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6 An Asian Capital Crunch? Implications for East Asia of a Global Capital Shortage

Rachel McCulloch

The strong growth performance of developing countries in East Asia has been fueled by inflows of foreign, especially Japanese, capital. However, dramatic changes in the Japanese economy and elsewhere across the globe are sure to have a major impact on future patterns of saving and investment worldwide. Based on these anticipated changes, many analysts see the threat of a global capital shortage, with dire implications for those areas most dependent on financial inflows from abroad.

This paper reviews the evidence for an impending world shortage of capital and assesses the implications for East Asia of increased competition for international investment. The paper focuses in particular on the role of foreign direct investment, often a potent mechanism for the international transfer of advanced technology and manufacturing organization. One surprising conclusion is that a regime of high capital costs could actually provide further encouragement for the already rapid growth of direct investments from the Asian newly industrialized countries (NICs)—Hong Kong, Korea, Singapore, Taiwan—into other Asian nations.

6.1 What We Mean by a Capital Shortage

The possibility of world "shortage" of capital or savings has clearly become a concern among economic analysts as well as policymakers (Solomon 1991; IMF 1991b). Although the concept is seldom made precise, such a shortage presumably exists when ex ante demand from potential investors exceeds the supply of savings at given terms. If capital transactions are mediated by banks and other market-based private financial institutions, a capital shortage in this

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sense might be expected to occur at most transiently, with any incipient gap between global savings and global investment quickly eliminated by an induced rise in real rates of interest. One possible interpretation of a capital shortage is thus simply an upward movement in real interest rates.[1] But the history of global capital movements over the past two decades suggests this view is at best incomplete and misses some important features of real-world flows, especially flows to developing countries.

A first crucial omission is the time dimension. Some frequently cited factors underlying the predicted global shortage of capital are secular trends, the most important among these being the decline in private saving in the industrial nations. Others represent large but strictly temporary developments, such as the capital requirements of Kuwait's reconstruction efforts following the 1991 Gulf War. In the early 1990s, a recession in the United States and several other major nations kept private investment in those regions unusually low despite stimulative monetary policy, and the trend in interest rates has been down rather than up.

In the United States, one reason for a very sluggish response to monetary stimulation was that, although short-term interest rates dropped to near-record lows, long rates fell much less. While stickiness of the long rates may have simply reflected lenders' worries about future inflation, an alternative interpretation is that markets anticipated a global capital shortage that would materialize as the industrial nations recovered.

A second problem with the simple story suggested above is the assumption that the market response to changes in supply and demand consists mainly of a movement in price, i.e., interest rate. Even in well-developed financial markets, the reality is far more complex. *Large* long-term changes in supply and demand in a given financial market surely have some impact on interest rates facing those currently in that market, but they also stimulate major shifts of transactors *between* markets and promote the development of new financial instruments and markets. The impact may thus vary according to the type of transaction.

The 1970s offer a graphic illustration of the importance of induced institutional change. Few of the actual consequences of petrodollar recycling in the 1970s could have been predicted by extrapolation from the institutional arrangements already in place in 1973. Indeed, an analysis that focused on the marginal responses of the important pre-1973 players and institutions would have missed almost all of the action. Rather than attempting to increase loans by cutting rates to current borrowers, international bankers literally roamed the world in search of profitable new markets. Thanks to these efforts, by 1981

1. Berner and Sargen (1990) treat a global capital shortage as synonymous with higher real interest rates. Collins and Rodrik (1991) also emphasize estimates of resulting interest-rate increases in their analysis of macroeconomic impact abroad from restructuring in the former Soviet bloc.

Table 6.1 **Funds Raised on International Credit Markets, by Type of Borrower, 1981 and 1989 (% of total)**

	1981	1989
Developed countries	68.4	87.8
Eastern Europe and USSR	0.8	1.3
Developing countries	27.5	6.7
Multilateral institutions	3.3	4.2

Source: Calculated from United Nations (1991, table A-30).

developing nations accounted for more than one-quarter of all funds raised on the international credit markets (see table 6.1). Of course, the debt crisis of the early 1980s led to another major shift, and by 1989 the share of developing nations had dropped to less than 7 percent. For the 1990s, new shifts across markets are already evident. In particular, borrowers in many regions, but most notably Eastern Europe and the former Soviet Union, are shifting away from commercial borrowing in favor of the World Bank and the international Monetary Fund (IMF) as potential sources of new loans, while at the same time a few developing countries are attempting a modest return to bank loans and bond issues as sources of new capital (IMF 1991b).

