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The International Debt Cycle and the United States as an External Debtor

One of the greatest anomalies in the world economy today is that the United States has ceased being a net supplier of capital to developing countries and, after several years of large current account deficits, has itself become the world's largest debtor nation at least in accounting terms.[1] Neoclassical theory suggests the contrary—that rich countries with relatively abundant capital will tend to have a lower return on capital than poorer countries, and that capital will thus flow from rich to poor countries.

This chapter first reviews the ''debt cycle'' theory of the expected phases of capital flows and international asset position as a country grows, and considers the relevance of this theory to the US case. It then examines the empirical information on international creditor and debtor status for the principal industrial and developing economies. The United States is in fact only one of several industrial countries that are in a debtor phase of the debt cycle; conversely, several middle-income countries are ''creditors.'' After considering the global data discrepancy between net-liability countries and net-asset countries, the analysis finds some empirical support for the idea that higher growth is the spur to capital inflows to those industrial countries that seem to be in the anomalous position of being net debtors.

International debt cycle theory helps provide a conceptual framework for judging whether the US external deficit is a problem. In short, the

1. ''Debtor'' or ''creditor'' status is used here in the broad sense as being in net-liability or net-asset status in terms of net international investment position, which includes direct investment, portfolio equities, and international reserves as well as debt.

diagnosis in this chapter is that the United States paradoxically is in the position of a ''young debtor country'' rather than being a ''mature creditor'' as might have been expected from its high levels of income and wealth. It is also found, however, that several other industrial countries are also in this paradoxical position, and, moreover, that the countries in this position have tended to experience more rapid growth, providing some confirmation to the notion that they may usefully be seen as still ''developing.'' By implication, this chapter does not provide a basis for judging that the US current account deficit and external liabilities have already become too large for safety. It is only in the forward-looking analysis beginning in chapter 3 that the question of sustainability of the external imbalance going forward is addressed. The reader for whom a review of the debt cycle framework is secondary may wish to proceed directly to chapter 2, which examines key special advantageous factors slowing the buildup of US external debt, and then move to the projections and policy analyses beginning in chapter 3.

The Debt Cycle

International economists have for a long time both formally and informally understood international capital flows as being likely to follow a ''debt cycle'' linked to the stage of a country's development.[2] For example, Kindleberger (1958, 417) wrote that, traditionally, economists had identified four phases of the debt cycle—young debtor, mature debtor, young creditor, and mature creditor—based on net international asset position and on whether the external current account balance was positive or negative. The young debtor not only has net external debt, but is also building up this debt further by running annual current account deficits. The mature debtor, in contrast, runs current account surpluses and is in the process of repaying external debt. The young creditor has reached a position of positive net international assets and is continuing to build its creditor position by running current account surpluses. The mature creditor, like a senior citizen living on accumulated savings, is still in a net positive international asset position, but is running down its assets by running a current account deficit.

Figure 1.1 summarizes the cycle, which in principle involves clockwise advance from the northwest corner to the southwest corner. As the experience of the United States and some other industrial countries suggests, however, there may be more than one historical spin around this cycle.

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2. The author would like to thank C. Fred Bergsten and Shafiqul Islam for their unpublished research in the late 1980s on the conceptual, empirical, and policy issues raised by the shift of the United States into net debtor status.

Figure 1.1 The debt cycle

	Current account < 0	Current account > 0
Foreign assets < liabilities	Young debtor	Mature debtor
Foreign assets > liabilities	Mature creditor	Young creditor

The optimal growth literature contains analyses seeking to confirm, qualify, or dispute the idea that there is a normal (clockwise) debt cycle in the process of economic growth. Fischer and Frenkel (1974) develop a simple two-sector model for a small economy facing fixed international terms of trade and interest rates to explore the optimal time path for external debt.[3] They show that under certain conditions, but not all, the optimal path will look like that in the traditional debt cycle, with the country moving from young to mature debtor and then from young to mature creditor. Their qualitative summation is as follows:

> Initially, since the levels of wealth and capital are relatively low, saving (the flow demand for securities) falls short of investment (the flow supply of securities); thus the economy becomes a net seller of securities, corresponding to a surplus in the capital account of the balance of payments and to an increase in the net debtor position. This process continues until the steady rise in wealth induces enough saving to match the flow supply of securities (which is declining through time as the capital stock is rising). At this point in time the capital account is balanced. As wealth continues to rise, saving exceeds the flow supply of securities and the economy becomes a net lender and thus reduces its net debtor position. (Fischer and Frenkel 1974, 513)

3. In the highly stylized model, there are two sectors: a consumption good and an investment good. Stability of the model (but not necessarily economic logic) requires that the consumption good be more capital-intensive than the investment good. Consumption is a function of real wealth and the international interest rate (permanent income hypothesis). Steady state per capita net ownership of foreign assets equals the excess of steady state per capita wealth over the per capita value of the domestic capital stock plus per capita human capital (wage rate divided by the international interest rate). Steady state equilibrium occurs when capital stock rises just enough to keep pace with population growth and investment equals saving. This means the country is no longer either accumulating external debt or external assets at the steady state. However, depending on the initial conditions, the country can ''overshoot'' from debtor to creditor before returning to zero net change in external assets (the debt stage tradition), or it can approach the steady state smoothly and asymptotically by running down large initial net external assets or reducing large initial net external debt.

In contrast, Bazdarich (1978, 426) applies optimal control theory to the same basic model and concludes instead that ''the optimal growth plan of an economy will show no tendency to pass through such stages in its payments accounts. Rather, a developing economy will always be a net debtor and net borrower, with its net debt position monotonically approaching some long-term, steady-state level.''[4] The economy accumulates net wealth only if the interest rate exceeds the discount rate (used in maximizing utility over time) plus the population growth rate. If instead the international interest rate is below the discount rate plus the population growth rate, the economy optimally depletes net wealth over time. Per capita capital rises, but an increasing fraction of capital and output is owned by foreigners (Bazdarich 1978, 435). Although this makes sense within the confines of Bazdarich's maximization problem, it does not take into account limits on foreign willingness to lend to the country as its net wealth declines.

Buiter (1981) develops a two-country model with trade and capital flows. This approach may be of special relevance to the United States, because it does not assume that the country is small relative to world markets with fixed terms of trade and fixed international interest rates. There is a single good, which can be used either for consumption or investment, and identical technology in both countries. The author demonstrates that the economy with the higher rate of pure time preference (the time discount rate applied to future consumption even in the absence of any expectation of rising income, or the discount rate for impatience) will run a current account deficit in the steady state, and the other country will run a current account surplus. Buiter (1981, 771) considers this outcome ''hardly surprising'' but emphasizes that the analysis demonstrates its ''rigorous foundation in optimizing behavior.''

