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Is a Yen Bloc Forming in Pacific Asia?

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Abstract

The essay reaches three conclusions regarding the Yen Bloc that Japan is reputed to be forming in East Asia and the Pacific. (1) Although growth in East Asian countries is rapidly raising their weight in world output and trade, the statistics from the 1980s do not bear out a movement toward intra-regional bias in trade and direct investment flows. (2) There is a bit more evidence of rising Japanese influence in the region's financial markets. (3) Much of Japan's increasing financial influence takes place via a growing role for the yen in Asian countries' exchange rate policies and invoicing of trade and finance. But these trends are less the deliberate outcome of wishes on the part of Japanese policy-makers than of pressure from the U.S. government to internationalize the yen.

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Japan will be driven to form her own trade and finance zone in Asia...The way Japan, Inc., operates also facilitates the formation of an Asian co-prosperity zone: government and business work hand-in-glove and business moves jointly...The decision will be made by consensus, and the rest is routine." (Dornbusch, 1989, p.270.)

The question "Is Japan creating a Yen Bloc in the Pacific Asia?" is one of those that is fun to pose, but unclear how to go about answering. We read daily in the papers that the answer is "yes": Japan is investing in its neighbor countries on an unprecedented scale. Japanese subsidiaries in Asia export goods back to Japan in large quantities, especially raw materials from Southeast Asia, and factories in Japan are increasing their exports of advanced manufactures to pliant markets in the rest of Asia. We are told that a self-contained trading bloc is evolving along this edge of the Pacific, and the United States and Europe face a choice between trying to stop the trend, or defensively forming trade blocs of their own.

After examining some of the relevant statistics, this essay argues that the evidence of an evolving East Asian trade

bloc centered on Japan is not so clear. Trade between Japan and other Asian countries increased substantially in the late 1980s, but intra-regional trade remains much smaller, for example, than trade within the European Community. The phrase "Yen Bloc" could, however, be interpreted as referring to the financial and monetary aspects implicit in the words, rather than to trade flows. The essay does find evidence of growing Japanese influence in the Pacific via financial and monetary channels, rather than primarily via trade flows.

One of the most remarkable and widely-remarked trends in the world economy over the last three decades is the rapid outward-oriented growth of Japan, followed by the four East Asian NICs (Newly Industrialized Countries) and then by some of the other ASEAN countries (Association of SouthEast Asian Nations). But when one asks whether a yen bloc is forming in East Asia, one is presumably asking something more than whether trade and financial flows among these countries are increasing in absolute terms. One must ask whether the share of intra-regional trade and finance is higher, or increasing more rapidly, than would be predicted based on such factors as the GNP or growth rates of the countries involved.

Then, even if evidence were found that an economic bloc by this criterion was indeed forming, there would remain the

separate question of whether this trend was the outcome of deliberate Japanese policy measures. Japan is, in fact, unusual among major countries in not having preferential trading arrangements with smaller countries. As for Japan's monetary power in the region, this essay concludes that if its policy-makers had their way, the internationalized yen might never have been unleashed.

A Trade Bloc in East Asia?

Table 1 decomposes trade (exports plus imports) undertaken by countries in East Asia into trade with other members of the same regional grouping, versus trade with other parts of the world. For comparison, the analogous statistics are reported for Western Europe (the EC Twelve) and for North America (the United States, Canada, and Mexico). Although such statistics depend very much on which years are chosen, the share of intra-regional trade in East Asia increased from 33 per cent in 1980 to 37 per cent in 1989. Pronouncements that a clubbish trade bloc is forming in the region are usually based on figures such as these. But the numbers are deceptive.

All three regions show increasing intra-group trade in the 1980s. The region that has both the highest and the fastest-increasing degree of intra-regional trade is not Asia

but the European Community, reaching 59 per cent in 1989. The share of intra-regional trade in East Asia has not even been increasing appreciably faster than that in North America.

Quite aside from the comparison with Europe, it is easy to be misled by intra-regional trade shares such as those reported in Table 1. If one allows for the phenomenon that most of the East Asian countries in the 1980s experienced rapid growth in total output and trade, then it is likely that there has in fact been no movement toward intra-regional bias in the evolving pattern of trade. The increase in the intra-regional share of trade that is observed in Table 1 could be entirely due to the increase in economic size of the countries involved. To take the simplest case, imagine that there were no intra-regional bias in 1980, that each East Asian country conducted trade with other East Asian countries in the same proportion as the latter's weight in world trade (15 %). Total trade undertaken by Asian countries increased by 108 per cent in dollar terms over this nine-year period, while total trade worldwide increased by only 53 per cent. Even if there continued to be no regional bias in 1989, the observed intra-regional share of trade would have increased by one-third (to 20 %) due solely to the greater weight of Asian countries in the world economy.