The final and most important problem with the simple story is that much of the world's international flow of capital, and in particular the flow to developing nations, is not in fact mediated by well-developed, highly integrated, financial markets. In this category are foreign direct investment, some lending and some borrowing by national governments, and most lending by multilateral institutions such as the World Bank and the IMF. In 1987, bilateral and multilateral official development finance (loans and grants) accounted for two-thirds of net resource flows from OECD nations to developing nations, while direct investment accounted for two-thirds of the remainder (see table 6.2). Although these channels differ significantly, an important common element is that in each case a capital shortage is likely to be met through some type of rationing of credit (or of grants) in addition to—or even instead of—a simple rise in its interest cost. An analysis that focuses on interest rates alone assumes that transactors lend or borrow freely at those rates, yet for most types of transactions this assumption is incorrect. Even when financial capital is highly mobile internationally, the terms borrowers face from various alternative sources of credit may be linked only loosely.[2]

2. Frankel's (1991) results indicating a high degree of international capital mobility are based on a comparison across currencies of rates on highly standardized securities (government bonds), a tiny slice of overall capital markets. Mobility in this sense is likely to be much greater than in the Feldstein-Horioka (1980) sense. The breakdown of the Feldstein-Horioka relationship in the 1980s was driven mainly by a surge in U.S. government borrowing and thus may give little indication of the prospects for international flows overall, especially flows to areas in which even government debt cannot be viewed as a riskless asset. The idea of a capital market consisting of loosely

Table 6.2 **Net Resource Flows to Developing Countries, by Type, 1980 and 1987 (% of total)**

	1980	1987
Official development finance	35.2	66.5
Export credits	13.3	−0.8
Private flows	51.6	34.3
Direct investment (OECD only)	8.7	22.5
International bank lending	38.2	5.6
Bond lending	1.2	0.6
Other private	1.6	1.7
Nongovernmental organizations	1.9	3.9

Source: OECD (1988, table III-1).
Note: Details may not add to totals due to rounding.

A second important common characteristic of capital flows to developing nations is the desire on the part of the lenders, and sometimes also on the part of the borrowers, for continuing involvement between the source of capital and the investment activity financed by that capital. For both official development finance and private direct investment, arm's-length transactions are rare exceptions; the prevailing assumption is that the investment's rate of return will be enhanced when the lender also engages in monitoring, training, technology transfer, marketing, and other functions that entail an ongoing multidimensional relationship with the borrower.

The relatively large role of bank credit in the 1970s and early 1980s accommodated the long-standing desire of many developing nations to "unbundle" activities previously carried out through direct investment, i.e., to substitute arm's-length transactions (debt) for ones requiring complex ongoing links with the lender (equity). Had direct investment rather than bank loans been the major vehicle for channeling petrodollars to developing nations, failed projects would have produced disappointing results for corporate stockholders rather than an international debt crisis. In addition, the failure rate for projects undertaken with these funds might well have been lower.

6.2 The Crunch in Bank Credit

A related but different problem from the hypothesized global capital shortage is the credit crunch arising from international banks' attempts to meet the new capital-adequacy standard of the Bank for International Settlements (BIS). This standard, called the Basel standard, requires commercial banks to have $4 of equity capital for each $100 of risk-weighted assets. To meet the standard, many banks have needed to increase capital or to reduce the average riskiness of their asset portfolio. In Japan, the adjustment process has been

complicated by the sharp decline in the stock market, because Japanese banks hold stocks as part of their capital base (Murray 1992).

The recent increase in the vigilance of bank regulators in a number of countries provides a second reason to anticipate qualitative change in banking practice. With new regulatory standards in place and old ones enforced with greater zeal, bankers are likely to favor the most conservative lending choices. Since capital adequacy is measured on a risk-adjusted basis, one paradoxical result may have been *lower* bank-lending rates to certain classes of borrowers (e.g., U.S. Treasury bonds; in the early 1990s, market-determined rates on Treasuries fell to their lowest level in decades) as banks attempted to expand their safest investments at the expense of riskier ones (e.g., loans to smaller businesses).

Changes in bank behavior have little or no direct effect on either the supply of savings or the demand for new investment, although they are likely to have important effects on the process by which the two are reconciled. Moreover, because changes in bank behavior affect the money-supply process, regulatory changes have the potential to translate into a significant monetary shock. Thus, the overall impact of regulatory changes in banking may be far from negligible, especially for countries like the United States that are in the early stages of recovery from recession. However, the underlying problem here is not a capital shortage but a disruption in established patterns of financial intermediation.[3]

6.3 Trends in Saving

Since the explosion of international capital flows in the early 1970s, a few supersavers among the world's nations have accounted for the lion's share of net capital inflows to the rest. However, as figure 6.1 and table 6.3 illustrate, the identity of those important few has not remained constant over time. In the 1970s, the major source of new external financing was the recycled current-account surpluses of OPEC nations. In the 1980s, although some OPEC nations continued to show sizable surpluses, Germany and Japan dominated total outflows of surplus national savings (see tables 6.3 and 6.4).[4] But for the 1990s, new circumstances suggest that each of these sources may make a smaller contribution to global flows.