If one considered the United States to have a higher pure time preference rate than other industrial economies, it might be tempting to expect the United States to be in permanent current account deficit. The recent US tendency toward high fiscal and external deficits is consistent with high pure time preference. However, observed real interest rate trends are not similarly consistent. The best measure of pure time preference is probably the real Treasury bill rate, because this is the rate at which households can transfer consumption over time with no credit or interest rate risk. The average real Treasury bill rate for the United States from 1949 through 2003 was 1.1 percent (IMF 2005a). This is not particularly high—the real Treasury bill rate for Germany from 1971 through 2003 was 2.2 percent,

4. In particular, Bazdarich finds that along the optimal path, the rate of growth in external debt per capita equals the price of the investment good relative to the consumption good multiplied by the rate of growth of the capital stock per capita. Assuming that for a developing country the initial per capita capital stock is below the steady state level, the implication is ever-positive growth in external debt.

and for Japan (for which the Treasury bill rate is not available), the average real money market rate was 1.5 percent. So if anything, the revealed pure time preference rate for the United States has historically been lower than that in Europe and Japan. Moreover, the recent US shift into fiscal and ever-widening external deficit has coincided with even lower (negative) real Treasury bill rates, so it is difficult to blame these trends on a higher rate of pure time preference. At a minimum, however, Buiter's analysis suggests that it is not axiomatic that all rich countries will necessarily be creditors, because the model shows at least one dimension in which otherwise identical countries can diverge into debtor or creditor status.

Measuring the Net International Investment Position

In recent years, the International Monetary Fund (IMF) has developed relatively comprehensive estimates for the international investment positions of member countries. In broad terms, a country with a net international investment position (NIIP) of less than zero can be considered a ''debtor'' country, while a country with a positive NIIP may be seen as a ''creditor.'' This interpretation treats direct investment, portfolio equity, and reserves the same as it treats traditional ''debt'' instruments (primarily bank loans and bonds). Direct investment abroad (or inward foreign direct investment) creates an asset (liability) that generates earnings (payment obligations), just as lending (borrowing) abroad creates an asset (liability) generating interest income (payments). Inward direct investment will usually pose less of a potential vulnerability than borrowing abroad, for two reasons. First, profits and hence payments to the foreign owner will tend to be procyclical, so that when the domestic economy is weak the burden of profit remittances will also tend to be lower. Second, despite some potential for hedging through borrowing against the direct investment as collateral, in practice plant and equipment will tend to be ''nailed down'' and less subject to withdrawal during crisis periods than especially short-term debt obligations abroad. For its part, portfolio equity also provides some procyclicality and hence burden-sharing on the earnings side, but it is more ''footloose'' and hence a source of potential vulnerability in an external crisis.[5] More fundamentally, however, both equity and credit constitute the country's balance sheet vis-à-vis foreigners, and hence ultimately underpin its external creditworthiness.

5. In an attempt to address this vulnerability, Malaysia famously froze repatriations of funds from the sale of foreign holdings of domestic portfolio equities during the East Asian financial crisis of the late 1990s.

IMF estimates of the NIIP are available for at least a few recent years for most emerging-market economies and are typically available for the past three decades or so for the industrial countries. To fill in the years with missing data, this study starts from the earliest year available for the NIIP, and then works backward to prior years on a basis of subtracting each year's current account balance from that year's year-end estimate of the NIIP. This process is more fully described in appendix 1A.

An important feature of the NIIP is that, as a residual between assets and liabilities, it does not convey the extent to which the gross magnitudes of both assets and liabilities are large or small relative to GDP. For many countries, both sides of the balance sheet show large stock values, and the difference between them is modest in comparison. One implication is that there can be large proportionate changes in the NIIP from relatively moderate changes (including solely from valuation effects) in gross assets and/or gross liabilities.

Table 1.1 shows the importance of considering both the gross and net international investment positions. For the United States, gross external assets by 2003 were substantial at about 75 percent of GDP, but gross external liabilities were even higher at 97 percent, leaving an NIIP of −22 percent of GDP. Yet when valuation changes occur, and in particular when the dollar depreciates and as a result the dollar translation of direct investment and portfolio equity held abroad increases, the change in the NIIP can differ substantially from what would have been expected just on the basis of the year's current account outcome. Thus, despite a large current account deficit in 2003, the US NIIP as a percent of GDP *increased* (net debt declined) because of valuation effects, primarily from the decline in the dollar.[6] The role of valuation changes in the evolution of the US NIIP is discussed in chapter 2.

The larger the gross asset and liability positions relative to GDP, the greater is the potential for valuation changes to cause major swings in the NIIP as a percent of GDP that diverge from changes solely from the year's current account performance. Countries with exceptionally large gross positions relative to GDP include Ireland (average of gross assets and gross liabilities equal to 845 percent of GDP in 2003), Switzerland (477 percent), the Netherlands (382 percent), Belgium (388 percent), and the United Kingdom (358 percent). In comparison, the average of gross assets and liabilities for the United States stood at 86 percent of GDP, lower than any other industrial country except Japan (65 percent). The

6. The current account deficit in 2003 amounted to $520 billion, which was 4.7 percent of GDP (BEA 2005c). However, the favorable valuation change was even larger at $643 billion, composed of about $415 billion exchange rate valuation gain and $230 billion ''other'' change (including increased coverage; see table 2.1 in chapter 2). As a result, the NIIP improved from −$2.46 trillion at the end of 2002 to −$2.37 trillion at the end of 2003.

Table 1.1 External assets, liabilities, and net international investment position (NIIP), 1990 and 2003 (percent of GDP)

	Assets		Liabilities		NIIP	
Country	**1990**	**2003**	**1990**	**2003**	**1990**	**2003**
Australia	26.5	72.9	72.3	141.4	−45.8	−68.6
Austria	66.9	174.6	71.1	191.4	−4.2	−16.8
Belgium	203.7	408.8	198.8	366.6	4.9	42.2
Canada	39.6	82.1	77.5	101.8	−37.9	−19.7
Denmark [a,c,d,e]	76.9	114.1	118.8	126.6	−43.4	−7.5
Finland	32.9	180.7	61.6	204.6	−28.7	−24.0
France	60.6	199.9	62.3	192.4	−1.8	7.5
Germany	65.0	164.9	44.9	157.9	20.1	7.1
Greece	n.a.	63.7	n.a.	132.6	−15.7	−68.9
Ireland	n.a.	834.4	n.a.	855.0	−72.3	−20.6
Italy	34.5	106.2	42.2	111.9	−7.7	−5.7
Japan	61.1	83.7	50.3	46.2	10.8	37.5
Netherlands	145.2	378.0	121.4	386.8	23.8	−8.8
New Zealand	19.9	67.0	107.6	153.6	−87.7	−86.7
Norway	42.8	n.a.	58.0	n.a.	−15.2	59.6
Portugal	n.a.	174.0	n.a.	231.1	−2.8	−57.0
Spain	26.2	119.0	38.3	162.3	−12.1	−43.3
Sweden	58.8	184.5	84.2	208.6	−25.4	−24.0
Switzerland	239.9	551.2	147.5	402.9	92.4	148.2
United Kingdom	175.7	356.3	178.1	358.7	−2.5	−2.4
United States	39.5	75.4	42.4	97.0	−2.8	−21.6
Argentina [a,d]	47.4	111.8	53.2	147.3	−5.4	−35.6
Korea	10.9	56.6	7.8	56.6	3.1	−14.2
South Africa [b]	19.1	63.0	31.4	69.2	−12.2	−6.2

n.a. = not available

a. 1991 assets.
b. 2002 assets.
c. 2001 assets.
d. 1991 liabilities.
e. 2001 liabilities.

