolio equity flows are not as large as FDI, its steady growth represents a dramatic and profound step in the integration of developing countries into world capital markets. Portfolio investment can take a variety of forms. Foreign investors may purchase bonds of developing country governments or firms, either in a major international currency in a major international market or in local currency in the host country market. Since local bond markets of most developing countries are not sufficiently developed or they are largely closed to foreign portfolio investors as in Korea until last year, foreign purchase of bonds in local bond markets has remained rather small. Foreign equity investments, however, jumped from only $3.2 billion in 1990 to $45 billion in 1993. It is now much easier for stocks of developing country firms to be listed and traded in major markets or over the counter in industrial countries in the form of ADRs or GDRs. Furthermore, an increasing number of developing countries have opened up their stock markets for foreign investors, including Korea. The growth of

country funds dedicated to equity investments in specific countries or regions is another indication of the attraction of investing in equity markets of developing countries.

Developing countries' equity markets have become increasingly integrated with global markets. Emerging markets' international equity issues rose 44 percent in 1997 to $18 billion, or from 15 percent of global issues in 1996 to about 25 percent. The surge in portfolio equity flows to developing countries in the 1990s has contributed to a substantial rise in equity market capitalization, which rose from $200 billion in1986 to $2.1 trillion in 1997 for the 18 developing countries included in the IFC Emerging Markets Global Composite Index. The events of October 1997, when stock market declines in developing countries set off a period of volatility in industrial country markets, demonstrated the growing importance of emerging equity markets for the world economy, as well as the risks inherent in increasingly integrated international markets.

5. Private Capital Flows to Korea

Korea has been a major recipient of foreign capital flows, mainly in the form of private capital until late 1997. The current financial crisis triggered a massive capital infusion from official sources beginning in December 1997, when Korea started to receive financial assistance from multilateral financial institutions such as the IMF, the World Bank and the Asian Development Bank as part of the emergency financial rescue package arranged through the IMF. At the end of November 1997 the total foreign debt of Korea stood at $156.8 billion, of which $92.2 billion was short term and the remainder, $64.6 billion, was long term. Thus, sort-term debt accounted for almost 60 percent of the total debt.

Korea's External Obligations
(billions of U.S. dollars, as of the end of November 1997)

(a) Foreign Debt (World Bank data)	**116.1**
1. Domestic Financial Institutions	70.8
Head offices	50.0
Foreign bank branches*	20.8
2. Private Enterprises	43.4
3. Public Sector	2.0
(b) Additions	**40.7**
1. Offshore borrowing**	20.9
2. Overseas branches***	19.8
(a)+(b) Gross Foreign Debt (IMF)	**156.8**

*Denotes the amount borrowed by the branches of foreign banks in Korea.
**Denotes the amount borrowed and used abroad by the head offices of Korean banks.
***Denotes the amount borrowed and used abroad by the overseas branches of Korean banks.

Source: Ministry of Finance and Economy; IMF.

However, the above debt figure tends to underestimate the true external payment obligations incurred by Korean entities, if one includes the payment obligations that arose from the accumulated losses in a number of derivative contracts that Korean firms and financial institutions entered into in recent years. For example, in February this year SK Securities, part of the giant Sun Kyung group, asked a Korean court to prevent Korea's Boram Bank from paying J. P. Morgan $180 million owed in a swap contract. SK Securities entered into the swap contract with J. P. Morgan through Boram Bank as the intermediary. J. P. Morgan is counter-suing SK Securities in the New York court, since the swap contracts were written under New York laws. It is reported that J. P. Morgan alone is owed a total of $349 million by SK Securities and other Korean firms involved in similar swaps, known as the total return swaps tied to the value of the Thai baht.3 As the Thai baht value collapsed as the result of the baht floatation by the Thai government on July 2, 1997, many Korean firms in similar situations have suffered huge losses.

The Korean press has reported that the total losses suffered by Korean firms from Thai baht swaps could reach almost $4-5 billion.4 Apparently, a number of Korean commercial banks, merchant banks, investment companies and securities firms had engaged in risky swap transactions, many through their overseas subsidiaries or funds to avoid the Korean government's regulatory constraints. While the bulk of derivative contracts are used by financial institutions in industrial countries for hedging or arbitrage purposes, Korean financial institutions obviously used these contracts as outright speculation tools betting on the direction of exchange rate or interest rate movements, without the Korean authorities recognizing their seriousness. Any losses by Korean firms from such derivative contracts would result in Korea's additional external payment obligations as surely as if they borrowed money abroad.