The national savings shortfall relative to domestic investment in the United

linked segments is similar to the preferred habitat analysis used by Modigliani and Sutch (1966) to analyze the term structure of interest rates.

3.There may be a parallel to the late 1980s, when the behavior of asset markets reflected in part the market response to unfamiliar investment opportunities opened up by financial deregulation. Recent regulatory developments have been a response to the unforeseen responses of deregulated markets.

4. Table 6.4 also underscores the extent of error in national current-account statistics. The discrepancy between total world current-account surpluses and the corresponding total deficits probably indicates a large and growing volume of unreported international capital flows.

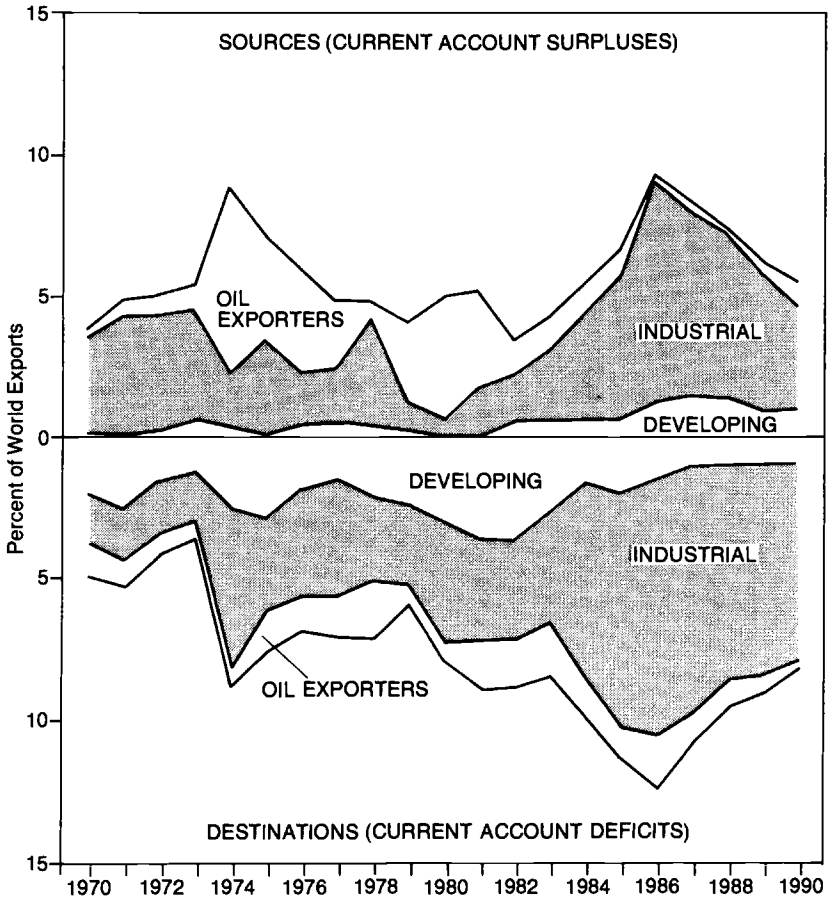

Fig. 6.1 Sources and destinations of world capital flows
Source: McCulloch and Petri (1992).

States has been widely discussed, and widely deplored, both at home and abroad. Less often noted is that the OECD area as a whole has shown evidence of a secular decline in national saving. Analysts explain this reduction, present in many but not all OECD nations, in terms of the slowing of population growth and the associated aging of the population, as well as by reduced government saving—smaller budget surpluses or larger budget deficits—that has not been entirely offset by greater private saving (Dean, Durand, Fallon, and Hoeller 1990). Although Japan continues to save more than its OECD counterparts, it too has experienced a secular decline in the saving rate. However, the effect of this trend on Japan's capital exports has been masked by two other important changes, the integration of Japan's financial markets into world capi-

Table 6.3 **Current Account Positions of Selected Countries, 1974–91 (billion $ U.S.)**

	1974	1980	1986	1990	1991
Oil exporters					
Kuwait	5.9[a]	15.3	5.3	−2.2	—
Saudi Arabia	23.0	42.8	−11.9	−4.1	—
OECD					
Germany	10.6	−14.0	39.9	46.4	−20.6
Japan	−4.7	−10.8	85.8	35.9	72.9
United States	1.9	1.8	−145.4	−92.1	−8.7

Source: IMF (1988, 1992).
[a]Figure for 1975.

