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Foreign Exchange Policy, Monetary Policy and Capital Market Liberalization in Korea

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January 1993

Department of Economics

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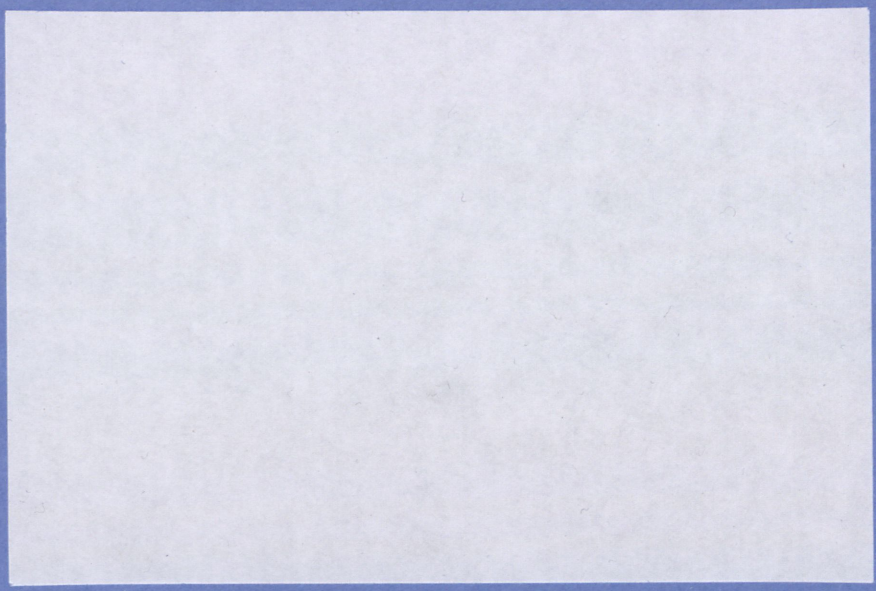

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Key words: Korea, financial liberalization, won, basket peg
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Abstract

The paper examines recent Korean financial and exchange rate reforms, including the role of U.S. political pressure. It undertakes some statistical tests of the extent to which Korean interest rates have become more closely tied to world interest rates, and of the extent to which the value of the won may have become less closely tied to the value of the dollar under the MAR system. One important theme is the possibility that Korea is becoming more closely tied to Japan financially. We find, however, little evidence that the nature of the relationship between the Korean won and the U.S. dollar has changed since the purported change in regime in 1990.

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"Foreign Exchange Policy, Monetary Policy and Capital Market Liberalization in Korea"

Korea's interface with the international monetary system appears to be undergoing a structural change, a transition analogous to that experienced by the major industrialized countries in the 1970s. First, it is liberalizing its financial markets. The liberalization process, which was begun around 1980 but slowed down around 1984-88, has picked up steam again with a set of measures implemented in 1991-92. Second, Korea has loosened the link of the won to the dollar. In 1980 it switched from a dollar peg to a purported basket peg; in the late 1980s it allowed appreciation against the dollar even beyond what the basket called for; and in March 1990 it officially abandoned a peg altogether, in favor of a "Market Average Rate" (MAR) system. These two kinds of policy reform have opposite implications for the question of Korea's ability to run an independent monetary policy: the removal of capital controls reduces monetary independence, while exchange rate flexibility restores monetary independence.

The U.S. Treasury has encouraged -- one might say pressured -- Korea in both kinds of structural change, financial liberalization as well as exchange rate flexibility, using the rhetoric of free-market reform. But appeals to free-market principles are in part misplaced here. First, Korea's domestic financial institutions are far less developed than those in the United States and United Kingdom and, for a country at its stage of economic development, a bank-oriented financial system like that of Japan might be a more appropriate model than the securities-oriented financial system of

the U.S. and U.K. Second, for a relatively small, trade-oriented economy, the advantages of a stable exchange rate may outweigh the advantages of a floating exchange rate, and a belief in free-market principles does not settle the matter one way or the other. Indeed European countries, after having completed the removal of barriers to capital mobility, are in the process of renouncing exchange rate flexibility. This is a decision that depends on countries' willingness to give up domestic monetary policy independence, not on free-market principles.

This paper examines the Korean financial and exchange rate reforms, including the role of U.S. pressure. It undertakes some statistical tests of the extent to which Korean interest rates have become more closely tied to world interest rates, and of the extent to which the value of the won may have become less closely tied to the value of the dollar under the MAR system. One important theme is the possibility that Korea is becoming more closely tied to Japan financially. We find, however, little evidence that the nature of the relationship between the Korean won and the U.S. dollar has changed since the purported change in regime in 1990.

Recent U.S.-Korean Talks on Financial Policy

In October 1988 the U.S. Department of the Treasury, in its "Report to the Congress on International Economic and Exchange Rate Policy" required by the Omnibus Trade and Competitiveness Act of 1988, concluded that Korea and Taiwan "manipulated" their exchange rates, within the meaning of the legislation. The Treasury

launched negotiations with Korea to induce that country to liberalize its financial markets, with improved treatment for U.S. financial institutions specified as one major goal, and appreciation of the won presumed to be another. The Financial Policy Talks took place in two rounds, in February and November 1990.

It is unusual for one nation to include such matters as financial and exchange rate policy on its agenda for bilateral negotiations with another nation, alongside standard trade issues; they are normally thought to be purely a matter of sovereign choice. But Korea is not the only example. U.S. trade policy has recently included demands for structural reform in several Asian macroeconomies. As nations go beyond arms-length merchandise trade and become more deeply entangled financially in each others' economies, and as world leaders fail to adapt adequately the multilateral trade negotiation framework to new issues such as services and investment, we may see more bilateral negotiations of the U.S.-Korean type.

