Financial Consequences of New Asian Surpluses

The shift of international trade surpluses from one country to another carries important consequences for financial markets because residents of various countries invest their surpluses differently. In an ideal world of cosmopolitan individuals, residents of one country might invest internationally in much the same manner as the residents of any other country. But today, national borders still divide individual and institutional investors with disparate investment habits.

The financial consequences of a country's use of its surplus have claimed the attention of international economists at times of major imbalances in the world economy. An earlier generation of analysts studied the transfer problem that arose with the German reparation payments after the First World War. In the 1970s economists investigated the effects of the oil-producing states' methods of recycling their surpluses. Recall that after the oil price increased in 1973, the governments of the Middle Eastern states initially placed their so-called petro-dollars in short-term dollar deposits in a few large banks. This behavior quickened activity in the interbank market, as the large banks re-lent the funds placed with them, and encouraged international lending of dollars at rates of interest tied to interbank rates. Later the oil producers diversified into investments in Europe and gold and thereby put downward pressure on the dollar.

Since Japan became the major surplus country in the 1980s, its investors have influenced financial markets in different ways. Whereas the oil states kept their foreign investments liquid, Japanese investors have preferred more solid foreign placements. Japanese financial institutions, in buying long-term securities to match their liabilities to insurance policyholders and to future pensioners, have fostered the rapid growth of security issuance. Foreign exchange markets have responded to these investors' moves to diversify their security holdings away from the dollar.

While Japanese foreign investment behavior has been closely followed in recent years, the foreign investments of two other Asian countries now bear watching. Taiwan and South Korea have achieved new prominence in international financial markets largely because of their growing current account surpluses: a combined $9 billion in 1985, $20 billion in 1986, and an estimated $25 billion in 1987. This article analyzes the ways in which Taiwan and Korea have managed their surpluses and compares the international investment behavior of these countries to that of Japan. The contrasts that emerge support the conclusion that the international investment behavior of Taiwan and Korea has tended to steepen the dollar yield curve, to strengthen the dollar, and to enhance the role of banks as intermediaries between surplus and deficit countries.

These tendencies are apparent from an examination of the countries' balance sheets. Taiwan has been accumulating assets exclusively in the form of short-term instruments—bank deposits and U.S. Treasury bills. At the same time, Korea has been making payments to foreign banks and others to reduce its debt, 70 percent of which is at floating interest rates. Both strategies—building up short-term assets and paying off liabilities tied to short-term interbank rates—have tended to steepen the dollar yield curve. By contrast, private Japanese capital outflows, mostly into bonds, have tended to flatten the dollar yield curve.

Taiwan has shown a propensity to accumulate dollar assets and, equivalently, Korea to repay dollar liabilities. The currency preference exhibited by investors in both nations sets them apart from Japanese investors who have recently diversified away from dollar assets. Because of this currency preference, the shift of the Asian surplus toward Taiwan and Korea and away from Japan in the wake of the appreciation of the yen has tended to stabilize the dollar. Taiwan, by accumulating bank deposits, and Korea, by repaying bank loans, are both primarily channeling their surpluses into the international banking system. This behavior again distinguishes the Taiwanese and Koreans from Japanese investors, whose massive purchases of securities have spurred security issuance.

Taiwan, with a large reserve build-up, has felt stronger pressures for change than has Korea and recently relaxed controls on capital outflows. Taiwanese investors are in the process of learning how to manage portfolios that include long-term as well as short-term instruments and nondollar as well as dollar foreign assets Korea will probably alter its behavior more gradually as it continues to repay its debt over the next five years.

Current account surpluses

The remarkable economic performance of Taiwan and Korea is transforming these nations into a major surplus region. Taiwan's current account surplus reached $16 billion at the end of 1986, while Korea's hit nearly $5 billion. These figures appear to be relatively small next to Japan's $86 billion surplus in 1986 However, as recently as 1983, Japan's surplus stood at $20 billion —less than the combined surplus for Taiwan and Korea last year. Moreover, Japan's current account has peaked: in volume terms the trade balance began to deteriorate in 1986,[1] and for the first time since August 1984, the current account surplus declined in dollar terms in May 1987 from the year-earlier figure. By contrast, Taiwanese officials expect their surplus to rise to $18.5 billion in 1987, and the South Korean Planning Board set a goal of $5 billion annual surpluses from 1987 through 1991. Korea's surplus is likely to overshoot the goal since it has reached $4.1 billion for the first half of this year. As shares of national product, the figures are even more striking—20 percent in Taiwan, 5 percent in Korea, and 4 percent in Japan at year-end 1986. Given the rapid growth of the economies of Taiwan and Korea, even maintenance of the surpluses at their current size in relation to national product implies their rapid growth.

Policy choices as well as world economic conditions have improved the current account of both Taiwan and Korea. Both chose to depreciate their currencies in nominal terms against the dollar in 1985 and to keep them relatively stable in 1986, notwithstanding lower inflation rates and, from mid-1986, more or less explicit pressure from the U S. Treasury to appreciate their currencies. Between the dollar's peak in February 1985 and December 1986 the New Taiwan (NT) dollar was allowed to appreciate by only 10 percent and the Korean won was actually depreciated by 2 percent in relation to the U.S. dollar. Therefore, both currencies depreciated sharply against those of their trading partners in general, and the currencies of Japan and Europe in particular (Charts 1 and 2). Against the yen and mark, the NT dollar depreciated by 32 percent and 35 percent, respectively; and the won, by 40 percent and 43 percent, respectively.

With low domestic inflation in Taiwan and Korea, these depreciations allowed both countries to claim an improved market share in strong currency countries. Between 1985 and 1986, Taiwan's exports to the European Community and Japan increased 35 percent and 24 percent, respectively, while Korea's exports increased 18 percent and 42 percent, respectively. More importantly, Taiwan and Korea claimed an increased share of third country markets, particularly in the United States, both countries' major market, at the expense of Japan and to a lesser extent Europe.

Both countries were able to benefit as much as they did from their depreciations because they had developed a structural advantage over comparable countries. The appreciation of the yen and other currencies against the dollar in 1986 was not associated with higher commodity prices in dollars, and so did not help commodity-exporting countries. But it offered Taiwanese and Korean exporters the opportunity to undercut the prices of the manufactures of countries with appreciating currencies and so to achieve large increases in volume. Both Taiwan and Korea had built a strong manufacturing base. In 1984-85, the share of gross domestic product originating in manufacturing was less than 25 percent for most comparable countries, but 41 percent and 28 percent in Taiwan and Korea, respectively (Table 1) While manufacturing contributes a fair share of Argentina's and Brazil's domestic products, only 18 percent of Argentina's exports, and 41 percent of Brazil's, are manufactured goods. By contrast, 91 percent of exports from Taiwan and from Korea are manufactured goods. As a consequence, Taiwan and Korea were poised to take advantage of the depreciations of their currencies against those of their trading partners.

