

Understanding Global Imbalances

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Two contemporary issues provide reason to focus on national saving and investment: the debate over public pensions, and pensions more generally, in all rich countries; and the large global current account imbalances, conceptually the difference between national savings and domestic investment. Are we all saving enough to provide adequate retirement income for rapidly ageing populations – especially Americans, whose household savings seems to have disappeared altogether in 2005? And are the countries with large external deficits – notably the United States – mortgaging the income of future generations inappropriately, not to mention courting financial calamity in the meantime?

This paper will not answer either question definitively, but I hope to shed some light on them, especially the second. The focus of attention will be the United States, but in an increasingly globalized economy it is increasingly anachronistic to focus on domestic factors alone, and it is simply inappropriate when the issue is the country's external deficit – equal attention must be devoted to the counterpart surpluses elsewhere in the world.

Start with some factual background. [Table 1](#) shows that the US current account deficit has risen steadily since 1995, with a brief pause in the recession year of 2001, both in dollar terms and as a percentage of GDP, rising from 1.5 percent of GDP in 1995 to 6.4 percent in 2005, the latter probably being the highest in US history. In accounting terms, with small qualifications, the current account deficit represents both net foreign investment in the United States, on which more below, and the difference between domestic investment and national saving. Thus a five percentage point rise suggests either that investment must have increased or that saving must have declined. [Table 2](#) provides information on gross domestic investment (including government investment) and on gross private and public saving in the United States over the period 1995-2004. If we compare 2004 with 1995, there has been a modest increase in investment and a modest decline in private saving, together amounting to 2.3 percent of GDP, or only about half the change in the current account. Investment grew strongly to 2000, and private saving declined sharply (4.9 percentage points together), but investment declined during the subsequent recession

and then recovered somewhat, while private savings grew steadily. Compared with the current account reported in [Table 1](#), the interesting thing about domestic investment and private saving in [Table 2](#) is how little variation they have each shown over the past decade, with a range of barely more than two percentage points each, although saving reached its low point when investment was at its highest (in 2000). There are however two additional columns in Table 2: government saving and statistical discrepancy. Both show substantial variation. The public sector was in rough balance in 1995, state and local government saving almost offsetting federal government dissaving. The federal budget then improved significantly, running surpluses for the four fiscal years 1998-2001. On national account definitions (as shown in Table 2), gross government saving was positive from 1996 through 2001, reaching a peak of 4.4 percent of GDP in 2000. With the 2001 recession, the federal tax cuts of 2001 and 2003, and increases in federal spending associated with homeland security, the war in Iraq, and farm support, the federal budget moved into deficit again and in 2004 gross government saving was negative by 1.6 percent of GDP – a swing of six percentage points from 2000. (State and local governments remained gross savers throughout this period, their capital expenditures exceeding their collective modest budget deficits in 2002 and 2003.)

To sum up, over the past decade the movements of domestic investment and private saving alone should have been associated with a deterioration of the current account of 4.9 percent points of GDP to 2000, compared with the actual deterioration of 2.7 percentage points, and an improvement 2000-2004 of 2.6 percentage points, compared with a further deterioration of 1.5 percentage points. The discrepancies are explained partly by movements in public saving, which increased by 4.4 percentage points 1995-2000, but declined by an astonishing six percentage points 2000-2004. Moreover, all such figures are subject to errors of measurement, and the statistical discrepancy swung by 2.7 percentage points in the period 1995-2000, suggesting that the investment boom was stronger than actually measured, or that private saving declined by more than measured; and in 2000-2004 swung by 2.0 percentage points the other way.

The relative steadiness of private saving in Table 2 is at odds with frequent references to declining savings rates in the United States. Indeed, household saving as a percent of disposable income declined from around ten percent in the inflation/recession years of the early 1980s to 4.6 percent in 1995 to 1.8 percent in 2004 and apparently became negative in 2005. Private savings as reported in Table 2 include the entire private sector, including corporate retained earnings; and they are gross, i.e. they include corporate

depreciation allowances. This is entirely appropriate in a world of rapid technological change. We should care less about net additions to the measured capital stock than about improvements in the quality of capital, and improvements are usually possible with replacement investment. Almost all investment is new in this sense, and a well-governed corporation assesses any major investment afresh, whether or not it is financed out of depreciation allowances.