Significant amount of foreign borrowings was carried out in recent years by Korean merchant banks, many of whom only recently licensed and thus without sufficient knowledge of, and expertise in, international finance. These foreign borrowings, most of which in short term, were then invested in high-risk long-term securities issued by East European or former Soviet Union countries in order to profit from their high yields without conducting a proper risk-return analysis. Many leasing firms also borrowed heavily abroad in foreign currency in order to finance equipment imports, which in turn were leased to Korean clients with lease payments denominated in Korean won. Most of their foreign currency borrowings were short term. Thus, the foreign exchange risk was

3 Euromoney, March 1998, p. 39.

4 Jung Nag Elba, February 18, 1998.

entirely borne by Korean leasing companies, who have not hedged against the currency risks by using a number of hedging techniques available in the financial markets such as currency futures, options and swaps. Such a risky international financial practice was possible because of inadequate prudential regulation and supervision of these financial institutions by the concerned government supervisory authorities.

As long as the international financial markets considered the Korean credit standing as acceptable due to her impressive macroeconomic achievements during the past three decades, these Korean financial institutions were able to benefit from the advantageous borrowing costs as represented by the low spread over LIBOR or SIBOR and then would re-deploy the funds into high-risk and high-yield securities. However, as the Korean credit standing nose-dived from AA- in November 1997 to B- in December 1997, a downgrade of nine notches in just one month, many foreign banks refused to renew their loans and consequently these Korean borrowers found themselves forced to repay the maturing short-term loans, thus exacerbating the already severe foreign exchange and liquidity crisis in Korea triggered by the South Asian financial crisis.

Until last year, Korea had been lagging behind other Asian countries in opening up its capital markets to foreign investors. A tentative step toward market opening was first taken in 1992, when the government allowed foreign investors to purchase Korean stocks up to 3 percent of the outstanding shares of each company per individual, but no more than 10 percent of a company in total. Further capital account liberalization was inevitable when Korea joined OECD in 1996. However, the government proposed many reservations to the code of liberalization of capital movements. According to the membership negotiations, many categories of capital inflows would continue to be subject to some form of limitation by the end of 1999. Concerning the bond market and short-term money markets, remaining restrictions on capital inflows would be removed only when the difference between domestic and international interest rates was reduced to at least 2 percent, which was expected to occur by the beginning of the next century.

However, Korea's current financial crisis and the IMF program have brought remarkable changes to the government attitude toward foreign capital inflows. Korea's financial market is being drastically liberalized due to the financial crisis. The government has announced a package of rapid deregulation measures in accordance with the IMF agreement. As a result, the ceiling on foreign stock ownership has been completely removed, allowing hostile mergers and acquisitions by foreign investors, and the bond market is also opened to foreign investment. Furthermore, foreign banks and securities companies are allowed to establish wholly-owned subsidiaries, and short-term money markets are also fully open to foreign investors.

As the financial market liberalization accelerates in Korea, FDI flows are likely to increase. Annual FDI in Korea stood below $2 billion until 1995, but it jumped more than 50 percent to $3.2 billion in 1996 and reached almost $6 billion in 1997. The size of average FDI projects also increased, surpassing $10 million in the manufacturing sector in 1997, which accounted for 29 percent of total FDI in Korea. The service sector FDI reached $4.1 billion in 1997, 71 percent of the total FDI. In Korea, the share of services

industry amounted to 64 percent of GDP and 66 percent of total employment in 1996. Sources of FDI have also diversified over the years. Up until 1980s, the United States and Japan were the major investors in Korea, accounting for more than 75 percent of the total FDI stock value in 1990. In the 1990s, however, their shares have declined substantially, particularly in the case of Japan. In 1997, for example, the United States accounted for about 40 percent of FDI inflows, while Japanese FDI flows stayed below 5 percent of the total. On the other hand, investments from other Asian economies such as Hong Kong and the countries of the European Union increased considerably. This trend toward diversification is likely to continue as Korea further globalizes its economy.

6. Capital Controls and Their Implications

While international capital flows are generally viewed as playing a positive economic role by making the efficient resource allocation possible on a global scale, they can also become a stabilizing force in certain circumstances. Sudden capital flight at the first sign of a real or imagined financial crisis can exacerbate the financial market turmoil of an affected country. Similarly, a sudden surge in capital inflows can lead to an excessive expansion of aggregate demand, eventually triggering an acceleration in domestic inflation. If a fixed exchange rate system is adopted by the country in question, rising domestic prices will cause the real exchange rate to appreciate, abetting the current account deterioration and even forcing a currency devaluation.