Taiwan and Korea pursued their competitive strategies against the backdrop of two favorable developments: the depreciation of the U S. dollar against the yen and other European currencies and the fall in oil and other com-

[1] International Monetary Fund, *World Economic Outlook*, April 1987, pp 60-61

modity prices.[2] First, between February 1985 and December 1986 the dollar fell by about 40 percent against the currencies of Japan and Germany. This gave both Taiwan and Korea the opportunity to keep their currencies relatively stable against the traditional reference currency, the dollar, even as the countries depreciated sharply against their trading partners taken as a whole.

The potentially inflationary consequences of this depreciation were damped by the second exogenous factor, the weakness of commodity prices. The drop in crude prices alone resulted in savings of approximately $2.5 billion for Korea and of $1.5 billion for Taiwan in 1986. The drop in oil prices thus explains approximately one-third of the increase in the combined current account surplus. The two countries also realized some terms-of-trade gains with the downswing in prices of food and industrial raw materials.

[2]The fall in interest rates is often considered to be a third favorable development for Taiwan and Korea (See Philip Bowring, "The Changing Fortunes of East Asia," *The Washington Quarterly*, Fall 1986, pp 15-21) However, Korea's savings from lower interest rates, estimated at $400 million, were in fact exceeded by Taiwan's losses, since Taiwan's foreign exchange reserves roughly equaled Korea's external debt at year-end 1986

Table 1

Percentage of Gross Domestic Product and of Exports Originating in Manufacturing in Selected East Asian and Latin American Countries, 1984-85

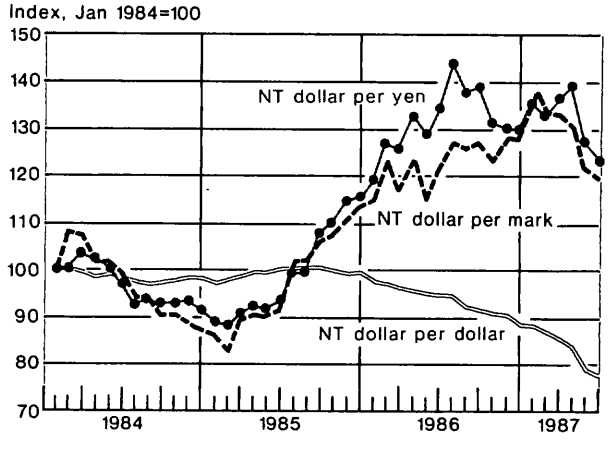
	Manufacturing Gross Domestic Product (Percent)	Manufacturing Exports Total Exports (Percent)
Taiwan	41	91
Argentina	30	18
Korea	28	91
Brazil	27	41
Phillipines	25	51
Mexico	24	28
Thailand	20	35
Peru	20	11
Malaysia	19	27
Indonesia	14	11

Sources The World Bank, *World Development Report*, Directorate-General of Budget, Accounting, and Statistics, Executive Yuan, *Statistical Yearbook of the Republic of China*

Chart 1

NT Dollar Exchange Rate Movements

End of month exchange rates

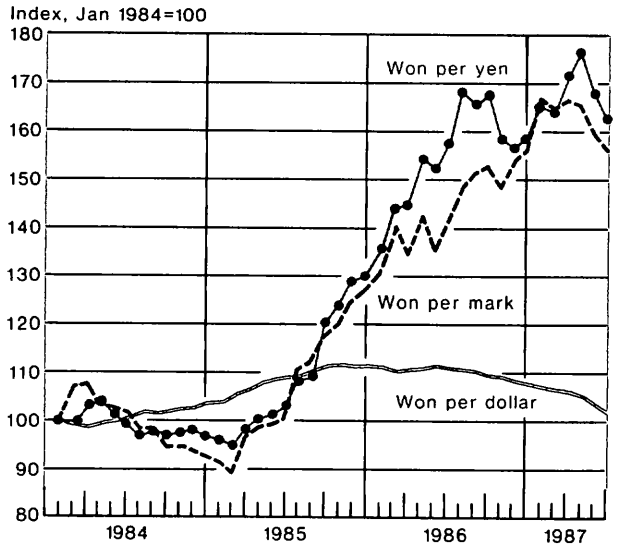


Sources The Central Bank of China, Financial Statistics Monthly, International Monetary Fund, International Financial Statistics, The Central Bank of China, Financial Statistics (for May figure), The Board of Governors, Federal Reserve Statistical Release H 10 (512) (for June figures)

Chart 2

Korean Won Exchange Rate Movements

End of month exchange rates



Sources International Monetary Fund, International Financial Statistics, The Board of Governors, Federal Reserve Statistical Release H 10 (512) (for June figures)

Financial management and its consequences

What are Taiwan and Korea doing with their newly found wealth? At the margin, how does their surplus management affect the dollar, its yield curve and banks' role in surplus intermediation? We first examine Taiwan's balance sheet and then turn to Korea's. In each case, we consider the types of instruments accumulated or repaid, their currency composition and location Our analysis of Taiwan's and Korea's international investments forms the basis of the following contrast of their behavior with Japan's management of its surplus. We draw the contrast to determine the financial effects of the shift of international surpluses within East Asia from Japan to Taiwan and Korea.

Taiwan

Until recently, Taiwan has shown a strong preference for staying liquid by hoarding short-term instruments, mainly dollar-denominated and held for the most part in the United States, the United Kingdom, and probably Singapore. The management of funds has been a reflection of official preferences since capital controls have been, until lately, pervasive in Taiwan. The ruling Kuomintang party maintained the controls out of fear of a Communist invasion—an invasion that could lead to capital flight and a shortage of funds for arms purchases—and out of political inertia. The capital controls obliged individuals to exchange export earnings for NT dollars at the central bank. As a result, Taiwan's foreign exchange reserves exploded and came to rival those of Japan and Germany. By a wide margin, Taiwan leads all other countries in the number of months of imports that its reserves represent (Table 2).

Like most other managers of official funds, Taiwan's central bank invested almost exclusively in liquid instruments, specifically bank deposits and short-term government securities. Through 1986, Taiwan's deposits in banks in the Bank for International Settlements (B.I.S.) reporting area[3] and its purchases of Treasury bills in the United States account for almost all of the country's current account surpluses and funds raised in loans from B.I.S. area banks (Table 3).

Despite some liberalization of capital controls since January 1986, there does not appear to have been any private Taiwanese investment in long-term instruments last year. The U.S. balance-of-payments data reveal no diversification into longer-term holdings, and the unexplained uses of Taiwan's surplus leave little scope for such investment in any case. Taiwanese residents, in fact, made net sales (albeit small) of U.S. Treasury coupons in 1986, while purchases of U.S. corporate bonds continued to be negligible. The U.S. balance-of-payments data are consistent with the modest amount —$344 million by May 1987—in foreign investment funds.

