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Do We Face a Global "Capital Shortage"?

Zia Qureshi

A severe global capital squeeze and a big increase in global real interest rates (which some fear) are unlikely if industrial countries continue fiscal consolidation — especially the reform of social security systems. Without such consolidation, global real interest rates could rise well above already high recent levels (about 4 percent), with adverse consequences for all countries.

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Summary findings

Qureshi assesses the medium- to long-term outlook for global demand and supply of capital. He reaches the following conclusions:

• The demand for investment funds in developing countries will remain strong, but most increased demand will likely be met by domestic savings. Investment's share in GDP will probably rise in these countries, but so will savings' share, so their net claim on industrial countries' savings is likely to remain small. Of course, savings will not rise automatically. It is essential that policies, institutions, and the economic environment be conducive to saving.

• Financial liberalization and integration of international capital markets will continue to give developing countries as a group improved access to private foreign capital. But whether specific countries attract and sustain such inflows will depend on their economic prospects and policies, including conditions that promote domestic saving and investment (to both attract foreign capital and help limit it to sustainable levels). Investment needs in developing countries are great, but "effective" demand for foreign capital will remain limited by the countries' perceived creditworthiness and viability. Despite the sharp rise in aggregate private capital flows to developing countries in the 1990s, only a dozen or so of them receive significant amounts of private capital.

• Most low-income countries will continue to depend mainly on official capital for some time. But official capital will likely be increasingly scarce, so these countries must intensify their domestic resource mobilization and accelerate the policy reform needed to attract private investment.

• The critical factor in alleviating pressure on global interest rates will be progress on fiscal consolidation in industrial countries, especially the reform of social security systems. Net capital flows from industrial to developing countries are much smaller than the budget deficits in industrial countries. In 1994, for example, lowering the industrial countries' budget deficit by about 20 percent would have freed up enough money to finance the entire net capital flow to developing countries.

• International capital markets will tend to remain tight in the coming decade, but a severe global capital squeeze and a big increase in global real interest rates (which some fear) are unlikely if industrial countries continue fiscal consolidation. Without such consolidation, global real interest rates could rise well above already high recent levels of about 4 percent, with adverse consequences for all countries.

This paper — a product of the International Economic Analysis and Prospects Division, International Economics Department — is part of a larger effort in the department to analyze major trends and issues in the global economic outlook and their implications for developing countries. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Virginia Barreto, room I4-327, telephone 202-458-7216, fax 202-522-2112, Internet address vbarreto@worldbank.org. October 1995. (30 pages)

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DO WE FACE A GLOBAL "CAPITAL SHORTAGE"?

Zia Qureshi
World Bank

Helpful comments and suggestions were received from Michael Bruno and Masood Ahmed. The paper draws heavily on global economic projections prepared by the Analysis and Prospects Division of the International Economics Department for *Global Economic Prospects and the Developing Countries 1995*. Special thanks are due to T.G. Srinivasan for assistance with the projections. Abdel Stambouli and Sarah Crow helped with the graphics. The paper also draws on recent analyses of global capital market prospects prepared by other organizations. An earlier draft of the paper served as a discussion document at the Aspen Institute's annual conference on The Future of the World Economy, Aspen, Colorado, August 19-23, 1995. The paper has benefitted from comments received from conference participants.

Summary

This paper assesses the medium- to long-term outlook for global demand and supply of capital. It reaches the following main conclusions:

- *The demand for investment funds in developing countries will be strong in the coming years, but the bulk of the rise in investment in these countries is likely to be met from their own savings. While the share of investment in GDP will likely rise in these countries, saving as a percentage of GDP will also rise. Thus, the net claim of these countries on industrial countries' savings will likely remain small. Saving in developing countries, of course, will not rise automatically to support higher investment. A domestic economic environment, policies and institutions conducive to higher saving will be needed.*

- *Financial liberalization and international capital market integration will continue to improve the access of developing countries as a group to private foreign capital. But for individual countries, success in attracting and sustaining inflows will depend mainly on country-specific economic policies and prospects. This includes conditions promoting high domestic saving and investment, which both attract foreign capital and help to limit it to sustainable levels. While developing countries' investment needs are large, their "effective" demand for foreign capital will continue to be limited by their creditworthiness and viability in the eyes of potential foreign investors. Despite increasing global capital market integration and the sharp rise in private flows to developing countries in the 1990s, still only a dozen or so of these countries are significant recipients of private capital.*

- *Most low-income countries will remain predominantly dependent on official capital for some time to come. As official capital is likely to be in increasingly short supply, these countries must intensify domestic resource mobilization and accelerate policy reforms that in time will enable them also to attract private investment.*

- *What will matter for long-term real international interest rates is not so much the increased competition for capital from developing countries as the balance of supply and demand for capital within industrial countries. The critical factor in alleviating pressure on global interest rates will be progress on fiscal consolidation in industrial countries, especially the reform of social security systems. The magnitude of the net capital flow from industrial to developing countries is small compared with the budget deficits of industrial countries. In 1994, for example, a lowering of the industrial countries' aggregate budget deficit by about 20 percent would have been sufficient to finance the whole of the net capital flow to developing countries.*

- *International capital markets will tend to be tight in the coming decade, but a severe global capital squeeze and a large rise in world real interest rates that some fear are unlikely to happen provided progress on fiscal consolidation in industrial countries continues. However, absent that, world real interest rates could rise well above the already historically high recent levels of around 4 percent, with adverse consequences for both industrial and developing countries.*

Introduction

A combination.of factors underlie recent concerns about the potential for a global "capital shortage".[1] Capital shortage is a rather misleading term. *Ex post,* the global demand for capital must equal the supply, since any shortage can be eliminated by a rise in the price of capital—the rate of interest. It is therefore more meaningful to pose the issue *ex ante,* in terms of the possibility that the global demand for capital will tend to outstrip the supply, exerting upward pressure on world real interest rates.

Concerns about tighter international capital markets and rising interest rates stem from expectations that an increasing demand for capital from developing countries[2] will coincide with rebounding investment in industrial countries as their economies recover, while the supply of capital will fail to keep pace because of declining private saving rates in the industrial countries and a rising drain on private savings from government deficits. Such expectations are reinforced by a pattern of world real interest rates over the past decade that are high by historical standards (Chart 1), the rise in interest rates being viewed as evidence of an increasing pressure of demand on the available supply of capital. From the perspective of developing countries, the question is: will a strongly rising world demand for capital collide with an increasingly limited supply, causing a global crowding-out in which world real interest rates will rise substantially higher and capital flows to developing countries will shrink?

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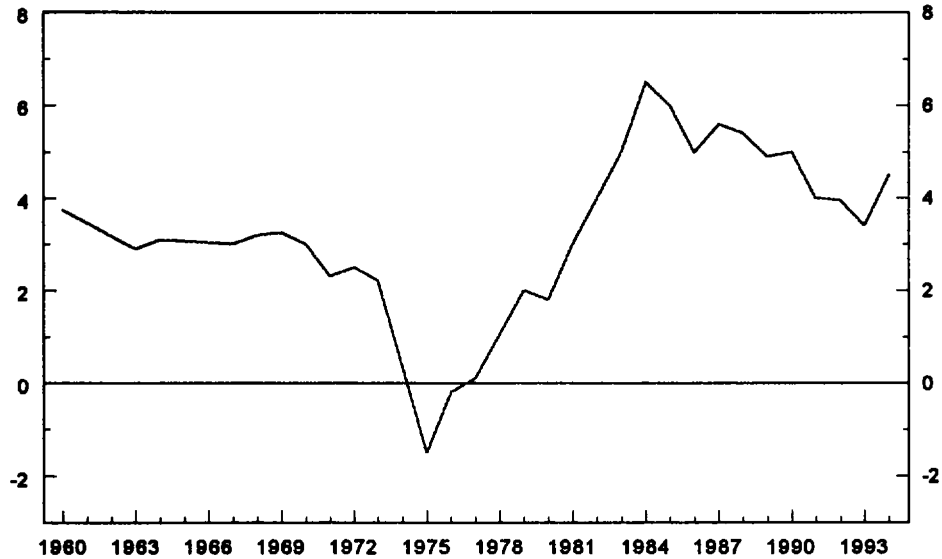
[1] For example, these concerns find an important place in George Shultz's Richard T. Ely Lecture at the 1994 annual meetings of the American Economic Association and in the *Economic Report to the President (1995)* of the Council of Economic Advisors.