In order to ameliorate the adverse effects of large foreign capital flows, some countries have adopted capital controls at various times. In the 1990s, however, a new breed of capital controls emerged that are characterized by two features: they are asymmetric in the sense that they were mainly for the purpose of discouraging capital inflows rather than outflows, and second, they are most often temporary measures rather than a permanent policy.5 Capital controls in recent years have been adopted in particular by those countries that received the largest amounts of private capital flows (Chile, Malaysia, Mexico, and Thailand) or those that were constrained in their ability to use other policy instruments to reduce potential overheating and vulnerability (Brazil, Colombia, and Indonesia). In most of these countries, capital controls took the form of new restrictions on inflows. Brazil, for instance, enacted financial transaction taxes on foreign purchases of domestic bonds in 1993, and on purchases of domestic stocks in 1994. Mexico imposed restrictions on the foreign exchange liabilities of banks in 1992. Indonesia took several measures in 1991 to discourage swaps and offshore borrowing by state-owned enterprises and tightened the limits on net open foreign exchange positions of commercial banks. The most concerted and sustained efforts at controlling destabilizing capital inflows were made by Brazil, Chile, Colombia and Malaysia.

Faced with an inflation rate of over 2000 percent per annum, in 1994 Brazil adopted a tough anti-inflation plan, known as the Real Plan, which included the creation of a new currency, the “real”, tightly pegged to the U.S. dollar, along with a stringent monetary and fiscal policy to control inflation. The dramatic improvement in the macroeconomic

5 Carmen M. Reinhart and R. Todd Smith, “Temporary Capital Controls”, a draft paper, August 1997.

environment such as low inflation and the exchange rate stability triggered massive capital inflows into Brazil. In response, the government imposed a series of capital control measures in the same year in the form of new or increased taxes: a 7 percent tax for Brazilian firms that issue bonds abroad; a 1 percent tax on foreigners investing in the local stock market; and a 9 percent tax on non-resident purchase of domestic fixed-income securities. These taxes were designed to become more costly to those foreign investors that invest in the country only for a short term.

In response to the increased capital inflows starting from 1990 amounting to 10 percent of GDP that year, Chile also introduced controls on capital inflows in 1991. These took the form of minimum non-remunerated reserve requirements of 20 percent at the central bank on new foreign currency liabilities associated with direct borrowing by firms (except credits granted to exporters) with maturities of less than one year. Later the requirements were extended to all external credits regardless of maturity. These deposits, although applied uniformly across maturities, were required to be maintained only for one year, whatever the maturity of the foreign credits. This implied a tax rate that varied inversely with the maturity of the loan. In 1992, the 20 percent reserve requirement on foreign currency loans was extended to foreign currency bank deposits as well. In the same year the required reserve ratio was increased to 30 percent across the board. Finally, reserve requirements were extended in 1995 to all types of foreign investments in Chile, including the issue of secondary ADRs. As a result, the proportion of short-term capital inflows into Chile has declined markedly from the 1990 level.

Similarly, in response to sudden acceleration of capital inflows into Colombia in early 1990s, the government introduced capital controls in 1993. Similar to Chile, these took the form of nonremunerated reserve requirements on direct external borrowing by firms, with the reserve ratio set at 47 percent. Unlike in Chile, however, the requirement was to remain in place for the duration of the loan, but it applied only to loans with a maturity of 18 months or less, with the trade credits exempted from the reserve requirements. In 1994, the control regime was tightened to include loans with maturities up to five years. The reserve ratio was set on a graduated scale, with higher rates for shorter maturities. The range was from 140 percent for loans with maturities of 30 days or less to 42.8 percent for those with 5-year maturities. In the aftermath of these controls, there was a marked shift in the composition of capital inflows away from short-term capital toward longer-term foreign borrowing, even though the total amount of capital inflows stayed the same at around 5 percent of GDP.