The measures to permit capital outflows put in place in 1986 remained quite restrictive. Investors were limited to placing $5,000 per year outside the country, through one of five trust funds administered by local banks. The funds were only permitted to buy into government, bank, and later corporate debt securities, with limited potential for capital gains. Further, the minimum term for trust investments—initially two years and later reduced to six months—limited the volatility of foreign outflows at the expense of investors' flexibility. Moreover, individual investors did not have access to the forward market to hedge their investment positions.

In the event, by the time Taiwanese investors were offered the trust accounts, Taiwanese assets had

Table 2

Foreign Exchange Reserves of Some Countries*

	December 1984	May 1987	
	Billions of U S Dollars	Billions of U S Dollars†	Number of Months' Imports‡
Japan	22 3	63 6	4 5
Taiwan	20 0	60 0§	27 3
West Germany	35 0	57.3	3 4
France	19 1	28 4	2 3
Britain	7 0	25 7	1 6
Italy	19 1	22 0	2 4
Switzerland	14 7	19 4	4 7
United States	6 7	14 2	0 3
Spain	11 4	14 5	4 8
Singapore‖	10 3	12 8	5 1
Norway	8 6	12 0	5 4
China	16 7	10 8	3 2
Korea	2 7	3 3	1 2

*When gold is included, Taiwan's reserves do not appear to be so large relative to those of other nations

†Except Spain (February 1987), Singapore (December 1986), and China (March 1986)

‡1985 goods and services

§As of June 8, 1987

‖Includes gold

Sources International Monetary Fund, *International Financial Statistics*, The Central Bank of China, *Financial Statistics*

[3]Up to the end of 1983, the B I S reporting area covered banks in Austria, Belgium-Luxembourg, Canada, Denmark, France, the Federal Republic of Germany, Ireland, Italy, Japan, the Netherlands, Sweden, Switzerland, the United Kingdom, the United States and the offshore branches of U S banks in the Bahamas, the Cayman Islands, Panama, Hong Kong and Singapore From end-1983, the reporting area also includes banks in Finland, Norway, and Spain, non-U S banks engaged in international business in the Bahamas, the Cayman Islands, Hong Kong and Singapore, and all offshore banking units in Bahrain and the Netherlands Antilles From end-1986, the reporting area includes the Japanese offshore banking center

become particularly attractive. By mid-1986, the U.S. Treasury was making no secret of its desire that the NT dollar appreciate.[4] Speculative capital inflows doubled the stock market price index between August 1986 and May 1987 and reduced the premium of the black market exchange rate over the administered "effective" rate to practically nothing by July of this year (Chart 3). Taiwanese investors also reduced the amount that they held in foreign investment funds from $1.4 billion in July 1986 to $0.3 billion by May 1987. Taiwan's holdings of foreign-exchange assets, as captured in B.I.S. and U.S data, came by the end of 1986 to be concentrated almost exclusively in the central bank, whereas in 1984 and 1985 official reserves fell short of measured total Taiwanese assets by about $5 billion (Table 4) In response, the government took steps in early 1987 to limit capital inflow so that no more than U.S. $10,000 could be brought into the country at any one time.

Taiwanese investors sacrificed yield for liquidity through 1986 but showed some interest in longer-term instruments in 1987. In the first quarter alone, $0.2 billion of Taiwanese funds were invested in U.S. Treasury bonds. Although small in absolute terms, this investment occurred over a relatively short period of time and indicates a significant change from past behavior. Moreover, this lengthening of the maturity of holdings does not appear to have been a response to the recent steepening of the dollar yield curve that only began in April. Thus the purchases should be interpreted as evidence of the Taiwanese learning to invest in instruments of longer maturity. While the decline in U.S. bond prices in April and May would have imposed unrealized losses on those who bought bonds in the first quarter, the associated steepening of the dollar yield curve only increased the incentive to extend maturities.[5]

[4]Hobart Rowen, "U S to Ask Taiwan, South Korea to Allow Currencies to Rise," *The Washington Post*, July 30, 1986

[5]Taiwanese investors may have suffered a capital loss (unrealized) of approximately U S $20 million on their first quarter investment in Treasury coupon bonds For Taiwanese purchases of Treasury bonds

Table 3

Taiwan's Sources and Uses of Funds

(In Billions of U S Dollars)

	1981	1982	1983	1984	1985	1986	1987-I
Sources of funds	0 9	2 0	6 1	6 2	8 6	20 1	6 1
Current account surplus	0 5	2 2	4 4	7 0	9 2	16 1	5 0
Bank borrowing*	0 4	−0 2	1 7	−0 8	−0 6	4 0	1 1
Uses of funds	0 9	2 0	6 1	6 2	8 6	20.1	6 1
Increased bank deposits*	1 2	1 2	4 7	5 4	6 7	14 4	4 7
(Nonadjusted increase in bank deposits)	(1 2)	(1 2)	(4 7)	(5 3)	(6 9)	(14 6)	(4 8)
(Valuation effect)	(0 0)	(0 0)	(0 0)	(−0 1)	(0 2)	(0 2)	(0 1)
Net purchases of U S Treasury securities	0 3	0 2	1 1	0 6	1 2	4 8	1 1
Bills	0 3	0 2	1 1	0 6	1.1	4 8	0 9
Coupons	0 0	0 0	0 0	0 0	0 1	0 0	0 2
Unexplained uses	−0 6	0 6	0 3	0 2	0 7	0 9	0 3

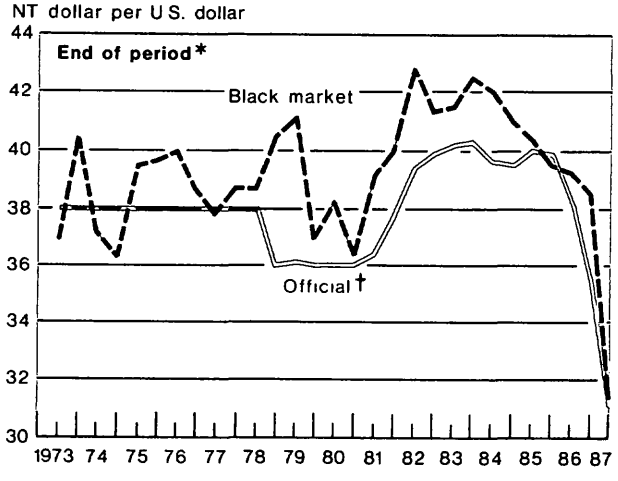
*Exchange adjusted, pre-1984 figures are estimates
Totals may not add owing to rounding

Sources B I S , *International Banking Developments*, Department of the Treasury, *Treasury Bulletin*, The Central Bank of China, *Financial Statistics*, International Monetary Fund, *International Financial Statistics*

Chart 3

Taiwan's Exchange Rates

Official and black market



*June and December of each year, 1987 figure is for July 9, average of bid and ask rates

†On July 12, 1978, the link of the NT dollar to the U S dollar was abandoned and an effective rate created, to be revised periodically

Sources International Currency Analysis Inc , World Currency Year Book, International Monetary Fund, International Financial Statistics, The World Journal (for 1987 figure)