Source: See appendix 1A.

relatively low ratios of the gross positions relative to GDP for both the United States and Japan reflect the greater size and resultingly lesser openness of the two economies compared with the other industrial countries.

Attention to the gross as well as net asset and liability positions also highlights the potential for divergence between expected and actual capital service burdens in the balance of payments. For the United States in particular, the balance on capital income has remained positive in recent years despite falling as a percent of GDP, even though the large net liability position of about $2.5 trillion (end-2004) might have been expected to generate a large net deficit on capital earnings.[7] This paradox stems

7. Thus, in 2004, US earnings on the end-2003 gross foreign assets of $8.3 trillion amounted to $376 billion, for an implicit overall return of 4.5 percent, whereas US payments on end-

from the persistent pattern of higher US earnings on foreign assets than foreign earnings on US liabilities. This paradox is also analyzed in chapter 2.

The Debt Cycle in Practice

Using the NIIP of each country over time, it is possible to conduct an informal review of how the debt cycle theory has tracked actual experience. At the simplest level, the theory has been contradicted by the facts—it has not been the case that industrial countries are systematically creditor countries, although it has been more common that developing countries are debtor countries. Even more surprising, a number of industrial countries, including the United States, have progressively shifted from being net creditor countries to being net debtor countries, and hence have embarked on a new circuit around the debt cycle.

Debt Cycle Patterns

Table 1.2 uses the combination of the average current account balance and the NIIP creditor or debtor position to classify 21 industrial and 24 developing countries into one of the four debt cycle categories of figure 1.1 in each of six subperiods since 1970. The table is based on annual data, assigning 1 to young debtor, 2 to mature debtor, 3 to young creditor, and 4 to mature creditor. The average status in each period is simply the numerical average for the years in question, and the numerical entry can appropriately be rounded off to arrive at the group in which the country belongs on average during that period. For example, in the period 1982–87, Austria is recorded at 1.67, which rounds to 2 and places the country as a mature debtor in that period.

Table 1.2 shades the country periods for creditors. A feature that immediately stands out is that only a minority of countries is in the creditor camp in most periods—that is, the table is mainly unshaded. For the 113 available industrial-country periods, only 46 (or 41 percent) show creditor status. This is perhaps the largest overall surprise, because according to the theory, industrial countries are supposed to be predominantly creditors rather than debtors. In contrast, for the developing countries, the expected debtor status dominates, accounting for 90 of the 106 country

2003 gross foreign liabilities of $10.67 trillion were only $340 billion, an implicit return of 3.2 percent (BEA 2005c, 2005e). Unusually low US interest rates associated with monetary stimulus following the 2001 recession have widened the chronic divergence between the higher rates of return on assets held abroad than on liabilities abroad, but the move toward monetary tightening beginning in mid-2004 is likely to narrow this gap, pushing the capital income account toward lower surplus or deficit.

Table 1.2 Country positions in the debt cycle, 1970–75 to 2000–03

Country	1970–75	1976–81	1982–87	1988–93	1994–99	2000–03
Industrial countries						
Australia	1.33	1.00	1.00	1.00	1.00	1.00
Austria	4.00	2.00	1.67	1.50	1.00	1.25
Belgium		3.83	3.50	3.00	3.00	3.00
Canada	1.17	1.00	1.17	1.00	1.33	2.00
Denmark			1.00	1.67	1.83	2.00
Finland		1.17	1.00	1.00	2.00	2.00
France		3.67	3.83	2.33	2.67	3.00
Germany	3.00	3.50	3.00	3.50	4.00	3.25
Greece		4.00	2.50	1.00	1.17	1.00
Ireland		1.00	1.00	1.50	2.00	1.00
Italy	3.00	3.50	2.50	1.17	2.33	2.50
Japan		3.33	3.00	3.00	3.00	3.00
Netherlands	3.00	3.33	3.00	3.00	2.00	2.00
New Zealand		1.00	1.00	1.00	1.00	1.00
Norway		1.33	1.67	1.83	2.67	3.00
Portugal		4.00	1.50	1.33	1.00	1.00
Spain		1.33	1.50	1.00	1.50	1.00
Sweden	1.50	1.00	1.33	1.00	2.00	2.00
Switzerland		3.33	3.00	3.00	3.00	3.00
United Kingdom	3.50	3.33	3.33	3.00	1.50	1.00
United States	3.33	3.50	4.00	1.67	1.00	1.00
Developing countries						
Argentina		3.50	2.00	1.17	1.00	1.50
Bangladesh		1.00	1.00	1.50	1.17	1.50
Brazil		1.00	1.17	1.67	1.00	1.25
Chile		1.17	1.00	1.00	1.17	1.00
China			2.67	1.83	2.50	3.00
Czech Republic					2.00	1.00
Hong Kong						3.00
Hungary			1.17	1.50	1.00	1.00
India		1.67	1.00	1.00	1.00	1.75
Israel	1.00	1.00	1.33	1.33	1.00	1.25
Korea		2.83	1.33	2.33	1.33	2.00
Malaysia		1.67	1.17	1.33	1.33	2.25
Mexico			1.67	1.00	1.00	1.00
Peru		1.33	1.17	1.00	1.00	1.00
Philippines		1.17	1.17	1.00	1.33	2.00
Poland		1.00	1.00	1.17	1.33	1.00
Russia					3.00	2.75
Singapore		1.00	1.17	2.00	2.33	3.00
South Africa	1.00	1.67	1.50	2.00	1.17	1.50
Taiwan			3.00	3.00	3.00	3.00
Thailand		4.00	2.67	1.00	1.33	2.00
Turkey		1.00	1.00	1.50	1.33	1.25
Ukraine					1.17	2.00
Venezuela	1.50	1.67	1.50	1.50	1.83	2.50

Notes: 1 = young debtor; 2 = mature debtor; 3 = young creditor; 4 = mature creditor. Creditor country-periods are shaded.

periods (85 percent). Nonetheless, as of 2000–03, fully half of the developing countries were in the ''mature debtor'' or higher stage, meaning that they were running current account surpluses rather than deficits.[8] The large incidence of current account surpluses among developing countries suggests a distortion in the recent pattern of international capital flows that is the flip side of the large current account deficits in the United States (along with current account deficits in Australia, Austria, Greece, Ireland, New Zealand, Portugal, Spain, and the United Kingdom).

Industrial-country debtors divide into two groups. The first includes countries persistently in debtor status during the past three decades: Australia, Canada, Denmark, Finland, Ireland, New Zealand, Spain, and Sweden. The second includes several countries that began as creditors but then shifted into debtor status: Austria, Greece, the Netherlands, Portugal, the United Kingdom, and the United States.[9] This second grouping shows that the United States is by no means unique among industrial countries in having shifted from creditor to (accounting) debtor status.

