

# U.S. Foreign Indebtedness: Are We Investing What We Borrow?

By Jon Faust

**I**n the decades following World War II, the United States came to be known as the world's largest lender, helping to finance economic growth throughout the world. Indeed, by 1981 the United States had amassed \$141 billion in net holdings of foreign assets. In the three years that followed, however, U.S. net holdings were totally eliminated and by 1987 this country's net position was a negative \$368 billion. The United States has now become the world's largest debtor.

There is widespread disagreement regarding the implications of this foreign indebtedness for the economic future of the United States. Some economists argue that inflows of foreign capital bode well for the United States, setting the stage for increasing prosperity. Other economists counter that this country is borrow-

ing to consume beyond its means and that growth of U.S. living standards will suffer when the bill comes due.

The behavior of investment in productive physical capital will play an important role in resolving this debate. If foreign funds have facilitated an investment boom, then rising economic growth and prosperity may result. On the other hand, if foreign funds are augmenting consumption rather than investment, slower growth in living standards may be in the offing.

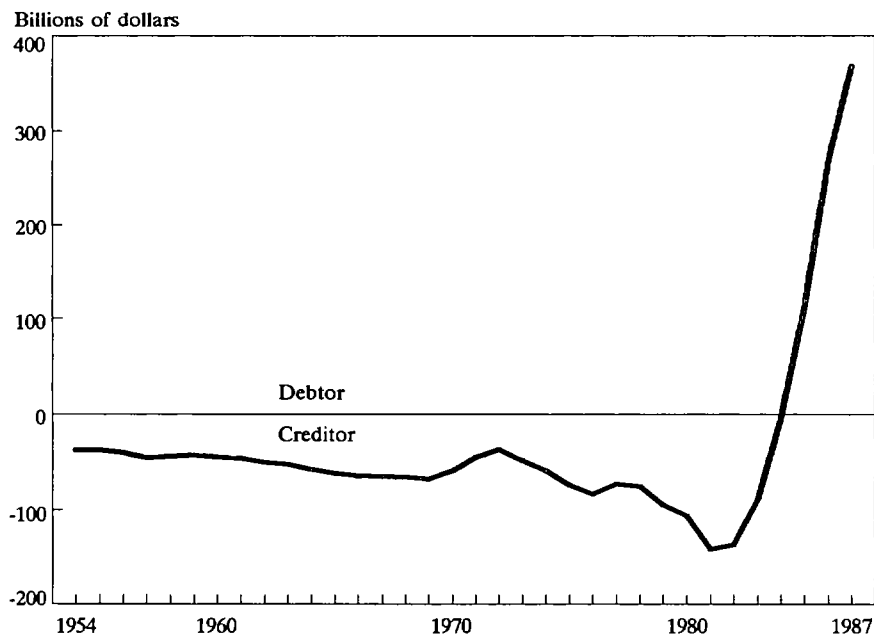
This article examines investment as a central factor in appraising the foreign indebtedness of the United States. The article concludes that investment has been weak in the 1980s and that the combination of weak investment and strong growth of foreign indebtedness could threaten growth in U.S. living standards.

The first section of the article explores the history of U.S. indebtedness, showing that rising indebtedness in the United States has not always led to bad times. The second section argues that whether the United States flourishes

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**CHART 1**  
**U.S. net foreign indebtedness**



Sources: U.S. Bureau of the Census 1975 (1874-1969); U.S. Department of Commerce, Bureau of Economic Analysis, June issues (1970-87).

or languishes under its present indebtedness will largely depend on the recent and prospective behavior of investment. The third section shows that investment has been weak in the 1980s and that a continuation of weak investment and rising indebtedness could slow the growth of U.S. living standards.

## **I. U.S. FOREIGN INDEBTEDNESS: HISTORICAL PERSPECTIVE**

The United States has undergone a remarkably rapid swing from its status as a net creditor to its current position of indebtedness in the

world economy. Chart 1 shows the net foreign indebtedness of the United States for the period since 1954. Falling steadily until 1981, net indebtedness declined in all but eight years from 1954 to 1981. Since 1981, though, net foreign indebtedness of the United States has soared.

While the surge of U.S. indebtedness has caused widespread concern, history reveals that indebtedness by itself is not an accurate barometer of economic well-being. On the contrary, rising indebtedness has at times been associated with good times, and falling indebtedness with bad times. This section provides a historical perspective for evaluating U.S. indebtedness,

indicating that although the United States has been deeply indebted before, the speed of the recent buildup is unprecedented.

## **Defining and measuring net foreign indebtedness**

Net foreign indebtedness of the United States is defined as net U.S. holdings of foreign assets. These net holdings are computed as the dollar value of foreign assets held by U.S. citizens less the dollar value of U.S. assets held by foreigners. For example, in 1981 the net holdings of the United States peaked at \$141 billion, when the United States held \$720 billion in foreign assets and foreigners held \$579 billion in U.S. assets.

