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Globalization of Financial Markets and Implications
for Pacific Basin Developing Countries *

Prepared by David Goldsbrough and Ranjit Teja

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Abstract

This paper analyzes the consequences of the growing interdependence of world financial markets for Pacific developing countries. Section I discusses trends in financial integration in the Pacific and the underlying movements in saving and investment. Section II seeks to quantify the increased capital mobility, in terms of rate of return differentials and the degree of correlation between savings and investment rates across countries. Section III focuses on policy implications of increasing integration, including the effectiveness of macroeconomic policy instruments, the usefulness of the current account as a target of policy, and the dangers of excessive taxation of financial intermediation.

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Summary

Financial flows to Pacific Basin countries have grown faster than either output or foreign trade during the last two decades. The upsurge in gross flows represents a massive expansion in the international trading of risk and maturity transformation but, for Asian developing countries as a group, the increasing globalization of financial markets has not resulted in significantly larger net inflows of foreign savings, even when the growing current account surpluses of the four newly industrializing economies are excluded. Rather, the most significant impact of increasing financial globalization on economic growth in developing Asia is likely to stem from more efficient investment.

In measuring international capital mobility, the paper distinguishes between financial market integration (that is, whether similar assets earn a similar return after adjusting for exchange rate risk), for which tests of covered interest parity are used, and real capital market mobility (that is, whether countries can freely engage in intertemporal trade), for which tests of the rate of correlation between domestic savings and investment rates are utilized. The empirical results suggest a significant degree of financial integration among Pacific Basin countries, but that the degree of capital mobility is more modest--albeit no less than in the Atlantic OECD region. The coexistence of closer financial market integration and significant real capital immobility is due to continued substantial differences in real interest rates that in turn largely reflect expected changes in real exchange rates.

As financial markets become more integrated, the relevance of any intermediate targets for monetary aggregates as guides to policy is reduced. In most Pacific Basin developing countries, however, capital markets are not so open that there is no scope for an independent monetary policy. Moreover, although the size of the external current account imbalance may have become less of a direct constraint on macroeconomic policy, it still contains useful information about underlying trends in savings and investment that may signal the need for policy changes. Finally, increasing financial integration increases the potential costs (in terms of capital flight, for example) of excessive taxation of financial intermediation. A cross-country comparison demonstrates that such taxation is especially high in the Philippines, whereas implicit tax rates in Indonesia were sharply reduced during the 1988 financial reforms.

The growing interdependence of world financial markets--in large part a consequence of the trend toward financial deregulation in the major economies combined with technological advances that have greatly reduced transaction and information costs--has numerous potential implications for the Pacific Basin developing economies. Section I of this paper discusses some of the broad trends of financial integration in the Pacific Basin and the underlying movements in saving and investment rates. Section II seeks to quantify the increased capital mobility, in terms of rate of return differentials between markets and the degree of correlation between savings and investment rates across countries. Finally, Section III focuses on some of the policy implications of increasing financial integration, including for the effectiveness of macroeconomic policy instruments, the usefulness of the current account as a target of macroeconomic policy, and the dangers of excessive taxation of financial intermediation.

I. Trends in International Financial Intermediation, Savings, and Investment in the Pacific Basin

Financial flows to Pacific Basin countries have grown faster than either output or foreign trade during the last two decades (Charts 1A and 1B). ^{1/} This is not just a phenomenon that has affected developing countries of the region, since the increase in financial flows to industrial countries has been even more marked than that to developing countries. Indeed, one of the most notable recent developments in international financial markets has been the emergence of Japanese financial institutions as a major source of maturity and risk transformation, borrowing short in the world interbank market in order to lend long through the purchase of bonds and equity, as well as through foreign direct investment. Thus, the liabilities of Japanese residents to foreign banks increased about ninefold during the 1980s, to almost \$1,000 billion in 1989, even as Japan emerged as the largest net exporter of capital in the world. As a share of GNP, foreign banks' claims on Japanese residents (mainly in the form of interbank claims) are much higher than those of most other Pacific Basin economies (Chart 2). However, recent developments in Japan's domestic financial markets--in particular, the sharp decline in stock prices which has reduced banks' capital and reserves--may substantially reduce the role of these banks in international financial intermediation.

The upsurge in these gross financial flows represents a massive expansion in international maturity transformation and the trading of risk, but need not necessarily reflect an increased net transfer of savings between countries. Tables 1 and 2 provide more details of the underlying trends in net resource flows and in saving and investment. Several facts are particularly noteworthy. First, the share of Pacific Basin industrial countries in total world savings has remained broadly unchanged (at 40-45 percent) since the early 1970s, but Japan has replaced the United States as the largest source of savings. Moreover, the United States emerged as a significant net

^{1/} The charts refer to funds raised on international financial markets (commitments basis) and include bank loans and sales of bonds.

Table 1. Trends in World Gross Saving and Its Composition

	1970-72 Annual <u>Average</u>	1980-82 Annual <u>Average</u>	1987-89 Annual <u>Average</u>
(In billions of U.S. dollars)			
<u>Total World Gross Saving</u> <u>1/</u>	<u>676</u>	<u>2,233</u>	<u>3,673</u>
Pacific Basin Industrial <u>2/</u>	302	913	1,667
Of which: Japan	(95)	(345)	(786)
United States	(173)	(467)	(583)
European Industrial	231	666	1,147
Asian developing countries	57	220	389
Of which: Four NIEs <u>3/</u>	(5)	(44)	(132)
ASEAN4 <u>4/</u>	(9)	(62)	(59)
Other developing countries	85	433	471

External Current Account Imbalances

United States	-1.6	0.3	-133.7
Japan	4.8	0.3	74.6
Asian developing countries	-1.3	-14.5	12.0
Of which: Four NIEs	(-0.9)	(-6.4)	(26.5)
ASEAN4	(-0.3)	(-6.9)	(-2.5)

(As a percentage of world gross savings)

Pacific Basin Industrial gross savings	44.7	40.9	45.4
Four NIEs gross savings	0.7	2.0	3.6
U.S. external current account balance	-0.2	0.0	-3.6
Japan external current account balance	0.7	0.0	2.0
Four NIEs external current balance	-0.1	-0.3	0.7

Source: IMF, World Economic Outlook and International Financial Statistics.