More generally, the progression from one stage of the cycle to the next is often not what one would expect. The debt cycle framework would predict that in each period, the country's status number in table 1.2 would be either the same as in the previous period or higher. The traditional theory does not envision backsliding. However, in 36 of the 113 industrial-country periods (32 percent), the debt cycle number is smaller than in the period before, violating one-way development. The figure is almost as high for developing countries (28 of 106 cases, or 26 percent).

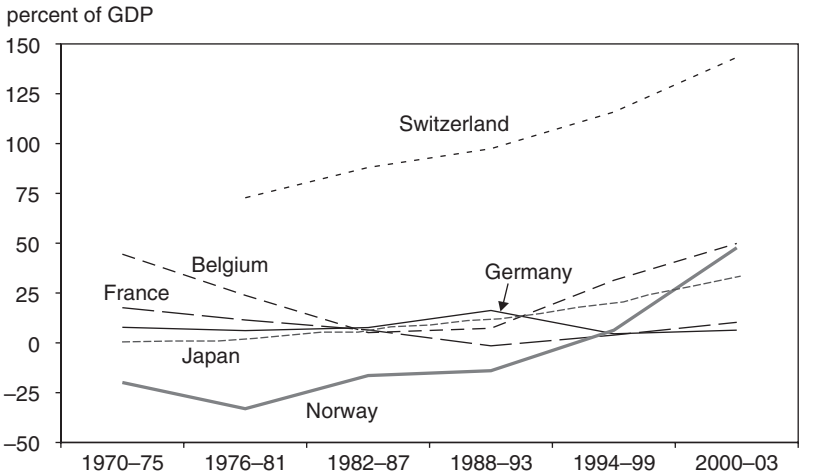
Fitting the Mold: Industrial-Country Creditors

As suggested in table 1.2, only a handful of industrial countries have been persistent creditors in recent years. Switzerland has been in a league of its own, building a net creditor position that has consistently been several times as high as that of other industrial creditor countries and reaching an NIIP of about 140 percent of GDP by 2000–03 (figure 1.2). Japan has become the world's largest creditor country in absolute terms (at $1.61 trillion in 2003), but it ranks only fourth in NIIP relative to GDP (at an average of 33 percent in 2000–03), behind Switzerland, Belgium (50 per-

8. All developing countries shown with a score higher than 1.5.

9. This section will treat the ''accounting'' US NIIP as the basis for definition as creditor or debtor. However, as shown in chapter 2, because capital income services have remained positive, in meaningful economic terms the United States has moved from a large to a small net creditor but as of end-2004 had not yet become a net debtor. However, as discussed below, the United States is poised to move decisively into economic net debtor status by 2006.

Figure 1.2 Industrial creditors, 1970–75 to 2000–03
(NIIP as a percent of GDP)



NIIP = net international investment position

Source: See appendix 1A.

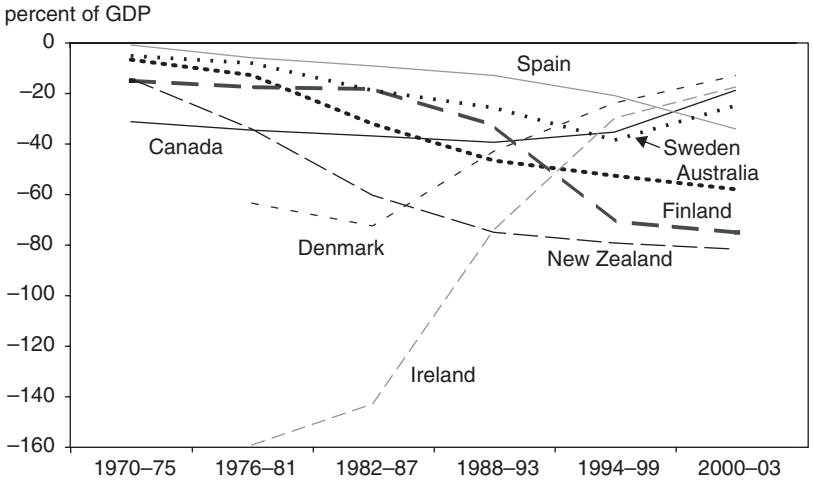
cent), and latecomer Norway (48 percent, after a meteoric rise from −33 percent in 1976–81).

Persistent Debtor Industrial Countries

Australia, New Zealand, and Canada are usually the industrial countries that are identified with the paradox of an industrial country with debtor status. As shown in figure 1.3, what is surprising for Australia and New Zealand is the intensification of their debtor status—their net debt increased from a range of 5 to 15 percent of GDP during 1970–75 to 60 to 80 percent by 2000–03. Canada, by contrast, eased its debtor position from about 40 percent of GDP in 1988–93 to less than 20 percent by 2000–03.

Some of the time paths for these debtor countries underscore the point made above about the sensitivity of the NIIP as a residual between two sometimes large numbers. Ireland had net international debt off the charts at about 250 percent of GDP in the early 1970s. Its net debt narrowed to about 150 percent of GDP in the mid-1980s, and rapidly declined to about 20 percent by 2000–03. Conversely, Finland experienced the steepest drop in its NIIP, from net debt of 33 percent of GDP in 1988–93 to 75 percent in 2000–03. In a single year, from 1998 to 1999, Finland's NIIP plunged from −77 percent of GDP to −169 percent, before rebounding to −41

Figure 1.3 Persistent industrial debtors, 1970–75 to 2000–03
(NIIP as a percent of GDP)



NIIP = net international investment position

Source: See appendix 1A.

percent by 2002. Finland's wide fluctuation was apparently driven by the bubble in high-tech stocks, combined with large foreign holdings.[10]

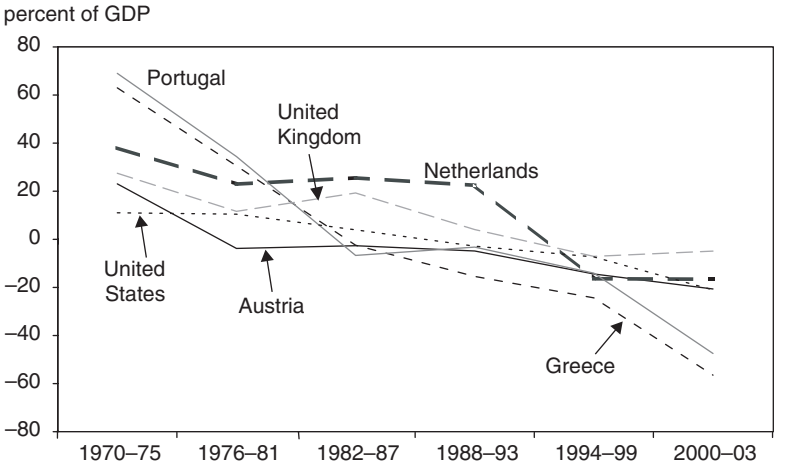
From Industrial Creditor to Debtor: Surprising Company

As shown in figure 1.4, the United States has been joined by Austria, Greece, the Netherlands, Portugal, and the United Kingdom in the creditor-to-debtor group. Italy is technically also a member of this group, but only marginally, and it is omitted from the figure as its changes are on a smaller scale.[11] Importantly, the magnitude of the swing for the United States has been broadly in the middle of the pack in this grouping. Thus, the NIIP swing of about 32 percent of GDP for the United States (from +11 percent to −21 percent) from the base in 1970–75 to the most recent period (2000–03) was small compared with the swing of about 115 percent of GDP (+70 percent to −45 percent) for Portugal, but about the same

10. Finland's portfolio equity liabilities to foreigners rose from $80 billion at the end of 1998 to $220 billion at the end of 1999, or from 62 to 171 percent of GDP (IMF 2005a). According to the *Wall Street Journal,* the market capitalization of Nokia alone rose from $71 billion to $225 billion over the same period before falling sharply by 2001–02 (http://online.wsj.com/home/US).