The “saving” reported in Table 2 is drawn from the national accounts, which has the advantage of being embedded in a well-thought-out, internally consistent accounting framework. But there are a number of reasons that the current set of national accounts do not serve well the modern “knowledge economy,” nor do they capture well saving from the perspective of the individual household, whose reported saving is now down to zero.

Economists define “saving” as consumption that has been deferred with the objective of raising consumption (of someone, perhaps progeny) in the future. By this standard, much spending on education should be counted as saving (and investment). Most people do not attend school or college for its consumption value, although there may be some; they attend, and forego earnings, because they or their parents (or society, through free compulsory education) believe it will improve their life prospects, including their future earnings. Evidence supports this belief: a summary of empirical work suggests that in the United States an additional year of school increases annual earnings by roughly ten percent (Card, 1999). The rate of return on a college education for a white male has been reported to be 13 percent (CEA, 1996). Americans spend a lot on education, 7.4 percent of GDP in 2002 counting public and private spending together, notably higher than most other countries. Yet these expenditures are treated as public or private “consumption” in the national accounts. A similar claim could be made for certain health expenditures, such as immunization.

Consumer durables are a large part of household expenditure in the United States, 8.4 percent of GDP in 2004. True, the services of these durables are consumed. But they are not all consumed in the year of purchase; rather, they provide a stream of services for many years, over ten for the average automobile, over twenty for some household furniture and appliances. Thus these purchases represent “saving” (and investment) in the strict sense of the term. Yet in the national accounts household purchases of automobiles, furniture, appliances, home computers, pianos, and television and audio equipment are treated

as consumption (new housing, including their original appliances, is treated as investment). While many such durables are discarded every year, the total stock is rising about \$250-300 billion a year in recent years, and in many cases replacement equipment is superior to discarded equipment, thanks again to continuing technical improvement.

Seventy percent of American households own their homes, and houses and condominiums have been increasing in value, as have equities in long-term trend. “Capital gains” do not add to the national stock of productive capital (although they may reflect retained earnings and intangible investments, on which more below), but they do add to the accessible wealth of individual households, hence to their ability to consume in the future. Thus from a household perspective they are “saving.” The net worth of American households has continued to rise from year to year (with modest setbacks in 2001 and 2002), averaging 6.4 percent a year since 1990, to nearly \$49 trillion at the end of 2004, over five times disposable income. Sixty percent of gross assets were in the form of financial assets, the remainder being home equity and durable goods. (These figures include non-profit organizations, but they accounted for less than two percent of the total.)

This increase in net worth has occurred despite the substantial mortgage refinancing that has occurred during the past four years, and the consequential withdrawal of home equity and its availability for other purposes -- to repay other consumer debt, to buy consumer durables (especially automobiles), or to finance vacations. Financial market innovations, such as home-equity loans and reverse mortgages, have increased the liquidity of home equity, making it increasingly available for other purposes. Of course, home equity as a potential liquid asset depends on home prices, which have risen significantly over the past decade. Some (e.g. Shiller) perceive a bubble which is bound to burst, wiping out much of the “saving” that has occurred in this way; others (e.g. Smith and Smith (2006)) find house prices in most US markets still below values justified by fundamentals such as rents, mortgage interest rates, and tax treatment. In the longer run, one of the fundamental factors is new household formation, which is likely to hold up better in the United States than in most other rich countries.

Extensive net worth, especially among older families, suggests the likelihood of significant bequests to the next generation. For example, the 2001 consumer finance survey shows Americans in the age group 55-64 with average (mean) net worth of \$727,000, and those aged 65-74 had a mean net worth of

\$674,000. Given high and increasing longevity, these bequests are likely to be received by persons in their late fifties or sixties, nearing conventional retirement age. Such transfers of course do not add to national productive wealth, but they do add to household wealth just as people are entering an age when they might need it. To the extent such transfers are anticipated, they too might reduce saving out of current income.