The U.S. dollar has enjoyed the status of Taiwan's currency of choice for reasons both economic and political: the parity maintained between the two dollars in 1971-78 and the relative stability in their rate of exchange since then, Taiwan's sale to the United States of half its exports, and its reliance on the United States for arms. It is too soon to observe the diversification into the German mark that was reported in the foreign exchange market in the first half of 1987.[6] That Taiwan's assets have been overwhelmingly dollar-denominated is obvious from a comparison of the change in bank deposits with the exchange-rate-adjusted flows.[7] The difference—the change in the dollar value of deposits owing to changes in exchange rates (the so-called valuation effect)—is very small each year between 1983 and 1987, despite the sharp movements of the dollar against major currencies. This small difference indicates that most of the assets were dollar-denominated. Ideally, to estimate the percentage of assets held in dollars, we would need a breakdown of nondollar assets by currency. Since such a breakdown is not available publicly, we assume that Taiwan splits its nondollar reserves among investments in various currencies in the same proportions as do central banks in general.[8] We estimate that in 1983 more than 95 percent of Taiwan's assets were held in dollars and that this dollar composition remained roughly stable through 1986 (Table 4). The estimates are robust with respect to assumptions about the currency composition of the nondollar assets.

The importance of the role of the dollar is underscored by another recently adopted policy. The only foreign-currency-denominated certificates of deposit that state-owned banks have been allowed to sell to Taiwanese have been U.S. dollar-denominated. This partial deregulation may be seen as an attempt to shift the exchange risk of holding U.S. dollars onto the private sector (and thereby to reduce official reserve growth).

Finally, the geographical distribution of Taiwan's assets indicates a preference for secure locations with low credit risk. In 1986, approximately 40 percent of reserves were held in the United States, 25 percent in the United Kingdom, 5 percent in Germany, only 1 per-

Footnote 5 continued
in the first quarter of 1987, see Department of the Treasury, *Treasury Bulletin*, Spring 1987, p 72

Table 4

Taiwanese Assets by Type, Currency and Location

(In Billions of U S Dollars)*

	1980	1981	1982	1983	1984	1985	1986
Total Taiwanese assets	5 6	7 2	8 5	14 2	20 1	28 1	47 5
(Reserves)	(2 2)	(7 2)	(8 5)	(11 9)	(15 7)	(22 6)	(46 3)
Type							
Deposits in B.I S banks	4 8	6 0	7 2	11 8	17 2	24 1	38 7
Treasury bills in the United States	0 8	1 1	1 3	2 4	3 0	4 1	8 8
Currency composition†							
Percent of Taiwanese assets in U S dollars				94 6	95 7	96 5	96 6
Geographical distribution of assets (Percent)							
United States	29 8	29 3	32 6	28 5	24 8	27 7	39 9
Foreign branches of U S banks‡	32 5	35 5	30 1	22 1	16 6	14 5	11 4
United Kingdom	7 8	20 1	19 9	19 9	22 6	21 8	22 9
Germany (All foreign branches and subsidiaries of German banks)	2 5 (2 2)	4 0 (2 4)	3 1 (3 2)	2 0 (4 6)	1 5 (5 9)	2 2 (5 1)	4 1 (4 9)
Hong Kong	1 9	1 5	4 6	1 8	4 4	4 3	1 3
Other	25 6	9 6	9 7	25 7	30 1	29 5	20 6

*The figures do not capture deposits, if any, with the B I S , totals may not add owing to rounding

†Federal Reserve Bank of New York estimates, assuming that 53 percent of nondollar deposits are in deutsche marks, 27 percent in yen and 20 percent in pound sterling

‡Excludes branches in the United Kingdom, Germany, Hong Kong and Taiwan.

Sources B I S , *International Banking Developments*, Department of the Treasury, *Treasury Bulletin*, The Board of Governors, *Federal Reserve Statistical Release E 11 (121)*, Bank of England, *Quarterly Bulletin*, Bundesbank, *Statische Beihefte*, Reihe 3, *Hong Kong Monthly Digest of Statistics*

[6]It appears that Taiwan's financial authorities are not acknowledging the importance of the yen because of a persistent ambivalence toward Japan The central bank's bulletin reports no less than 14 currencies' exchange rates against the NT dollar, but a yen rate is not given

[7]The B I S computes these flows from data on currency composition reported by some countries and from its estimates for those countries that do not provide this breakdown Singapore, for example, does not provide a currency breakdown of its assets and liabilities To the extent that the currency composition of Taiwan's assets vis-a-vis Singapore differs from that of the assets of countries that do report this breakdown, the flows are inaccurate

[8]See Akinari Horii, *Evolution of Reserve Currency Diversification*, B I S Economic Papers, No 18, December 1986 We simplify further by assuming that all nondollar assets are denominated in deutsche marks, yen or pound sterling

cent in Hong Kong, and 10 percent in foreign branches of U.S. banks. Most of the remaining reserves were probably held in Singapore.[9]

Korea

While net creditor Taiwan is building its assets with its surplus, net debtor Korea is paying off its liabilities with its surplus. However, many of the financial effects of a reduction in liabilities are equivalent to those of an accumulation of assets.

Korea has used its surplus to repay its external debt, of which 70 percent was at floating rates, and more than 80 percent dollar-denominated between 1983 and 1986. It appears that Korea employed all of its current account surplus and more for this purpose because the country reduced its assets held with B.I.S. banks (Table 5). In May 1986, Korea interrupted its sovereign borrowing and soon after started prepayments. A proposed $0.5 billion syndicated credit was withdrawn and two note issuance facilities totalling $0.3 billion were cancelled; estimated prepayments of credits totalled $0.5 billion in 1986. While paying off liabilities tied to short-term interbank rates represents a net contribution of short-term funds to the international banking system, Korea has also acquired some long-term assets. Korea purchased $1.3 billion of Treasury coupon bonds in 1986. So Korea ventured to lengthen the maturity of its assets in 1986 while Taiwan, on the present showing, waited until 1987 before so doing.

The small valuation changes in Korea's external liabilities to B.I.S.-area banks indicate that most of these liabilities were dollar-denominated. Our estimates[10] show that 86 percent of Korea's debt in 1986 was dollar-denominated. This share remained fairly stable over the years and even appears to have declined in 1984 with the appreciating dollar and to have risen in 1985 with the depreciating dollar (Table 6). These trends reveal an active management of the type of liabilities acquired, since the valuation effect itself would have resulted in a rise in the share of dollar liabilities in 1984 and a decline thereafter. In any case, with the major share of Korea's debt in dollars, repayments on its $45 billion debt will tend to support the dollar.

The changing distribution of Korea's bank liabilities probably reflects the growing importance of Japanese banks in the syndicated loan market and the market for outstanding loans. Between 1983 and 1986 U.S. banks steadily lost market share in bank lending to Korea; U.K. and German banks maintained their share, while other banks, including Japanese banks, increased their share considerably.