11. Italy's NIIP swung from an average of +2.1 percent of GDP in 1970–87 to −7 percent in 1988–93 and back to −1.2 percent in 2000–03.

Figure 1.4 Industrial creditors-to-debtors, 1970–75 to 2000–03
(NIIP as a percent of GDP)



NIIP = net international investment position

Source: See appendix 1A.

as the downswing of about 30 percent for the United Kingdom, and much larger than that of only a percent or two for Italy. The Netherlands' downswing of about 55 percent of GDP is perhaps the most surprising of the group.

Storylines are generally not difficult to develop for the creditor-to-debtor group. For the key case of the United States, the optimistic interpretation is that more rapid labor force growth than in persistent creditor industrial countries, and, especially by the 1990s, higher rates of return on capital, have systematically attracted capital inflows. This interpretation can be augmented by the extra dose of capital inflows from China, Korea, and some other new-creditor countries, especially by the late 1990s and after, in part as a consequence of the dollar's reserve currency role. The pessimistic interpretation for the United States, of course, is that for a long time it has been living beyond its means, and has had nearly limitless access to credit to do so.

For Portugal and Greece, a reasonable interpretation of the steep swing from creditor to debtor status is that the process of European integration, and especially the move to a single currency, meant a narrowing of costs of capital among European countries and a corresponding increase in investment in what was formerly the periphery of the European Union. A similar interpretation, perhaps augmented by an oil shock diagnosis, can be made regarding the case of Austria, which experienced its NIIP downswing mainly during the 1970s. For the United Kingdom, the Thatcher period of privatizations, falling tax rates, and capital inflows coincides with the main downswing from net creditor to net debtor. The

large downswing for the Netherlands beginning in the mid-1990s is much more difficult to explain, and appears to reflect a relatively extreme case of stock-flow discrepancies in the data or massive adverse valuation changes.[12] The Netherlands has unusually high gross foreign assets and gross foreign liabilities relative to GDP, so a moderate swing in valuation of existing stocks can yield an outsized swing in NIIP as a percent of GDP.[13]

For the purposes of this study, perhaps the salient pattern in figure 1.4 is that *the United States is not unique*. It lies squarely in the middle of this pack of six industrial countries that have steadily transited from initial creditor positions to debtor positions during the course of the past three decades. At least one implication of this pattern is that it is not necessarily the unique financial and economic position of the United States as the reserve-currency country and the largest economy in the world that has made it possible to pursue this apparently not-so-unusual round trip in the debt cycle from mature creditor back to young debtor. However, the company of five other industrial countries does not necessarily mean that the United States can indefinitely continue its downward NIIP path in the creditor-to-debtor group in a manner that is safe for itself or the world economy.

Creditor Developing Countries

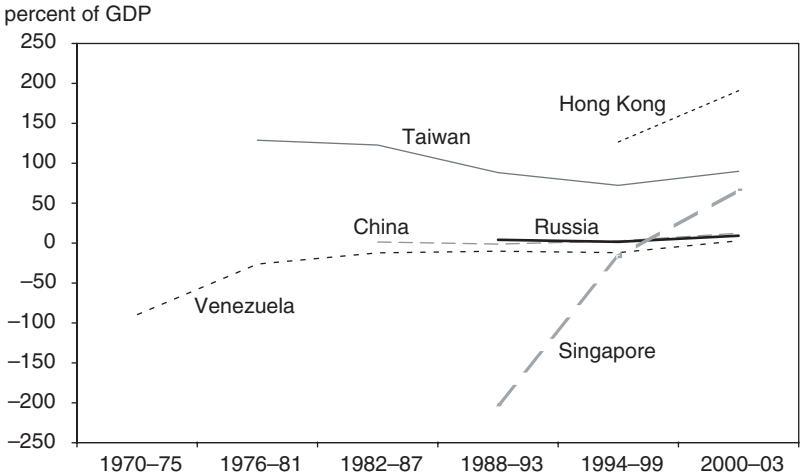
Perhaps even more surprising than the record of persistent-debtor industrial countries and the creditor-to-debtor group is the advent of a few super-creditors among the developing countries. Four countries or regions alone accounted for a remarkable $980 billion net creditor position in 2003: Hong Kong ($394 billion), Taiwan ($308 billion), China ($202 billion), and Singapore ($76 billion).[14] Smaller creditor positions were held by Malaysia ($4 billion) and Venezuela ($10 billion). Russia, illustrating the volatility of the NIIP as a residual, swung from net assets of $27 billion in 2002 to net liabilities of $8 billion in 2003 before returning to net assets

12. Thus, from end-1993 to end-1998, the Netherlands' NIIP swung from +$63 billion to −$153 billion. This decline of $216 billion flatly contradicts the data for the cumulative current account balance during 1994–98, which amounted to +$103 billion. The cumulative stock-flow discrepancy in this period amounts to $319 billion, or 84 percent of the value of GDP in 1998.

13. In 2003, the Netherlands' gross international assets were 378 percent of GDP, and gross external liabilities were 387 percent of GDP (table 1.1). So, if valuation changes cause a 5 percent marking-up of liabilities and a 5 percent marking-down of assets, for example, this will cause the NIIP to fall by about 38 percent of GDP.

14. Singapore has experienced a dramatic upswing from large net external debt amounting to an extraordinary 2,100 percent of GDP average in 1970–75, 945 percent in 1976–81, and 480 percent in 1982–87. These observations are omitted from figure 1.5 to keep the scale of relevance for the other countries.