We begin by reviewing the two areas of negotiation between the Korea and the U.S.: exchange rate issues, and other issues of financial liberalization. We will then describe some empirical tests of the removal of financial barriers in Korea, of the strengthening of financial ties with financial centers in New York and Tokyo, and of the links between the won and the dollar and yen.

[THIS SECTION COULD BE DELETED]

Speaking in Seoul in July 1986, C.Fred Bergsten urged Korea to allow the won to appreciate. U.S. Treasury Assistant Secretary David Mulford soon picked up the idea, and began to urge all four dragons to appreciate.[1] Since Hong Kong and (to a lesser extent) Singapore had open trade and financial markets, American attacks on the smaller two of the four rang hollow. But with a tradition of heavy intervention in all aspects of the economy, and rapidly growing trade surpluses, Taiwan and Korea were obvious targets. Taiwan was at first the more vulnerable politically in that it was rapidly amassing what was almost the largest stock of foreign exchange reserves in the world (irrespective of GNP). Korea could and did point to its large international debt (larger relative to GNP than the most problematic Latin American debtors in 1982) and the need to service the debt with export earnings.

Taiwan began to let the New Taiwan dollar (which had ceased pegging to the U.S. dollar in 1978) appreciate sharply in mid-1987, and the pressure switched to Korea. In 1987 the Korean current account surplus, which had first gone into surplus the previous year, doubled to $9.9 billion. The bilateral trade surplus with the United States reached a record $9.6 billion.[2] In a November 1987 speech in San Francisco, Mulford accused all four countries of

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[1] The first discussions with the Korean government took place in September 1986. (Wang, 1991, p.14-15, details the chronology of U.S. demands in this area.)

[2] Ohm (1991, p.9). [The bilateral surplus was to decline to $2.4 billion in 1990 on Korean reckoning, $4.1 billion on U.S. reckoning (U.S. Treasury, 1991, p.30).]

artificially depressing the value of their currencies to run up huge trade surpluses with the United States, but reserved the harshest criticism for Korea and Taiwan. The attack on Korea was seen as somewhat surprising in light of the special U.S. military relationship with Korea and the delicate political transformation underway there at the time.[3]

Meanwhile, Congressional proposals for more activist trade policy, which had been held in abeyance by Baker's Plaza initiative of 1985, resurfaced with as much force as ever. The final outcome was the Omnibus Trade Bill of 1988. The bill included "Super-301" provisions mandating that the Administration identify "unfair traders" and negotiate elimination of the barriers in question, with automatic retaliation if progress were not satisfactory. There was a requirement [Section 3005] that the U.S. Treasury submit reports and updates to Congress twice a year on exchange rate policy and other aspects of international economic policy. Though Japan was the single target that the Congress had most firmly in mind, the Treasury reports devoted many pages to the East Asian NICs. * * *

Three threads in U.S. financial policy towards Korea came together in 1989. First, the dollar depreciation strategy of 1985-86 had left a precedent for pressuring the East Asian NICs, particularly Korea, to appreciate their currencies against the dollar. Second, bilateral negotiations over Korean treatment of

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[3] Preparations for elections were underway in Korea.

U.S. insurance companies had created a precedent, and the Primary Dealers Act of 1988 (the Schumer Amendment to the Omnibus Trade Bill, aimed mainly at Japan) had created a requirement, for the government to push East Asian countries for better treatment of U.S. financial institutions through a new policy of "reciprocal national treatment." Third, negotiations with Japan beginning in the Yen/Dollar talks of 1983-84 [and continuing through the Structural Impediments Initiative of 1989-90] constituted a precedent for the U.S. Treasury to pass judgment on the appropriateness of financial regulations in East Asian countries.

Changes in Korea's Exchange Rate Policy

Korea maintained a fixed exchange rate against the dollar in the late 1970s. As the inflation rate was higher at home than abroad, the won became progressively more overvalued in real terms, and exports suffered as a result. In 1979 the government enacted an important and needed program of macroeconomic stabilization and microeconomic reform. In January 1980 the won was devalued by 20 per cent. This devaluation, and the contractionary macroeconomic measures taken the preceding year, succeeded in stimulating rapid export growth and reducing the current account deficit. This left Korea as one of the few major debtors that was well-positioned when the 1982 international debt crisis hit.[4]

The official exchange rate policy in 1980 became one of

[4] Balassa and Williamson (1990), Collins and Park (1989), and K. Kim (1990).

defining the won's value in terms of a basket of five foreign currencies, rather than just the dollar.[5] In principle, pegging to a basket has the advantage that it leaves a small country less vulnerable to movements in exchange rates among major trading partners, particularly the yen/dollar rate in the Korean case, over which it has no control, and is otherwise similar to pegging to a single currency. In practice, however, almost all countries that officially claim to be on a basket peg regime do not publicly announce what the currency weights are and frequently secretly change the weights and/or the level at which they peg to the basket, with the result that the exchange rate is as flexible as if the authorities made no commitment at all.[6] Korea in the 1980s was a clear example of basket-pegging in name only.[7] The equation that related the value of the won to the value of the dollar, yen, and other currencies, included an additional "alpha" term that in practice could be varied at will. The IMF was perceptive enough to classify Korea as a "managed floater" rather than a "basket-pegger."

The phase of dollar depreciation that began in 1985, as represented by the Plaza Accord, was welcomed in Korea as one of

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[5] Including the U.S. dollar, yen, mark, pound, and Canadian dollar (according to Lindner, 1991a, p.5, and Wang, 1991, p.3).

[6] One can ascertain whether a country that is officially pegging to a basket is in fact doing so, by regressing the value of its currency against the value of major trading-partner currencies, and allowing for occasional changes in weights and in level. A true basket pegger will show up with an R-squared close to one. Such tests are reported in the last part of this paper.

[7] Balassa and Williamson (1990, p.48).