Not least, there are pension rights, public and private. Publicly financed social security provides virtually all future retirees an income up to a maximum of \$21,000 a year, escalated for inflation, after the age of 66. Career military and government employees have much more generous government-supported pension rights. Many private corporations have promised “defined benefit” post-retirement pensions to their employees. While these are in decline, and not all are fully honored due to corporate bankruptcy, they remain an important claim by millions of workers, for which corporations are enjoined to save (one reason for the growth in corporate saving in recent years, to a cumulative total of \$1.8 trillion in pension assets) (Wilcox, 2006). They are publicly guaranteed up to a maximum pension of \$48,000 (escalated for inflation), and while the Pension Benefit Guaranty Corporation is now technically insolvent, few doubt that it will somehow be preserved by government action. .

The United States is noted, among rich countries, for having relatively generous terms for personal bankruptcy, and only modest social inhibitions for invoking it in case of burdensome personal debt. It remains to be seen whether the recent tightening of the conditions for personal bankruptcy will result in a discernable increase in personal savings

In short, the average household seems to have many sources of future income. It is not clear that it needs to “save” more as measured in the national accounts, or that it will do so. Of course, there is a wide dispersion of household net worth; direct equity ownership in particular is highly concentrated. Many households should no doubt save more in their own interests. But if concern is really with destitution or even genteel poverty for some people in retirement, that should be the focus of attention, rather than lamenting the low total of private savings.

Society is less than the sum of its parts when it comes to saving. A private perspective differs from a social perspective. Society needs to be concerned with an adequate flow of total income, not counting transfers between buyers and sellers or between benefactors and heirs. Capital gains per se do not

add to the capital stock, although as we shall see they may reflect additions to the capital stock, including especially the growth of intangible capital.

But we do not do a good job of measuring corporate saving either. This is most obvious in the case of spending on research and development, which is clearly motivated by the expectation of payoff in the future (and is thus, strictly speaking, saving). Except when undertaken directly by government these do not enter the national accounts at all, but rather are handled as an intermediate business expense, netted out in calculating final demand and output. (Apparently agreement has been reached within the OECD to change this practice in the next few years.) Yet on such evidence as we have, R&D produces exceptionally high rates of return, roughly 25 percent private return and 50 percent social return (Fraumeni and Okubo, 2005, p.279), and a mean of 100 percent on agricultural research (Frederico, 2005, p.112). But the point is not limited to R&D. Carrodo, Hulten, and Sichel (2006) estimate that there may be \$3.6 trillion of intangible capital in the US corporate sector, and \$1 trillion annual investment, built through systematic expenditure on research and development, personnel training, and branding, that is not recorded either as investment or as part of the capital stock, even though it generates future value. Counting it would have added nearly \$1 trillion annually to GDP during the period 2000-2003—which would be 120 percent of investment by the business sector in tangible capital (i.e., excluding housing).

The basic system of national accounts was developed in the 1930s and 1940s, at the height of the industrial age, and strongly emphasizes physical capital as the major source of future earnings. This legacy does not serve well a knowledge-based economy, where value lies increasingly in teams of highly skilled employees operating in complex interdependent systems. Physical capital of course plays an important role, but it is not the key to generating future income streams; building the teams and product innovation are.

Expenditures to build intangible capital may be expected to raise equity prices, so some of the “capital gains” that are not recorded as personal income or saving may in fact reflect the accumulation of capital, both tangible and intangible, through retained earnings (including depreciation allowances) by corporate business. In addition to funding defined benefit retirement plans, corporations in this way are saving on behalf of individuals.

Government investment is now included in the national accounts as investment rather than consumption (with allowance also for depreciation), but with the same emphasis on bricks and mortar (and on durable weapons platforms such as aircraft carriers) as private investment. Expenditures on R&D, education, and public health are counted as consumption, not investment. If American expenditures on durable goods, education, and R&D are reclassified as saving, US private saving, plus public expenditure on education and R&D, is over one-third of GDP. This does not sound like short-changing the future. (This reclassification should also be made for other countries, of course, but the magnitude of the additional contribution would be considerably smaller in all but a few countries.)