Figure 1.5 Developing creditors, 1970–75 to 2000–03 (NIIP as a percent of GDP)



NIIP = net international investment position

Source: See appendix 1A.

of $50 billion at the end of 2004. Russia and Venezuela represent oil exporters that have built up a hoard of private flight capital from current account surpluses even as their governments have remained in debt.[15]

Relative to the size of the economy, the NIIP of Hong Kong is by far the highest, at an average of 190 percent in 2000–03 (figure 1.5). This means that Hong Kong outstrips even Switzerland as the premier creditor country or region. The NIIPs of Taiwan (90 percent of GDP) and Singapore (67 percent of GDP) also place them well ahead of their industrial-country counterparts in the creditor league (Belgium and Norway, both at about 50 percent). While it is ironic that the top three ''developing-country'' creditors surpass the top three industrial countries, they represent exceptions that prove the rule because their income levels have risen so much that they are now in the ranks of high-income countries.[16]

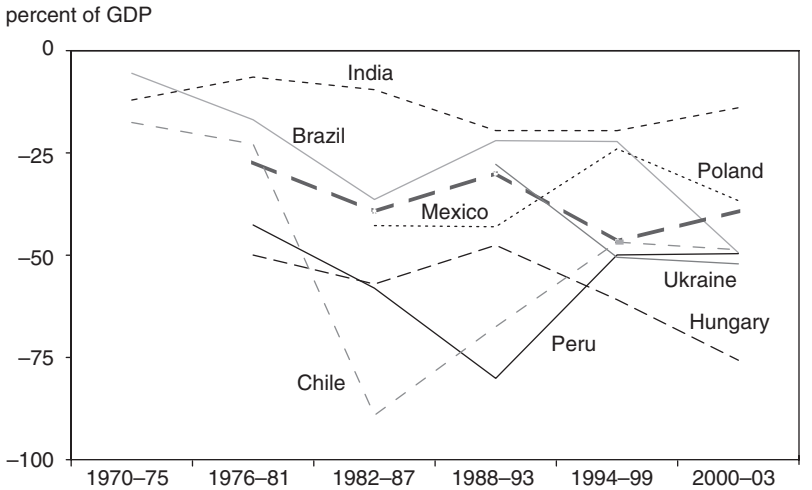
Trends for Debtor Developing Countries

Figures 1.6 through 1.8 show trends in NIIPs for debtor developing countries. Several patterns emerge. First and simplest, most developing coun-

15. At the end of 2002, the public sector had external debt greater than external reserves in both Russia ($100 billion versus $44 billion) and Venezuela ($23 billion versus $12 billion) (IMF 2004b, World Bank 2004b).

16. In 2003, purchasing power parity per capita GDP was $24,500 in Singapore and $27,000 in Hong Kong, compared with $29,500 for all high-income countries (World Bank 2005).

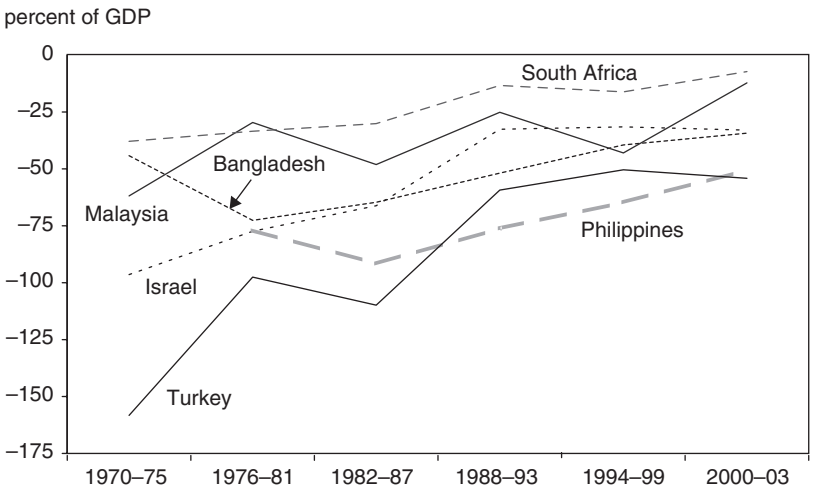
Figure 1.6 Persistent developing debtors, 1970–75 to 2000–03
(NIIP as a percent of GDP)



NIIP = net international investment position

Source: See appendix 1A.

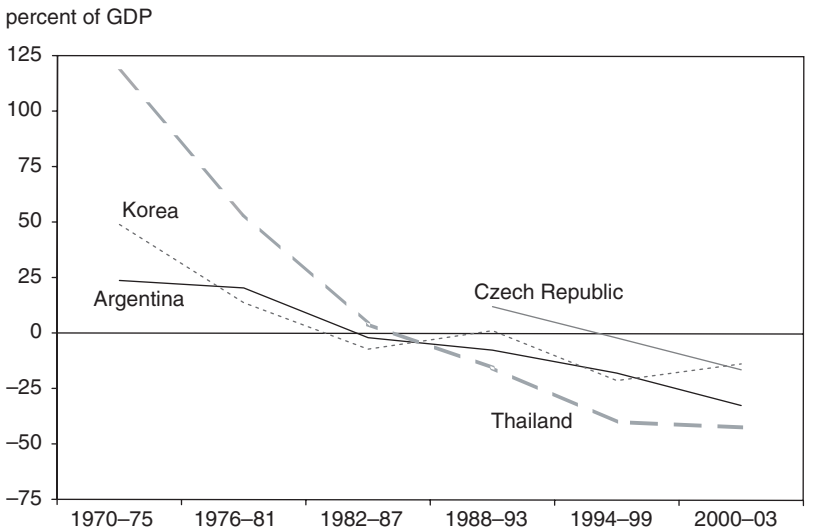
Figure 1.7 Mature developing debtors, 1970–75 to 2000–03
(NIIP as a percent of GDP)



NIIP = net international investment position

Source: See appendix 1A.

Figure 1.8 Developing creditors-to-debtors, 1970–75 to 2000–03 (NIIP as a percent of GDP)



NIIP = net international investment position

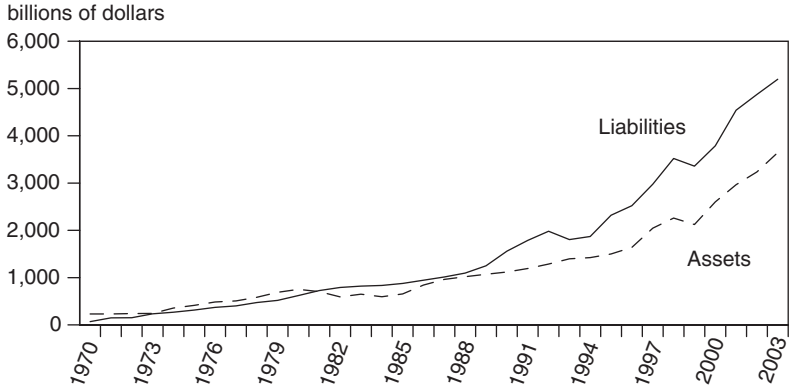
Source: See appendix 1A.

tries have been and remain net debtors. Second, the mean and median debt ratios were both approximately 35 percent of GDP for the 18 net debtor countries over 2000–03. Third, dispersion is high, with the standard deviation at 21 percentage points of GDP. Fourth, several well-known debtor countries started out as substantial creditors in the 1970s, including Argentina, Chile, Korea, and Thailand. Fifth, of the two largest Latin American debtors (Brazil and Mexico), debt ratios by 2000–03 were back to levels even higher than at the height of the region's debt crisis in the mid-1980s, a testimony to the vigor of the emerging bond market that arose in the 1990s following the Brady Plan restructuring of bank claims, and a reflection of the far lower interest rates (and hence higher debt-carrying capacity) in the 1990s than in the early 1980s. Sixth, several countries have systematically reduced their relative indebtedness and can be seen as mature debtors that have not yet transited to young creditors, including South Africa, Malaysia, Israel, and the Philippines. Seventh, among transition economies, Hungary stands out as persistently more heavily indebted, with net debt at about 75 percent of GDP in 2000–03.