"three blessings" in the world economic environment: low dollar, low interest rates, and low oil prices. For two years Korea kept the won close to the dollar, which meant a substantial depreciation against the yen and other currencies, and basked in the stimulus to its exports. But the country responded to U.S. pressure by appreciating the won against the dollar in 1987 and 1988.[8]

Despite the recent won appreciation, the U.S. Treasury pronounced Korea a country that manipulates its exchange rate in its first three reports to Congress called for by the 1988 Trade Bill: October 1988, April 1989, and October 1989. It sought further appreciation, citing as recently as the third report continued "indications of exchange rate 'manipulation' during the six months since the April report" (p.26).[9]

The Treasury's October 1989 report included the announcement: "Recently, the Treasury Department and the Korean Ministry of Finance have agreed to initiate talks on financial policies, including the exchange rate system and capital market issues. We hope to encourage a more market-oriented exchange rate system in Korea within the framework of these talks" (p.29). As noted, the Financial Policy Talks took place in February and November of 1990. Evidently, the 1990 talks did not explicitly focus on the level of the won/dollar rate per se. Rather, the Treasury sought to "encourage the liberalization of Korea's exchange rate system and

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[8] Bergsten (1989), Layman (1988, p.374), Noland (1990, p.49-50), Oum (1989), Williamson (1989), Kwack and Kim (1990), Park and Park (1990), and Wang (1991).

[9] See also Balassa and Williamson (1990, p.58).

of the capital and interest rate controls that impede the full operation of market forces." But it seems clear that a likely consequence of this liberalization of the system was expected to be, under the recent economic circumstances at the time of the 1989 decision to hold talks, to allow the won to appreciate further. The Treasury did say that, parallel with the talks on financial policy, would be negotiations "to press for exchange rate policy to support further external adjustment," i.e. for more appreciation of the won to reduce the current account surplus.[10]

On March 2 of 1990, the Korean authorities adopted a "Market Average Rate" system of setting the exchange rate each week. (Hwang, 1990, p.15.) This reform led the Treasury to drop charges of exchange rate manipulation in its April 1990 report, where the earlier won appreciation was apparently not sufficient to convince it to do so.

The Market Average Rate (MAR) system sets the won/dollar exchange rate at the beginning of each business day at the weighted average of transactions in the inter-bank market on the preceding business day. Inter-bank and customer rates are allowed to float freely within specified margins.[11] Presumably the width of the margins puts an upper limit on the amount by which the central rate can be adjusted each day (somewhat like so-called "circuit-

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[10] Fall 1990 footnote.

[11] (US Treasury Report May 1991.) The margins were widened to .8 per cent on July 1, 1992, from .6 per cent, to which the range had been widened in September 1991. B.Kim (1992, p.18), and Lindner (1991a, p.8).

breakers" imposed on some countries' stock markets), though the exchange rate apparently almost never hit the limit, or even come close to it, during the period March 1990 to May 1992.[12] This leaves out the most important questions: Will the authorities systematically intervene, and if so how? Will they exercise influence over the banks? Also, the question that is of secondary importance except to the U.S., how fully will foreign banks be allowed to participate in the developing foreign exchange market?

A year later, the U.S. Treasury Report (p.15) found: "During the first thirteen months of the MAR system (through April 12, 1991), the won depreciated 4.4 in nominal terms against the dollar...Foreign banks accounted for a large share of transactions in the inter-bank market, generally 40-60 per cent of the total. The Bank of Korea (BOK) was not a direct participant in the market, and other government-owned banks accounted for only a small share of inter-bank activity." This would seem to suggest a genuinely market-oriented system.

On the other hand, we are told that "The Korean authorities maintain a comprehensive array of controls on foreign exchange and capital flows. These controls prevent market forces of supply and demand from playing a fully effective role in exchange rate determination, distort trade and investment flows, and provide the Korean authorities with tools for indirectly manipulating the exchange rate...." In other words, Korea has moved to a floating exchange rate before removing capital controls or progressing far

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[12] B. Kim (1992, p.20).

with other aspects of financial liberalization. This is an unusual response to emerge from a campaign for free markets, as the next section will discuss.

On the surface, it appears from the report that the Treasury cares primarily about the Korean foreign exchange system, that it be "fair," or free, or market-oriented, rather than about the level of the exchange rate per se. This would appear to follow from the fact that the Treasury continued to accuse Korea of manipulating the exchange rate after the won had appreciated substantially, and terminated the accusation during a period when its value fell but was set by the MAR system. If U.S. motives are interpreted more pragmatically however, the key change between 1988 and 1991 was the disappearance of the Korean current account surplus in 1989. (The two most important reasons for the deterioration in the trade balance were probably the large effective appreciation of the won in 1988-89 and rising labor activism.) Indeed the report concludes that (p.18) "...with a return to external surpluses likely in 1992, we would expect to see a renewed trend toward appreciation of the won."[13]

The view from Korea is that the current account is remaining in substantial deficit in 1992, rather than returning to surplus. Nevertheless, it is possible that capital inflow will create a potential surplus in the overall balance of payments, and thereby put upward pressure on the won. In current circumstances, allowing

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[13] The May 1992 Treasury Report again apparently does not consider Korea to be manipulating, but names rather Taiwan and China.

the won to appreciate very far would probably be unwise from the Korean viewpoint. It seems likely that the government would react by resuming sales of won to dampen such an appreciation, abandoning the MAR system.[14]

Do Free Markets Imply Freely-Floating Exchange Rates?

[THIS SECTION COULD BE OMITTED.]

There were some respectable economic arguments for letting the won appreciate in 1986-89, beyond the goal of helping to reduce the U.S. trade deficit. When a country like Taiwan or Korea attempts to keep the currency from appreciating, it may experience an inflow of reserves too large to sterilize, resulting in undesired monetary expansion and inflation.