The federal budget went from deficit to surplus to deficit again during the past decade while the current account deficit grew continuously. Thus there is no easy one-to-one relationship between the government deficit and the external deficit, as the current experiences of Australia, with its budget surplus and large current account deficit, and of Japan, with its large budget deficit and large current account surplus, should remind us. Other things equal, however, a larger budget deficit increases the current account deficit by raising yields on long-term US Treasury securities, an attractive investment instrument worldwide, higher than they would otherwise be.

The foreign exchange market for the US dollar is not subject to systematic US intervention; the US dollar floats against other currencies that are allowed to float. The US current account deficit is large because foreign investment in the United States is large. [Table 3](#) shows foreign capital inflows, private and public, and US capital outflows, for the period 2000-2005. Over \$1 trillion in foreign private funds entered the United States in 2004 – much larger than the current account deficit in that year – and again in 2005. Indeed, foreign private capital inflows have exceeded the US current account deficits, usually by substantial amounts, in every year since significant deficits began in the early 1980s. In addition, nearly \$400 billion of foreign official funds, reflecting a build-up of foreign exchange reserves in foreign central banks, also entered the United States in 2004, dropping to \$174 billion in 2005. It has been said that foreign central banks are financing the US current account deficit and, incidentally, the US budget deficit. This is an inappropriate attribution of selective inflows against selective outflows in the US balance of payments. It would be as true to say, as France's President DeGaulle did in 1963, that foreign central banks (partially) financed US capital outflows, which at \$860 billion were exceptionally large in 2004.

Indeed, nearly half of this outflow was US bank lending to the rest of the world, financed largely by US bank borrowing in the rest of the world, some of which was from bank deposits by foreign central banks.

Why are so many foreign funds being invested in the United States? The answer lies partly in the attractiveness of US financial assets, which are claims on a robust, innovative economy, with good yield, liquidity, security, and relative stability. But the answer lies also in high savings relative to investment opportunities in other economies, particularly but not exclusively in other rich countries. Investment opportunities have been limited in Japan and continental Europe while savings remain relatively high. The excess private savings have been partially, but only partially, absorbed by large budget deficits in other major countries such as Japan and Germany. The difference has been invested abroad. In addition, since the rise in world oil prices started in 2003, oil-exporting countries have seen their export revenues soar, and with that also their current account surpluses. [Table 4](#) provides data on the world allocation of current account positions in 1997, 2000, and 2005. An increase in the US deficit of about \$400 billion over 2000-2005 has been matched by significant increases in the surpluses of Japan, Germany with its close economic associates Netherlands and Switzerland, China, Russia, and the Middle East, the last two mainly reflecting oil prices. Central Europe and other rich countries (mainly Spain, Britain, and Australia) experienced negative movements in their current accounts, while Latin America (including oil-exporting Venezuela but also Brazil) experienced a significant positive movement. For all years there is a significant statistical discrepancy, indicating higher recorded deficits than surpluses.

The surpluses of the members of OPEC – mainly Middle Eastern countries plus Venezuela and Nigeria -- will undoubtedly decline after several years, either as oil prices decline or as the oil-exporting countries learn to spend their higher income, which accrues initially to governments in almost all significant oil-exporting countries. The IMF staff however projects these surpluses to rise somewhat in 2006 and to remain high through 2007 (WEO, p. 217). Thus these surpluses can be considered transitory, although enduring for several years.

Japan and augmented Germany have the largest surpluses after the oil-exporting countries. [Table 5](#) provides data for recent years on national saving and domestic investment in Japan and Germany, along with newly rich Asian economies (Hong Kong, Singapore, South Korea, and Taiwan) and developing Asia. Saving has declined in Japan, and private saving even more since 2000, as the large public sector deficit

declined from 7.7 to 5.8 percent of GDP, 2000-2005. In Germany saving rose slightly, and private saving even more since the government deficit rose by four percentage points 2000-2005. Saving remained roughly unchanged in the four Asian Tigers, and rose a remarkable 8 percentage points in developing Asia, which is dominated by China but also includes India, Indonesia, and a number of other significant developing countries. All these regions record significantly higher saving than the United States, as indeed do other regions of the world, including Latin America and Africa, but for reasons discussed above the real difference is lower than the recorded difference.