Consider now the more realistic case where, due to

transportation costs if nothing else, countries within each of the three groupings undertake trade that is somewhat biased toward trading partners within their own group (East Asia, North America, or the European Community). Although East Asian trade with other parts of the world increased rapidly, trade with other Asian countries increased even more rapidly.

Does this mean that the degree of clubbishness or within-region bias intensified over this period? No, it does not. As in so-called "gravity models", bilateral trade depends on the sizes of both trading partners.¹ Even if there was no increase at all in the bias toward intra-Asian trade, the more rapid growth of total trade and output experienced by Asian countries would show up as a rate of growth of intra-Asian trade that was faster than the rate of growth of Asian trade with the rest of the world.

Think of each East Asian country in 1980 as conducting trade with other East Asian firms in the same proportion as their weight in world trade (15 %), multiplied by a regional bias term to explain the actual share reported in Table 1 (33 %). Then the regional bias term would have to be 2.18 ($=.33/.15$). An unchanged regional bias term multiplied by

¹ [Krugman (1991) has made a crude first pass at applying the gravity model to the question whether Europe and North America are separate trading blocs, but did not get as far as including other countries, or including a variable for distance.]

the East Asians' 1989 weight in world trade would predict that the 1989 intra-regional share of trade would be 44 per cent ($2.18 \times .20 = .436$). The actual intra-regional share, however, did not increase to nearly this level. Thus the East Asian bias toward within-region trade, far from rising, actually diminished in the 1980s!

[What about bilateral trade between Asian/Pacific countries and Japan? Like intraregional trade overall, trade with Japan increased rapidly in the second half of the 1980s.

Most of this increase merely reversed a decline in the first half of the 1980s however. (Petri, 1991.) More importantly, the recent trend in bilateral trade between Japan and its neighbors can be readily explained as the natural outcome of the growth in Japanese trade overall and the growth in trade levels attained by other Asian countries overall. Lawrence (1991) has calculated that, out of the 28 percentage point increase in the market share of Pacific Asian developing countries in Japanese imports from 1985 to 1988, 11 percentage points is attributable to improved competitiveness (as reflected in increased exports from Pacific Asia to worldwide markets), and 18 percentage points is attributable to the commodity mix of these countries' exports. There is no residual to be attributed to Japan's development of special trading relations with other countries in its region.]

In short, beyond the evident facts that countries near each other trade with each other, and that Asian countries are growing rapidly, there is no evidence that they are concentrating their trade with each other in any special way, let alone that they are moving toward a trade bloc as rapidly (or as deliberately) as is Western Europe.

The Japanese Influence on Financial Flows in East Asia

In the case of financial flows, proximity is less important than it is for trade flows. For some countries the buying and selling of foreign exchange and highly-rated bonds is characterized by the absence of significant government capital controls, transactions costs or information costs. In such cases, there would be no particular reason to expect greater capital flows among close countries than distant ones.

Rather, each country would be viewed as depositing into the world capital pool, or borrowing from it, whatever quantity of funds it wished at the going world interest rate. Thus even if we could obtain reliable data on bilateral capital flows, and whatever pattern they happened to show, such statistics would not be particularly interesting.

Many Asian countries still have substantial capital controls, and financial markets that are in other respects less than fully developed. Even financial markets in

Singapore and Hong Kong, the most open in Asia, retain some minor frictions. Where the links with world capital markets are obstructed by even small barriers, it is an interesting question to ask whether those links are stronger with some major financial centers than with others. This question is explored econometrically below.

Information costs exist for equities, and for bonds with some risk of default. These costs may be smaller for those investors who are physically, linguistically, and culturally close to the nation where the borrower resides. Proximity clearly matters as well in the case of direct investment, in part because much of direct investment is linked to trade, in part because linguistic and cultural proximity matter for direct investment.