In general, my advice to a less developed country experiencing unwanted reserve inflows and fearing real appreciation of its currency is as follows: (1) liberalize with respect to capital outflows, thus reducing the magnitude of the net inflows, and (2) liberalize with respect to domestic bond markets, thus allowing scope for central bank operations to sterilize reserve inflows. Korea did the right things in 1986-89: paying off external debt, and sterilizing reserve inflows by selling monetary stabilization bonds and raising reserve requirements.[15] But the actions were

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[14] Korea has said it plans to move the rest of the way to a fully-floating exchange rate system (for example, dropping the daily margins) in 1994. B. Kim (1992).

[15] Lindner (1991b). [On the growing use of Monetary Stabilization Bonds since 1986, see also Emery (1992) 6-11.]

not strong enough to prevent inflationary growth in the money supply. The absence of active domestic bond markets in which the Bank of Korea might have been able more fully to sterilize its purchases of dollars in exchange for won [by selling domestic bonds in exchange for won and thereby preventing the supply of won in the hands of the public from expanding] has been attributed to the cessation of financial liberalization in the period 1984-87.[16] Further financial liberalization is indeed a good idea for Korea; facilitating sterilization operations in the future is one of the reasons.

In any event, the case against Korea and the other Asian NICs dampening appreciation of their currencies against the dollar has none of the legal or principled basis that is imputed to it by the Omnibus Trade Act of 1988. Small countries should be perfectly free to seek to maintain fixed exchange rates. There is nothing in the Articles of Agreement of the GATT or IMF, nor is there anything in idealized free-market principles, that discourages the attempt to maintain a fixed exchange rate. Indeed, the original goal of the IMF was to promote stable exchange rates even for large countries.[17] Such fathers of "Supply-Side Economics" as Robert Mundell and Jack Kemp consider a return to exchange rate stability to be essential to their creed. (They actually consider proposals to solve world trade imbalances by depreciating the dollar against

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[16] Kim, 1990, p.17.

[17] Noland (1991, p.176) notes that the IMF did not agree with the Treasury position that Korea should appreciate its currency after 1985.

Asian currencies to be similar in character to protectionism!)

Even those who are more enamored of floating exchange rates for major currencies like the dollar and yen recognize that there is little point in a sufficiently small country -- whether less-developed, newly-industrializing, or fully industrialized -- having a floating exchange rate. The Optimum Currency Area argument of undergraduate textbooks in international economics reminds us that for a small open economy like Hong Kong -- or New York City -- the advantages of a floating exchange rate (monetary independence, and automatic adjustment of the balance of payments) are probably outweighed by the advantages of a fixed exchange rate (no exchange rate uncertainty, and a credible commitment to low money growth and inflation). It would not be unreasonable for a country the size of Korea to opt for a fixed exchange rate. The countries of Europe are in the process of doing so. (For Korea, if it chose to go this route, I would recommend a true basket peg, with the weights publicly announced to enhance credibility.)

This is not to say that there were not some valid economic reasons for Korean appreciation in the second half of the 1980s. The point is rather that Americans are mistaken to accuse small Asian economies of violating any rules of free-market economics or international commitments when they intervene in the foreign exchange market. The case for negotiating reductions in barriers to international trade has strong justification in the principles of economic theory and of international commitments like the GATT. The case for reducing barriers to international capital flows is

also respectable, though its justification in principle is somewhat weaker, both in theory and under international commitments. The case for abstaining from intervention in the foreign exchange market has no such basis in principle at all. When Americans apply terms like "unfair" or "manipulate" indiscriminately, they undermine the rules and principles that truly are important.

Korean Financial Liberalization in the 1980s

Issues of financial liberalization fall into three areas: domestic liberalization, removal of international capital controls, and treatment of foreign providers of financial services.

In the 1970s, Korea met the description of a financially repressed economy. The banking system was kept underdeveloped (although an informal "curb market" became very large), securities markets were largely non-existent, and interest rates were kept negative in real terms to stimulate investment in favored sectors (especially heavy industry).[18]

By end of 70s, the government recognized that financial repression was an obstacle to further growth. An early aspect of a financial liberalization program was the establishment of two open-end trust funds.[19] The road to banking de-regulation started in 1982 with the privatization of five national commercial

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[18] See, e.g., Kihwan Kim (1990, p.3-6), who argues that the resistance to currency depreciation in the late 1970s was in part due to the desire to keep interest rates low. ...

[19] Kim (1991, p.22).

banks.[20] Restrictions on bank management were reduced. The requirement that loans be made at preferential rates for policy purposes became less common in 1982. Further steps toward liberalization of interest rates were taken in early 1984. But the most effective agents of liberalization were the rapidly-growing non-bank financial intermediaries.

There seems to be general agreement that the pace of liberalization has been slow since 1984. "During [the 1984-87] period no important steps were taken to further liberalize the financial sector."[21]

In December 1988 more serious interest rate de-control was undertaken by the outgoing Finance Minister, Il Sakong.[22] (This process was soon slowed, however, when interest rates -- rather predictably -- started to rise.) At the same time, "citing unexpected economic changes, the Korean Government revised its original 1981 schedule to liberalize the securities industry."[23] A new timetable was announced for the removal of controls on capital inflow and outflow. The measures announced in December 1988 included a schedule under which substantial liberalization was to take place in 1992.

Many Korean officials believe that further domestic

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[20] Oum (1991) and K. Kim (1990, p.11).

[21] Kihwan Kim (1991). Others who note the slow pace of Korean financial liberalization include Fry (1990, 42-44) and Park.

[22] E.g., Kihwan Kim (1991, 21).