The Global Balance Sheet Discrepancy

To recapitulate, in broad-brush terms, the principal aberration in global external balance sheet positions is that several industrial countries, espe-

Figure 1.9 External assets and liabilities of 45 industrial and developing nations, 1970–2003 (billions of dollars)



Source: See appendix 1A.

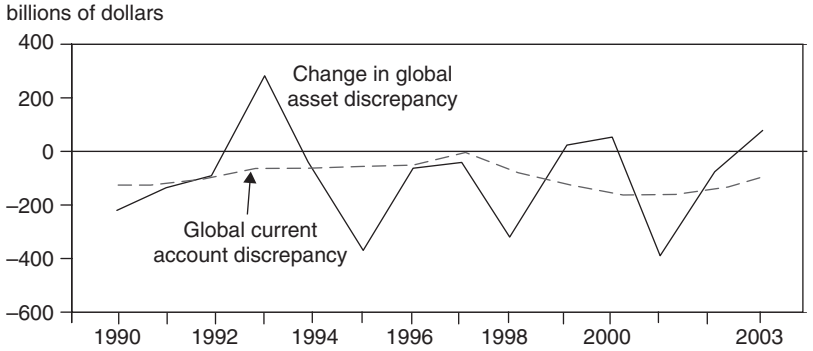
cially the United States, are net liability countries rather than net creditors as traditional debt cycle theory predicts. At a second level of analysis, the question becomes whether characteristics of these countries would in fact make them good candidates for debtor status under the traditional theory. First, however, it is important to take note of a possible bias in the overall findings toward identifying countries as debtors rather than creditors.

It is well known that the world chronically has an aggregate current account deficit instead of the definitional balance, because of statistical problems (IMF 2003a). Thus, in 1990–92, the global current account showed a deficit averaging $118 billion (IMF 2005b). The global discrepancy eased to an average of −$59 billion during 1993–96 and dropped to −$4 billion in 1997, but then returned to an average of −$124 billion in 1998–2003 and stood at −$81 billion in 2004. Although the discrepancy fell from −1.5 percent of world current account transactions in 1990 to −1.1 percent in 2001 and −0.4 percent in 2004, it remains substantial.

If the current account statistics are systematically biased toward deficits, then we should suspect that international investment positions will be systematically biased toward net liabilities. That is, the change in the NIIP of each country in principle equals the year's current account surplus or deficit (before valuation changes for currencies and asset prices), so systematic bias toward deficits will cause a systematic understatement of increases in assets or a systematic overstatement of increases in liabilities.

As it turns out, the NIIP data do indeed show a large discrepancy between global external assets and liabilities. Figure 1.9 shows that, for the 45 industrial and developing countries examined above (see appendix table 1A.1), the sum of NIIPs for creditor countries in 2003 was $3.64 trillion, whereas the sum for debtor countries was $5.2 trillion. The ''world–45'' global asset-liability discrepancy was thus −$1.55 trillion.

Figure 1.10 Global current account discrepancy and change in global asset discrepancy, 1990–2003 (billions of dollars)



Sources: IMF (2005b); figure 1.9.

One place to look for the missing assets is in those members of the Organization of Petroleum Exporting Countries (OPEC) that are not included in the compilation. An extremely rough estimate would place the combined net international assets of five Middle Eastern oil economies at about $500 billion by 2003.[17] Taking these countries into account would thus still leave about $1 trillion in missing global external assets.

Figure 1.10 shows the annual change in the global asset discrepancy and compares it to the global current account discrepancy of the year in question. For the full period from 1990 to 2003, the sum of the current account discrepancies is surprisingly close to the change in the global asset discrepancy, at −$1.34 trillion and −$1.37 trillion respectively. Even though the time path of the current account discrepancy is much more stable than that for the change in the global asset discrepancy (which even swings to large reductions in the discrepancy—or increments in assets in excess of increments of liabilities—especially in 1993 but also in 2000 and 2003), the cumulative pattern suggests that the asset discrepancy is driven by the current account discrepancy. This diagnosis would further imply that valuation changes are not the main influence behind the global asset discrepancy, because valuation changes are applied independently to the asset and liability stocks and are thus not directly captured by the current account discrepancies.

In principle, the global asset discrepancy might help explain the paradox of the large number of debtors among the industrial countries. That is,

17. For 1999–2003, cumulative current account surpluses (or, for Qatar and the United Arab Emirates, trade surpluses) were as follows: United Arab Emirates, $166 billion; Kuwait, $153 billion; Qatar, $124 billion; Saudi Arabia, $50 billion; and Libya, $15 billion. Note that Saudi Arabia's cumulative current account peaked at $166 billion in 1982.

perhaps some of them would be recorded as net creditors if their external assets were corrected for understatement associated with the global asset discrepancy. It turns out, however, that an exercise allocating the global asset discrepancy across the net debtor countries does not transform any of them from net debtor to net creditor status, although it moderates the extent of their reported net debt.[18]

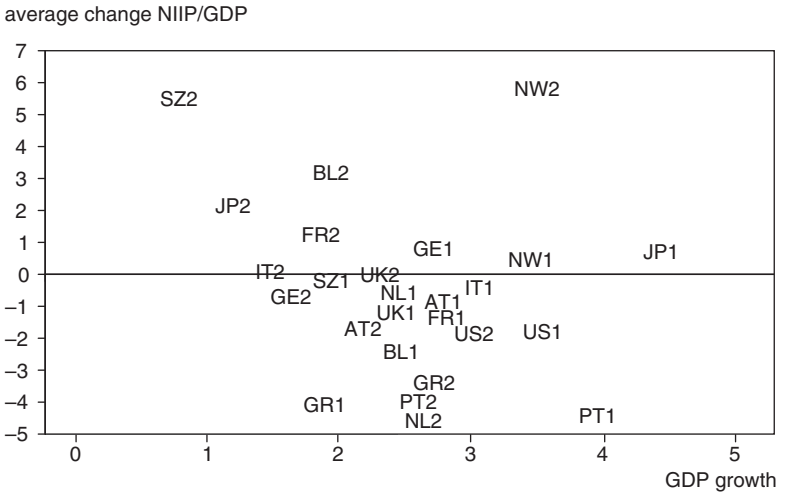
Debt Cycle Status and Growth Performance

For the United States, a popular argument justifying its paradoxical young-debtor status is that its economy more closely resembles that of a developing country with high return to capital than a mature industrial economy with ample capital and relatively low returns (Cooper 2001). The high-growth, high-return explanation of the paradox of industrial-country debtors suggests that we should find higher growth rates associated with those industrial countries that have been either persistent debtors (figure 1.3) or have transited from creditor to debtor status (figure 1.4). Similarly, even for persistent creditors, one might expect higher-growth economies to be building up net international assets relatively more slowly, or reducing them more rapidly, than lower-growth economies. The relationship is ''reduced form'' in the sense that it reflects various simultaneous influences. A high level of domestic growth boosts import demand rapidly and hence can widen the trade and current account deficits and build up liabilities. Similarly, high growth can be associated with high interest rates, attracting capital inflows, and with expectations of high returns, again attracting capital.