What is more noteworthy is the decline in investment in most other rich economies, including Japan, Germany, and newly rich Asia. Recorded physical investment remains higher in most places than in the United States. Germany (along with the United Kingdom) is the major exception; there investment has been in a slump for some years. In developing Asia, by contrast, investment has risen sharply, led by China where investment exceeds forty percent of GDP and is considered, both by Chinese authorities and by some foreign analysts, to be too high – the only such case of a developing country with too much investment (as distinguished from investment in the wrong places) that I can recall. But the growth of investment has fallen short of the increase in saving. Rapid growth permits consumption to rise rapidly even when the rate of saving increases.

Recall that, apart from measurement errors, the current account position (= net foreign investment) is the difference between domestic investment and national savings. Thus saving in excess of domestic investment (or private saving in excess of investment plus government deficits) implies investment abroad, net of inward flows of foreign investment. Why are several of the world's major economies investing so much abroad?

A major part of the answer, I believe, lies in demographic trends. Birth rates have declined in all rich countries, although differentially, and in many developing countries as well, most notably China, which introduced the one-child policy in 1979 (China allows for a number of exceptions). The result is the prospect, or the actuality in Japan and Germany, of declining population, despite an increase in longevity in most countries. More pertinent than total population for saving and investment is the change in the age composition of populations. The ageing of societies, with its implications for pensions and health care, has been widely discussed. Less widely discussed has been the decline in the population of young adults –

those who receive contemporary education, enter the labor force, form new households, and require housing and, for their children, schooling. [Table 6](#) shows the age 15-29 population in 2005 and projections to 2025 for Japan, Germany, China, and the USA – the four largest national economies. Apart from the United States, where birth rates have declined less than in other rich countries, and where immigration continues to be an important source of new young adults, the decline in this age group is remarkable. Yet this is the age group that provides the most educated, most flexible (occupationally and geographically) new members of the labor force. A decline in this age group not only implies a loss in economic flexibility, but also a decline in the need for investment to equip new members of the labor force, of investment in housing and its accoutrements, and of investment in new schools. Housing investment, in particular, is reduced to less than full replacement plus some allowance for geographic mobility in rich countries. In poor growing countries such as China demand for housing will remain robust as the population upgrades housing quality, as well as moving from rural to urban areas.

With these demographic trends, the prospects for significant increases in domestic investment in rich countries are limited. Replacement of obsolete equipment, necessary in a world of continuous technical change, will continue to take place; and some capital deepening will continue to occur, although that implies lower returns to capital, making such investment unattractive compared with investment abroad. Investment in Japan and Germany is closely related to export prospects. If these weaken due to appreciating currencies, investment is likely to suffer.

The United States stands out among rich countries as having in prospect a continued rise in population, especially of young people, partly because the fertility rate has declined noticeably less in the United States than in other rich countries (to 2.1 children per woman of child-bearing age, compared with 1.4 in Japan and Germany and 1.0 in Hong Kong and Singapore), partly because of continuing immigration on a significant scale.

The real needs of ageing, low growth societies with limited domestic investment opportunities can be met by profitable external investment. (Excess private savings can be, and in Japan and Germany have been, absorbed in financing budget deficits, but most government expenditures are not oriented toward increasing future income.) That is what is happening. Most countries with prospective declines in new entrants to the labor force show significant current account surpluses, reflecting their foreign investment.

Spain is a notable exception, as are several central European countries. These are below the rest of Europe in per capita income and are still in a “catch-up” phase, requiring additional productive investment; and Spain is building vacation and retirement homes for many northern Europeans, as well as upgrading Spanish housing.