[23] U.S. Treasury (1990b) National Treatment Study, p.261.

liberalization "could further raise the market interest rates, pushing up the firms' financing costs..."[24] One would think that international liberalization is the answer, allowing the firms to borrow much more cheaply abroad. But apparently the government position is the reverse: "It is recognized that in order to minimize the negative effects on the economy as a whole, the deregulation of interest rates and domestic financial markets need[s] to precede the liberalization of foreign exchange and capital transactions." It is not clear what are these negative effects. Perhaps the authorities wish to avoid overborrowing like that experienced by Chile in its 1970s liberalization, which caused writers on the Optimal Order of Liberalization to warn against beginning with the removal of capital controls. According to Nam (1989, p.157), "The fear of massive capital inflows attracted by relatively high domestic real interest rates and anticipated foreign exchange appreciation has prompted controls on capital inflows."

One possibility is that the authorities are worried that a large capital inflow would bring about a real appreciation of the won: if the authorities intervened to resist the pressure toward nominal appreciation (which would itself require abandoning the free-float spirit of the MAR), then the inflow of reserves would be inflationary. Korean exporters would lose competitiveness. The solution, as I noted above, is to resist the nominal appreciation, but to sterilize the increase in reserves so as to prevent

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[24] Oum (1991, p.7).

inflationary growth in the money supply.

Another possibility is that the authorities are worried that Korean "domestic financial institutions, especially banks, are not efficient and competitive enough compared to their foreign counterparts."[25] One could argue that there are three natural stages of development in a country's financial system. In Stage 1, business investment is financed out of family savings or -- in a country where the government plays a more *dirigiste* role -- by official loans. This is clearly the stage that Korea has been at up until now. One should hesitate before condemning Korean "financial repression," given how successful the development process has been over the last thirty years.[26] Nevertheless, it may be time to move on to a new stage.

In Stage 2, financial intermediation by investment banks allows a more effective channeling of funds from savers to business. The Japanese post-war main bank system illustrates this system at its best, with the banks efficiently monitoring the activities of the firm managers to make sure they are not diverting the funds from productive investment projects toward their own purposes.[27] DeLong (1991) has argued that in the nineteenth century investment banks served this role in the United States as well.

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[25] Oum (1991, p.7).

[26] See Yung Chul Park (1991) on this point.

[27] For a survey of this and other aspects of corporate finance in Japan, see Frankel (1991b). In the context of economic development, see Stiglitz (1991).

In Stage 3, well-established corporations find that it is more efficient still to disintermediate. They switch from reliance on bank loans to issuing securities directly in developed financial markets, where a corporation with a good reputation and credit-rating can obtain capital cheaply. The United States and the United Kingdom have been at Stage 3 for some time, and Japan is apparently beginning to move there (though it is unclear whether or not this will constitute an improvement). The question is whether it is not premature for Korea to jump to Stage 3, without first having passed through Stage 2.

Recent U.S.-Korean Negotiations Over Financial Issues

The U.S. Treasury evaluation of progress in the 1990 Financial Policy Talks regarding financial services was negative. With respect to treatment of foreign banks, even though Korea had in 1984 declared national treatment for foreign-owned banks as part of a three-year deregulation plan,[28] the report found: "progress in resolving problems has been very slow and no timetable for dealing with them has been produced."[29] With regard to treatment of foreign securities firms, even though Korea had [in 1988] declared that 24 foreign firms would be allowed to establish branches,[30] the report found (p.11): "U.S. financial firms do not receive

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[28] Ohm (1991, p.7).

[29] U.S.Treasury, 1990, p. 243.

[30] Eight of them American. Ohm (1991, p.7).

national treatment in Korean securities markets."[31] With regard to overall financial liberalization, the report found: "Until the Korean Government allows domestic banks to compete in a market environment, fully liberalizes interest rates, and eliminates credit allocation and exchange controls, there is little likelihood of major advances in equality of competitive opportunity for foreign financial service providers in the Korean market."[32]

In 1991, foreign securities companies were for the first time allowed directly into the country (as had been promised in the negotiations with the U.S.). The Ministry of Finance in March approved four out of nine applications for branch office securities licenses,[33] two of them American[34], turning down all four Japanese securities companies (and one French-owned) that had applied. The reason given was reciprocity: Korean firms would be more able to enter American and British markets than Japanese and French. But in the interpretation of the Economist, "Few people doubt that dislike and fear of Japan had more to do with it." Such developments are of interest, because there is the potential that as U.S. political pressure forces open Korean financial markets, the capital and financial firms that come in will be Japanese rather than American. On economic grounds, the flow of money from Japan to Korea is quite natural. On political grounds it is more

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[31] U.S. Treasury, 1990, p.261.

[32] U.S. Treasury, 1990, p.258.

[33] The Economist, "The Korea that can say no," March 23, 1991.

[34] Boum.

difficult.

In June 1991 restrictions were lifted on the establishment of multiple branches of foreign banks. It was also announced that application of national treatment for banks will be "stepped up," [Oum, p.8] and that the government of Korea was preparing a "master plan" to liberalize interest rates and to "rectify distortions in its term structure."[35] (In its next report, the U.S. Treasury appeared unimpressed, however.[36])

As of the beginning of 1992 foreign investors have been officially free to invest in individual Korean stocks on the stock market.[37] Other reforms are planned as well. On December 17, 1991, the National Assembly approved revisions in a number of laws, including a revision to permit banks to engage in all foreign exchange business that is not specifically prohibited.[38] Liberalization is reported to have progressed relatively well in the first part of 1992.[39] However a firm commitment to the final stages of a complete "blueprint" for financial reform[40] is not

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[35] Oum (1991, p.10-11). Evidently there is a need to encourage more saving in longer-term securities, instead of short-term (Fry, 1990).

[36] Lindner (1991a, p.18).

[37] Kihwan Kim (1991, p.22) and Oum (1991, p.9). But apparently there will be a 10 per cent limit on foreign ownership. (Economist. March 23, 1991.)

[38] The Korea Times, Dec. 19, 1991.

[39] With corporate bond yields coming down between October 1991 and March 1992 (though this could be weak credit demand, rather than abundant foreign capital). The Economist, April 4, 1992.