1/ Totals may not add due to rounding. Excludes members of the Council for Mutual Economic Assistance (CMEA) that are not members of the Fund.

2/ Australia, Canada, Japan, New Zealand, and the United States.

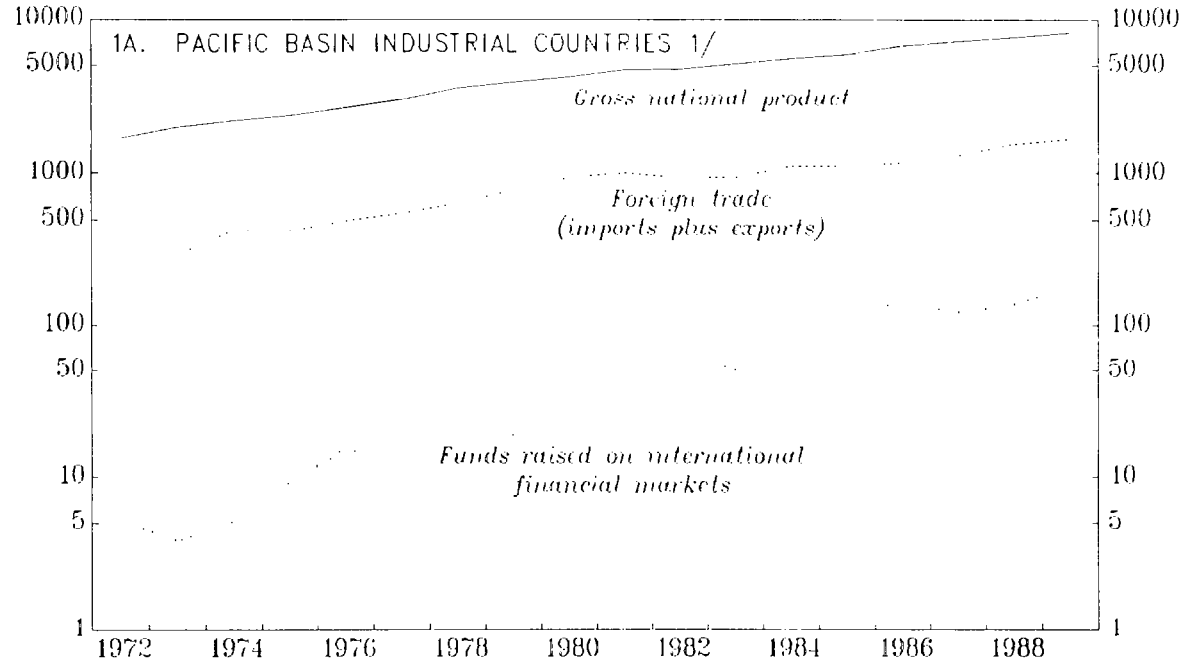
3/ Hong Kong, Korea, Taiwan Province of China, and Singapore.

4/ Indonesia, Malaysia, Philippines, and Thailand.

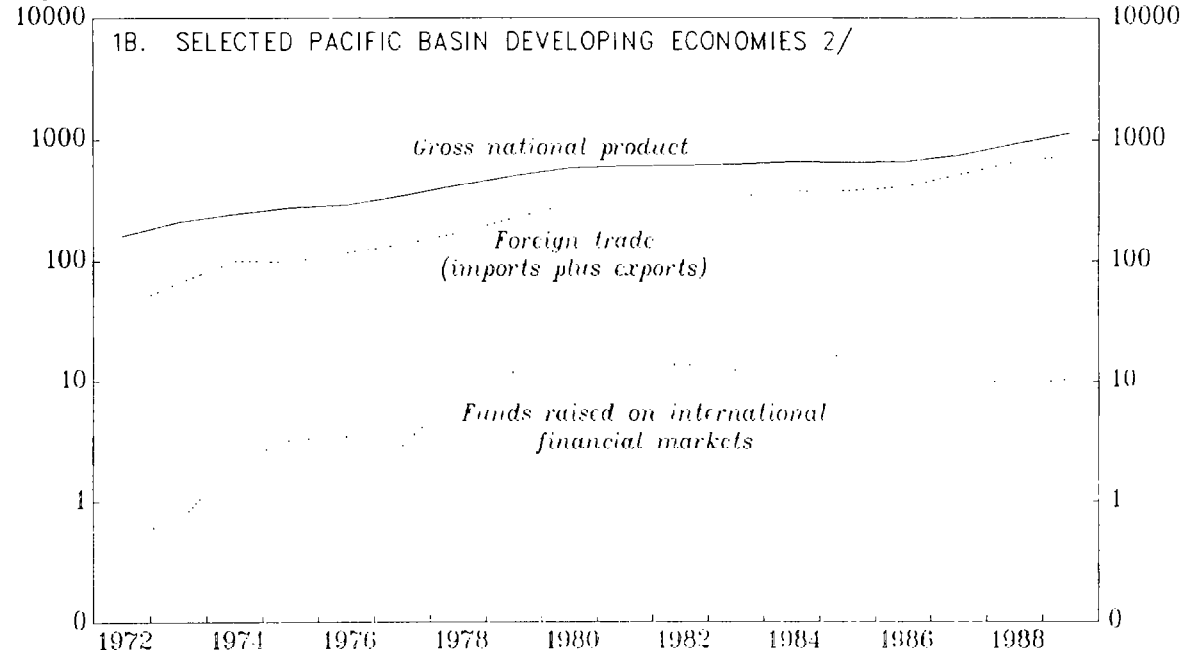
CHARTS 1A and 1B

PACIFIC BASIN COUNTRIES: TRENDS IN OUTPUT, FOREIGN
TRADE, AND FUNDS RAISED ON INTERNATIONAL FINANCIAL MARKETS, 1972-89

Billions of U.S. dollars
(log scale)