[2] Unless indicated otherwise, the term developing countries as used in this paper includes all low- and middle-income countries, including the transition countries of Central and Eastern Europe and the former Soviet Union.

Chart 1. Global Long-Term Real Interest Rates

(In percent)

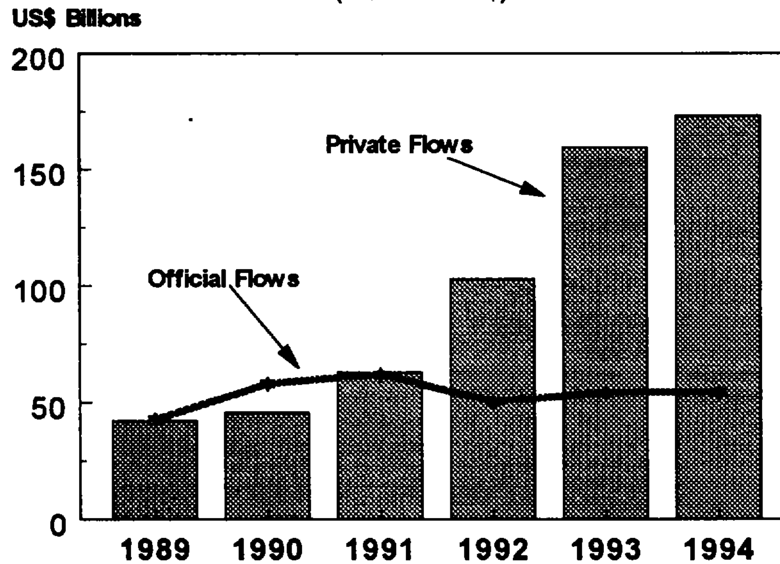


Source: IMF, World Economic Outlook, May 1995

Note: GDP weighted average of ten-year (or nearest maturity) government bond rates for the United States, Japan, Germany, the United Kingdom, Canada, Belgium, the Netherlands, and Switzerland minus long memory inflation estimate.

Chart 2. Net Long-Term Capital Flows to Developing Countries, 1989-94

(In billions of US$)



Source: World Bank (1995a)

Analysis of likely trends over the next ten to fifteen years suggests that such an outcome is unlikely, but with the important proviso that fiscal consolidation efforts in industrial countries remain on track. The paper first reviews the prospects for saving and investment in developing countries and their net demand for foreign capital. Next it assesses the prospects for the supply and demand for capital in industrial countries, which are net suppliers of capital to international financial markets. The last section of the paper draws conclusions from this analysis and the main implications for policy.

Foreign Capital Requirements of Developing Countries

It is useful first to place developing countries' net demand for foreign capital in perspective. Private capital flows to developing countries rose sharply in the early 1990s, quadrupling between 1990 and 1994 (Chart 2). The surge in these flows has been a factor feeding the concerns about demand outrunning supply in the global capital market. But despite this rise in private capital flows to developing countries, total net capital flow to these countries remains rather small relative to industrial country financial aggregates. To illustrate, in 1994, total net capital flow to developing countries was approximately $130 billion, about 3 percent of industrial country gross national saving and 0.6 percent of their GDP.

Demand for Capital. Looking ahead, the demand for capital in developing countries in the next ten years or so is likely to rise faster than over the past decade. Current World Bank projections are for real gross domestic investment in developing countries to rise at an average annual rate of 6-6.5 percent in 1995-2004. That would raise their investment to GDP ratio from about 24 percent in 1985-1994 to 27-28 percent in 1995-2004. In absolute terms, investment in developing countries could average $1.7-1.8 trillion per year in 1995-2004

(measured in constant 1994 dollars), close to fifty percent higher than its estimated level in 1994 (Chart 3).

Investment ratios are expected to rise in all developing country regions, albeit by different margins. The largest increase is expected to occur in East Asia, where investment ratios are already the highest—34 percent compared with a developing country average of 24 percent.[3] Gross domestic investment in East Asia could average as high as 38-39 percent of GDP in the next ten years, amounting to around $750-800 billion annually (at 1994 prices) and accounting for nearly 45 percent of total investment in developing countries (up from about 30 percent over the past ten years). Two factors account for the expected strong growth of investment in East Asia: large needs to expand and upgrade existing infrastructure capacity which is coming under severe strain as a result of rapid economic growth and urbanization; and investment requirements of a major shift in the industrial structure of these economies from predominantly labor-intensive manufacturing to capital-intensive industries.

With the breakdown of the old system, investment collapsed in many of the transition countries of Eastern and Central Europe and the former Soviet Union, recording an estimated average annual decline in real terms of more than 15 percent during 1991-94 for the group as whole. As these countries progress from stabilization to growth, investment will recover, and could rise in real terms at 5 percent a year or higher on average in the next ten years. Total investment in these countries could be on the order of $250 billion annually over the next ten years, measured in constant 1994 dollars.

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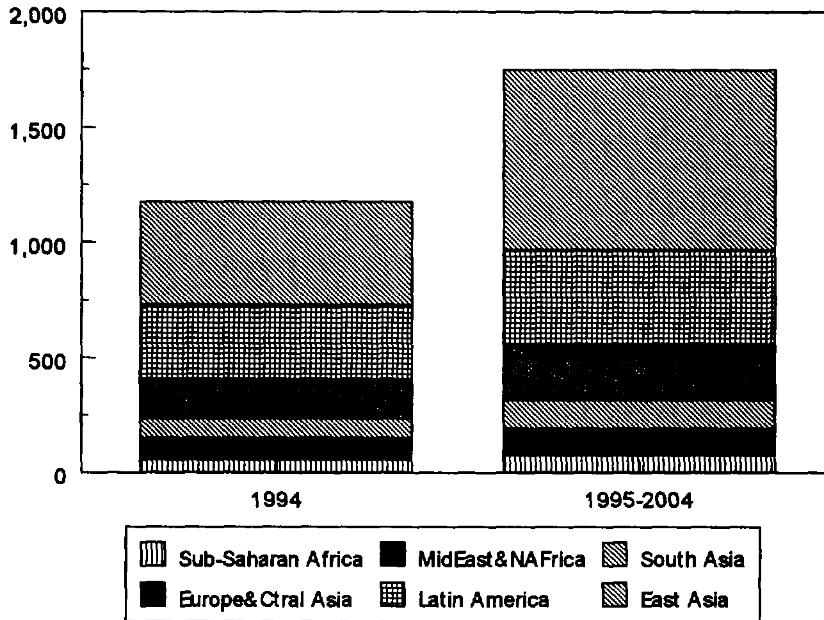
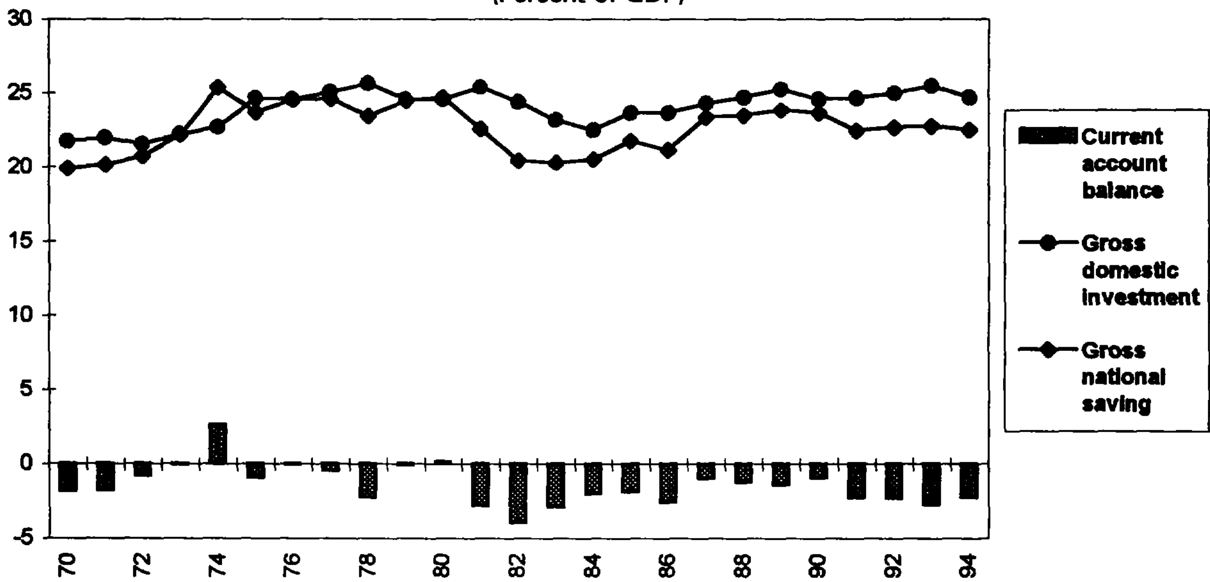
[3] This paper uses the standard World Bank country classification. Under this classification, developing East Asia excludes three newly industrialized, high-income East Asian economies—Hong Kong, Singapore, and Taiwan, China. For a fuller description of the country classification, see World Bank (1995b).