Figure 1.11 shows annual averages for real GDP growth and change in NIIP as a percent of GDP from 1976–90 and from 1991–2002 for 13 industrial countries, including the six persistent creditors (figure 1.2) and the seven creditors-to-debtors (figure 1.4). The data labels indicate 1 for the first period and 2 for the second period. The northwest and southeast extremes capture stylized-fact relationships between slow-growing creditors (Switzerland) and fast-growing new debtors (Portugal). Notable exceptions to the general downward-sloping relationship between growth and change in NIIP include Norway (especially NW2) and Japan (especially JP1). If a dummy variable is included for Norway, on grounds that its experience of asset accumulation in response to oil exports is essentially unique among the industrial countries, there is a statistically significant

18. When the estimated $1 trillion in ''missing'' external assets at the end of 2003 is allocated across the debtor-status countries, not a single industrial-country debtor is shifted into net asset status. For the United States, this exercise reduces the net debt from $2.4 trillion to $1.9 trillion, not enough to change the qualitative accounting diagnosis of net debtor.

Figure 1.11 Annual change in NIIP and growth rate (percent of GDP and percent)



Sources: World Bank (2004a), author's calculations.

relationship between growth and the change in NIIP. Each percentage point of additional growth is associated with a 1.5 percentage point additional annual reduction in NIIP as a percent of GDP.[19]

For the United States in particular, average annual GDP growth over 1990–2000 was 3.4 percent, whereas the average for all high-income countries was 2.4 percent (World Bank 2002, 237). If the coefficient from the simple regression associated with figure 1.11 is applied, the NIIP over the decade 1990–2000 could have been expected to decline by 15 percentage points of GDP as a consequence of the faster growth in the United States than in other industrial countries. In fact, the US NIIP fell from −2.8 percent of GDP to −16.1 percent over this period, or by 13.3 percentage points of GDP. Thus, although these relationships should be seen as rough and the statistical estimates as more heuristic than rigorous, the implication is that the persistent escalation of net international liabilities for the United States over the past decade has been driven primarily by growth in the United States at rates higher than in other industrial countries.

19. The regression is: dNIIP%Y = 2.95 (1.9) − 1.55 g (−2.5) + 5.3 Dn (3.0); adj. R^2 = 0.29, where dNIIP%Y is the average annual change in NIIP as a percent of GDP, g is average annual real growth, Dn is the Norway dummy variable, and t-statistics are in parentheses.

Appendix 1A
Estimating the Net International Investment Position

In recent years, the International Monetary Fund (2005a) has published NIIP data for numerous industrial and developing countries. For many of these countries, however, there are extended periods for which data are not available. This study uses a combination of the directly reported NIIP data for the years with data available and an estimated NIIP for other years. To fill in the missing data for early years, the earliest reported NIIP is taken as the base, and each previous year's NIIP is estimated by working backward decumulating annual current account balances. Considering that the NIIP is an end-of-year stock, this means that if the earliest available NIIP is K_T, then the estimate for NIIP n years earlier is:

$$K_{T-n} = K_T - \sum_{t=T-n+1}^{T} CA_t \tag{1A.1}$$

where CA_t is the current account balance in year t. Similarly, for those cases in which the most recent year is earlier than 2003 (the general end year), the current account of each year is cumulated to obtain the end-of-year NIIP.

Lane and Milesi-Ferretti (2000) have similarly used cumulative current accounts to develop more sophisticated series on estimated NIIPs from 1970 through 1998. They make adjustments for the composition of capital flows by type (direct investment, portfolio equity, debt) in order to arrive at valuation adjustments. These can be important, for example, because of increases in stock prices that make external liabilities on portfolio equity larger than the cumulated sum of past portfolio equity inflows. For purposes of the present study, however, approximation by simple summation of current accounts should provide a broadly accurate picture of changes in debt cycle status over time.

Table 1A.1 reports the years for which direct estimates of the NIIP are available and the years for which the NIIP is estimated by cumulating or decumulating the current account balance for each of the 45 countries considered.

For the special case of the United States, NIIP data are from the US Department of Commerce (BEA 2005e). They refer to the NIIP with direct foreign investment valued at market prices, from 1982 to 2003. For 1976–81, only the NIIP with direct investment at book value is available, and this series is used for that period. The market-valued NIIP was surprisingly lower than the book value in 1982–84, perhaps because of the 1982 recession. This suggests that use of the book value in the preceding five years will not significantly understate the NIIP. The Department of Commerce series does not cover 1970–75, and for this period, backward cumulation of the current account is applied starting from the 1976 book value of NIIP.

Table 1A.1 Data source by time period

Countries	Constructed from current account	NIIP from IFS
Developing countries		
Argentina	1975–90	1991–2003
Bangladesh	1975–99	2000–03
Brazil	1974–2000	2001–03
Chile	1974–96	1997–2003
China	1982–2003[a]	none
Czech Republic	1992	1993–2002
Hong Kong	1997–99	2000–03
Hungary	1981–96	1997–2003
India	1974–96, 2003	1997–2002
Israel	1970–88	1989–2003
Korea	1975–79, 1995–2000	1980–94, 2001–03
Malaysia	1973–79, 1995–2000, 2003	1980–94, 2001–02
Mexico	1978–2000, 2003	2001–02
Peru	1976–85	1986–2003
Philippines	1976–2000	2001–03
Poland	1975–93	1994–2003
Russia	none	1993–2003
Singapore	1971–2000	2001–03
South Africa	none	1970–2003
Taiwan	1980–99	2000–03
Thailand	1974–94	1995–2003
Turkey	1973–99	2000–03
Ukraine	1993–2000	2001–03
Venezuela	1970–82	1983–2003
Industrial countries		
Australia	1970–85	1986–2003
Austria	1970–79	1980–2003
Belgium	1974–80	1981–2003
Canada	none	1970–2003
Denmark	1980–90, 2002–03	1991–2001
Finland	1974	1975–2003
France	1974–88	1989–2003
Germany	1970–79	1980–2003
Greece	1975–97	1998–2003
Ireland	1973–2000	2001–03
Italy	none	1970–2003
Japan	1976–79	1980–2003
Netherlands	1970–79	1980–2003
New Zealand	1971–88	1989–2003
Norway	1974–79, 1994–2003	1980–93
Portugal	1974–95	1996–2003
Spain	1974–80	1981–2003
Sweden	1970–81	1982–2003
Switzerland	1976–82	1983–2003
United Kingdom	1970–79	1980–2003
United States	1970–75[b]	1976–2003[c]

IFS = *International Financial Statistics*, IMF (2005a).

a. Lane and Milesi-Ferretti (2000) for 1982 base.
b. BEA (2005c).
c. BEA (2005e).