Billions of U.S. dollars
(log scale)



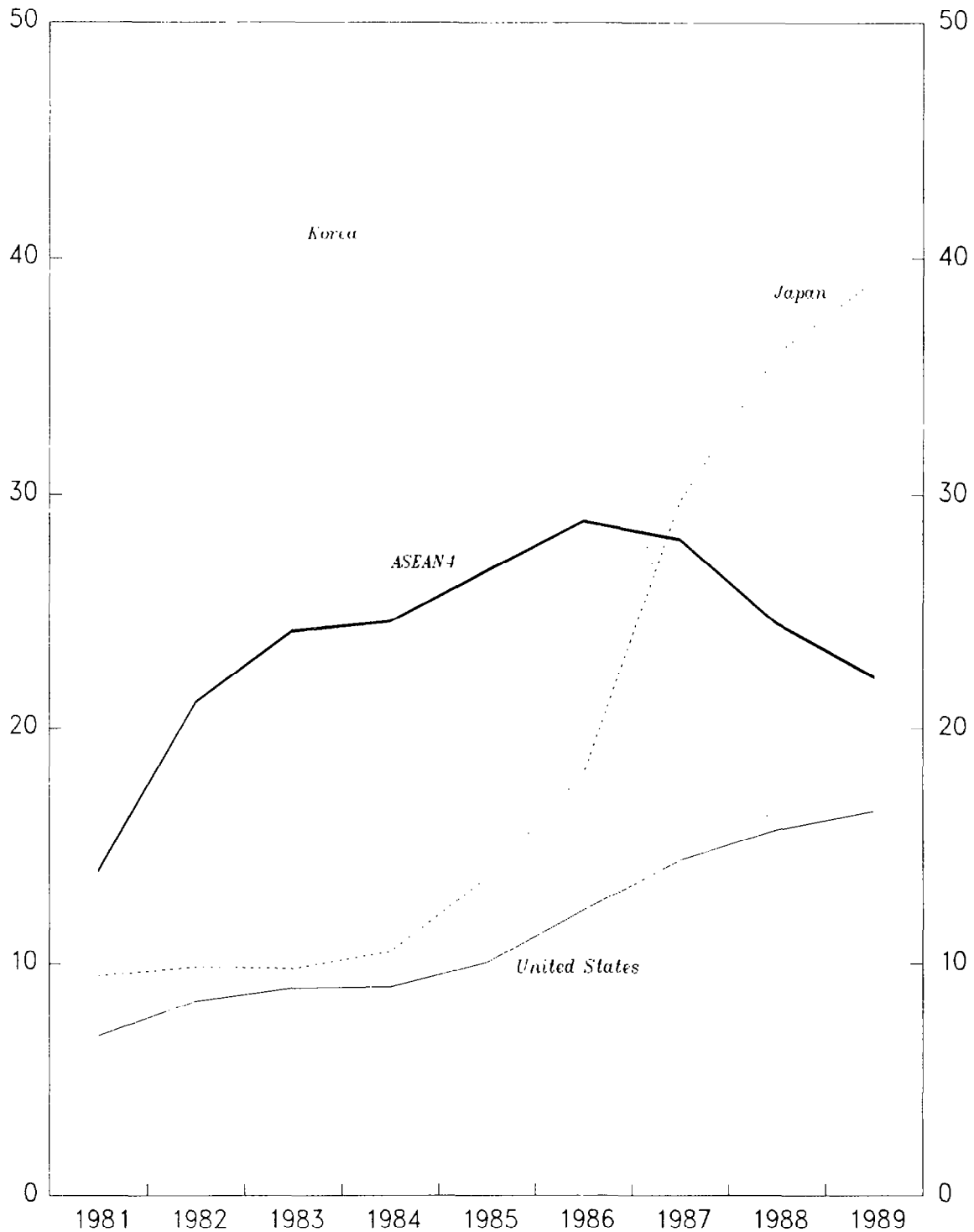
Sources: IMF, *International Financial Statistics* and *World Economic Outlook*; and OECD, *Monthly Financial Statistics*.

1/ Australia, Canada, Japan, New Zealand, United States.

2/ People's Republic of China, Fiji, Hong Kong, Indonesia, Korea, Malaysia, Papua New Guinea, Philippines, Singapore, Taiwan Province of China, Thailand.

CHART 2

CLAIMS OF FOREIGN BANKS ON RESIDENTS
IN SELECTED PACIFIC BASIN COUNTRIES, 1981-89
(In percent of GNP)



Source: IMF, International Financial Statistics.

Note: Includes Cross-Border Interbank Claims (IFS line 8xad) and Cross-Border Credit to Nonbanks (IFS line 7xdd).

Table 2. Pacific Basin Countries: Savings, Investment,
and the External Current Account

(In percent of GDP 1/)

	1970-72 <u>Average</u>	1980-82 <u>Average</u>	1987-89 <u>Average</u>
<u>Pacific Basin Industrial Countries</u>			
Gross savings	20.1	20.0	21.8
Gross investment	19.8	20.2	22.8
External current account	0.2	-0.2	-1.1
<u>United States</u>			
Gross savings	15.5	15.7	12.8
Gross investment	15.7	15.7	15.7
External current account	-0.1	0.0	-2.9
<u>Japan</u>			
Gross savings	38.5	31.1	39.1
Gross investment	36.6	31.1	35.9
External current account	1.9	0.0	3.3
<u>Four NIEs</u>			
Gross savings	23.7	30.9	39.5
Gross investment	27.9	35.5	31.3
External current account	-4.2	-4.5	8.2
<u>ASEAN 4</u>			
Gross savings	27.7	34.1	29.4
Gross investment	29.6	37.7	30.6
External current account	-1.9	-3.6	-1.2

Source: IMF, World Economic Outlook and International Financial Statistics.