Chart 3. Prospective investment in developing countries by region, 1995-2004
(Annual average in billions of 1994 US dollars)



Source: World bank data; projections are from World Bank (1995b)

Chart 4. Developing Countries' saving, investment and current account balance, 1970-94
(Percent of GDP)



Source: World Bank data.
Note: Excludes transition countries

Investment is expected to rise in Latin America as the region emerges from the shadow of the debt crisis of the past decade and builds on the stabilization and structural gains of recent years, and in South Asia as that region makes a break from inward-looking policies and pervasive government controls that shackled private sector growth in the past. Over the next ten years, total investment in these two regions could average around $400 billion and $125 billion per annum, again in constant 1994 dollars. Total investment in the Middle East and North Africa region is likely to average roughly the same as in South Asia, starting from a higher base than in South Asia but growing more slowly.

In Sub-Saharan Africa also, which at an average of about 16 percent of GDP has the developing world's lowest investment rate, some rise in investment is expected, supported by the economic reforms that a number of countries in the region are now undertaking. But total investment in Sub-Saharan Africa will remain small relative to other developing regions, likely averaging $75 billion or so annually over the next ten years (at 1994 prices), and accounting for less than 5 percent of total investment in developing countries over the same period.

Supply of Capital. The prospect of strong growth in investment spending in developing countries, however, does not imply a parallel large increase in their demand for foreign capital. The bulk of the prospective rise in investment in developing countries is expected to be financed from increases in these countries' own savings. Over the past two decades or so, average investment and saving rates in developing countries have generally moved closely together around a slightly rising long-term trend (Chart 4). Current World Bank projections are for the average gross national saving rate in developing countries to rise from 23 percent in the past decade to around 26 percent in the next, roughly matching the projected rise in their investment rate (Chart 5).

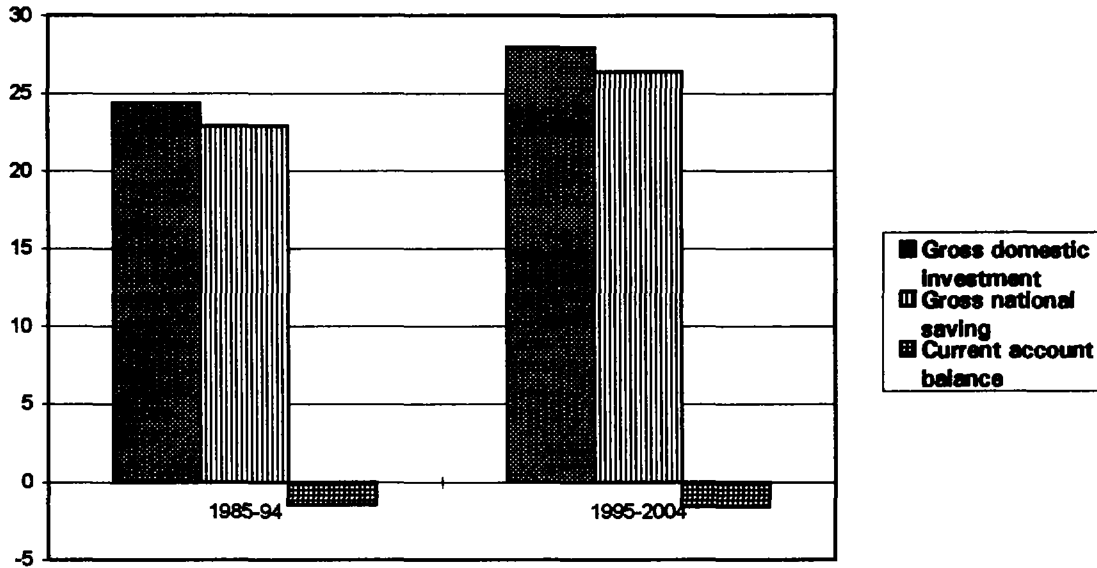


Chart 5. Outlook for Developing Countries' saving, investment and current account balance, 1985-2004
(Percent of GDP)
30
25
20
15
10
5
0
-5
1985-94
1995-2004
Gross domestic investment
Gross national saving
Current account balance
Source: World Bank data; projections are from World Bank (1995 b).
Note: Includes transition countries.

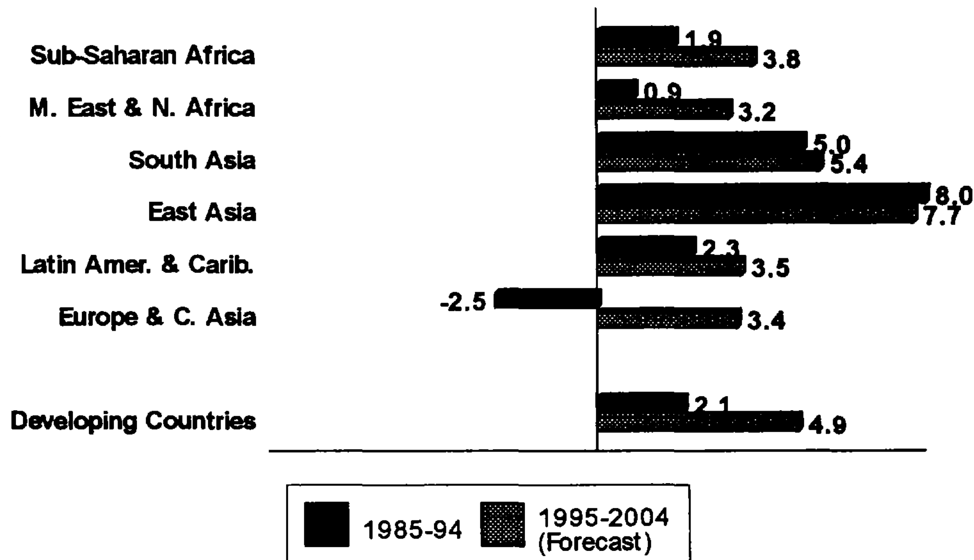


Chart 6. GDP Growth in Developing Country Regions
Percentage changes per year, 1987 prices and exchange rates
Sub-Saharan Africa
M. East & N. Africa
South Asia
East Asia
Latin Amer. & Carib.
Europe & C. Asia
Developing Countries
1.9
3.8
0.9
3.2
5.0
5.4
8.0
7.7
2.3
3.5
-2.5
3.4
2.1
4.9
1985-94
1995-2004 (Forecast)
Source: World Bank (1995b)

The projected rise in developing countries' saving rate is underpinned by projected stronger growth in these countries. Substantial empirical evidence supports a positive relationship between growth and saving—a virtuous circle whereby higher growth raises the saving rate which helps finance the increased investment associated with higher growth.[4] Subject to continued progress on economic reforms, and given the improved external environment marked by buoyant world trade, average growth in developing countries is currently projected by the World Bank to rise from 2.1 percent annually in the last ten years to close to 5 percent in the next (Chart 6). The projected acceleration in developing countries' average growth appears less sharp if the transition countries, many of which experienced large output declines in the late 1980s and early 1990s, are excluded. For developing countries excluding this group, the projected acceleration is from 4.0 to 5.2 percent, smaller but still significant.