Table 2 shows the figures for Japanese direct investment. The steady stream of direct investment by Japanese firms in East Asia has received much attention. But the table shows that, whether measured in terms of annual flows or cumulated stocks, Japan's direct investment in the region is approximately equal to its investment in Europe, and is much less than its investment in North America.²

Similar statistics exist on Japanese portfolio investment. But, in the case of portfolio capital, looking at

² See also Komiya and Wakasugi (1991).

price data -- that is, at interest rates -- is more informative than looking at quantity data. For one thing, the quality of the data on interest rates is much higher than the quality of the data on capital flows. For another, the interest rate test is more appropriate conceptually. If the potential for arbitrage keeps the interest rate in a given Asian country closely in line with, say, Tokyo interest rates, then this constitutes good evidence of close links between the two national capital markets, even if the amount of actual arbitrage or other capital flow that takes place within a given period happens to be small.

Tokyo's Influence on Regional Financial Markets

Many East Asian countries have liberalized and internationalized their financial markets over the last ten to fifteen years.³ A number of studies have documented Japan's removal of capital controls over the period 1979-84 by looking at the power of arbitrage to equalize interest rates between Tokyo and New York or London.⁴ Australia and New Zealand, while lagging well behind Japan, also show signs of

³ Frankel (1991a) presents the 1980s evidence for Japan, Australia, New Zealand, Singapore, Hong Kong and Malaysia.

⁴ These include Otani and Tiwari (1981), Ito (1986), and Frankel (1984). The interest rates in the calculations are covered on the forward exchange or Eurocurrency markets so as to avoid exchange risk.

liberalization during the course of the 1980s.⁵ Hong Kong and Singapore register impressively open financial markets, showing smaller interest differentials even than some open European countries like Germany. (Hong Kong has long had open capital markets. Singapore undertook a major liberalization in 1978, though it has tried to segment its domestic money market from its offshore "Asia dollar market."⁶) Malaysia has officially liberalized, following Singapore,⁷ though its covered differential has remained considerably higher.

We can apply a simple test to the hypothesis that a particular Asian country is dominated financially by Japan, versus the alternative hypothesis that ties to capital markets in the other industrialized countries are equally strong. We use the technique of OLS (Ordinary Least Squares) regression to see how the interest rate in a typical Asian country depends on interest rates in Tokyo and New York. Under the null hypothesis that the country's financial markets are insufficiently developed or liberalized to be directly tied to any foreign financial markets, the coefficients on foreign interest rates should be zero. Under the alternative hypothesis that the country's financial markets are closely

⁵ The frequently large negative covered differential that had been observed for Australia up to mid-1983 (see, e.g., Argy, 1987) largely vanished thereafter.

⁶ See Moreno (1988). Edwards and Khan (1985) includes another test of covered interest parity for Singapore.

⁷ Abidin (1986) and Glick and Hutchison (1990, p.45).

tied to those in Tokyo, the coefficient on Tokyo interest rates should be closer to 1 than to 0; and similarly for New York.⁸

Table 3 presents estimates for three-month interest rates in Hong Kong and Singapore. For the Hong Kong interest rate, the influence of the New York market appears very strong; neither Tokyo, London nor Frankfurt has significant influence on average over the sample period (from 1976 to 1989). For the Singapore interest rate, the influence of New York is again very significant; but now there is also a significant, though smaller, weight on Tokyo. The evidence suggests that both countries have had open financial markets ever since the mid-1970s, with New York having the dominant influence, but with Tokyo also having a one-quarter effect in the case of Singapore.

To see whether the influence of the foreign financial centers changed over the course of the sample period, we can allow for time trends in the coefficients, also reported in Table 3. For Hong Kong, it is clear that London used to have a strong influence, and equally clear that the British

⁸ It should be noted that if capital markets in Tokyo and New York are closely tied to each other, as they indeed are (footnote 3), then multicollinearity might make it difficult to obtain statistically significant estimates. But this does not mean that there is anything wrong with the test. A finding that the coefficient on the Tokyo interest rate is statistically greater than 0, or than the coefficient on the New York interest rate, remains valid.

influence has been diminishing over time. For Singapore, there is no sign of change in New York's role, but there is weak evidence of a role for Frankfurt that has been gradually diminishing over time, and of a gradually increasing role for Tokyo.