1/ Group totals are weighed by GNP.

importer of capital during the 1980s (with an external current account deficit equal to 3 1/2 percent of world gross savings), reflecting a decline in its domestic savings/GDP ratio and an unchanged investment ratio. Second, the group of four Asian NIEs (Hong Kong, Korea, Singapore, and most notably, Taiwan Province of China) became significant net capital exporters in the second half of the 1980s, primarily as a result of a sharp rise in domestic savings rates; indeed, these four countries' share in total world gross savings increased fivefold in less than two decades. Third, the increased integration of financial markets has not been associated with a marked increase in the transfer of savings to Asian developing countries as a group. Even if the four NIEs are excluded, the combined external current account deficits of Asian developing countries averaged only \$15 billion annually during 1987-89, about one third of one percent of total world gross savings. The share was somewhat higher immediately after the first two oil shocks, but not for long. This suggests that, for Asian developing countries as a group, the increasing globalization of financial markets has not made a large direct contribution--in the form of higher inflows of foreign savings--to increased domestic capital formation. This is hardly surprising in the aftermath of the debt crisis. Of course, the aggregate data can mask important changes for individual countries. Moreover, as studies of financial market deregulation in individual countries suggest, the most significant impact on economic growth is likely to stem from an increased efficiency of investment. 1/

Finally, it is interesting to examine whether the developments in international capital markets during the last decade, including the debt crisis, have led to changes in the debt/equity composition of capital flows to Pacific Basin developing countries. Data presented in Table 3 indicate that, for most countries, the importance of external borrowing--either from official or commercial sources--has declined substantially since 1983, while inflows of foreign direct investment have become relatively more significant as a source of foreign savings. However, the magnitude of this shift should not be overemphasized; apart from Thailand and Malaysia (and possibly China), it owes more to the collapse of external borrowing than to a dramatic increase in direct investment flows. Indeed, with the notable exceptions of Singapore and Malaysia, the share of foreign direct investment in Pacific Basin countries' total external liabilities is not much higher than the average for all (non-oil exporting) developing countries (about 17 percent). 2/

1/ For example, the evidence presented in Interest Rate Policies in Developing Countries (IMF Occasional Paper No. 22) suggests that, in the longer run, positive real interest rates contribute significantly to the growth of output, in large part by encouraging a greater average efficiency of investment.

2/ Since the estimates of the stock of foreign direct investment are derived by cumulating the annual gross flows, they reflect book values and may therefore considerably understate current market values. However, the broad cross-country comparisons are probably still valid.

Table 3. Selected Pacific Basin Developing Countries: Relative Importance of Debt and Equity in Capital Flows, 1973-89

(In billions of U.S. dollars, unless otherwise specified)

	Cumulative Inflows of Foreign Direct Investment (FDI)		Change in Stock of External Debt 1/		Share of FDI in Total Gross External Liabilities	
	1973-83	1983-89	1973-83	1983-89	1983	1989
China, P.R.C.	...	13.7	...	34.7	...	24
Indonesia	2.4	2.5	25.2	20.1	18	15
Korea	0.8	3.0	35.1	-9.5	4	16
Malaysia	7.8	5.0	15.2	2.7	28	38
Philippines	0.8	1.9	22.0	3.7	11	14
Singapore	8.3	13.8	0.3 3/	4.2 3/	92	81
Thailand	1.6	4.0	13.3	6.5	9	21

Source: IMF, Balance of Payments Yearbook and World Economic Outlook; World Bank, World Debt Tables.

1/ Includes valuation changes and impact of debt reduction operations.

2/ Total gross external liabilities are defined as the stock of foreign direct investment plus total outstanding external debt. Stock of FDI is based on end-1973 figure taken from IMF, Foreign Private Investment in Developing Countries, plus cumulative flows since that date.

3/ Excludes short-term debt and liabilities of offshore banking operations.

II. Capital Mobility in the Pacific Basin-- Some Quantitative Estimates

1. Theoretical framework

In recent years, there has been considerable debate in the academic literature on the degree of international capital mobility. The controversy has stemmed from a number of empirical studies (following the seminal work of Feldstein and Horioka (1980)) that have found the actual degree of capital mobility to be quite low--a conclusion clearly at odds with everyday observation of growing and increasingly interdependent international financial markets. Consequently, any attempt to quantify capital mobility must be clear about definitions, and must distinguish between two principal notions about what constitutes perfect capital mobility. Such a clarification is essential for correctly interpreting the results obtained below.

The first, which may be labelled real capital mobility, focusses on the ability of a country to freely engage in intertemporal trade. Under this notion of capital mobility, a country wishing to invest more than it saves should be able to do so by borrowing abroad. Statistically, such independence of investment from the level of domestic savings should be manifested in a low level of correlation between the two variables. Feldstein and Horioka (1980) found that this generally was not the case, and many studies have reproduced this result, although the degree of correlation has been found to be declining in the 1980s (e.g., Frankel (1989), Bayoumi (1990)).

A second definition of capital mobility emphasizes free trade in financial assets, and may accordingly be referred to as financial market integration. Under this definition, provided that the tax and regulatory barriers to financial trade are negligible, similar assets should earn a similar rate of return after adjusting for exchange rate risk. However, in practice, such arbitrage rarely occurs beyond a limited menu of assets such as short-term deposits or government bills. Even within a country, there are substantial differences in real returns between, say, bank deposits, bonds, and equity, arising from relative price expectations and risk characteristics. Therefore, one should not be surprised to find that real interest rates are not equalized across countries either.