Saving rates in developing countries should be boosted also by favorable demographic developments. Because of a falling share in the population of those below the working age, the average dependency ratio in developing countries is expected to decline continuously for at least the next 20-25 years. Between 1995 and 2015, for example, the average dependency ratio could decline from around 90 percent to 70 percent (Chart 7).[5]

An additional boost to saving could come from further fiscal adjustment. Average developing country central government deficits fell from 5-6 percent of GDP in the latter half of the 1980s to 3-4 percent in the early 1990s. Continuing adjustment policies in many countries are expected to produce further gains in the

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[4] For some recent studies, see Edwards (1995), IMF (1995b), Schmidt-Hebbel *et al.* (1994), and Bosworth (1993).

[5] IMF (1995a). See also Lam and Teh (1995) for prospective trends in dependency ratios in East Asia and their likely impact on saving.

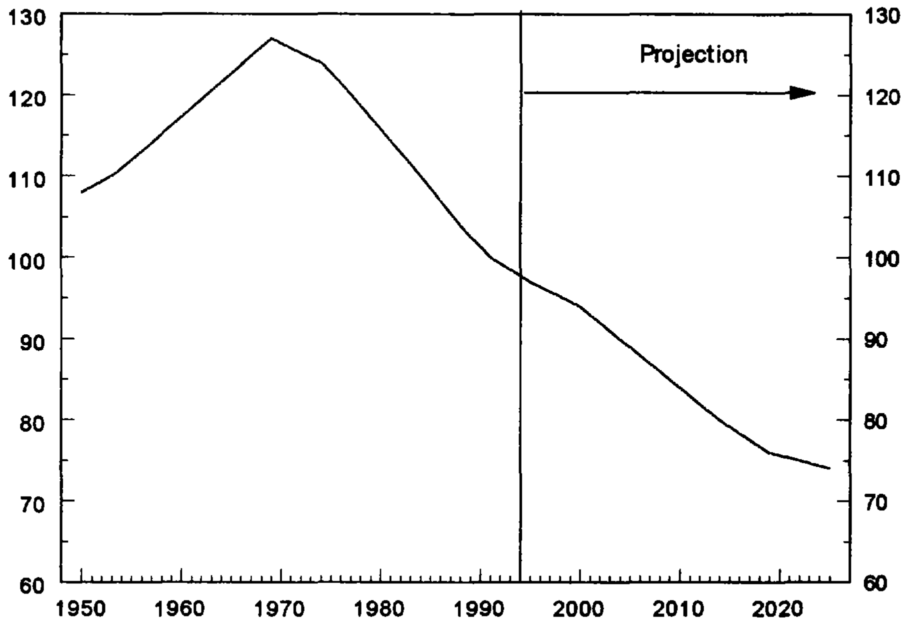
Chart 7. Dependency Ratio in Developing Countries, 1950-2025
(Youth and elderly as percent of working age population)
Projection
130
120
110
100
90
80
70
60
1950
1960
1970
1980
1990
2000
2010
2020
Source: U.N. population data and projections

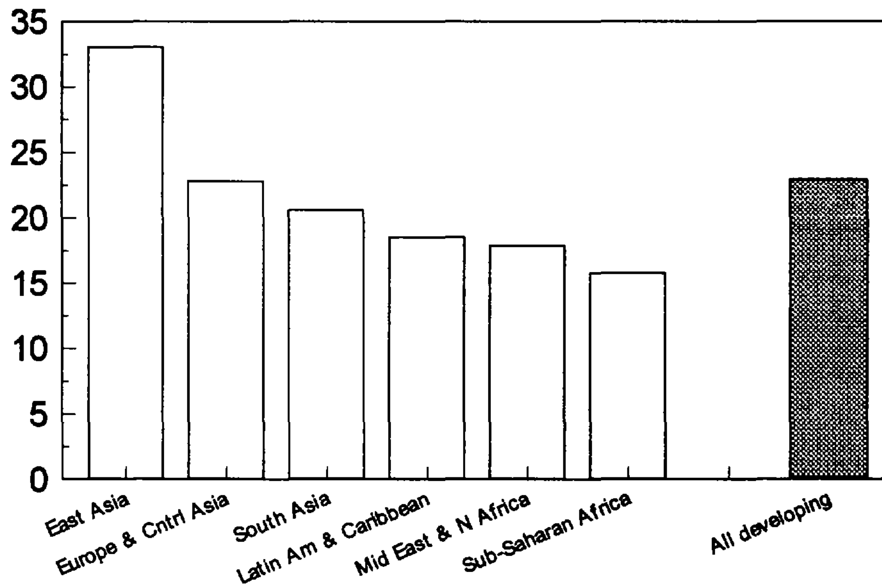
Chart 8. Saving in Developing Countries by Region
(Gross national saving as percent of GDP; 1985-94 average)
35
30
25
20
15
10
5
0
East Asia
Europe & Cntrl Asia
South Asia
Latin Am & Caribbean
Mid East & N Africa
Sub-Saharan Africa
All developing
Source: World Bank data.

years ahead. For example, current projections are for the average central government deficit of developing countries to decline from about 3 percent of GDP in 1994 to about 2 percent by 1996.[6] An improved public sector saving performance should contribute to higher overall saving.[7]

As in investment, the rise in saving is expected to be the largest in East Asia. Over the last ten years, gross national saving in the region averaged a high 33 percent of GDP, having risen from 27 percent in the previous ten years. Declining youth dependency ratios, combined with the virtuous circle of high investment, high growth and high saving that has been much in evidence in East Asia in the past two decades, are likely to boost the average regional saving rate to 36-37 percent of GDP over the next ten years. Saving rates are also expected to rise in other developing country regions, albeit more moderately and from much lower levels. Saving rates in Latin America and Sub-Saharan Africa, averaging about 17 and 15 percent of GDP, respectively, are among the lowest in the developing world (Chart 8), and have declined over the past decade or so. Provided the macroeconomic and incentive-system reforms now underway remain on track, saving rates in these regions are expected to recover some of the lost ground, averaging up to two percentage points of GDP higher over the next ten years than at present.

Domestic financing of prospective increases in investment in developing countries will be facilitated by a shift in the composition of investment toward the private sector. Again, East Asia provides an example. As noted, a major driver of investment in East Asian countries in coming years will be their vast needs for infrastructure development to support continued rapid industrialization. It is

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[6] IMF (1995a).

[7] Empirical evidence has tended to reject the notion of a one-to-one offset between public and private saving—the so-called Ricardian equivalence. Most studies find the offset to be little more than one-half. See, for example, Corbo and Schmidt-Hebbel (1991), Edwards (1995) and IMF (1995a).

estimated that to meet these needs, East Asia will need to increase its investment in infrastructure from about 5 percent of GDP currently to 7-8 percent over the next ten years. This translates into total infrastructure investment of some $1.5 trillion over 1995-2004, with annual investment rising from about $100 billion in 1995 to more than $200 billion by 2004 (at 1994 prices).[8] Whereas in the past these countries relied heavily on the public sector and foreign funding, they are increasingly switching their infrastructure investment toward the private sector and domestic financing. The development of local capital markets is one way in which these countries are encouraging the mobilization of domestic resources. Of the total private sector investment in East Asia over the next ten years, only about 4 percent is expected to rely on foreign financing.[9]

Financing the Balance. The net claim developing countries make on industrial countries' savings equals their current account deficit—the excess of their gross domestic investment over their gross national saving—plus the net change in their external reserves.[10] Experience shows that, in general, current account deficits in developing countries substantially in excess of about 2 percent of GDP on a continuing basis are unlikely, and inconsistent with sustainable external financial positions in the long run.[11] Where persistent large imbalances are not corrected by domestic adjustment, international financial markets can be

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[8] World Bank (1995c); Kondury (1994).