Taiwan and Korea in contrast to Japan

We have seen that the current account surpluses of Taiwan and Korea have flowed into international financial markets largely in the form of short-term dollars, mostly through the banking system. But the growth of Taiwan's and Korea's surpluses has its counterpart in the leveling off of the Japanese surplus and, prospectively, in its shrinkage. The consequences of this shifting of the Asian surplus are the steepening of the dollar yield curve, the strengthening of the dollar, and the partial restoration of the role of banks in intermediating global current account imbalances. These consequences

Table 5

Korea's Sources and Uses of Funds

(In Billions of U S Dollars)

		1987	
	1986	QI	Year
Sources of funds	64	19	
Current account balance	47	20	50*
Decreased bank deposits†	17	−01	
Uses of funds	64	19	
Debt repayments†‡	51	20	59
(Nonadjusted decrease in external debt)	(35)	(17)*	(45)*
(Valuation effect)	(16)	(03)	(14)
IMF	03	01	03
Non-IMF	48	19	56
B I S banks	25	12	
Net purchases of Treasury securities	13	03	
U S Treasury bills	00	01	
U S Treasury coupons	13	02	
Unexplained uses	00	−04	

*Official Korean estimates

†Exchange adjusted

‡Estimated from total debt figures We assume (a) the currency composition of nondollar, non-IMF debt is the same as that of debt to B I S banks, (b) the composition is constant between 1986 and 1987, and (c) Korea repays the IMF in 1987 at the same rate as in 1986

Sources The Bank of Korea, *Principal Economic Indicators*, Department of the Treasury, *Treasury Bulletin*, World Bank, *World Debt Tables*, B I.S , *International Banking Developments*

[9]According to an account of a report issued in August 1986 by the Control Yuan, a government accounting agency, most of the reserves were held in the United States, the United Kingdom, and Singapore See Carl Goldstein, "The Question That Gets You Thrown Out," *Euromoney*, February 1987, pp 31-32 This same account reports that the nondollar portion of Taiwan's reserves was 88 percent some years ago

[10]The shares of different currencies in Korea's nondollar liabilities are assumed to be similar to the shares of Korea's non-U S exports sent to Japan and Europe The assumption differs from that made for Taiwan since we focus here on a different side of the balance sheet In any case, the estimates are robust with respect to different assumptions about the relative shares of nondollar liabilities

follow from the differing ways in which Taiwan and Korea, on the one hand, and Japan, on the other, manage their surpluses.

In contrast to Taiwan's accumulation of short-term dollar assets and Korea's repayment of LIBOR-priced debt, Japan has invested its surplus in longer-term instruments. Indeed, more than the entire 1986 current account surplus of $86 billion was used to acquire long-term foreign securities. According to the Bank of Japan, investment in long-term foreign securities by private Japanese investors reached $102 billion in 1986. Short-term dollar borrowing funded most of the excess of long-term investment over the current account surplus. Thus Japan was not only placing its entire surplus at long maturity but also borrowing at short maturity to place even more funds long. The effect has been to flatten foreign yield curves. Even with all the increase in official reserves in the first half of 1987, the private Japanese purchase of $58 billion of long-term foreign securities still exceeded the current account surplus of $44 billion. In effect, the Bank of Japan bought dollars, accepting the currency risk, and placed them in short-term instruments; private Japanese investors borrowed short-term and bought long-term foreign securities. Consequently, Japan as a whole continued to use its surplus to buy long-term securities.

Again in contrast to Taiwan and Korea, Japan has come to invest abroad in nondollar assets to a very considerable extent. Large and growing discrepancies between Japanese portfolio investment in the United States and Canada as recorded by the Bank of Japan, on the one hand, and by the U.S. Treasury and the Bank of Canada, on the other, sound a warning that great precision in specifying the nondollar share is not possible. Data published by the Bank of Japan show that portfolio investment in the United States claimed about a 50 percent share of Japanese portfolio investment (Table 7). To this must be added Japanese purchases of dollar bonds in the Eurobond market, which attracts some one-fifth to one-third of Japanese portfolio investment (included in the subtotal for Europe other than the United Kingdom on Table 7). The dollar share of Eurobonds bought by Japanese investors is taken to be the dollar share of all Eurobonds issued in

Table 6

Korean Liabilities by Type, Currency and Location

	1980	1981	1982	1983	1984	1985	1986
Total external debt (Billions of U S dollars)	29 8	33 4	37 8	40 9	43 2	48 0	44 5p
Type							
Percent of debt at floating rates*	60 9	64 1	67 1	68 3	69 3	69 5	69 5e
Currency composition†							
Percent of Korean liabilities in dollars				87.3	84 3	86 1	86 0
Geographical distribution of debt to B I S area banks (Percent)							
United States	42 3	44 5	51 3	35 1	31 4	28 0	22 9
Foreign branches of U S banks‡	4 6	7 7	6 2	3 5	4 1	2 6	0 9
Hong Kong	19 4	23 1	28 1	22 1	23 7	24 1	26 0
United Kingdom	22 5	22 2	20 5	11 2	9 7	10 0	10 7
Germany	3 6	2 7	2.0	1 1	1 0	1 1	1 7
(All foreign branches & subsidiaries of German banks)	(2 0)	(2 4)	(3 0)	(3 6)	(7 5)	(5 0)	(4 7)
Other	7 5	−0 2	−8 0	27 0	30 2	34 2	37 8
Memo Reserves (Billions of U S dollars)	2 9	2 7	2 8	2 3	2 8	2 9	3 5

*Includes all of short-term debt, private nonguaranteed long-term debt, IMF credit and that part of public and publicly guaranteed long-term debt that is at variable rates

†Federal Reserve Bank of New York estimates, assuming 49 percent of nondollar debt is in yen and the rest in deutsche marks

‡Excludes branches in the United Kingdom, Hong Kong, Germany and Korea

pPreliminary

eEstimated assuming (a) Korea repays the IMF in 1987 at the same rate as in 1986, and (b) the percentage of non-IMF debt at variable rates is the same as in 1985

Sources B I S , *International Banking Developments*, Department of the Treasury, *Treasury Bulletin*, The Board of Governors, *Federal Reserve Statistical Release E 11 (121)*, FR2502S, Bank of England, *Quarterly Bulletin*, Bundesbank, *Statische Beihefte* Reihe 3, Census and Statistics Department, Hong Kong, *Hong Kong Monthly Digest of Statistics*, *World Debt Tables*

1985-1986, 63 percent. So the dollar share of Japanese portfolio investment may be estimated at two-thirds from the Japanese data. The U.S. Treasury data show a much smaller share of portfolio investment in the United States, about 40 percent in 1985 and only 25 percent in 1986. Taken together, the U.S. and Canadian data suggest a reduction in Japanese flows into the dollar in 1986, as do partial data assembled by the Japanese Securities Dealers Association. By all evidence, Japanese investors place a substantially smaller fraction of their international portfolio in dollars than do Taiwanese and Korean investors.