Assets considered in calculating foreign indebtedness include financial debt (such as bonds), stock market holdings, and direct foreign ownership of physical capital. Thus, what is often called U.S. foreign "debt" actually includes stock market holdings and direct investment as well as financial debt. In this article, U.S. net holdings of foreign assets are referred to as net indebtedness of the United States.

Referring to net indebtedness of the United States as U.S. foreign debt has led to some confusion when the situation of the United States has been compared with the debt problems of Mexico, Brazil, and Argentina. The debt of these countries, which has attracted widespread attention, is financial debt in the form of bonds and bank loans. Furthermore, the gross debt of these countries is typically discussed, not their net debt.

The figures on U.S. net indebtedness probably overstate the true foreign indebtedness of the United States. This overstatement arises

because the computation of the dollar value of direct investment is based on original purchase price, rather than on current market value. Much of U.S. direct investment abroad took place long ago during the buildup of net foreign assets before 1982. The value of many of these assets has appreciated a great deal, implying that the original purchase price substantially understates the true value of U.S. holdings. Because many foreign holdings in the United States were acquired quite recently, the original purchase price more accurately reflects the value of foreign holdings.<sup>1</sup> Nevertheless, while the value of U.S. net indebtedness is not precisely reflected in the statistics, most analysts would agree that the United States is currently indebted to the world and that U.S. indebtedness is growing at an unprecedented rate.

## **Net capital flows, saving, and investment**

Net capital flows are the primary source of change in U.S. net indebtedness.<sup>2</sup> Net capital flows occur when U.S. purchases or sales of foreign assets are not offset by foreign purchases or sales of U.S. assets. If foreign pur-

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<sup>1</sup> While the treatment of direct investment may undervalue U.S. holdings, the treatment of U.S. loans to less developed countries may overstate U.S. holdings. The true value of these loans may be substantially less than the value they are given in the official statistics.

<sup>2</sup> The other source of change in net indebtedness is the change in the value of assets held in the United States and abroad. This factor tends to be far less important than capital flows in accounting for changes in indebtedness. For example, in 1987 net valuation changes were quite large by historical standards, benefiting the United States by about \$36 billion. The change in valuation offset only about one-quarter of the capital inflows, however.

chases of U.S. assets exceed U.S. purchases of foreign assets, capital inflows to the United States occur. For example, in 1988 foreigners purchased \$136 billion more in U.S. assets than the United States purchased from abroad. This represented a net capital inflow to the United States, which increased the net foreign indebtedness of the United States.

Net capital flows can be broken down into two components: investment and national saving. Specifically, net capital flow can be calculated as national saving minus investment.<sup>3</sup> The “investment” in this relation is gross private domestic investment, which includes purchases by businesses of structures and equipment, changes in business inventories, and residential construction. National saving is the sum of private saving and government saving. Private saving occurs when individuals and corporations do not spend their entire after-tax incomes. Government saving is simply the negative of the government budget deficit, as measured by the combined tax revenues of all levels of government—federal, state, and local—less the combined government expenditures.

The relation between capital flows and their two components is an accounting relation based on the fact that all investment must be financed either at home or abroad. When domestic investment exceeds the available flow of U.S. national saving, the excess investment must be financed by attracting funds saved abroad. This importation of foreign funds represents an inflow of capital into the United States and therefore increases U.S. net indebtedness. The

<sup>3</sup> This ignores net capital grants received by the United States, which are almost always negligible.

TABLE 1  
**Net capital flow, saving,  
and investment**

(billions of dollars)

	<b>1988</b>
National saving	645
Private saving	732
Government saving	-87
Gross domestic private investment	767
Net capital flow	-136
Statistical discrepancy	14

Source: U.S. Department of Commerce, Bureau of Economic Analysis, various issues.

data for 1988 shown in Table 1 illustrate this situation. Gross domestic private investment in 1988 was \$767 billion, which exceeded U.S. national saving of \$645 billion. Thus, to achieve the 1988 level of investment, a net \$136 billion in foreign capital was attracted.<sup>4</sup>