[9] World Bank (1995c). This study of the development prospects of East Asia's domestic capital markets finds these markets to be playing a much larger role in coming years in financing the region's investment requirements. It estimates, for example, that the East Asian bond market will grow from about $340 billion in 1994 to more than $1 trillion by 2004. World Bank (1994b) documents the increasing role of the private sector in infrastructure investment in developing countries.

[10] Abstracting from transactions included in net errors and omissions.

[11] As some recent studies of the differential experience of Latin American and East Asian countries with large capital inflows have found, external deficits used mainly to finance investment (as in much of East Asia) tend to be more sustainable in the longer-run than those used largely to finance consumption (as in several Latin American countries in recent years). See Corbo and Hernandez (1994) and World Bank (1995b).

expected to force the necessary adjustment by ceasing to finance the imbalances, as happened recently in Mexico.

Current World Bank projections show the aggregate current account deficit of developing countries averaging around 1.6 percent of GDP over the next ten years, only slightly higher than in the past decade (see Chart 5). Allowing for increases in reserves to maintain adequate import cover, this translates into a cumulative net capital flow to developing countries of $1.5-2 trillion between 1995 and 2004. Under these projections, foreign capital will finance around 7 percent of the total investment in developing countries over this period.

Relative to industrial countries' total saving and GDP, the net capital flow to developing countries over the next ten years will remain small—on average a little over 3 percent and 0.7 percent, respectively. Gross flows would be larger, as increasing global capital market integration will see rising two-way flows between developing and industrial countries.

The smallness of these magnitudes suggests that developing countries are unlikely to face a "shortage" in international capital markets on account of the size of the claim they collectively make on these markets. For individual developing countries, access to capital markets will depend mainly on their own ability to attract capital, based on investors' perceptions of their policies and prospects. The increasing integration of developing countries in international capital markets is reflected in the surge in private capital flows to these countries in the 1990s. Within this aggregate picture of increasing integration, the dependence of private flows on individual country circumstances is reflected in the concentration of these flows in a relatively small number of countries. Between 1991 and 1994, only a dozen countries, mostly in East Asia and Latin America, accounted for close to 90 percent of all private capital flows to developing countries (Chart 9). Developing

countries with a record of sound policies and strong economic prospects should continue to be able to raise needed capital on international capital markets without much difficulty.

The major recipients of private capital flows in the developing world have been mostly middle-income countries, with the notable exception of two large low-income countries—China and India. Low-income countries in general remain heavily dependent on official flows for their foreign capital needs. Sub-Saharan Africa, for example, received a paltry 1 percent of total private flows to developing countries over the past five years, and continues to obtain 90-95 percent of its total long-term capital inflow from official sources, compared with an overall developing country average now of 25-30 percent. As low-income countries improve their economic performance and prospects, they too can begin to attract private capital. But even under favorable assumptions, most of them will continue to rely mainly on official capital for some time to come.

The demand for official capital from low-income countries thus will remain high, but the supply is likely to be increasingly limited. Net official capital flows to developing countries have leveled off in the 1990s, and in real terms have been declining (see Chart 2). So if there is a shortage, it will be in the supply of official capital. This is of concern particularly to Sub-Saharan Africa. The region not only relies predominantly on official sources of finance, as indicated above, but also has a much heavier dependence on external financing to meet is resource needs than do other developing regions. In 1993, for example, the external current account deficit excluding grants was about 7 percent of GDP on average in Sub-Saharan Africa, compared with an average of about 3 percent for all developing

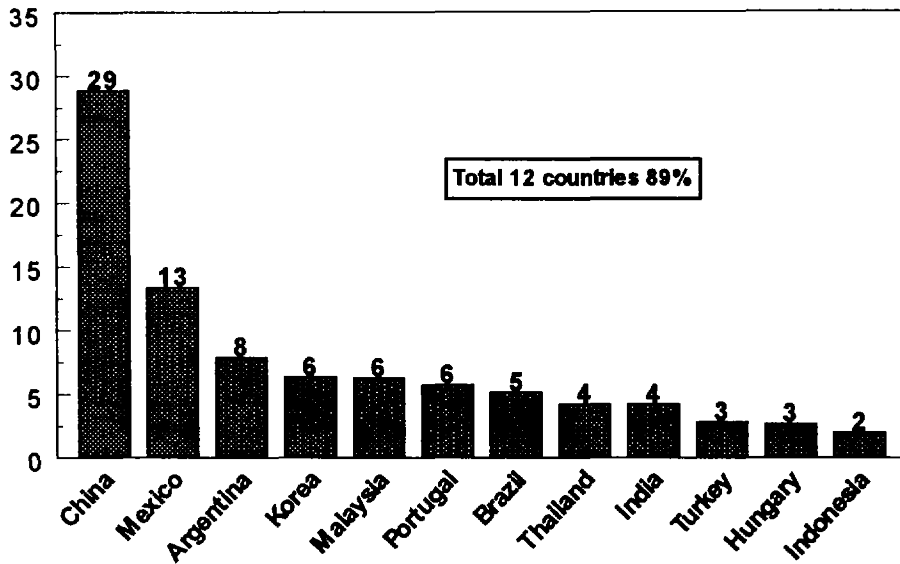
Chart 9. Share in Total Private Capital Flows to Developing Countries, 1991-94
(In percent)
Total 12 countries 89%
29
13
8
6
6
6
5
4
4
3
3
2
China
Mexico
Argentina
Korea
Malaysia
Portugal
Brazil
Thailand
India
Turkey
Hungary
Indonesia
Source: World Bank (1995a)

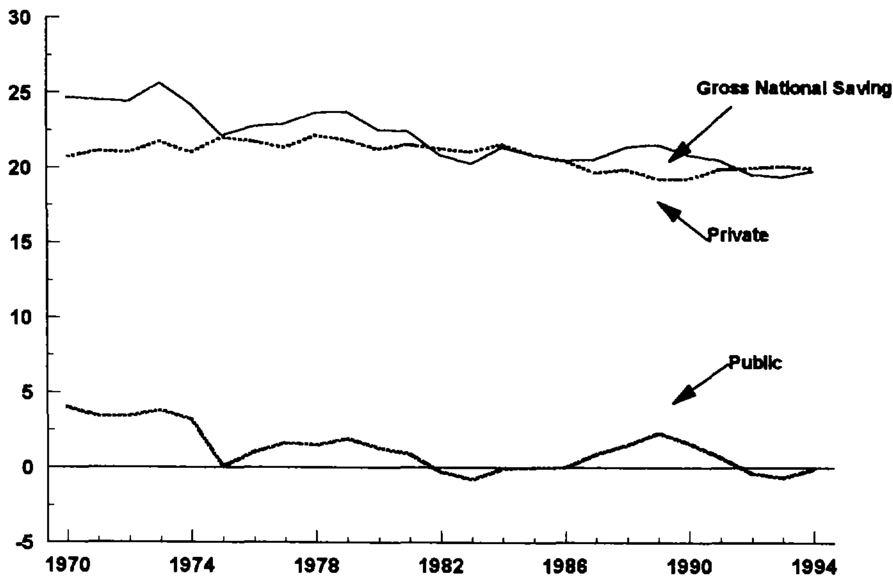
Chart 10. Saving in Industrial Countries, 1970-94
(Percent of GDP)
Gross National Saving
Private
Public
1970
1974
1978
1982
1986
1990
1994
Source: IMF

countries.[12] The prospective scarcity of official capital increases the urgency for countries in the region to strengthen domestic resource mobilization and to accelerate economic reforms that in time will improve their prospects for attracting private investment.

Supply and Demand for Savings in Industrial Countries

From the above analysis the capital demands of developing countries overall appear unlikely to be a significant source of increased pressure on world capital markets and international real interest rates. These will be influenced mainly by the supply of savings relative to the demand within industrial countries, which account for about three-quarters of the world's total annual savings and dominate the global capital market. What is the outlook for the supply and demand for savings in industrial countries?