Finally, Japan's surplus has bypassed bank intermediation by flowing primarily into securities, although private Japanese investors do borrow at short term from banks in order to invest in long-term securities. By contrast, nearly all of Taiwan's and Korea's surpluses were channeled through the banking system. At the margin, a shift of surplus their way has thus increased the role of banks in the intermediation of global surpluses.

Table 7

Japanese Portfolio Investment Abroad by Market

(As a Percent of Total Japanese Portfolio Investment Abroad)*

	1985	1986
A. OECD countries	92 3	94 8
1 United States	52 9	48 4
(Source: Treasury Bulletin)	(38 1)	(24 7)
2 European Community countries	30.9	39 8
2(a) United Kingdom	10 4	12 5
3 Other OECD countries	8 6	6 5
3(a) Canada (Source Statistics Canada)	(3 5)	(7 0)
B. Communist bloc	1 2	0 8
C Other countries	0 7	−0 2
D International institutions	3 8	1 4
E Unallocated	2 0	3 2
Total	100 0	100 0

*Totals may not add owing to rounding

Sources The Bank of Japan, *Balance of Payments Monthly*, April issue, Department of the Treasury, *Treasury Bulletin*, Bank of Canada, *Statistics Canada*

The future

Both the size of Taiwan's and Korea's surpluses and their management of those surpluses depend on how the countries respond to pressures to appreciate their currencies, to cut tariffs, to reduce quantitative restrictions on imports, and to license foreign providers of services, especially financial services. Both countries feel external pressure from the U.S. Treasury, U.S. Trade Representative and others, as well as domestic pressure from rapidly growing money supplies, though these pressures bear on Korea less weightily. The pressures are compounded in net creditor Taiwan's case by the consequences of currency appreciation and monetary control measures for the position of the central bank; the appreciation of the won, by contrast, has eased the domestic burden of repaying Korea's dollar debt. Both countries face a protectionist threat to their export success; both may manage their surpluses to fend off the threat.

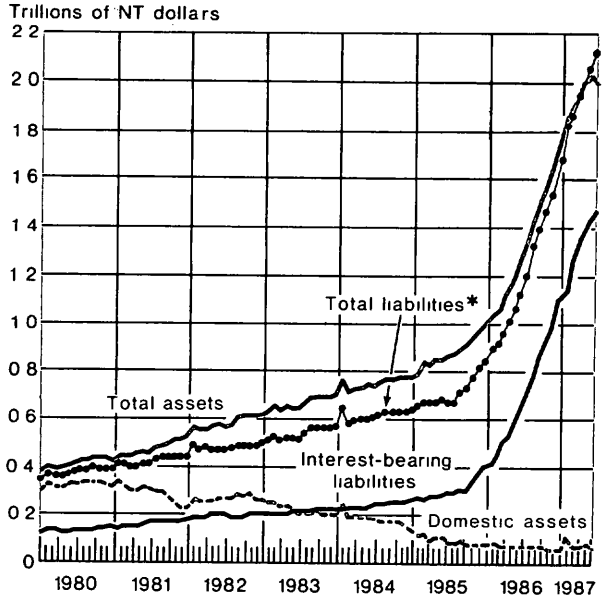
Taiwan

The explosion of Taiwan's money supply, the echo of the explosion of Taiwan's reserves, has forced the government to consider policies that will reduce the surplus or will encourage outward investment. Money, including cash and bank deposits, grew by a half in 1986; currency in the hands of the public alone rose 26 percent last year. Thus far, the liquidity has helped push up prices of equity and land but not as yet consumer or wholesale prices. Indeed, as of May 1987, the indexes of both were still falling.

In response to these pressures, the authorities have

Chart 4

Assets, Domestic Assets, Liabilities and Interest-bearing Liabilities of the Central Bank of China



*Excluding "other items" residual

Source The Central Bank of China, Financial Statistics Monthly

raised the value of the NT dollar. It has risen a few tenths of a NT dollar per week, so that one U.S. dollar now buys only 30 NT dollars, as compared to 40 in 1985. Thus, the NT dollar has appreciated by over 25 percent. This appreciation should at least slow the growth of the current account surplus. In fact, reports have already emerged that some marginal exporters are in difficulty and that others are attempting to produce higher quality exports that command higher prices in the United States.

The central bank has also sought to absorb the liquidity created by the reserve inflows. Starting from a base of zero outstanding in late 1985, interest-bearing certificates of deposit that are sold to commercial banks came by May 1987 to represent more than one-third of the total liabilities of the central bank. Increased time deposits by banks and savings bonds bought by the public have also absorbed liquidity. In February, sales of interest-bearing instruments by the central bank actually exceeded the reserve inflow of almost $3 billion, and reserve money fell. For the rest of this year through May, however, the central bank has only partially offset the reserve inflow. As a result, money supply growth has only decelerated to the 25-30 percent range this year.

The measures adopted by the authorities to respond to U.S. and domestic pressures have in turn created problems for the central bank—problems that have encouraged the bank to revise its view of private capital outflows. The appreciation of the NT dollar has produced unrealized losses by reducing the NT dollar value of the stock of foreign reserve assets while leaving the value of the central bank's local liabilities unchanged. We estimate the valuation losses from the appreciation of the NT dollar in the 17 months between December 1985 and end-May 1987 to be in excess of $9 billion at the current exchange rate. At the same time, the increasing proportion of interest-bearing liabilities has slowed the growth of the central bank's net interest income. Set against net interest earnings—estimated interest received on foreign reserves less interest paid on domestic liabilities—the valuation losses led to overall losses in the 17 months in excess of $7 billion.

The implication of these losses for the central bank's overall position is the erosion of the surplus that it accumulated from years of issuing currency and other non-interest-bearing liabilities against interest-bearing foreign exchange reserves and other assets. The last liability column on the central bank's published balance sheet, "other items," which appears to include paid-in capital and retained earnings, peaked in September 1985, just before the recent appreciation began. Since then, the "other items" residual has declined from the equivalent of about $5 billion through zero in April to a negative $3 billion at end-May 1987 (Charts 4 and 5). It appears, then, that the central bank no longer has a surplus with which it might cover losses resulting from further appreciation.