[40] Byrne (1992, p.17-20).

expected until after presidential elections in December 1992.

Tests of financial and monetary links to the U.S. and Japan

A useful way of empirically measuring the magnitude of barriers separating a country's financial markets from the outside world is to look at differentials between onshore and offshore interest rates, usually with adjustments of some kind to make them more comparable. The idea is that if barriers are low, then arbitrage should equate onshore and offshore rates of return. We will review some empirical evidence on three questions:

(1) Have financial markets in Korea become more open?

(2) Are financial links tighter with New York or Tokyo?

(3) Of the barriers that remain, which are more important: currency factors or country factors?

Are Korean financial markets becoming more open?

A recent study by Reisen and Yeches (1991) estimates the degree of Korean links with foreign interest rates through a time-varying coefficients model. It finds an increase in financial openness in the first half of the 1980s, following the financial deregulation package that was part of an overall liberalization of the economy in 1981. But the degree of openness declined during 1985-87 (and remained below its 1985 peak as recently as 1990). This is the period when the won appreciated against the dollar as the result of dollar depreciation against major currencies, followed by U.S. pressure on Korea not to keep its currency tied to

the dollar. Reisen and Yeches point out that despite the switch from a depreciation trend to an appreciation trend, which one would expect in a fully liberalized system to eliminate the premium demanded by investors to hold Korean assets, Korean interest rates remained far higher (16 to 20 %) than U.S. interest rates. These are curb-market rates[41]; their still-high level represents some unknown combination of controls on capital inflow and the higher credit risk of curb-market obligations. But the fact that low-risk market-determined interest rates were still not available is even more direct evidence that the market is not liberalized.

I have estimated trends in the absolute value of the differential between Korean and U.S. interest rates, and found that on average during the period September 1982 to March 1992, the differential actually widened at a statistically significant rate. This is for two Korean interest rates that are relatively market-determined -- a rate on Monetary Stabilization Bonds and a corporate bond rate.[42] The estimated trend coefficients are 1.2 percentage points per annum and 0.6 percentage points per annum. A third interest rate showed an (insignificantly) declining differential; but this particular series is the highly regulated interbank rate (which moved very little over the sample period, staying within a 6.5%-8% band.)

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[41] The Korean call money rate is lower, occasionally as low as offshore dollar interest rates.

[42] I am grateful to Bong-Sung Oum for supplying the data. These results are reported in Chinn and Frankel (1992), Table 1, along with statistics on other Pacific Rim countries.

The Korean CPI inflation rate averaged 4 per cent during the period 1982-1989, almost exactly as low as the U.S. CPI inflation rate. This suggests a differential in real interest rates between Korea and the United States in excess of 16 per cent. For purposes of comparison, the real interest differentials in other Asian Pacific countries averaged as follows: Japan -0.6 %, Hong Kong -2.9 %, Singapore +0.1%, Malaysia +0.8 %, Australia +1.2 %, and New Zealand +1.0 %.[43] This list of six countries is unrepresentative of Asia and the Pacific, in the sense that they are the ones whose financial markets are the most developed and open; the list was chosen because these countries are the only ones for whom data from the London forward exchange market are available.[44] But the contrast between Korea and these six makes clear how far the former is from having open and fully-developed financial markets.

There is, however, one kind of test that shows Korean interest rates becoming increasingly influenced by interest rates abroad. A regression of the Korean rate against the U.S. interest rate shows that the coefficient has a statistically significant upward trend over the period 1982-92. (Again this is when the Korean Monetary Stabilization Bond or corporate bond rate are used. The interbank rate shows a negative trend in the coefficient.)

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[43] Over the period September 1982 to January 1988. Further statistics and data details are given in Frankel (1991a). For more tests of real interest parity in the region, see Glick (1987) and Glick and Hutchison (1990).

[44] These data allow tests of covered interest parity, which show that capital controls and similar barriers to the movement of capital across national boundaries are as low in Japan, Hong Kong and Singapore, as in any European country.

Without forward rate data, which do not exist for Korea, it is difficult to distinguish between country factors and currency factors linking countries' interest rates. That is, one cannot tell whether U.S. interest rates are having a greater effect because capital controls, information costs, and other barriers to the movement of capital between the countries are diminishing, or whether perceptions of the likelihood of exchange rate changes are diminishing. Survey data can be used in place of forward rate data to correct for expectations of exchange rate changes.[45] The hypothesis of a unit coefficient in the interest rate regression then becomes the condition of uncovered interest parity [rather than covered interest parity]. A regression of the Korean rate against the U.S. rate adjusted for expectations of change in the won/dollar exchange rate as reported in survey data, from March 1988 to the end of 1991, shows a statistically significant coefficient. When this coefficient is allowed to change by means of a rolling regression, it is found to be slightly higher in the last month of the sample period than the first. But we can reject the hypothesis of uncovered interest parity.

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[45] There are by now a number of surveys of forecasts of participants in the foreign exchange market. Most deal only with the major 5 or so currencies. There is one, however, that covers more currencies, including a number of Asian ones: Currency Forecasters' Digest of White Plains, New York. This is the source for our survey data, obtained by subscription of the Institute for International Economics where the author is a Visiting Fellow. The results described here are reported explicitly in Chinn and Frankel (1992).

Are financial links tighter with New York or Tokyo?