Prospects for Saving. Saving rates in industrial countries have been on a long-term declining trend (Chart 10). The average gross national saving rate in industrial countries has declined by about 5 percentage points since the early 1970s. While private saving has also declined, the fall in the overall saving rate has been concentrated in the public sector, with average public saving falling from close to 4 percent of GDP in the 1960s and early 1970s to below zero today. Many analysts consider this decline in public saving in industrial countries to be the main factor behind the increased pressure of demand on the global supply of savings that is reflected in the relatively high world real interest rates seen since the 1980s. A recent study attributes as much as four-fifths of the rise in world real

[12] Including grants, the current account deficit in 1993 was 2.1 percent of GDP in Sub-Saharan Africa and about 2.5 percent in developing countries as a whole.

interest rates since the 1960s to the worsening of government fiscal positions in industrial countries.[13]

If the decline in saving rates in industrial countries continues, world long-term real interest rates may rise even higher than the 4 to 4.5 percent average range observed since the mid-1980s. Fortunately, however, there are reasons to think that the declining trend in industrial country saving rates could be reversed, at least for a time.

Private saving rates in industrial countries over the next 15 years or so are likely to be boosted by a rise in the share of population of higher-saving age groups, as the baby boom generation enters middle age. The proportion of industrial country population aged between 40-64 years—the prime earning and saving years—is expected to rise from 40 percent today to 45 percent by 2010, with the proportion of population aged between 20-39 years—typically a time of net borrowing—declining from 42 to 34 percent (Chart 11). This demographic shift is expected to more than offset the negative effect on saving of a continuing rise in the share in population of those over 65 years—who typically save little or dissave—from 18 to 21 percent. Also, the baby-boom generation is much richer and appears to be saving at higher rates than its previous cohorts. It is estimated that these factors could cause aggregate net household financial savings in industrial countries to rise in real terms over a ten-year period by about $5 trillion on top of a trend increase of about $7 trillion, yielding a total of $12 trillion (Chart 12).[14] The favorable demographic shift is expected to be especially pronounced in the United States, potentially raising its net saving rate from 4.9 percent in 1992 to 6.2 percent in 2010.

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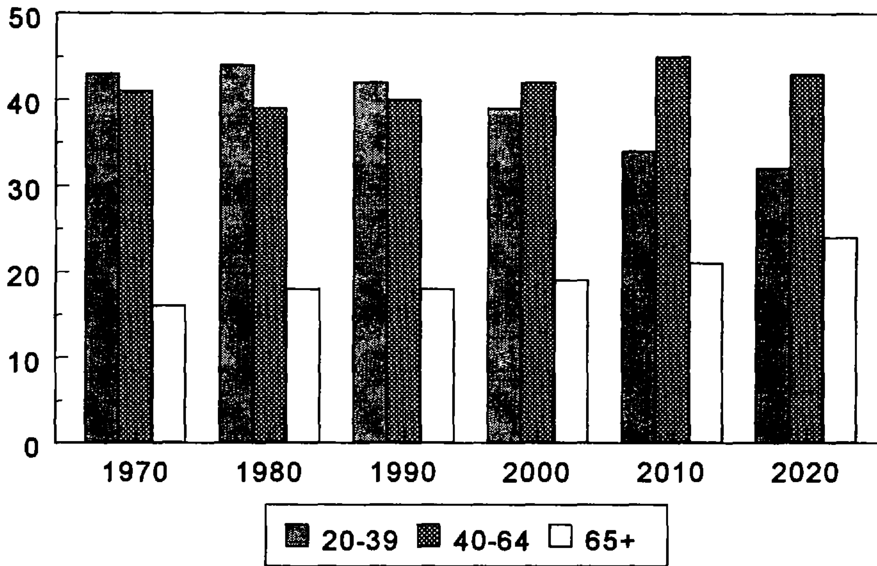
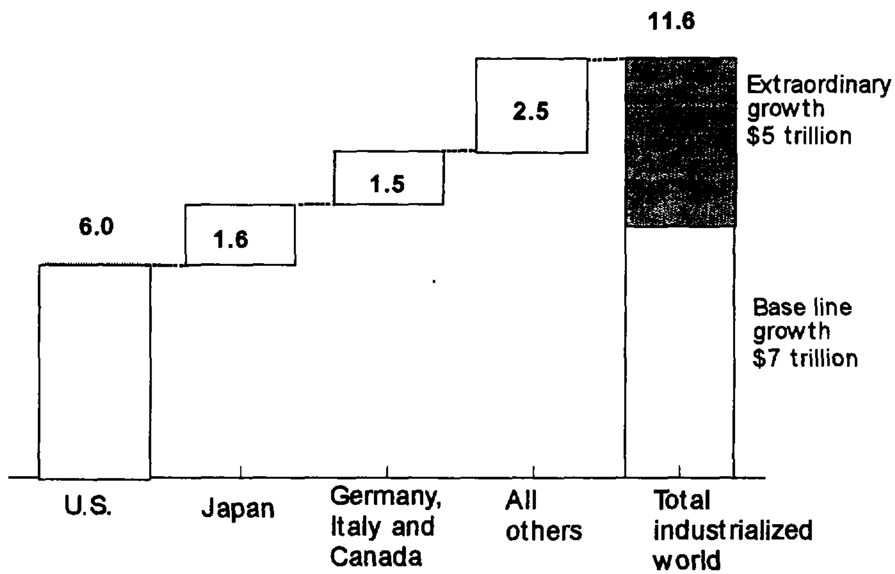
[13] IMF (1995a).
[14] McKinsey (1994). See also Borsch-Supan (1995).

Chart 11. Changing Age Composition of Adult Population in Industrial Countries, 1970-2020
(In percent)



Source: U.N. population data and projections

Chart 12. Net Household Financial Savings in Industrial Countries over the Next Ten Years
(1992 U.S.$Trillions)



Source: McKinsey (1994)

Adequacy of Saving and the Need for Fiscal Consolidation. Will this boost to the supply of capital be adequate to meet the increase in demand? The outcome will depend critically on the evolution of fiscal balances in industrial countries. It is estimated that net private investment in industrial countries financed through capital markets could account for up to $5 trillion of the increase in net household financial savings over a ten year-period.[15] That would leave roughly an equivalent amount of net household financial savings available for financing industrial country government deficits, after allowing for net capital flow to developing countries of $1.5-2 trillion. Could the absorption of private savings by government borrowing in industrial countries over the next ten years be kept within that order of magnitude?

On the basis of past trends and existing expenditure programs, the aggregate borrowing requirement of governments in industrial countries would appreciably exceed $5 trillion over a ten year period, which would squeeze the capital available both for private investment in industrial countries and for flows to developing countries, putting upward pressure on interest rates. An illustrative worst-case scenario is depicted in Chart 13. Constructed by extrapolating past trends on the assumption of no change in policies and programs, it shows an accelerating deterioration of the fiscal positions of most major industrial countries. The indicated increases in budget deficits and public debt to multiples of the already high present levels are clearly not feasible, but serve to bring the need for fiscal consolidation into sharp relief.