This is what financial globalization is all about: a decline in home bias in the disposition of savings and investment, especially when indicated by structural changes such as the demographic developments discussed above. Where should such investment take place? Conventional economic theory suggests it should take place in relatively poor countries, with low ratios of capital to labor, because returns should be higher there. But conventional theory is a vast over-simplification of the complex conditions that both attract investment (investors want assurance that their investments are secure, subject only to business risk) and that make investment productive, which in addition requires an appropriate social and political infrastructure – social order, physical security, rule of law, secure property rights, impartial dispute settlement, etc. Many of these conditions are not present in the world’s poorest countries, and some of them are not present even in middle-income countries. Argentina, Russia, and Bolivia have reminded investors in recent years how insecure private property rights can be from political action, particularly foreign private property rights. So investors approach very poor countries hardly at all, unless they have exploitable natural resources, and they approach many “emerging markets” warily. And after the financial crises of 1994-2001, many emerging markets also approach international borrowing warily. As those painful experiences recede in time, however, private foreign investment in emerging markets has begun to pick up, aided by low interest rates in capital-exporting countries and a desire by investors for higher returns. During 2004, for instance, an estimated \$300 billion in private funds flowed to developing countries, up from \$180 billion in 2000. This went mainly to East Asia (primarily equity) and to central Europe (primarily debt), but a significant amount of foreign direct investment also occurred in Latin America (GDF, 2005, Tables A21-A27).

However, it is not surprising that much of the surplus saving in other rich countries went to the United States. The US economy accounts for between 25 and 30 percent of world economic output. The social system is stable, private property is respected, and dispute settlement is reasonably quick and fair. Nearly half of the world’s marketable securities (stocks and bonds) are in the United States. Returns are

better on average than in other rich countries, and more secure and reliable than in emerging markets. The American economy is innovative and relatively flexible. Prospects for the future are bright. It would not be surprising under the circumstances that a growing fraction of world saving should be invested in the United States.

Indeed, in a fully globalized world economy, with no home bias, one would expect roughly 30 percent of world saving outside the United States to be invested in the United States – and 70 percent of US saving to be invested abroad. Saving outside the United States in 2004 was around \$7 trillion, 30 percent of which would be \$2.1 trillion. US private saving was about \$1.8 trillion, 70 percent of which would be \$1.2 trillion. The difference is \$900 billion, larger than the US current account deficit in 2004 or even that in 2005. Of course, home bias continues to be important, so investment abroad has not yet reached these large two-way amounts. But fifteen percent of world saving, which will rise in value from year to year, does not seem to be an unsustainably large number; if anything it is on the low side. Yet that was enough to cover American investment abroad (less loans by US banks, which are directly financed abroad) plus the current account deficit.

Some people are troubled that a significant amount – although a minority – of foreign investment in the United States is by monetary authorities, in the form of additions to their foreign exchange reserves that are held in US Treasury or other securities. Japan added \$480 billion to its reserves during the period 2000-2005, and together the newly rich Asian economies added over \$300 billion. Emerging markets and developing countries taken together (including OPEC members) added an astounding \$1579 billion to their reserves, exceeding the net private capital inflow into these countries. Why?

The reasons are varied. Oil-exporters have experienced an unexpected increase in export receipts because of strong world demand and rising oil prices over the past five years. Their imports have not grown correspondingly, but this is likely to be largely a question of timing. Oil prices may be expected to decline in the future, and oil-exporting countries will gradually move the higher earnings, initially accruing to governments, into the income stream and ultimately into higher imports.

It should be noted that total foreign exchange reserves have grown enormously since the introduction of floating exchange rates in the mid-1970s, contrary to expectations by the advocates of floating exchange rates. Clearly countries are not comfortable with freely floating rates, desire at least to

have the possibility of managing them, and therefore feel they need higher reserves as economies and foreign trade grow in value. This sentiment was strongly reinforced by the financial crises of 1994-1999, in which reserves in several important countries proved to be totally inadequate to deal with the financial pressures on their currencies, initially more from residents than from non-residents. Even a country such as Switzerland built up its reserves substantially, from \$37 billion in 1999 to \$55 billion in 2004. The major exceptions are the United States, Canada, and the European Central Bank since 1999.