It is the relation between real interest rates that links the two definitions of capital mobility, and explains how substantial financial integration across similar assets may coexist with low real capital mobility. If real interest rates are not equalized across countries, then there is little reason to expect savings and investment to be independent of each other. For example, a shortfall in domestic savings normally places upward pressure on domestic interest rates which, under perfect mobility, is eliminated by an inflow of foreign savings in an amount required to restore the equilibrium interest rate. But if imperfect asset substitutability--or expected changes in real exchange rates--allows for differences in real rates of return, then the capital inflow will fall short, and higher domestic interest rates will force a decline in investment.

2. Empirical tests

We present here the results of a regression of savings rates on investment rates for a sample of 17 Pacific Basin economies over the period 1980-87. The estimation procedure was structured to minimize the chance that the regressions may merely be picking the correlation between savings and investment rates arising from common disturbances rather than from lack of capital mobility--the problem of "simultaneity bias." Thus common shocks over the business cycle were smoothed out by averaging the data over a number of years. Similarly, to eliminate the bias imparted by government behavior (e.g., attempts to stabilize the external current account by adjusting government savings or government investment), the regressions were also carried out using private savings and investment data. Finally, to the extent that some simultaneity bias remained to render OLS estimates inconsistent, a two-stage least squares (2SLS) estimation procedure was also employed wherever the data was available. ^{1/}

With $\beta = 0$ and 1 representing the bounds of perfect real capital mobility and immobility, respectively, the results presented in Table 4 would place the Pacific Basin countries as a group about half way along the scale. Both OLS and 2SLS estimates of the β coefficient are remarkably robust, averaging about 0.6 with relatively small standard errors. In contrast with the original Feldstein and Horioka (1980) results which found the beta coefficient to be insignificantly different from unity, the estimates here are significantly different from both the bounds 0 and 1. A comparison of the estimates for the period 1980-87 and the more recent years 1984-87 also confirms the findings of other studies (e.g., Frankel (1989)) that the correlation between savings and investment rates has been declining during the 1980s. Finally, is real capital mobility significantly higher in other regions, say, the Atlantic OECD? The answer appears to be no: Bayoumi's (1990) estimates for a cross section of ten Atlantic OECD countries (plus Japan) for the period 1981-85 found the correlation coefficient to be in the 0.4-0.7 range--not much below the present estimates. One may conclude that there is a fair degree of real capital mobility to be found amongst the Pacific group countries.

We now turn to the question of trade in financial assets and the measurement of capital mobility using the criterion of financial market integration. We begin by testing for covered interest parity (CIP)--the hypothesis that differences in nominal interest rates, after adjusting for exchange risk through cover in the forward exchange market, are small. Thus we calculate the covered interest rate differential

$$\phi = i - i_{US} - f$$

^{1/} The instruments used for savings were a constant, an age structure variable (the ratio of persons aged 15-64 to the total population), and lagged savings rates. Due to data problems, these variables could not be employed on a consistent basis for the 2SLS regressions for the period 1980-87.

Table 4. Cross-Section Results for Seventeen
Pacific Basin Economies 1/

(Regression: $I/Y = \alpha + \beta(S/Y)$)

	<u>OLS Estimate</u>		<u>2SLS Estimate</u>	
	1980-87	1984-87	1980-87	1984-87
<u>β-Coefficient</u>				
Total investment and saving	0.67 (0.13)	0.62 (0.13)	...	0.56 (0.15)
Private investment and saving <u>2/</u>	0.65 (0.26)	0.60 (0.18)	...	0.58 (0.23)

1/ The countries included were: Australia, Canada, China, Fiji, Hong Kong, Indonesia, Japan, Korea, Malaysia, Mexico, New Zealand, Papua New Guinea, Philippines, Singapore, Taiwan Province of China, Thailand, and the United States. Figures in parentheses are standard errors.

2/ Defined as total investment/saving less central government investment/saving. Due to data limitations, the calculation excludes China, Hong Kong, and Taiwan Province of China.

where i and i_{US} are the domestic and U.S. nominal interest rates, respectively, and f is the forward exchange rate premium/discount. One would not expect ϕ to be literally zero, since transactions costs and differences in the characteristics of the underlying assets--in the present instance, 90-day certificates of deposit--would drive a wedge between returns. By adding and subtracting the offshore eurodeposit rates for the domestic currency (i_E) and for the U.S. dollar ($i_{\$}$), ϕ can also be broken down into its components

$$\begin{aligned}\phi_d &= i - i_E \\ \phi_{US} &= i_{\$} - i_{US} \\ \phi_{euro} &= i_E - i_{\$} - f\end{aligned}$$

where $\phi = \phi_d + \phi_{US} + \phi_{euro}$. Each of the components provides information on the source of the overall covered interest differential. For example, ϕ_d , by comparing onshore and offshore interest rates (e.g., between domestic yen and euroyen CDs) measures the extent to which domestic controls and regulations are the cause of a non-zero CIP differential. Similarly, ϕ_{US} measures the contribution of U.S. regulatory factors, while ϕ_{euro} measures covered interest arbitrage in offshore markets.

These calculations are presented in Table 5 for a sample of seven Pacific countries for which forward exchange rate data was readily available. (Unfortunately, only three developing countries--Hong Kong, Malaysia, and Singapore--could be included because of data limitations). The first column gives the mean of deviations from CIP, which ranges between 5 and 35 basis points. Again, these deviations are not very different in magnitude from those that have been observed in relatively open Atlantic developed countries. 1/ To the extent that the mean may disguise potentially large positive and negative deviations from CIP, the last column presents data on the mean of absolute deviations. As it turns out, these deviations too tend to be small, averaging less than 20 basis points.