Recently, however, the governments of industrial countries have started to show greater resolve in coming to grips with the major fiscal challenges they face. The average structural general government budget deficit of OECD countries

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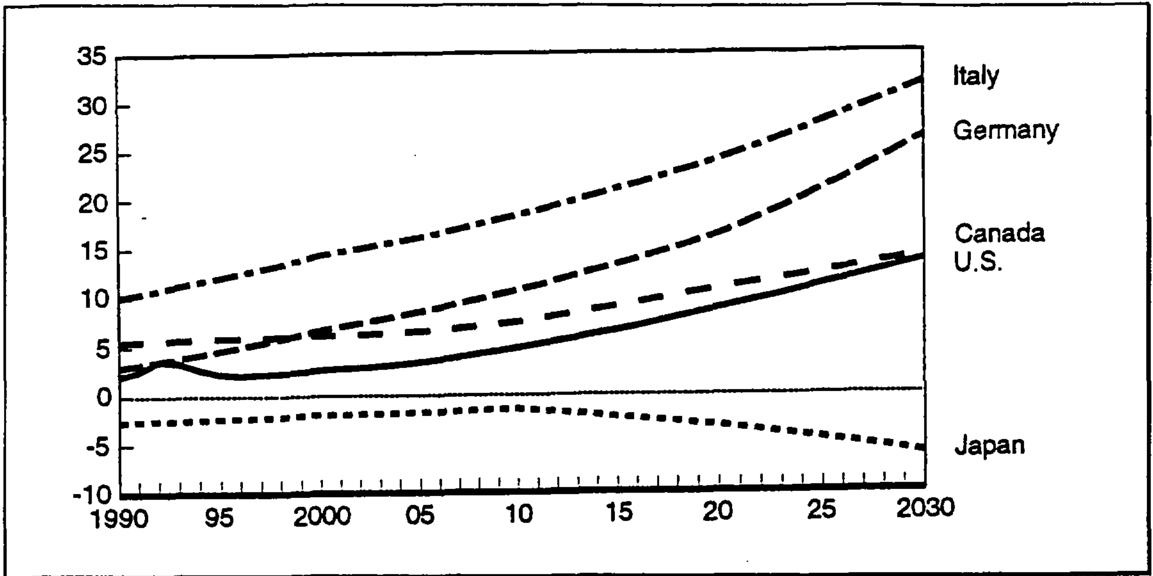
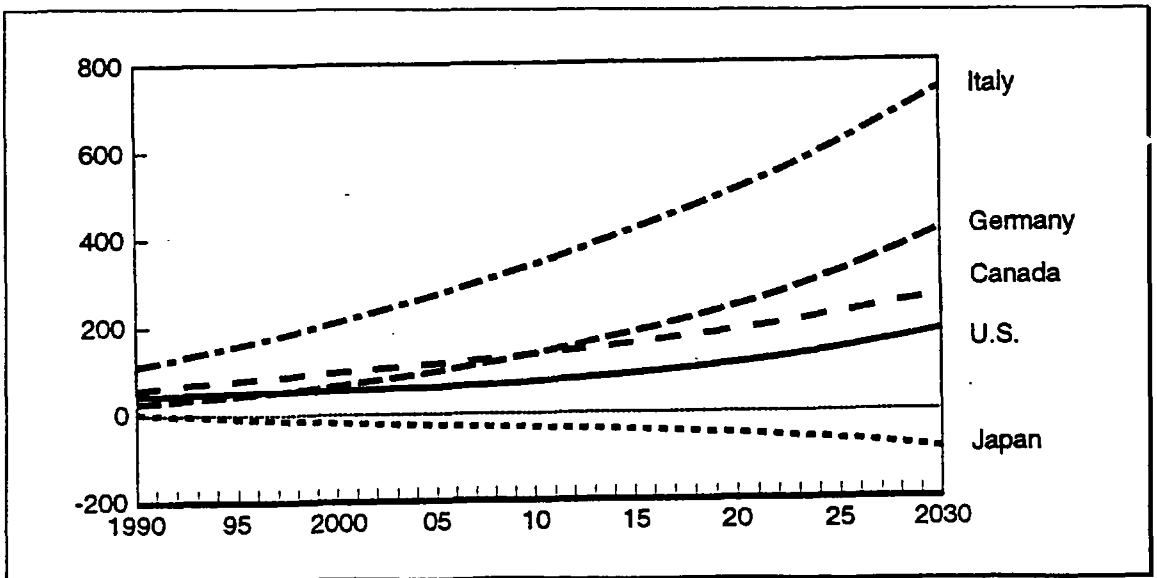
[15] McKinsey (1994).

Chart 13. Fiscal Position of Some Major Industrial Countries: An Illustrative Scenario

(a) Budget Deficit (Percent of GDP)



(b) Goverment Debt (Percent of GDP)



Source: McKinsey (1994)

declined from 3.7 percent in 1992 to 3.2 percent in 1994. The actual general government budget deficit declined from 4.5 percent in 1993 to 3.9 percent in 1994. A number of industrial countries have announced medium-term deficit-reduction objectives. Based on these, the OECD projects the average actual general government budget deficit in industrial countries to fall from 3.9 percent in 1994 to 1.9 percent in 2000.[16] Sustained progress on these efforts at fiscal consolidation will be needed to keep government absorption of private savings within the amounts available without putting further upward pressure on real interest rates.

Most current projections, including the World Bank's current baseline projections,[17] assume that the fiscal consolidation efforts now underway in industrial countries will be sustained, and will be sufficiently strong to help avoid a global crowding-out scenario that could otherwise result, with potentially serious consequences for world real interest rates and capital flows. But achieving the necessary fiscal adjustment will be a major and difficult challenge for industrial country governments, and the possibility of a faltering of these adjustment efforts constitutes an important risk in the global capital market outlook.

A major area of fiscal adjustment will be the reform of social security systems. The unsustainability of present social security policies is indicated by the fact that the present value of unfunded public pension liabilities in most major industrial countries ranges from 100 to 250 percent of GDP (Chart 14).[18] That means that the implicit social security debt is a multiple of an already large explicit public debt (in gross terms, the latter now averages over 70% of GDP in industrial countries, having jumped from about 40% only fifteen years ago).

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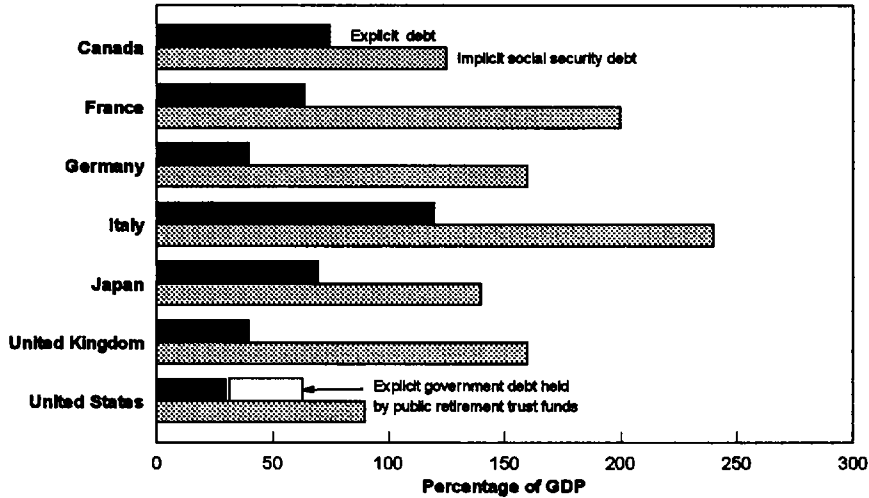
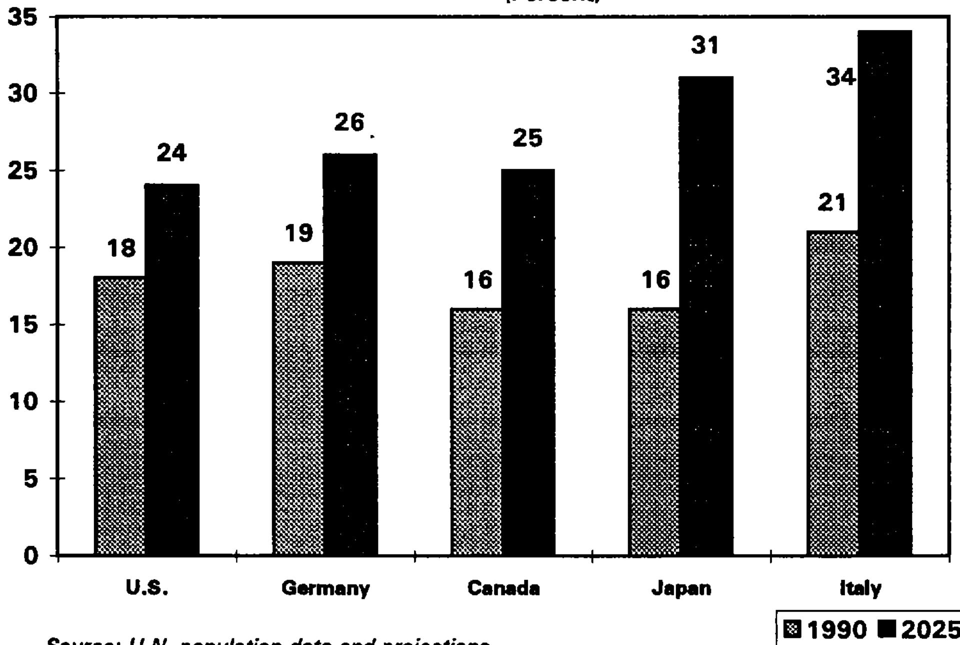
[16] OECD (1995a).
[17] World Bank (1995b).
[18] Van der Noord and Herd (1993) and World Bank (1994a).