Table 6.4 **Current Account Positions by Region and Selected Country, 1990 (billion $ U.S.)**

Region and Country	Current Account
Total	−84.4
International organizations	7.6
Industrial countries[a]	−95.8
United States	−92.2
Japan	35.9
Germany	46.8
United Kingdom	−24.6
Developing Africa	1.4
Developing Asia[a]	−4.1
China (PRC)	12.0
Indonesia	−2.4
Korea	−2.2
Malaysia	−1.6
Philippines	−2.7
Singapore	2.4
Taiwan	10.8
Thailand	−7.1
Central Europe	−7.9
Middle East	16.2
Developing Western Hemisphere	−1.8

Sources: IMF (1991a, table A-1); World Bank (1992, table 18).
[a]Details are for selected countries only and so may not add to totals.

tal markets and a secular decline, albeit from a very high level, in the rate of domestic investment spending.

In the short run, two temporary but important factors could operate in the opposite direction, producing a higher rather than lower OECD saving rate. A sharp decline in real estate prices in many areas, especially in the United States

and the United Kingdom, has greatly reduced the ability of households to finance spending through home-equity loans. Negative wealth effects from the fall in real estate and equity prices may also reduce household spending in Japan and some other parts of East Asia.

6.4 The Emergence of Newly Industrializing Supersavers

Most analysts conclude that the likely net effect of the factors summarized above will be to shrink the global supply of savings in the 1990s, at least once the major industrial economies have resumed normal growth. However, the now-standard account omits what may be the most important potential source of international capital flows for the 1990s and beyond: the developing countries themselves, and particularly those in East Asia. While inflows of foreign resources have played a significant role in the development of each of the NICs, their very high rates of domestic capital formation have been financed primarily by very high rates of domestic saving. Moreover, the NICs have already shown their potential as capital exporters, although their current contribution to global capital flows is still small relative to that of Japan. Their high (and in some cases, still rising) saving rates, together with strong growth, suggest these nations cannot be ignored in predicting trends in international capital flows, and especially flows within East Asia.

Ironically, the main pressure to limit potential capital exports from these new sources comes from the world's number one international borrower, the United States. During the 1980s, U.S. policymakers viewed Asian current-account surpluses as the major factor underlying record current-account deficits at home. The root problem was thus seen—at least in Washington—as an excess supply of financial capital in Asia rather than an excess demand for financial capital in America. Accordingly, the U.S. response was to urge (or even demand) adoption of policies in Japan and the Asian NICs to reduce capital exports—domestic expansion and exchange-rate appreciation in Asia, plus direct management of trade flows between Asian nations and the United States. Korea, for example, moved from a peak current-account surplus of more than $14 billion in 1988, to a 1990 current-account deficit of more than $2 billion, while Taiwan's current-account surplus fell from nearly $18 billion in 1987 to less than $11 billion in 1990 (IMF 1992).

Whether the U.S. approach made sense in the 1980s is open to debate, but its disadvantages are clearly magnified in a period of anticipated global capital shortage. Nonetheless, the same pressures to limit Asian current-account surpluses remain in place in the 1990s. Although the overall U.S. current-account position improved dramatically from 1988 to 1992, at least part of that improvement is expected to be reversed as the economy recovers. The challenge is thus to encourage, or at least not to discourage, Asian capital exports to other nations, while at the same time continuing to reduce politically troublesome U.S. bilateral trade imbalances with Japan and the Asian NICs.

6.5 Trends in Investment

While the prospects for expansion of the global supply of savings are at best clouded even when trends among the Asian NICs are taken into account, there are many new reasons to anticipate an increased overall demand for those savings, especially once the OECD nations have recovered from the current slump.

One major cause of new investment spending is the response to opportunities created by regional economic integration, both ongoing and anticipated. While the peak of investment spurred by the expansion and consolidation of the European market may already be past, the successful conclusion of negotiations to establish a North American Free Trade Area (NAFTA) is expected to accelerate the growth of investment flows to Mexico and to the U.S. border region.

Germany's abrupt turnaround from leading capital exporter to net capital importer (see table 6.3) is the consequence of the unexpectedly high cost of reunification. Although some of this cost reflects the investment required to modernize the capital stock of the former East Germany, a substantial part stems from the needed clean-up of decades of environmental neglect. The high cost of German reunification is thus significant both because of its direct impact on Germany and the world, but also as an indication of the size of likely future financial flows associated with the restructuring of Eastern Europe and the former Soviet Union.