In some cases the growth in reserves is the incidental by-product of an active exchange rate policy, designed to slow appreciation of the currency or even to prevent appreciation altogether. The growth in reserves is not necessarily unwelcome in these circumstances, but it does create problems of monetary management since it is the equivalent of open-market purchases in foreign rather than domestic securities. But the currency policy may itself be motivated by fundamental factors. As noted above, it makes sense for ageing Japan to invest heavily abroad in assets with positive yields rather than investing at home for lower yields or, worse yet, investing in government securities that finance construction projects with negligible social return. Yet private Japanese savers are extraordinarily conservative; households keep much of their saving in the postal system, backed by the government but with very low returns to the savers and perhaps, given the use of these funds, none to the nation as a whole. By buying foreign exchange reserves, the Ministry of Finance is assuring future real returns – command over real resources in the international market – to the entire nation, which through their conservative behavior would not be obtained by relying on private savers alone. In short, the monetary authorities are acting as financial intermediaries, converting what private savers want now into what they will need in future years. Foreign exchange risk is real to the individual, but it is not to the nation: by investing abroad, even in US bonds, it secures a future claim on goods and services in the international market. (Given the magnitude of their reserves, Japanese authorities might be well advised to diversify them into some higher yield foreign investments, as a number of other countries have done, and as Korea has recently decided to do.)

The most dramatic growth in reserves, along with OPEC's, has been experienced by China: an increase of \$655 billion from the end of 2000 to the end of 2005, out-stripping even its very rapid growth in imports. This growth in reserves has been made possible by a current account surplus, modest and

without trend until 2005, when it shot upward to \$159 billion, 19 percent of exports; and by continued net private capital inflow, particularly of foreign direct investment.

But China still maintains severe restrictions on resident capital outflow. Given the rapid growth in income in China in recent years, the high savings rate, and the limited domestic menu of financial investments in which Chinese households can invest, mainly in bank savings accounts, the latent demand for investment abroad is probably very high. Partly on residual communist doctrinal grounds, partly for the pragmatic reason of not wanting to undermine their fragile banking system, Chinese authorities are hesitant to move soon to full currency convertibility and free movement of capital. Nonetheless, China's central bank, the Peoples Bank of China, can be thought of investing abroad on behalf of the public, and against the day in which the currency will be fully convertible (a stated Chinese objective) and net capital outflow may be large. It is undoubtedly true that China, unlike Japan, has many potentially profitable investments at home. But it is also true that the banking system as it is currently constituted does a poor job of allocating capital, and that, as noted above, in recent years Chinese authorities have considered aggregate investment to be excessive. A similar argument may be made with respect to the more modest, but still significant, buildup of reserves by India and a number of other developing countries that continue to maintain controls on resident capital outflow.

Presumably savings will decline in other rich countries as their populations age. That is implied by the life cycle hypothesis. But the decline may be a very gradual one. Simple versions of the life cycle hypothesis assume individuals know when they will die, or purchase annuities. But longevity is increasing, remarkably but unpredictably, so people do not know when they die. Relatively few purchase annuities on top of their defined benefit pensions (whether state-sponsored or private). And non-financial assets such as houses or family businesses are not easily liquefied in most countries. So savings continue into post-retirement ages. This is especially noteworthy in Germany and Italy (McKinsey, 2004), but it is true even in the United States. [Table 7](#) shows the median net worth, in constant dollars, in the United States by age bracket for 1992 and 2001. Looking at either column alone suggests a decline in net worth, i.e. dissaving, as people age past 65. But different groups are being compared. People aged 55-64 in 1992 were nearly a decade older in 2001, and their net worth increased despite passing age 65. Those 65-74 in 1992 also increased their net worth further, i.e. saved, by 2001. (This behavior can also be observed by comparing

2004 with 1995.) Thus it cannot be taken for granted that ageing societies will dissave, at least quickly and reliably.

While the rest of the world may continue to produce saving available for investment in the United States, can the United States accommodate an ever-increasing amount of such investment? [Table 8](#) shows household financial assets and net worth in the United States 1990-2004 (the figures include non-profit institutions). It also shows gross foreign claims on the United States. Several points stand out. First, both household net worth and financial assets have grown faster than GDP over this period, 6.7 percent a year for financial assets compared with 5.2 percent growth for GDP. This reflects in part increasing financial innovation and layering of financial assets over the physical capital stock, but it also reflects the growth in intangible capital discussed above.