As regards the sources of the CIP differential, domestic controls appear to be negligible in Japan, Hong Kong, and Canada but, somewhat surprisingly, quite significant in the case of Singapore. 2/ As might be expected, ϕ_{euro} , the CIP differential within the Euromarket (which is least likely to be obstructed by controls) is, in fact, quite small--less than 10 basis points on average if Australia and New Zealand are excluded.

To conclude, there appears to be a significant degree of financial integration amongst many of the Pacific countries (certainly at the short

1/ Frankel (1989) finds the mean deviation to be 14 basis points for the group consisting of the United Kingdom, Switzerland, Netherlands, Germany and Canada. However, Frankel's study covers a somewhat earlier time period (late 1982-early 1988), and the differentials may well have declined further in recent years.

2/ In our view, the results for Singapore are a statistical aberration that may be connected with data problems.

Table 5. Deviations from Covered Interest Rate Parity

January 1987-March 1990

(Three-month return, in percent)

	Mean of Total Deviations	<u>Of which due to:</u>			Mean of Abso- lute Deviations	Standard Deviations
		Domestic Factors	U.S. Market Factors	Euro Market Factors		
Japan	0.21	0.04	0.16	-0.02	0.21	0.07
Hong Kong	0.18	0.05	0.16	-0.03	0.18	0.14
Malaysia	-0.05	...	0.16	...	0.14	0.17
Singapore	-0.34	-0.37	0.16	-0.13	0.34	0.18
Canada	0.14	0.08	0.16	-0.10	0.14	0.06
Australia	0.04	0.17	0.16	-0.28	0.12	0.15
New Zealand	0.07	0.16	0.16	-0.39	0.16	0.21

Source: Barclays Bank database, Data Resources Incorporated.

end of the maturity spectrum), although the degree of real capital mobility is somewhat more modest. Are these findings consistent? In our view, yes, since the tendency of some interest rates to converge does not imply that all interest rates converge. More importantly, substantial differences in real interest rates remain, in large part due to changes in expectations about real exchange rates. This may be seen in Table 6, which computes the "currency premium" implicit in the real interest rate differential as the expected change in the real exchange rate. ^{1/} Even within a relatively short time horizon of three months, expected changes in the real exchange rate can be quite large, with the standard deviation being over 75 basis points for most countries. Variations in real exchange rates--and hence real interest rates--over the longer maturities that are more relevant to investment decisions are known to be even greater. As noted in the previous section, this finding alone is sufficient to explain why real capital mobility tends to be lower than that suggested by tests of financial market integration.

III. Policy Implications of Increasing Financial Integration

We would like to discuss briefly three of the numerous policy issues raised by the increasing globalization of financial markets: (1) the consequences for the effectiveness of different macroeconomic policy instruments and the international transmission of economic influences; (2) the usefulness of the current account as a target of macroeconomic policy; and (3) the taxation of financial intermediation in a world of increasingly integrated asset markets.

1. The effectiveness of macroeconomic policy instruments and changes in the international transmission mechanism

Since this issue is to be covered in some depth in other papers, we will limit ourselves to a few comments. First, the increasing liberalization of domestic financial markets means that the transmission mechanism of monetary policy now falls more heavily on interest rates and exchange rates rather than on credit rationing and quantitative restrictions. Moreover, as domestic markets become more integrated with those abroad, the demand for national currencies becomes increasingly sensitive to the expected returns on foreign financial assets. This can complicate the choice and reduce the relevance of any intermediate targets for monetary policy.

However, while the direction of change is clear, most Pacific Basin developing countries (with Hong Kong and Singapore as important exceptions) are probably still some way from a situation of completely open capital markets in which an independent monetary policy is incompatible with a fixed

^{1/} Because expected changes in the real exchange rate cannot be observed, Table 3 utilizes the realized change, which is defined as $f - \pi - \pi^*$ where f is the forward premium and π and π^* are actual inflation at home and abroad.

Table 6. Real Forward Discounts, 1/
January 1987-March 1990

	Mean	Mear of Absolute Values	Standard Deviation
Japan	-0.23	0.68	0.84
Hong Kong	-1.22	1.24	0.73
Malaysia	-0.18	0.62	0.75
Singapore	-0.16	0.50	0.61
Canada	0.53	0.59	0.49
Australia	1.00	1.05	0.72
New Zealand	1.60	1.76	1.14

Source: Barclays Bank data base, Data Resources Incorporated.

1/ Defined as the forward discount plus realized inflation differential between U.S. and the home country.

exchange rate. As we discussed in Section II, the degree of linkage between domestic and foreign markets can vary markedly across the spectrum of assets; consequently, domestic monetary policy instruments can still have an impact on the prices of many assets that have no effective close substitutes, even if markets for certain short-term financial assets are closely integrated with those abroad. (An important corollary of this is, of course, that a tightening of monetary policy will have the biggest impact on those who are least able to obtain credit from the external sector; i.e., as markets are globalized, the pursuit of an independent monetary policy may fall on an increasingly narrow segment of the economy.) As always, the question of the effectiveness of monetary policy can only be answered empirically. Work by Fry, et al. (1985) ^{1/} suggests that external capital flows adjust to offset a greater proportion of changes in domestic credit in Pacific Basin developing countries than is the case in a broader sample of developing countries, which would imply that the former group has less monetary policy independence. However, the offset is much less than complete, which suggests that monetary policy is still not without influence.