However, any extrapolation from East Germany to the former Soviet bloc must distinguish between the cost of socially desirable restructuring and the cost of the actual restructuring that can be anticipated in the near future. Although it accounts for only a small fraction of the region in terms of population or area, the former East Germany is in a special position that virtually ensures that needed restructuring will actually occur within a relatively brief period. The same presumption cannot be made for the other nations (Collins and Rodrik 1991).

The developing nations as a group illustrate the same distinction between socially desirable restructuring and likely capital flows: the poorest and least-developed nations are unlikely to attract even a proportionate share of total resources flowing to the developing world, and certainly not a share that reflects the extent of needed economic transformation. However, important changes in some of the largest developing nations suggest that the flow of private capital to these regions may be larger in the 1990s than in the 1980s.

Despite some recent setbacks (e.g., Peru, Haiti), the move in Latin America toward democratically elected governments and market-guided development policies has improved the atmosphere for direct foreign investment and for private investment in general; in some countries, notably Mexico, changed political and economic prospects have halted or even reversed the capital flight of the 1980s. In Africa change is also in the wind. A successful political transi-

tion in South Africa, for example, could mean a resurgence of foreign investment in a nation that once attracted large amounts of capital from abroad. In Asia, the People's Republic of China (PRC) is once again moving in the direction of market activity, and even India appears to be opening its economy to market forces. At least in the near term, the Middle East is likely to invest more at home, and thus send less capital elsewhere, as Kuwait rebuilds its infrastructure. And across all these regions, greater attention to environmental concerns, especially as they apply to the developing world, will translate into new investment projects encouraged by and financed through multilateral agencies.

As with saving, temporary but important factors may reduce investment demand in some areas. Sharply lower equity prices on the Japanese stock market have led some Japanese multinationals to revise their plans for offshore expansion. Lower prices for real estate, especially commercial real estate, in many OECD nations have led developers to scale back plans for new construction. In either case, the impact is unlikely to be felt only at the margin, i.e., as small reductions across all areas. Rather, each major project still at the planning stage will have to be reevaluated.

6.6 Restoring the Saving-Investment Balance

With the potential for substantially increased investment demand in many regions, some investment plans will have to be scrapped or deferred unless saving also grows. As noted above, there is demonstrated potential for new Asian supersavers to fill at least part of the incipient gap. But an increase in current-account surpluses among the Asian NICs could also create new trade frictions. Moreover, unless their contribution becomes very large, some form of global capital shortage is nonetheless likely to materialize. Another possibility is that governments will choose to save more,[5] i.e., to reduce budget deficits by spending less or increasing tax revenues.[6]

The regional impact of an incipient capital shortage depends critically on the means by which conflicting ex ante plans are reconciled. To the extent that interest rates are pushed upward, there are obvious distributional implications for borrowing and lending nations. Nations with large external debt could feel the kind of pain many developing nations experienced in the early 1980s. This group would include many of the same problem debtors as before, but now

5. This assumes, as evidence from past OECD behavior suggests, that changes in government saving are not fully offset by induced changes in private saving (Dean, Durand, Fallon, and Hoeller 1990).

6. For example, Solomon (1991) concludes his analysis of a coming capital shortage by noting that "the most reliable policy action would be to enlarge government saving. . . . One would hope that the end of the Cold War and the subsequent peace dividend would make this possible without undue political strain." Although recent events make talk of a peace dividend seem premature, the Clinton administration has made defense cuts an important element in efforts to reduce the U.S. budget deficit.

also the United States. Higher interest payments on the huge U.S. government debt would further complicate America's problem of controlling the government deficit, although a large part of the interest payments are to U.S. residents and thus do not represent a net burden to the nation. Net lenders could expect to benefit correspondingly from high real returns on their assets, assuming that borrowers, especially among the developing nations, are not pushed into default. Unfortunately, a new round of debt crisis cannot be ruled out. This would imperil the promising reforms recently implemented in a number of developing nations.

However, as suggested above, rising interest rates would be just one possible consequence of a global capital shortage, and perhaps not even the most important. With capital scarce, most lenders will respond in part by rationing credit rather than simply raising rates. In particular, because of the perceived threat to world peace of economic collapse in the former Soviet Union, lending there is likely to be determined as much by international politics as by market forces. Likewise, political pressure at home will encourage international companies to limit new activities abroad before curtailing planned domestic projects.