Chart 14. Explicit Debt versus Implicit Public Pension Debt in Some Major Industrial Countries, 1990



Note: The assumed discount rate is 4 percent.
Source: Van der Noord and Herd(1993); World Bank (1994a)

Chart 15. Share of Retirees in Adult Population of some Major Industrial Countries, 1990-2025
(Percent)



Source: U.N. population data and projections
Note: Population 65 years of age and over divided by total population over 19 years of age.

It is important to note that the boost to private saving rates in industrial countries from a rising proportion of middle-aged savers, though significant, will be temporary. Around 2010, the share in industrial country populations of those over 65 years will start to rise rapidly while the share of 40-64-year-olds will fall, tending to depress private saving rates once again (Charts 11 and 15). At the same time, the rising proportion of retirees in the work force will add to public pension liabilities, which at that point could start to rise exponentially unless the pension systems were reformed.[19] This underscores the importance of investing the temporary increment in savings over the next decade or so as profitably as possible (including in developing countries), to generate maximum returns that will support the rising ranks of future pensioners, and at the same time initiating timely actions to reform social security systems to place them on a sustainable footing. Limiting government deficits in industrial countries and so allowing more capital to flow to developing countries that offer an abundance of profitable investment opportunities would thus prove beneficial to both groups of countries. The fast integrating international capital markets would facilitate such global, mutually beneficial reallocation of capital toward more profitable uses.

While reducing public dissaving is a priority, the declining secular trend in private saving rates in industrial countries calls for attention to the need to correct incentive distortions that depress the private propensity to save. Social security reform, together with tax reform, would be important in that respect as well. Some analysts consider generous, unfunded public social security systems perhaps the main factor in the decline of private saving in industrial countries.[20]

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[19] This possibility is indeed a major reason for the accelerating deterioration of government fiscal positions depicted in the illustrative scenario in Chart 13.

[20] Feldstein (1994), for example, finds that social security programs in the United States reduce private saving to about half of what it might otherwise be. See also Poterba (1994).

As Chile's successful experience with privatization of pension plans shows, social security reform can make an important contribution to raising saving also in developing countries.

Conclusions

The foregoing outlook for global capital demand and supply suggests that international capital markets will tend to be tight in the years ahead, but a severe global capital squeeze and a sharp rise in world real interest rates that some fear are not inevitable. The key will be fiscal outcomes in industrial countries. Provided progress on fiscal consolidation in these countries continues, prospective increases in the global demand for capital can be accommodated within the likely increases in supply. In this scenario, world long-term real interest rates will not be expected to rise beyond the recent average of around 4 percent, and could even decline if the fiscal effort is sufficiently strong. On the other hand, absent the reduction in fiscal deficits, world real interest rates could rise well above the already historically high recent levels, with adverse consequences for both industrial and developing countries.

The single most important implication for policy that emerges from an assessment of the outlook for global capital demand and supply thus is the need for strong and sustained efforts at fiscal consolidation in industrial countries. Central to fiscal consolidation, and with favorable implications for private saving, will be the reform of social security systems. The timing of reform matters, as acting early will help improve the fiscal positions and reform entitlement programs before the share of the elderly in industrial country populations begins to rise rapidly.

Developing countries' demand for foreign capital will rise but is unlikely to be a major source of pressure on world real interest rates. Increased investment

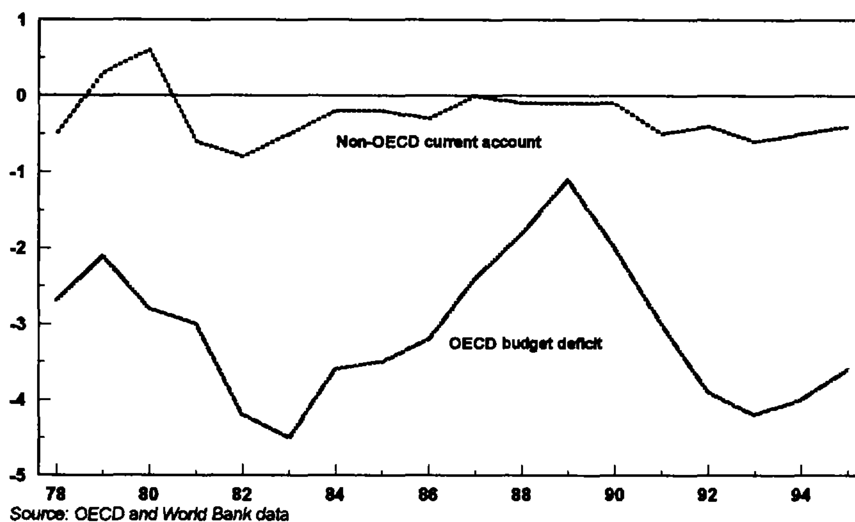
spending by these countries will for the most part be financed from increases in their own savings. The magnitude of the net capital flow from industrial to developing countries is small compared with the budget deficits of industrial countries (Chart 16). In 1994, for example, a reduction in industrial countries' aggregate budget deficit of about one-fifth would have been enough to finance the whole of the net capital flow to developing countries.

Saving in developing countries, of course, will not rise automatically to support higher investment. A domestic economic environment, policies and institutions conducive to higher saving will be needed. Especially important are macroeconomic stability that underpins strong and sustainable growth, fiscal discipline, reforms in pricing and the tax and transfer system that remove disincentives to saving, and well-functioning financial markets and institutions. These are also among the conditions that promote investment and attract foreign capital. Countries that are successful in raising investment and foreign capital on a sustained basis will also be the ones generating a complementary increase in domestic saving.

Investment, like trade, thus is not a zero-sum game. Resources available to finance investment are not fixed. As East Asia's experience shows, higher investment can call forth higher saving, through the commonality of many of their underlying determinants and the dynamics of the growth process. Foreign capital also tends to flow on a steadier basis to countries with high domestic investment and saving, and therefore high economic growth. These both attract foreign capital and help to limit it to sustainable levels.

Despite increasing global capital market integration and the surge in aggregate private capital flows to developing countries, a relatively small number of countries account for the bulk of the private flows. For individual developing

Chart 16. Comparison of Claims on Resources, 1978-94
(percent of OECD GDP)



countries, it is not trends in capital markets at the global level that will mainly determine inflows but their own policies and prospects that affect foreign investors' perceptions of their creditworthiness and viability. And, as emphasized above, this includes in particular conditions that promote high domestic investment and saving. Where domestic saving remains low, or worse still falls as foreign saving becomes a substitute for domestic saving, significant private flows will either not be attracted or, as happened in Mexico, not be sustainable.

For most low-income, low-growth developing countries, private capital inflows will remain limited, until the time they are able to achieve substantial improvement in their policies, performance and prospects. These countries in general will have to continue to rely mainly on official sources to meet their foreign capital requirements for some time to come, and could face financing constraints if the recent stagnation in official flows continues. The prospective

tighter supply of official capital intensifies the need for these countries to mobilize more domestic resources and to quicken the pace of economic reforms that in the medium term would enable these countries to begin to attract more private investment.

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