Similar tests were also run for four other Pacific countries: Australia, New Zealand, Taiwan and Korea (not reported here, to save space). There is evidence of a London effect in Australia that has been slowly increasing during the sample period, and a Frankfurt effect in New Zealand that gave way to a Tokyo effect late in the sample period.

For purposes of comparison we can look at developments in Europe (also not reported here). Similar regressions for European countries show that Frankfurt has, for example, a substantial effect in Switzerland, a rapidly increasing role in Denmark and Norway, and a significant and increasing role in Austria.⁹

Overall, there is only weak evidence in Table 3 of a special role for Tokyo as a financial center exerting influence in its part of the world. But during most of the

⁹ It also has a significantly growing effect in France, Belgium, Denmark and Spain, if one uses the forward market to correct for the likelihood of exchange rate changes against the mark, as discussed below. (In the case of Denmark and Italy, Frankfurt's gain is at London's expense. London had a large effect in Belgium and Denmark early in the sample period and a large but rapidly diminishing effect in Italy.)

sample period examined, most Asian countries had not yet opened their financial markets to external influence by any foreign center.

These first tests leave some important questions unanswered. First, what would such tests show for the last three years? Economic relationships have been changing rapidly in international financial markets. Korea and Taiwan, for example, have begun to liberalize and internationalize only very recently. Second, are the barriers that remain between a given country and the major world financial centers due to currency factors or country factors? Most of the Asian countries experience frequent changes in their exchange rates against the yen and the dollar. Financial markets in a country like Singapore could be very open and yet observed interest rates could differ from those in Tokyo or New York because of premiums meant to compensate investors for the possibility of changes in the exchange rate. The question of whether the yen is playing an increasing role in the exchange rate policies of East Asian countries is an important one to address, but it should be kept distinct from the question whether financial links to Tokyo (irrespective of currency) are strengthening.

Table 4 analyzes the determination of interest rates in five Pacific countries with monthly data for a more recent

time period: 1988-91. There is more evidence of an important role on the part of Tokyo than there was in the earlier period. For Singapore, where the influence of Tokyo in Table 3 was less than New York but rising over time, estimates in the first row 1, based simply on interest rates, suggest that the Japanese financial center has now surpassed its American rival. For Taiwan, Tokyo dominates so strongly that New York doesn't even seem to matter. For Hong Kong and Australia, on the other hand, New York dominates. For Korea, the two major financial centers appear to be equally strong.

As noted above, a country could have close financial ties with a foreign country and yet, if exchange rate changes are important, the simple regression against the foreign interest rate would be inappropriately designed to show this relationship. We can take out currency factors by using the forward exchange market. We simply express the foreign interest rates so as to be "covered" or hedged against exchange risk. Doing so in Table 4 changes the results for Australia and Singapore toward a Tokyo effect that is smaller than the New York effect.¹⁰ (Usable forward rate data are not

¹⁰ For the case of Australia, the coefficient on the covered foreign interest rate is close enough to 1 to constitute statistical support of the hypothesis that "covered interest parity" holds. That is, capital controls and other barriers to the movement of capital between Sydney and New York are close to zero. (The Durbin-Watson statistics improve substantially when the forward rates are included, suggesting that the equation that uses covered interest rates is a more

available for the other countries.)

For four of these countries, there exists another way of correcting for possible exchange rate changes: direct data on forecasts of market participants collected in a monthly survey by the Currency Forecaster's Digest of White Plains, N.Y.¹¹ One advantage of using the survey responses to measure expected exchange rate changes is that the data allow us to test explicitly whether there exists an exchange risk premium that creates an international differential in interest rates even in the absence of barriers to international capital flows. Such a differential would be compensation to risk-averse investors for holding assets that they view as risky.¹²

appropriate specification.)

¹¹ The use of such data, obtained originally from a survey conducted by the AMEX Bank Review and later from surveys conducted by MMS International and others, was explored by Frankel and Froot (1987), for the case of five major currencies. The Currency Forecasters' Digest data is proprietary, and was obtained by subscription by the Institute for International Economics.

¹² The forward rate data allow us to eliminate factors associated with the currency in which countries' assets are denominated, but they do not allow us to distinguish between two currency factors: the exchange risk premium and expectations of depreciation. For the case of Australia, for example, the support for covered interest parity (see footnote 9) suggests that barriers to the movement of capital between Sydney and New York are low, and so differences in interest rates are due to currency factors. But when the Australian interest rate is observed to exceed the U.S. interest rate, is this because the Australian dollar is confidently expected to depreciate, or is it because investors have no idea what the exchange rate will do and demand to be compensated for this risk? The survey data may be able to distinguish between these two hypotheses, whereas the forward rate data cannot.