To tell whether a small country is more tightly linked to one major world financial center or another, one can run a regression of its interest rate against interest rates in several foreign countries. A regression of monthly Korean interest rates against major foreign interest rates over the period December 1977 to March 1989 suggests that U.S. interest rates have the most influence, with Japan close behind (followed by the United Kingdom; the coefficient on German interest rate shows the wrong sign).[46] [These effects appear to be highly significant statistically.[47]]

One would expect that this relationship would have changed over time, particularly since Korea did not even begin to deregulate its interest rates until 1982. A way of investigating how the relationship changes is to allow for simple time trends in the coefficients. [These results are reported in Table 3 of Frankel (1992a)]. The influence of Japanese interest rates, though high, appears to be decreasing over time. The same is true of German interest rates. The British interest rate is gaining influence over time. The U.S. shows no significant trend. When one takes first differences [in Table 4], the significance of the

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[46] These results use monthly observations of the Korean call money rate. The foreign interest rates are three-month interest rates. Analogous regressions using a Korean 3-month financial bill rate from World Financial Markets show a greater role for U.K. interest rates during this sample period, but are otherwise similar.

[47] This significance disappears, however, when one tries the regression on first differences in response to the evidently high level of serial correlation.

results regarding the role of Japanese interest rates remains (though there is nothing left of the German and British effects).

During most of this period, Korean interest rates were still tightly regulated. U.S. pressure to liberalize, and further steps in that direction, date from 1988. I tried the interest rate regression, against U.S. and Japanese interest rates, during the more recent time period 1988-1991. New York and Tokyo appear to have equal effects on the Korean interest rate.[48] [For purposes of comparison, the influence of Japanese interest rates in Taiwan and Singapore now appears to be greater than the influence of U.S. interest rates, while in Hong Kong (which is pegged to the dollar) it is the U.S. influence that is larger. It is not a coincidence that Hong Kong is the one country of the four that is currently pegged to the U.S. dollar.] A regression for the entire longer sample period, September 1982 to March 1992, shows slight signs that Japanese influence in Korea is rising and U.S. influence declining.[49]

The role of the yen and dollar

The evident positive trend in the effect of Japanese interest rates on Korean interest rates diminishes when the foreign interest rates are corrected for expectations of exchange rate changes (as reflected in the survey data). Now it is the U.S. influence that

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[48] Frankel (1992, Table 4).

[49] Chinn and Frankel (1992), Table 10.

appears to be rising.[50] This finding suggests the possibility that the link between Korean and foreign interest rates during the recent period may in part be obscured by currency factors: the won is less closely tied to the dollar than it used to be, so the increasing influence of U.S. interest rates only shows up when expectations of won depreciation against the dollar are eliminated. We now turn to a test of the exchange rate question.

The hypothesis that the implicit weights assigned to major foreign currencies by the won changed during the course of the 1980s can be tested by regressing changes in the value of the won against changes in the value of other major currencies. There is a methodological question of what numeraire should be used to measure the value of the currencies. A simple solution is to use the SDR as numeraire. This approach suffers a bit from the drawback that the SDR is itself a basket of five major currencies including the dollar and yen. An alternative approach is to use purchasing power over Korean goods (the inverse of the Korean price level) as the numeraire.

Regressions of the change in the real value of the won show a statistically significant weight on the value of the dollar throughout the period April 1980 to March 1986, with an estimated coefficient of .4 to .5. (The Canadian dollar, which was reputed to be included in the Korean basket, also shows up with a significant coefficient of .2 during part of the period.) There is

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[50] Chinn and Frankel (1992), Table 13, for the period February 1988 to March 1992.

a significant constant term (the "alpha") during this period: the value of the won declined during the early 1980s, whether measured by inflation or depreciation, relative to foreign currencies. The dollar, like the other major currencies, is insignificant during the period April 1985 to March 1987. Its influence re-emerges from April 1986 to March 1988. But then during the final two-year sub-period, April 1988 to March 1990, the yen (with a highly significant coefficient estimated at .18) suddenly eclipses the dollar (with an insignificant coefficient of .11).[51] This evidence appears to suggest that Korea indeed loosened the link between the won and the U.S. dollar in the late 1980s, as the United States urged, and developed a link with the yen.

When data on weekly changes are used and the sample is extended to 1991-92, however, the conclusion changes. Table 1 reports the results when currency values are measured in terms of the SDR. The estimated weight on the dollar is as high during recent periods (1989 to 1990 and January 1991 to May 1992) as ever, and is insignificantly different from 1.0. The weight on the yen is insignificant. The R-squared is about .98, again virtually as high as in any preceding sub-periods. (This is true regardless

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[51] When values in terms of the SDR are used, the dollar appears to maintain its significance much more strongly, but the finding of a highly significant yen in the last two years remains. The results are reported in Frankel (1992a): the purchasing power method in the Seoul Journal of Economics version of the paper, and the SDR method in the Hoover Institution version.

whether values are measured in terms of the SDR or Swiss franc.[52])

These results would seem to suggest that the MAR system may after all not be very different from the old (loose) dollar peg. If the won were truly market-determined, one would expect a much larger error term. It is possible that the MAR is a facade, which has been accepted by the Americans because it has happened to coincide with a period of renewed Korean trade deficits and improved U.S. trade balances.

One sign of increased influence of the yen in Korea is its use as an international currency for conducting financial transactions and trade. The yen share of external debt increased from 16.6 per cent in 1980 to 26.6 per cent in 1989. For an average of five major debtors in the region [Korea, Indonesia, Malaysia, Philippines and Thailand], the yen share increased from 19.5 % to 35.7 % over this period. The share of official reserves held in the form of yen in Korea rose from 8.0 % in 1980 to 12.3 % in 1989. In the Asian region as a whole, the share of the yen in official reserve holdings rose from 13.9 % in 1980 to 26.7 % in 1988 (and then declined back to 17.1 % in 1990). The share of imports denominated in yen in Korea rose from 4.0 % in 1980 to 10.6 % in

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[52] Results using the Swiss franc method are reported in Frankel and Wei (1992). We hope in future research to discern the roles of the sample-period endpoint, frequency of observation, and numeraire, in producing these conflicting results. A promising asset to try as an alternative numeraire is the price of gold. It is available on a daily basis; and, sources of changes in its value are likely to have a low correlation with sources of changes in the values of the other currencies.