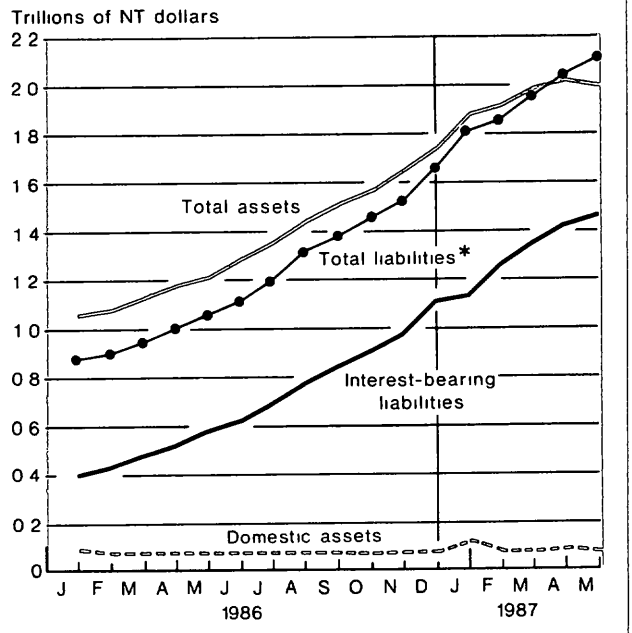
With the sharp 4.5 percent appreciation of the NT dollar in May, the central bank's assets, expressed in NT dollars, actually fell. That is, despite the growth of the central bank's liabilities (excluding "other items") by over $2 billion (over 3 percent), corresponding to the purchase of a like amount of foreign exchange, valuation losses drove the local value of total assets down.

It should be noted that the losses remain unrealized. Only a massive outflow of private capital would more than offset the current account surplus and force a reduction of reserves and thereby a realization of losses. On a cash-flow basis, the central bank is averaging a surplus of well over $100 million per month, so budgetary transfers have not proven necessary.

Against this background, then, came the partial loosening of restrictions on capital outflows in July. Henceforward, private investors can send funds abroad without limit to buy any foreign assets, including real estate and

Chart 5

Assets, Domestic Assets, Liabilities and Interest-bearing Liabilities of the Central Bank of China



*Excluding "other items" residual

Source The Central Bank of China, Financial Statistics Monthly

stocks. Foreign investment exceeding U S. $5 million will still require prior approval by the central bank, just as investment exceeding U.S. $1 million will require prior notification of the central bank. Investors will also have access to the forward market. That the change in policy was a response to the pressures outlined above, rather than a conversion to abstract liberal principles, is evident from the tightening of restrictions on capital inflow.

The effects of partial liberalization on the use of Taiwan's surplus, and consequently on the dollar yield curve, the exchange rate of the dollar and the importance of bank intermediation of surpluses, may now ultimately depend on portfolio choices made by private Taiwanese investors. The two weeks following the lifting of the controls witnessed modest private outflows of no more than $200 million Private Taiwanese behavior is hard to predict, and for a time official decision making may dominate the management of Taiwan's foreign assets. There are grounds for arguing, however, that the private foreign investment behavior of the Taiwanese will differ from that shown by Japanese investors since the early 1980s, when exchange controls were relaxed in that country.

Compared to Japanese investors earlier in this decade, private investors in Taiwan have very different domestic investment experience on which to draw as they approach the new problem of how to manage foreign investment. Not only did Japan have deeper financial markets relative to national product, as one would expect of a richer country, but also Japanese financial assets were of much longer term (Table 8). The difference in the relative size of bond markets is most striking: a bond market hardly exists in Taiwan today, while the fiscal deficits after the first oil shock produced a large bond market in Japan by 1980. Even Korea has a bond market that is relatively larger than that of Taiwan, this difference may account for net debtor Korea's acquisition of Treasury coupons in 1986 before net creditor Taiwan's first sizeable acquisition in 1987. In any case, Taiwanese investors have more to learn about managing a portfolio of bonds than Japanese investors did. Of course, would-be investment managers and advisors are anxious to speed the learning.

The lesser importance of institutional investors in the savings process in Taiwan relative to Japan may lengthen the learning process. In relation to national income, the liabilities of life insurance companies in Japan are five times those of life insurers in Taiwan. Further, such liabilities have grown faster than total financial assets in Japan since Japan's relaxation of exchange controls It remains to be seen whether life insurance will take off in Taiwan, even with the recent granting of licenses to five U.S. insurance companies. In Japan, relatively few managers of institutional portfolios, in trying to match contractual long-term liabilities, learned to buy foreign bonds, in Taiwan relatively more investors with perhaps less well-defined horizons must learn to buy into even professionally managed foreign bond funds.

Taiwanese investors may prove more ready buyers of foreign equity than foreign bonds The value of outstanding equities in Taiwan is four times the value of outstanding bonds (Table 8). The capitalization of the

Table 8

Relative Importance of Bonds, Equities and Money in Japan, Taiwan, and Korea
(Amount Outstanding as a Percent of GNP)

	1980			1984			1985			1986		
	Japan	Taiwan	Korea	Japan	Taiwan	Korea	Japan	Taiwan	Korea	Japan	Taiwan	Korea
Bonds*	62	3	7	78	4	17	81	5	19	84	5	19
Equities	33	15	12	56	17	8	62	17	9	89	20	14
Money†	86	87	47	92	120	50	93	140	55	99	157	55
Total	181	105	66	226	141	75	236	162	83	272	182	88
Memo												
Total liabilities of life insurance companies	11	2	3	15	3	7	17	4	9	19	4	10

*Includes government and corporate bonds, includes bank debentures

†Defined as domestic liabilities of monetary institutions less bank debentures issued by them

Source International Monetary Fund, *International Financial Statistics*, Bank of Korea, *Monthly Statistical Bulletin*, The Central Bank of China, *Financial Statistics Monthly*, The Central Bank of China, *Financial Statistics*, B I.S , *International Banking and Financial Market Developments* (for foreign liabilities of Japanese banks), Bond Underwriters Association of Japan, *Bond Review*, Tokyo Stock Exchange, *Annual Securities Statistics*, The Bank of Japan, *Economic Statistics Annual* and International Finance Corporation

Taipei stock market in relation to Taiwan's national product approaches the relative capitalization of the Japanese stock market in 1980 when a much richer Japan began to relax its exchange controls. Especially in the face of surging foreign stock markets, Taiwanese investors may take less than the five years it took Japanese investors to become substantial buyers of foreign equities.

Wealthy Taiwanese individuals will probably continue to favor investment in real estate, especially in housing in the United States, a form of wealth valued not only for itself but also as a first step to possible immigration. Heretofore, funds for this purpose could be raised by underinvoicing exports to the United States and traveling to the United States to buy houses and apartment buildings. This route may continue to be favored by tax-evaders, but otherwise such investment may find legitimate channels. It is still very hard for the Department of Commerce to obtain reports on such investment, so it may not be captured in the U.S net investment position. Indeed, when such investment precedes immigration and naturalization, it does not remain foreign investment.

Another reason to expect Taiwanese investors to respond to relaxed exchange controls differently from their Japanese counterparts is that the level of concern over bilateral trade balances and trade practices at the present time far exceeds that of the early 1980s. The reason for the difference, of course, is the widening of the current account deficit of the United States. While Japanese automakers invested in the United States early on in the 1980s because of the particular constraints on their exports, Taiwanese exporters confront a more broad-based risk.