An advantage of the Currency Forecasters' Digest data in particular is that they are available even for countries like Taiwan and Korea where financial markets are less developed. A potential disadvantage is the possibility that survey data measure the expectations of market participants imperfectly.

For Singapore, the survey data corroborate the finding from the forward rate data that, once expected depreciation is eliminated as a factor, the New York effect dominates the Tokyo effect. For Korea, the survey data also show that the Tokyo effect becomes smaller than the New York effect.

The Role of the Yen

The finding that eliminating exchange rate expectations from the calculation leaves Tokyo with relatively little effect on local interest rates in most of these countries does not mean that the Japanese influence is not strong. It is likely, rather, that much of the influence in the Pacific comes precisely through the role of the yen. If Pacific countries assign high weight to the yen in setting their exchange rate policies, then their interest rates will be heavily influenced by Japanese interest rates.

No Asian or Pacific countries have ever pegged their currencies to the yen in the post-war period. But neither are there any Pacific countries that the International Monetary

Fund classifies as still pegging to the U.S. dollar. (Hong Kong has since October 1983 followed a policy of pegging to the dollar,¹³ but the colony is not an official member of the IMF.) Malaysia and Thailand, and a number of Pacific island countries, officially peg to a basket of major currencies and are thought to give heavy weight to both the dollar and yen, but the weights are not officially announced.

There is other evidence, however, that the yen is playing an increasing role in the region. As Table 5 shows, Asian central banks in the course of the 1980s increased their holdings of yen from 13.9 per cent of their foreign exchange reserve portfolios to 17.5 per cent.¹⁴ The yen is also being used more widely to invoice trade and finance in Asia. The countries that incurred large international debts in the 1970s and early 1980s subsequently shifted the composition away from dollar-denominated debt and toward yen-denominated debt. Table 5 shows that the yen share among five major Asian debtors nearly doubled between 1980 and 1988, entirely at the expense of the dollar.¹⁵

We may draw three conclusions.

(1) Although growth in Japan, the four NICs, and other East

¹³ See Balassa and Williamson (1990, p.32).

¹⁴ The deutschmark and Swiss franc are the two currencies that suffered the largest loss in share in the region.

¹⁵ Tavlas and Ozeki (1991) give further statistics.

Asian countries, is rapidly raising their weight in world output and trade, the statistics do not bear out a movement toward intra-regional bias of trade and direct investment flows. (2) There is more evidence of rising Japanese influence in the region's financial markets. Tokyo appears to have recently acquired a dominant influence over interest rates in Singapore and Taiwan. It also has important and increasing effects on interest rates elsewhere in the Pacific, though overall its influence is as yet no greater than that of New York. (3) Much of Japan's financial influence takes place through a growing role for the yen, at the expense of the dollar. The yen's importance in exchange rate policies and invoicing of trade and finance in the region is increasing.

This still leaves a question raised at the beginning of this essay. Are these trends the outcome of deliberate policy measures on the part of Japan? It is difficult to see, even with imagination, signs of deliberate policy actions taken by the Japanese government to increase its financial and monetary influence in Asia. To the contrary, at least until recently, the Japanese government has resisted any tendency for the yen to become an international currency in competition with the dollar. It has been the U.S. government, in the Yen/Dollar Agreement of 1984 and in subsequent negotiations, that has been pushing Japan to internationalize the yen, to promote its

worldwide use in trade, finance, and central bank policies.¹⁶ It has also been the U.S. government that has been pushing Korea and other East Asian NICs to open up their financial markets, thereby allowing Japanese capital and Japanese financial institutions to enter these countries. It has again been the U.S. government that has been pushing Korea and Taiwan to move away from policies to stabilize the value of their currencies against the dollar.¹⁷ The increasing role of the yen in Pacific Asia may or may not be a good idea. But it is an idea that originated in Washington, not in Tokyo.

¹⁶ Frankel (1984).

¹⁷ Balassa and Williamson (1987), Noland (1990) and Frankel (1989). Financial negotiations between the U.S. Treasury and the governments of Korea and Taiwan were a response to congressional passage of the 1988 Omnibus Trade Bill.

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