1989. In Asia (still excluding Japan) the yen share of imports rose from 2.0 % in 1983 to 19.5 % in 1989.[53]

The general pattern seems to be that, although Koreans resist the allure of the yen relative to Southeast Asians, the importance of the yen is gradually rising in both parts of East Asia. To the extent that the emergence of a "Yen Bloc" in East Asia would not be welcome by the United States, it is ironic that internationalization of the yen was originally a goal of U.S. policy.

Conclusion

Financial liberalization is a good thing for Korea, so long as proper SEC-type regulation is maintained. Allowing in providers of financial services, like allowing in foreign agricultural products, is consistent with comparative advantage, and would benefit both countries.

The beneficial implications for U.S. "competitiveness" of Asian liberalization in the area of exchange rate policy are less clear than one would infer from observing the amount of U.S. pressure applied. It is misguided for Americans to appeal to free-market principles to justify pressure on Asian countries to allow their currencies to appreciate against the dollar. It is perfectly appropriate for a small country to seek exchange rate stability if it so desires. American negotiators would perhaps be better

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[53] These statistics are from Tavlas and Ozeki (1992, pp.39-49).

advised to concentrate on negotiating the liberalization of trade in goods and services, where the appeal to principle is on secure ground.

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Table 0

WEIGHTS ASSIGNED TO FOREIGN CURRENCIES IN DETERMINING MONTHLY CHANGES IN VALUE OF KOREAN WON

(during 1980s and two-year sub-periods)

	Constant	Yen	Dollar	Mark	Pound	Franc	Can. $	R^2	D.W.
80.4-90.12	-.0038	-.03	.27	.10	-.01	-.02	.14	.40	.78
	-6.32***	-1.24	4.05***	1.42	-0.36	-0.34	2.40***		
80.4-82.3	-.0095	-.06	.50	.21	-.05	-.15	.29	.70	1.72
	-4.86***	-0.44	1.17	1.39	-0.30	-0.89	0.99		
82.4-84.3	-.0027	.01	.41	-.07	.02	.07	.11	.67	1.38
	-3.28***	0.18	3.24***	-0.97	0.65	1.19	1.64		
84.4-86.3	-.0033	.03	.40	.36	-.03	-.34	.08	.46	1.32
	-3.44***	0.68	2.77**	0.85	-0.71	-0.71	0.82		
86.4-88.3	-.0001	-.09	.36	.13	-.01	-.04	.04	.78	2.35
	-.04	-2.54**	3.20***	1.18	-0.19	-0.35	0.47		
88.4-90.3	-.0015	.18	.11	.34	-.06	-.39	.11	.56	2.02
	-1.04	2.60**	0.79	1.44	-0.96	-1.67	1.49		

* (**) [***] Statistically significant at 90% (95%) [99%] level.

t-statistics reported below coefficients.

Note: the values of the won and foreign currencies are measured as purchasing power over Korean goods, as defined by the CPI.

corrected 9/8/92

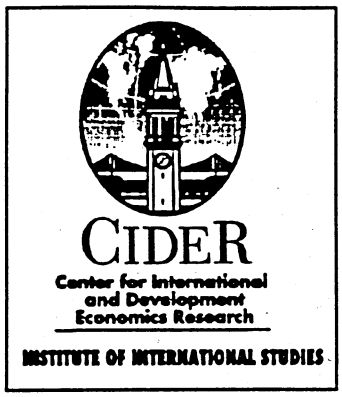
Table 1: Weights Assigned to Foreign Currencies in Determining Changes in Value of Korean Won

numeraire: SDR (.49, .19, .15, .12, .12)

	Constant	US$	Yen	DM	Aus$	NZ$	R^2/DW	Chow /White
79-80	-.003# .002 -.003# .002	.86* .35 .85# .44	-.05 .12 -.08 .13	 .14 .22	 .15 .42	 .01 .29	.04/2.01 .01/2.01	.87/.99 .46/1.97
81-82	-.001** .000 -.001** .0004	1.03** .06 1.13** .09	.05# .03 .05## .04	 .06 .04	 -.08 1.10	 .01 .02	.73/2.23 .73/2.20	.34/3.62 .90/5.91
83-84	-.001* .0003 -.0008* .0003	.85** .07 .87** .09	.04 .04 .02 .05	 .02 .05	 .01 .03	 .00 .02	.61/2.36 .60/2.37	1.46/1.44 .69/8.76
85-86	-.0006** .0002 -.0007 .0002	.88** .03 .94** .05	.03# .02 .02 .02	 .04 .03	 -.00 .01	 -.00 .01	.89/1.44 .88/1.48	12.25**/5.01 6.32**/22.87
87-88	.002** .0002 .0020** .0003	.87** .05 .80** .06	.02 .03 .01 .03	 -.02 .04	 .05** .02	 -.01 .01	.83/.91 .84/.87	7.79**/7.11 3.46**/17.8
89-90	-.0004* .0002 -.0005* .0002	1.01** .04 1.03** .05	.005 .017 .003 .017	 .013 .017	 -.015 .0018	 -.79 .02	.88/1.38 .88/1.40	3.68*/2.53 2.44*/16.03
91-92	-.0012** .0004 -.0011** .0004	.96** .04 .90** .15	-.07## .04 -.07## .04	 -.00 .11	 -.00 .03	 .07## .05	.87/2.31 .87/2.31	1.19/6.62 .91/27.88
79-92	-.0007* .0003 -.0007* .0003	.91** .05 .97** .07	.01 .02 -.005 .025	 .06## .04	 .01 .02	 .01 .02	.36/1.94 .36/1.94	4.36**/.92 2.17*/1.40

** (*) statistically significant at 99 % (95 %) level
# (##) statistically significant at 90 % (85 %) level

t-statistics reported below coefficients
"R^2" refers to R^2 adjusted for degrees of freedom.



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