Second, does an increasing integration of financial markets create a greater preference for a particular type of exchange rate arrangement? The conduct of exchange rate policy can be affected by the trend toward globalization because (1) the economy is likely to be subject to a broader range of shocks (e.g., foreign monetary shocks that affect world interest rates will have a larger domestic impact); and (2) the extent of a given shock on prices and domestic output could be affected by financial market globalization (e.g., a domestic financial shock will tend to have less of an effect on domestic output or prices when capital markets are open since more of the impact will be transmitted abroad). Recent analytical work (e.g., Mathieson and Rojas-Suarez (1990)) suggests that while more open capital markets can amplify or reduce the effects of a given shock on prices or output, the direction of the shock's effect would not be altered. Thus, the optimal degree of exchange rate intervention will still have to weigh the relative sizes of the various shocks that impinge on the economy (i.e., real or monetary) and the relative emphasis that the authorities place on stabilizing prices or output. While this theoretical literature is illuminating, in practice it is difficult if not impossible to distinguish the nature of different shocks or to decide whether they are transitory or permanent. In these circumstances, one of the key considerations in the choice of exchange rate regime (as the recent debate in the United Kingdom has illustrated) is likely to be the effect on domestic financial discipline. Specifically, would a fixed nominal exchange rate system create more incentives for the

^{1/} Their approach is to estimate a reduced-form capital flow equation using instrumental variables, across a pooled time series for 19 developing countries, including five from the Pacific Basin (Indonesia, Korea, Malaysia, the Philippines, and Thailand) and then to allow the estimated coefficients for the latter group to vary from the broader sample. The estimated offset coefficient of the domestic credit variable for the Pacific Basin countries (-0.66) was considerably higher than for the broader group (-0.32), but was still significantly different from -1.

pursuit of responsible financial policies and would an announced commitment to a particular exchange rate target make an anti-inflation policy more credible (and hence less costly in terms of lost output) than a similar announcement of another form of policy commitment (e.g., to a monetary target)? Once again, the only relevant answer is an empirical one, which may well vary from country to country.

Finally, there is ample theoretical and empirical evidence that the sensitivity of exchange rates to fiscal policy increases with the growing internationalization of financial markets. While the precise modelling of the transmission process varies, most models (Fukao (1989) is a good example) suggest that, with increasing financial globalization, the relative importance of interest rates for the determination of the exchange rate become more important. Thus, an expansionary fiscal policy would tend to result in a larger appreciation of the exchange rate and more persistent current account deficits, which would argue for greater fiscal policy coordination between the major economies. This applies not only to the overall level of fiscal deficits, but also to the need for greater attention to be paid to the consequences of domestic tax policies for external capital flows. ^{1/}

2. Implications for the external current account
as a target of macroeconomic policy

As financial markets of Pacific Basin countries become more integrated with overseas markets, the size of the external current account balance, per se, becomes less of a constraint on macroeconomic policy. Certainly, the Pacific Basin has witnessed some marked divergences and dramatic shifts in current account balances in recent years. Substantial surpluses or deficits can be sustained for longer periods because of the possibility of offsetting capital flows. In these circumstances, what should be the reaction of policymakers to current account imbalances?

Even with well-integrated capital markets, there are clear constraints on the extent to which external imbalances can be covered by debt-creating capital flows. Because of the risks of default, most countries will face an upward sloping supply curve for loans and, beyond a certain level of debt,

^{1/} Isard (1988) and Dooley and Isard (1988) use a model in which fiscal policy instruments influence exchange rates largely through policy changes that affect the expected after-tax returns on physical capital in different locations. Bovenberg, et al. (1989) note that the changes in the tax treatment of investment in the United States--most notably the favorable investment credits, depreciation rules, etc., in place during 1980-87--contributed to a combined U.S.-Japan tax system that favored investment in the United States over investment in Japan; in contrast, U.S. residents were taxed more heavily on their savings than were Japanese residents. These differences in tax policy, which were particularly large during 1980-84, must have contributed to capital flows to the U.S. and the consequent appreciation of the dollar during this period.

the optimal strategy of commercial lenders will be to refuse further loans. Because of this risk of credit rationing, which--as the experience of the Philippines has illustrated--is most likely to be imposed when an economy is also suffering from other adverse shocks, limiting the size of the current account deficit can still be an important target of macroeconomic policy.

Moreover, trends in the current account balance can contain useful information about shifts in the underlying savings and investment variables and hence can provide signals about whether changes in economic policy are warranted. However, an assessment of the origins of any imbalance is needed before judging whether and how to correct it. An imbalance that reflects individuals' and firms' optimizing decisions concerning saving and investment made in the absence of any major policy distortions or other rigidities would not require adjustment. For example, a current account deficit that reflects heavy foreign equity financing of domestic investment projects (as, say, in Malaysia) would be benign provided that it was not due to distorted interest rate, tax, or exchange rate policies that favored the use of foreign rather than domestic savings. Similarly, if a high rate of savings in a given country is attributable to demographic factors that are likely to be reversed over time (albeit a long one), the country should run a current account surplus rather than attempt to reduce its surplus by policy actions to lower savings or encourage more, but less efficient domestic investment. (Of course, as the debate over Japan's current account surplus has made abundantly clear, the assessment of whether or not external imbalances are caused by policy distortions often depends on who is doing the assessing.)

In general, the following factors are of particular importance in an evaluation of current account imbalances: 1/ (1) whether the fiscal position is appropriate (in terms of the level and composition of government spending as well as the structure of taxes and borrowing to finance the budget); (2) whether any increased investment associated with the imbalance can be expected to provide a rate of return that exceeds the cost of borrowing; (3) whether any increased consumption associated with the imbalance is temporary and desirable for purposes of intertemporal consumption-smoothing; and (4) the composition of net external financing of any deficit (i.e., debt versus equity) and the prevailing level of debt and debt service payments.