Due to the widening differential between domestic and foreign interest rates and widespread expectation of an imminent appreciation of the Malaysian ringgit during late 1993, Malaysia experienced a surge of short-term capital inflows. In early 1994, the government responded with a series of capital control measures, most of which were announced to be temporary. Measures included the imposition of limits on the foreign exchange liabilities of banks, the extension of reserve requirements to such liabilities, a ban on the sale of short-term securities to foreigners by residents, and the imposition of a regulation requiring that domestic currency deposits of foreign institutions be non-interest-bearing. Later the government also banned trade-related swaps and the

imposition of fees on non-interest-bearing foreign deposits. Consequently, capital inflows as a percent of GDP declined from 17.2 percent in 1993 to 2.1 percent in 1994, accompanied by a drop in short-term inflows from 8.6 percent of GDP to –4.6 percent in 1994.

Capital controls may allow a country to avoid a significant appreciation of its currency and discourage the inflows of speculative capital, the so-called hot money flows. In that sense, they benefit exports and domestic investments. Most of the capital controls were announced to be temporary or de facto became temporary, because soon both foreign investors and domestic borrowers find the ways to circumvent the control measures. Usually, the controls have been effective in the short term, but the longer they stay the more they tend to lose their effectiveness. Furthermore, isolating the domestic financial markets from international markets tend to promote speculative attacks on the domestic currency. A recent example is Chile, which experienced heavy speculative pressure against the peso this year in connection with the pestering Asian financial crisis. In Chile there are rising voices of criticism of the capital controls as outdated and long overdue for outright removal, and consequently the government eased the capital controls in June this year, lowering the reserve ratio from 30 percent to 10 percent.

7. Strategic Issues for Strengthening the Korean Bond Market

The Asian financial crisis, triggered by sudden capital outlfows, highlighted the importance of healthy domestic bond markets in promoting stable capital flows. Private debt capital flows into Asia took place mostly in the form of bank loans, much of them in short term. According to Nomura Securities, bank loans in eight Asian economies (Korea, Indonesia, Malaysia, Thailand, the Philippines, Taiwan, Singapore, and Hong Kong) amounted to 92 percent of GDP, while bond market financing stood only at 22 percent of GDP. Short-term bank credits are inherently volatile. Once bank credit shrank and stock markets collapsed in Asia, overseas investors could not diversify into local bonds even if they wanted to, because a thriving Asian bond market did not exist. The only alternative they had was to withdraw their capital. Bond market financing would also have subjected Asian borrowers to more stringent credit analysis, thereby promoting transparency for the issuers. Bond issues entail more stringent disclosure rules than bank loans.

Despite a respectable size, the Korean bond market is burdened with inefficiencies and many outdated constraints. The size of the Korean bond market in terms of the outstanding stock of bonds stood at 53 percent of GDP, but the market is dominated by corporate bonds due to very few government bond issues as the result of past conservative fiscal management. On the other hand, the bond markets of industrial countries have been strengthened by the existence of dynamic Treasury bond activities. As of 1996, the outstanding government bonds as percent of GDP amounted to 70 percent in the United States and 50 percent each in the United Kingdom and Japan. In contrast, the comparable figure for Korea was less than 12 percent in 1997.

Absence of a viable Treasury segment has deprived the Korean bond market of the Treasury securities' role of providing benchmark interest rates and the term structure of yields as in the case of industrialized countries such as the United States. Furthermore, marketing of Treasury securities, even though nominally based on a competitive auction system, has in the past relied too heavily on obligatory allocation of unsold new issues among seleted institutional investors, frequently at below-market rates. One reason is that the primary dealer system is still underdeveloped in Korea. The market needs strong and professionally competent primary dealers with the necessary capital base and trading expertise. Even though commercial banks are allocated over 70 percent of new government issues, only stock brokerage firms with relatively low new issue allocation have been given the market-making role. Commercial banks should also be allowed to play the market maker role in order to broaden and deepen the bond market.

Even those few Treasury issues were hardly traded in the secondary market in Korea due to the possibility of capital losses to be suffered by the original institutional purchasers. The Korean practice of securities valuation at purchase cost plus accrued interest rather than marking them to market further discouraged investors from trading their government securities in the secondary market. For example, the trading volume of government securities in the secondary market amounted to only 6.2 percent of the total bond trading volume in 1997, even though government securities accounted for almost 14 percent of the outstanding volume in the Korean bond market. A widespread use of mark-to-market valuation practices is essential to promoting a healthy secondary market. Furthermore, the government needs to redouble its efforts to issue Treasury securities at prevailing market rates, thus providing the necessary incentives for original investors to trade them actively in the secondary market rather than holding them until maturity.