6.7 Direct Investment and Firm Strategy

So far this discussion has looked only at prospects for aggregate global flows of capital, ignoring their composition. But the role of private international capital flows in promoting growth in developing nations appears to be tied most closely to the investment activities of businesses, i.e., to foreign direct investments. Moreover, the volume and even the direction of direct investment flows, whether worldwide or between any two regions, is linked only loosely to overall capital flows. Although direct investments do often entail some international transfer of financial capital, this is not their central function.

Foreign direct investment represents the expansion of a firm's business activities into another country. This can mean establishment of a new local subsidiary, but also acquisition of an existing local enterprise or initiation of a joint venture. Direct investors usually possess a competitive advantage such as superior technology, managerial know-how, brand recognition, or efficient channels for product distribution. Foreign direct investment in effect transfers the firm's competitive advantage for use in a new location. This process is fundamentally different from other kinds of investment because the transfer does not leave less of the firm's intangible capital available for use at the other end. The competitive advantage can thus be viewed as having the character of a public good within the enterprise. (Of course, this does not apply to any financial capital, managerial input, or machinery that is also part of the investment package.)

Firms incur the extra expense of establishing production facilities abroad because the location itself confers a substantial advantage. This advantage may reflect the usual elements of comparative advantage as reflected in lower pro-

duction cost; transport costs, barriers to imports, or host-country policy inducements also play an important role in determining the most advantageous location for production. However, because expansion through direct investment usually means higher cost of management, advantageous location alone is not enough to explain the establishment of foreign subsidiaries. Unless the investor has an advantage over local firms sufficient to offset the higher costs of international coordination, the benefits of location will be captured instead by domestic firms. Moreover, unless the parent firm adds over time to its intangible asset (through new research and development, for example), the relative profitability of foreign control is likely to erode over time. In mature industries, this erosion produces a tendency for control to shift to local entrepreneurs.[7]

6.8 Direct Investment in East Asia

In the 1980s, the scene for an explosion of outward direct investment by firms in Japan and the Asian NICs was set by three related but distinct changes in government policy: elimination of most restrictions on capital outflows, a liberalized regulatory environment toward inward direct investment (in particular, a smaller role for performance requirements), and host-country economic reforms to bring domestic prices into line with world prices (United Nations 1992).

Although in some cases government policies at home gave firms an extra push to expand operations abroad, a large number of direct investments by Asian firms were driven by two location-related factors: exchange rates and trade policy. Japanese direct investment accelerated in the second half of the 1980s, following the sharp rise in the yen relative to the dollar in 1985. Currency revaluations in the late 1980s similarly spurred outward direct investments by firms in Korea and Taiwan (see table 6.5). In all three cases, the exchange rate movement, together with rapidly rising wages at home, provided firms with an incentive to move some manufacturing operations offshore. Other Asian nations became favored locations for labor-intensive manufacturing activities (see table 6.6).

The direct-investment responses to changes in trade policy have been more complex, reflecting the increased use of selective trade restrictions by major importing nations. Production is sometimes moved to the importing country, as in the case of Japanese automobile production for the North American and European markets. Alternatively, it may be shifted to as-yet uncontrolled alternative export sites that offer a significant cost advantage. The Multifibre Agreement and its various precursors thus provided an important impetus for

7. Wells (1992) sees such a shift over time to local ownership in the case of NIC investments in Indonesia. These are typically low-technology manufacturing operations whose relocation is dictated mainly by rising labor costs at home.

Table 6.5 **Taiwanese and Korean Direct Investment Abroad, 1985–91 (million $ U.S.)**

	1986	1987	1988	1989	1990	1991
Taiwan						
Worldwide total	66	704	4,120	6,951	5,243	1,854
Korea						
Worldwide total (A)	121	300	281	620	1,332	1,368
ASEAN (B)	3	177	57	172	441	273
B/A (%)	2.6	59.1	20.2	27.7	33.1	20.0

Sources: Central Bank of China, *Balance of Payments: Taiwan District, the Republic of China* (Taipei, December 1992); Bank of Korea, *Foreign Investment* (Seoul, various issues [courtesy of Won-Am Park]).