3. The taxation of financial intermediation

Increasing integration creates opportunities for substantial welfare gains through greater specialization and use of comparative advantage. However, the potential costs of inappropriate policies are also increased. We will focus here on just one issue that is of particular importance to Pacific Basin developing countries: the taxation of financial intermediation. Globalization of markets, including the ease of communications and the declining cost of international transactions, has greatly increased the possibilities for international trade in financial services. Indeed, the establishment of offshore banking centers by a number of Pacific Basin

1/ The first three factors are drawn from Frenkel and Goldstein (1990).

developing countries reflects an effort to gain a share of this trade. However, the strengthened linkage between markets also means that there is a greater risk that domestic financial intermediation will be driven offshore if it is taxed more heavily than in neighboring countries. This is more than just a question of losing jobs in the banking sector, since the work of McKinnon and Shaw has shown that there is a close link between financial development and broader economic growth. Moreover, one of the lessons of the debt crisis, particularly in Latin America, has been that a country can accumulate a substantial gross external debt without receiving substantial net resource inflows because of the externalization of financial intermediation. Because of the phenomenon of credit rationing, the resulting large gross debt can have serious macroeconomic consequences.

Taxation of financial intermediation can take many forms: explicit taxes on banks' gross receipts (e.g., in the Philippines), corporate income taxes that are higher for banks than other enterprises (e.g., in some of the socialist economies), large uncompensated required reserves, requirements to lend to certain favored sectors at below-market rates, and liquidity requirements that force banks to hold a large volume of government paper, in order to reduce the cost of servicing the public debt. Table 7 compares the estimated aggregate impact of these various charges, in terms of the average spreads that they cause between deposit and lending rates. Details are shown in Appendix I.

Table 7. Pacific Basin Economies: Spread between Deposit and Lending Rates Attributable to Direct and Indirect Taxes on Financial Intermediation ^{1/}

Japan	0.04
U.S.	0.13
Singapore	0.2
Malaysia	0.4
Thailand	0.5
Korea	0.6
Taiwan, Province of China	1.2
Philippines	1.8
Indonesia, pre-Oct. 1988	2.9
Indonesia, post-Oct. 1988	0.4

Of course, there are many other influences on the magnitude of interest rate spreads--most notably the degree of competition that is encouraged in the banking sector. Nonetheless, the high level of implicit or explicit taxation of financial intermediation in a few Pacific Basin countries

^{1/} Percentage points per annum; average 1987-89. The table shows the "break-even" spread between deposit and lending rates that would be required just to offset the various taxes and other charges on bank financial intermediation. See Appendix I for details of the calculation.

clearly risks causing substantial distortions to resource allocation. 1/ The importance of the level of reserve requirements, in particular, is illustrated by the impact of the dramatic reduction in the required reserve ratio (from 15 percent to 2 percent) that came into effect in Indonesia in October 1988. Our calculations suggest that this represented a reduction in taxation of financial intermediaries equivalent to a decline in interest rate spreads of about 2 1/2 percentage points. A careful, general equilibrium analysis of the effects of this change is warranted, but initial observations suggest that the main initial impact was on deposit rates (which rose by over 1 1/4 percentage points in the year following the change) and on bank profitability, while observed average lending rates declined only moderately. 2/

1/ If the total spread between deposit and lending rates is taken as a rough proxy for value added in banking, financial intermediation taxes amount to 36 percent of value added in the Philippines, but less than 10 percent in Japan, the United States, Singapore, and Malaysia. Alternatively, the size of the spreads could be compared to the likely level of the underlying real equilibrium interest rate on deposits.

2/ However, the latter conclusion could be modified if information on indirect loan fees and other charges were available.

Calculation of Interest Rate Spread Required to Cover
Implicit and Explicit Taxes on Financial Intermediation

Gross receipts by banks are equal to interest charged on loans, less any applicable taxes, plus interest received on required reserves and holdings of government securities. (For simplicity, we exclude fee income and other sources of bank revenue):

$$GR = (1-t)i_L L + i_r R + i_g G$$

Where

GR = gross income

L = value of loans outstanding

R = reserves

G = liquidity and other reserves or required lending to special sectors, if applicable

t = gross receipts taxes, if applicable

i_L = interest paid on loans

i_r = interest rate paid on legal reserves

i_g = interest rate paid on liquidity and other reserves

Moreover,

$$R = rD$$

$$G = gD$$

where

D = deposits

r = average required reserve ratio

g = average required liquidity or other required portfolio ratio

To obtain the average interest rate that would just allow banks to cover the interest paid on deposits (but not to cover other costs), we need to set gross income equal to interest paid on deposits:

$$i_d * D = (1-t) i_L * L + i_r * rD + i_g * gD$$

$$\text{Thus, } i_L = \frac{i_d - i_r * r - i_g * g}{(1-t) (1-r-g)}$$

$i_L - i_d$ would then measure the interest rate spread that is needed just to cover the implicit and explicit taxes on financial intermediation. Details of the calculation are shown in Table 1.

Table 1. The Impact of Implicit and Explicit Taxes on Financial Intermediation in Selected Pacific Basin Economies, 1987-89 Average

	Indonesia		Korea	Malaysia	Philip- pines	Singapore	Taiwan, China	Thailand	Japan	U.S.
	Pre-Oct. 1988	Post-Oct. 1988								
Average deposit rate (i_d) <u>1/</u>	17.3	18.6	10.0	4.7	11.2	4.1	7.3	8.7	4.0	7.9
Average required reserve ratio (r)	15.0	2.0	7.0	4.5	21.0	6.0	14.6	7.0	1.1	2.9
Interest rate paid on reserves (i_r)	—	—	—	—	4.0	—	—	—	—	—
Liquidity ratio (g)	—	—	—	17.0	9.0 <u>2/</u>	18.0	7.0	—	—	—
Interest rate paid on required liquid assets (i_g) <u>3/</u>	—	—	—	4.3	16.2	4.4	6.5	—	—	—
Gross receipts tax rate (t)	—	—	—	—	5.0	—	—	—	—	—
Interest rate spread required to cover all taxes <u>4/</u>	2.9	0.4	0.6	0.4	1.8	0.2	1.2	0.5	0.04	0.13

1/ Average 12-month deposit rate.

2/ Agri/agra requirement.

3/ In most cases, the 12-month Treasury bill rate.

4/ See text for details of calculation.

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