Liquidity in the market can be further improved by actively promoting repos (repurchase agreements) and securities lending. Both repos and securities lending provide market makers with short-term liquidity critical to a strong secondary market. Currently, there are no brokers for repos as in the U.S. and other advanced financial markets. Due to the absence of repo brokers, individual securities firms now have to contact major institutional holders of securities directly to arrange for repos, which requires extra time and efforts. Currently, securities lending is limited only to equity instruments. In order to strengthen the bond market, securities lending should be expanded to fixed-income securities as well like in the advanced capital markets. Securities lending not only provides additional liquidity for market makers but it also lowers inventory financing costs. In the U.S. and other industrial countries, active securities lending programs permit a smoother settlement system by ensuring on-time delivery of securities. Both market makers and institutional investors should be allowed to engage in securities lending to provide the required depth and liquidity in the market. Ample liquidity and timely settlements can move the secondary market from the current broker-driven market toward a modern dealer-driven one.

In order to improve transparency in the market, a system of mandatory credit rating of all private public bond issues should be introduced immediately rather than delaying it until

1999. Credit rating provided by reputable rating agencies promote confidence among investors and moves the market away from rumor-driven trading practices. At the same time, the government should allow international credit rating agencies to conduct business here directly in competition with the existing Korean credit rating firms. As in other developing countries, international credit rating agencies can bring in the needed credit analysis expertise, thus strengthening the overall credit appraisal standards in Korea. Up-graded credit rating practices reduce the need for collateralized bond issues and promote straight debenture issues backed by the general credit of the issuing firm. Introduction of international accounting standards, as was done in 1997 in Mexico, can further improve the corporate transparency and accountability, promoting long-term portfolio flows into Korea by international investors. At the same time, the Korean bond market needs to develop high-yield bond issues that can be utilized by venture capital firms and other small and medium-sized companies.

8. Conclusions and Recommendations

The Asian financial crisis can be characterized as the crisis of confidence, triggered by the sudden loss of confidence in the Asian economies by international investors. The resulting massive and sudden capital outflows from Asia culminated in a series of events in the region such as: precipitous fall in currency values, collapse in stock markets, emergency international bailouts, panic in the financial systems, credit crunches, a string of bankruptcies, massive unemployment, widespread labor strikes and civil unrest, nose-diving capital investments and private consumption, collapsing real income, disappearing middle classes, and pervasive asset deflation. It is truly an economic disaster of a colossal scale for the Asian region, comparable to the Great Depression that gripped Western industrial countries in the 1930s.

While the causes of this economic disaster can be found in many corners, this paper attempts to look into one aspect of the Asian financial crisis, namely, the role of international capital flows. Integration of financial markets and acceleration of international capital flows have been one of the distinguishing characteristics for the global economy in recent decades, reinforced by the revolution in telecommunication and data processing and a robust trend towards financial innovations. International financial markets have become a truly global, 24-hour market encompassing every time zone in one continuous trading day. Daily foreign exchange trading volume has reached $1.5 trillion, equivalent to the entire foreign exchange reserves of all 182-member countries of the IMF. Outstanding financial derivatives in terms of notional principal amounts exploded from almost nothing to twice the size of the $30 trillion world GDP in just two decades. Whether one likes it or not, massive international capital flows are bound to affect every country and its financial market in the foreseeable future.

The Korean bond market is part of the country's financial system, but it has lagged significantly behind other advanced bond markets in terms of institutions, market practices, trading volume, and technology. As a result, Korean firms have relied too much on bank financing, mostly in short term credits. Development of a viable Korean

bond market, with the required depth, breadth and liquidity, is essential to the strengthening and modernization of corporate finance in the country. In this endeavor, the government can play an important catalytic and nurturing role. Modernization of regulatory framework, adoption of adequate prudential supervisory practices, introduction of international accounting standards, upgrading of credit rating and credit analysis expertise, strengthening of the secondary market through active repos and securities lending practices, and other steps are all an essential part in establishing a modern bond market infrastructure. The role of government fixed-income securities is also critical to establishing benchmark yields and the formation of an objective and credible term structure.

Most of all, however, policy makers should be ready and willing to study best practices of advanced bond markets of the world and apply them to the Korean market to the maximum extent possible. Only with a strong and viable capital market, Korea can regain the lost momentum towards a dynamic economic progress that has distinguished its economy during the past three decades.

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