Table 6.6 **Direct Investment in Selected East Asian Countries, 1985–91 (billion $ U.S.)**

Country	1985	1986	1987	1988	1989	1990	1991
Malaysia	0.7	0.5	0.4	0.7	1.7	2.5	3.5
Indonesia	0.3	0.3	0.4	0.6	0.7	1.1	1.5
Thailand	0.2	0.3	0.2	1.1	1.7	2.3	—
China (PRC)	1.0	1.4	1.7	2.3	2.6	2.7	—

Source: IMF (1992).

the worldwide dispersion of textile and apparel production, and of the associated technology, management skills, and marketing networks, first from Japan to the NICs, and more recently from the NICs to less-developed, lower-cost, and sometimes less-restricted export sites.[8]

Although Japan remains the largest single source of direct investment for most Asian nations, other Asian investors now account for a surprisingly large, and growing, share. This new pattern may reflect the desire of some host nations to avoid excessive dependence on a single source of capital or technology, as well as the location-related motivation of the NIC investors already discussed. In 1988–89, the four NICs together committed almost $8 billion to direct investments in Indonesia, Malaysia, the Philippines, and Thailand, while Hong Kong alone registered $6.6 billion of investments in the PRC over the same period (United Nations 1991). For Indonesia, the anticipated inflow of new direct investment from other Asian source countries has recently exceeded that from Japan (Wells 1992).

8. See Wells (1992) on NIC foreign direct investments in Indonesia and Petri (1992) on investments in Thailand.

6.9 Implications of Scarce Capital for Direct Investment

How will a period of global capital shortage or a shorter-term credit crunch affect direct investment flows from and into East Asia? The surprising answer is that direct investments (and associated transfers of technology and know-how) from the Asian NICs into other Asian nations may be headed for a period of even more rapid expansion. Several related but distinct factors favor the expansion of NIC firms into new Asian locations.

First, for reasons noted above, Japanese firms may scale down their plans for foreign expansion, at least temporarily; indeed, several have already announced their intentions. Thus, host-country competition to attract NIC investments will intensify. While Japanese investments have been especially prized by national planning authorities because of their presumed technological excellence, NIC investments can also offer a welcome technological boost along with the other benefits associated with any new project.

Second, a regime of high capital costs promotes the use of smaller-scale, labor-intensive technologies rather than those requiring large investments in plant and equipment. This favors the types of projects carried out by smaller NIC-based firms over their typically larger and more capital-intensive Japanese, U.S., and European competitors. New investments will be clustered in relatively labor-intensive industries, and within any given industry, in the more labor-intensive production technologies.

Third, the likely expansion of labor-intensive production activities will in turn enhance the location advantage of relatively low-wage Asian nations like Malaysia, Indonesia, Thailand and perhaps the PRC and Vietnam over location sites elsewhere, especially Europe and North America. Although Eastern Europe also offers low labor costs as well as greater proximity to Western markets, problems of property rights, dispute resolution, and worker motivation (all familiar to firms with investments in the PRC) are substantial deterrents. In addition, Asian sites are favored by many smaller investors on account of physical proximity, family ties, or cultural propinquity.

Finally, even if interest rates move upward, there may be reason to expect relatively little impact on capital costs for smaller firms based in the NICs. Much of the investment by these firms is financed either internally or by local partners in the host country, so conditions in global capital markets may play only a remote role in determining the cost of these funds. In Korea, the move toward liberalization of internal capital markets may even have the effect of reducing borrowing costs for smaller firms as government policy attempts to limit chaebol economic dominance.

6.10 Concluding Comments

The review of developments in worldwide patterns of saving and investment suggests that both a short-term credit crunch and a longer-term capital short-

age, while by no means assured, may be realistic concerns. However, the examination also underscores that few if any of the important capital-market developments of the past two decades could have been foreseen from a similar exercise of adding up anticipated changes in the supply of savings and demand for investment.

Even in a world of highly integrated capital markets, the consequences of either a crunch or a prolonged shortage are unlikely to materialize mainly as a marginal adjustment to higher interest rates. Rather, any large change in market conditions will promote major shifts across markets, or between market and nonmarket credit sources. Even in market transactions, an important part of the adjustment will come through nonprice mechanisms for allocating credit.

Of course any rise in interest rates will favor lenders. However, in the specific area of foreign direct investment the impact is complex. Direct investors are typically both sources and users of capital. Moreover, high capital costs favor some investments and some investment sites over others. The particular characteristics of direct investment carried out by firms located in the Asian NICs in other Asian nations suggest that a regime of higher capital costs will favor rapid growth of direct investment, and associated transfers of technology and know-how, from the Asian NICs into other Asian nations. An unexpected consequence of a global capital shortage may thus be to reduce the dependence of Asian developing nations on Japan as a source of technology and capital.

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Comment Chong-Hyun Nam

Rachel McCulloch sets out two important propositions in her interesting paper. One is that a short-term credit crunch along with a long-term capital shortage is now becoming a real possibility. The other is that, surprisingly enough, such a global capital shortage is likely to cause Asian NICs to expand, rather than contract, their direct investments into other Asian developing nations. Both propositions are based on careful reviews of surrounding factors. I would like to address my comments to each of these two propositions.