Foreign claims on the United States have grown even faster, by 12.3 percent a year over this period. The foreign share of total household financial plus foreign assets has thus risen from 14 percent in 1990 to 25 percent in 2004 (22 percent if US banking liabilities to foreigners, nearly offset by bank claims on foreigners, are excluded). Obviously a rise in share cannot continue indefinitely, although 22 percent remains far below the foreign share in a fully globalized economy. But a rise in value can continue indefinitely, so long as the US economy and its financial asset superstructure continue to grow. And growing foreign investment in the United States can be serviced indefinitely so long as directly or indirectly they add to productive assets.

The risk profile of foreign private claims on the United States is very different from the risk profile of US private claims on the rest of the world; it is tilted much more toward debt instruments, both short-term and long-term. For example, 58 percent of private US claims on foreigners are equity (foreign direct investment plus corporate shares), while only 37 percent of foreign private claims on the United States are equity. In this respect their claims on the United States mirror their behavior at home, at least for the largest rich countries for which data are readily available: Japan, Germany, Britain, France, Italy, and Canada, in order of economic size. At end 2004 equities made up only 21 percent of German household financial assets (62 percent of disposable income), for instance, 16 percent in Britain (64 percent of disposable income), and 8 percent in Japan (39 percent of disposable income), compared with 28 percent (116 percent of disposable income) in the United States (OECD 2005, annex Table 58). Foreign official

investment in the United States includes virtually no equity, so the bias is even greater with respect to total foreign claims on the United States.

The difference in risk profile goes part way toward explaining the fact that although the United States is a substantial net debtor to the rest of the world, US earnings on its overseas investments continue to exceed its payments to foreigners on investments in the United States, although the gap has narrowed in recent years and may reverse in 2006 or 2007 as a result not only of continued net foreign investment in the United States, but also rising interest rates on foreign short-term interest-bearing claims on the United States.

There is another significant asymmetry, seen from US perspective: foreign claims on the United States are denominated overwhelmingly in US dollars, while US claims on the rest of the world reflect a mixture of US dollar-denominated assets and foreign currency denominated assets. Thus the net international investment position (NIIP) of the United States is sensitive to movements in exchange rates between the dollar and other currencies. Concretely, depreciation of the dollar, *ceteris paribus*, reduces the net debtor position of the United States, measured in dollars. Valuation changes other than those arising from currency movements also affect the NIIP, in particular movements in share prices and in the valuation of foreign direct investment. Thus while the cumulative US current account deficit 1990-2004 was \$3.68 trillion, the increase in the net debtor position of the United States was “only” \$2.50 trillion. Largely because of depreciation of the dollar, the NIIP of the United States actually increased by \$83 billion in 2003, despite a current account deficit of \$520 billion in that year.

Many have argued that the large US current account deficit is unsustainable. If they mean recent trends in the deficit cannot continue, that is surely correct; the deficit cannot continue to rise indefinitely as a share of US GDP, as it has done for the past decade (with a brief pause in 2001). If however they mean that a large deficit cannot continue, that is neither correct nor likely. Demographic trends in Japan, Europe, and East Asia are likely to call forth current account surpluses for a number of years, to build up external assets that can be drawn upon in later decades as populations continue to age. Central banks are sometimes endogenous in this process, intermediating between domestic savers whose behavior (e.g. in the case of Japan) is too conservative to serve well the national needs or who (e.g. in the case of China) are not permitted to invest freely abroad.

The United States has a vibrant, innovative economy. Its demographics are markedly different from those of other rich countries, in that natality has not fallen nearly so much and immigration, heavily concentrated in young adults, can be expected to continue on a significant scale. In these respects the United States, although rich and politically mature, can be said to be a young and even a developing country. It has an especially innovative financial sector, which continually produces new products to cater to diverse portfolio tastes. The United States has a comparative advantage, in a globalized market, in producing marketable securities; and in exchanging low-risk claims for higher risk assets. It is not surprising that savers around the world will want to put a small but growing part of their savings in the United States. The US current account deficit as a consequence is likely to remain large for some years to come.

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