Taiwan faces not only the threat of legislation mandating a reduction of its bilateral surplus with the United States but also, perhaps more fundamentally, the possibility of finding itself outside of a free trade zone in the Americas. The United States is negotiating a free trade pact with Canada, has already extended special treatment to manufactures from the Caribbean, and has an active two-way trade with Mexico that integrates Mexican labor into U S. industry. Taiwan may find that the best means of prospering in a more hostile world trading environment is the use of its current surplus to make direct foreign investments that will unite its industry with North America's and hasten the transfer of technology. Similarly, direct investment in southern Europe and perhaps Southeast Asia may provide some assurance of continued access to the European and Japanese markets.

Taiwan has of late made some efforts to promote direct investment abroad. Private industry is being provided with tax and loan incentives to invest abroad, and increased efforts are being made to arrange joint foreign ventures, especially with U.S. firms. The Taiwanese government sponsored a business group that visited the United States in June, investigating prospective joint ventures with U.S. firms in steel, machinery, chemicals, energy, and other industries. Though such efforts are in the early stages, some projects are further along. A proposed collaboration with Wang Laboratories would raise $500 million of capital: 10 percent from Wang Laboratories, 30 percent from the government of Taiwan, and 60 percent from private Taiwanese investors. Other joint ventures that are being organized designate Taiwanese firms—to date, all of them controlled by Taiwan's government—as minority stockholders. According to a forecast published by the Taiwanese Economic Ministry in March of this year, new Taiwanese investment in the United States is expected to double from last year to $80 million this year, and reach $400 million by 1991. This is likely to prove an underestimate.

Korea

Korea has not announced significant measures to loosen its capital controls and is not likely to do so for two reasons. First, since it is devoting most of its surplus to debt reduction, it is not following Taiwan's example in creating a conspicuous foreign currency reserve position and thus has felt less external pressure. Korea's status as a debtor country may shield it against some protectionist moves; the trade bill passed by the House of Representatives allows the President to waive mandated reductions of bilateral trade surpluses in the case of heavily indebted countries. Korea must weigh the potential cost of forgoing this exemption by reducing its gross debt against the benefits of improved market reception and lower spreads. Second, because reserve growth has been moderate, excessive liquidity and a speculative stock market have posed fewer problems in Korea than they have in Taiwan. Korea's money supply (M1) increased by 16.6 percent last year, as compared to 10.8 percent a year earlier, and its growth has not accelerated significantly this year.

Tightly controlled management of Korea's surplus is likely to persist, at least until considerable progress is made in reducing the debt. The Korean Ministry of Finance expects the country to reduce its debt to under $40 billion by the end of this year; continued current surpluses would permit $5 billion or more of debt reduction per year. Keeping domestic interest rates at double-digit levels and appreciating the won, the Korean authorities have had to direct the Korean conglomerates to repay cheaper foreign credits.

Korea will, however, permit direct foreign investment to protect and to further its access to its foreign markets, particularly the United States. In pursuing this

strategy, Korea has some advantages that have given it an early lead over Taiwan: assets controlled by Korean-owned firms in the United States at end-1985 totalled $1.9 billion while those controlled by Taiwanese firms were $0.5 billion. Korea's advantages lie in its more concentrated industrial organization and more extensive bank branch network. Emblematic of the difference in industrial organization is the achievement by Korea's major conglomerates of a certain brand recognition in the United States while the largest Taiwanese firms are only now trying to break out of their role as suppliers of U.S. firms and to achieve this recognition. Korea's banking system is represented in the United States by 21 branches and agencies, with a total of $1.1 billion in domestic commercial and industrial loans outstanding as of December 1986. Taiwan's banks have only 4 branches, with total commercial and industrial loans of $0.2 billion.

Korea's foreign direct investment in North America is accelerating. Outlays for newly established or acquired enterprises in the United States rose from $14 million in 1985 to $130 million in 1986; investment in already established operations cannot be disclosed by the Commerce Department without revealing the dimensions of a limited number of particularly large deals. Hyundai Motor, South Korea's largest vehicle maker, is already building an assembly plant in Canada that is scheduled to begin operation in 1988, and may also establish a car plant in the United States. Textile companies are also increasing their overseas manufacturing bases. At the end of 1985, seven textile companies invested $2.7 million abroad; in 1986, the number of companies jumped to eighteen, and the investment, to $8.4 million.

Foreign direct investment does not bulk large on Korea's international balance sheet since the country leverages the actual outflow with foreign borrowing A case in point is a $100 million syndicated loan that Hyundai Auto Canada, Inc., signed on July 14, 1987. The borrowing carried the guarantee of the parent. In this manner, Korea does much of the financing of its foreign operations off the national balance sheet, a practice that permits a faster fall in gross national debt than would be possible if foreign direct investment were funded by the parent. Since many calculations of net indebtedness—for example, those of the International Monetary Fund and the World Bank—exclude foreign direct investment, Korea can lower its net debt so measured by funding its foreign direct investment offshore. One of the sources of funds for the U.S. subsidiaries is the commercial paper market, where the U.S. subsidiaries of four Korean conglomerates had $207 million in commercial paper outstanding at end-September 1986. Not only is the borrowing off Korea's balance sheet, but it is also off the balance sheet of banks that write the letters of credit backing the commercial paper. Thus, bank exposure to Korea has not fallen by as much as the decline of on-balance-sheet assets might suggest.

Like the Taiwanese, the Koreans are becoming an important new immigrant group. Last December Korea doubled to $200,000 the amount of foreign exchange that a household may carry abroad to establish a business.

Conclusions

To date, Taiwan and Korea have so disposed of their international surpluses as to make the shift of the Asian surplus in their direction important for financial markets. In their investment practices, they resemble less Japanese investors than a certain type of U.S. investor, one who has a strong liquidity preference, a strong taste for home-currency assets, and a strong aversion to anything but the safest of investments.

In the medium term at least, Taiwan cannot be expected to continue its accumulation of assets exclusively in the form of short-term dollar-denominated instruments, Korea, however, can be expected to continue to repay bank loans. We have reason to believe that both countries will favor foreign direct investment relatively more than Japan has, especially in the western hemisphere. Nevertheless, making a foreign direct investment is a relatively time-consuming process, and as a consequence, both countries will probably continue to lengthen the maturity of their portfolio investments. In the process, a smaller portion of their surpluses are likely to flow through the banking system.

The recent relaxation of capital controls in Taiwan is likely to lead to a substantial demand for dollar-denominated assets, especially after foreign financial institutions are allowed to set up brokerage and advisory services in Taiwan. Whether Taiwanese individuals and firms will show much of a propensity to diversify out of the dollar remains to be seen. Arguing in favor of diversification is the opportunity loss of holding dollars over the last two years. Arguing against diversification is the possibility that the dollar's depreciation has run its course. In addition, Taiwan's continued military and political reliance on the United States may inhibit diversification. Korea still has a large dollar debt to repay if it is to eliminate most of its gross debt and become, as it plans to, a creditor nation by 1994. Yet it currently appears to be, if anything, ahead of schedule. The investment behavior of the two nations thus far suggests that their management of surpluses may continue to provide support for the dollar.

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Robert N. McCauley