Indeed, I agree with McCulloch's first proposition. As she detailed in her paper, there is ample evidence to believe that global savings will fail to meet global demand for investment in coming years. In most OECD nations, as well as in many OPEC nations, excess savings over domestic investment are not likely to be generated for some time. At the same time, demand for outside sources of funds is expected to rise significantly in many Eastern European countries as well as in the former soviet republics.

The Asian NICs will not be of much help either. Unless the United States changes its trade policy toward the NICs, they are not likely to remain supersavers too much longer. Korea is a good case in point. Of the Asian supersavers, Korea has already become a net capital importer since 1990, after a short period of trade surplus from 1986 to 1989. Of course, many factors contributed to this, but persistent U.S. pressure on the Korean government for

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currency revaluation was certainly a major one. As then–U.S. Trade Representative Carla Hills testified before the U.S. Congress, U.S. trade policy toward Korea was most successful on that score. If the United States achieves the same victory over the rest of the Asian NICs, these countries will soon cease to be supersavers, as well.

In addition to such gloomy prospects for regional savings and investment demand, there are now some indications that the world economy is coming out of recession, which is bound to increase investment demand relative to savings capacity.

Now, let me turn to McCulloch's second proposition, that an unexpected consequence of such a global capital shortage may be increased foreign direct investments by Asian NICs in other Asian developing countries, making these nations less dependent on Japan. I have reservations about this proposition on several grounds.

First of all, given the current level of trade surplus in Japan and the prospect that it will be maintained for some time, I wonder where Japan will turn to dump its extra savings. My hunch is that it will keep increasing its portfolio as well as its direct investments abroad. Certainly Asian developing nations will remain attractive sites for Japanese investors. So, in my view, the recent slowdown of Japanese foreign direct investment in Asian developing nations may be only a transitional phenomenon.

Second, of the Asian NIC supersavers, Korea, as I mentioned earlier, has already become a net capital importer, and other Asian NICs may follow suit as long as the United States sticks to its current trade policy. In my view, this policy is likely to continue into the Clinton administration. In other words, given their large dependence on the U.S. market, Asian NICs may choose to ease trade frictions vis-à-vis the United States by increasing domestic investment demand rather than generating excess savings over domestic investments. If this is the case, then, any foreign direct investments they make would need to be financed by foreign savings, which are expected to become increasingly tight.

Finally, I have a hunch that the Asian NICs, as well as Japan, are likely to keep their outward direct investment at a rather high level mainly because their economic growth rate is likely to remain higher than that of the rest of the world, and so they will need to make quicker structural adjustments. Many firms and industries with diminishing comparative advantage may, therefore, wish to relocate their production sites into other Asian developing nations.

An important question is whether their outward direct investment will be encouraged or discouraged as external capital market conditions become more tight. I think this will depend, to a large extent, on the degree of substitutability or complementarity between direct investment and other types of capital movements, especially when the global capital market becomes more tight. I think this is an empirical question yet to be answered.

Comment

Kazumi Asako

Rachel McCulloch has presented a very neat and concise paper on worldwide capital markets centering especially on an Asian capital crunch. Many issues are discussed in the paper, and I agree with most of the conclusions. But, in order to play the discussant's role, I will pick up several issues and raise questions.

First, as a general comment, I would like to express a bit of dissatisfaction, as follows: In many places McCulloch states important propositions and observations without referring to the actual data. In other words, her analysis is mostly qualitative in nature and lacks quantitative or statistical foundations. I think McCulloch should include statistical analysis or simulation analysis to improve the persuasiveness of the paper.

Second, I question whether one of the most important conclusions of the paper has quantitative support. That is, I wonder whether the role played by East Asian countries such as Korea and Taiwan as capital exporters to the other Asian countries is large enough to replace the role played by Japan. McCulloch observes that Japan's role as a capital exporter to the Asian countries will decrease in the 1990s partly because stock and land prices have fallen in Japan. But, I think both Korea and Taiwan have also experienced declines in stock and real estate prices. For this reason, I cannot imagine how these countries can afford capital exports large enough to replace Japan's.

Third, I agree that a regime of high capital costs promotes the use of smaller-scale, labor-intensive technologies rather than those requiring large investments in plant and equipment. But, again, I would like to know the quantitative importance of this substitution effect. Without any solid data analysis, the conclusion that the higher the capital costs the larger the direct investments from the Asian NIEs into other Asian nations is not secured.

Fourth and finally, I would like to know how McCulloch assesses the capital flows which are related to environmental protection, which is a hot issue nowadays. Capital flows of Japanese official development aid (ODA) are likely to change because of environmental considerations. How about capital flows between East Asian countries and other Asian countries?

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