## U.S. indebtedness since the Civil War

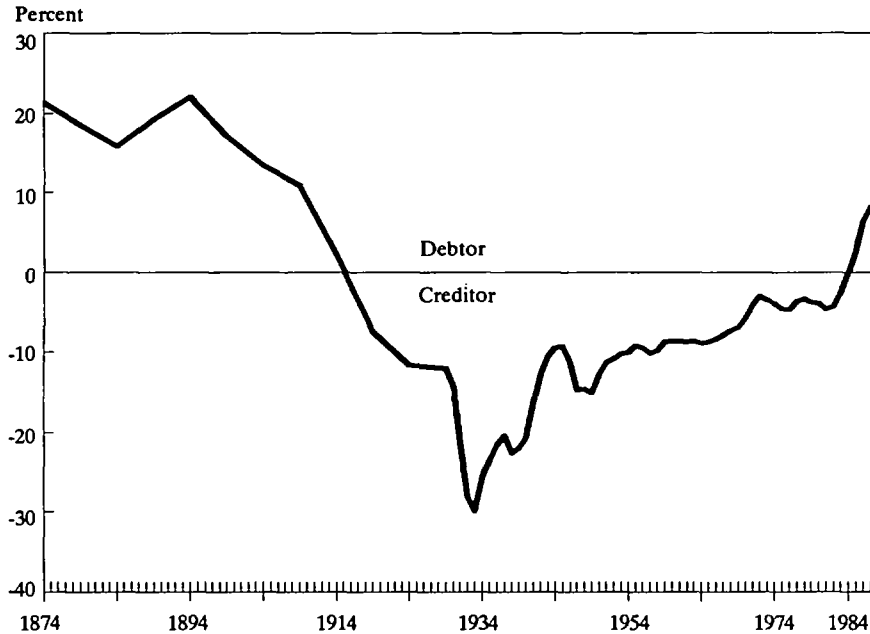
Since the Civil War, U.S. net indebtedness as a share of national income has shown large swings (Chart 2).<sup>5</sup> In the early 1890s, U.S. indebtedness rose to over 20 percent of national income. Throughout the next 50 years—spanning World War I, the 1920s, and the Great Depression—indebtedness fell steadily. By the middle of the Great Depression, the United

<sup>4</sup> The statistical discrepancy of \$14 billion between the capital flow and saving minus investment is due to difficulty in measuring these items. Such large discrepancies are not uncommon.

<sup>5</sup> The historical data should be used only to judge the general character of events because of possible inaccuracy.

## CHART 2

### U.S. net foreign indebtedness as a share of national income



Note: For the pre-1929 period, there are only two data points per decade. This accounts for the appearance of greater smoothness in the pre-1929 data.

Sources: Net indebtedness, see sources for Chart 1. National income (current dollars), Ransom and Sutch 1984 (1874-1928); U.S. Department of Commerce, Bureau of Economic Analysis, various issues (1929-87).

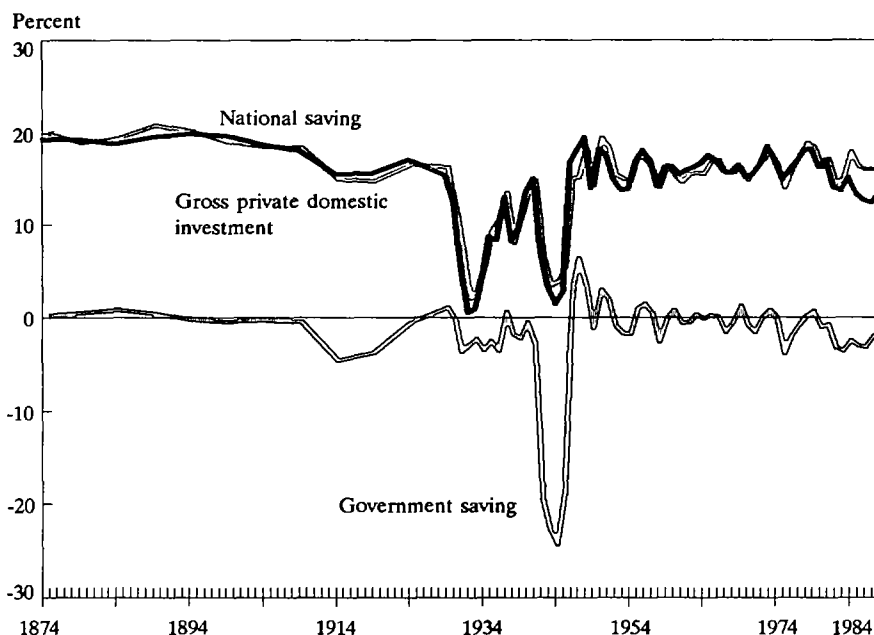
States had a net credit position equal to over 25 percent of national income. During the next half-century, including World War II and the postwar era, the net credit position was steadily depleted. By 1987 U.S. indebtedness was equal to 8 percent of national income.

One simple conclusion to be drawn from Chart 2 is that increases in indebtedness do not necessarily signal bad times; conversely, decreases in indebtedness do not necessarily signal good times. For example, the most rapid increase in the credit position of the United States occurred at the beginning of the Great

Depression, certainly a low point in U.S. economic history. In contrast, the United States moved steadily toward indebtedness during the 1950s and 1960s—two relatively prosperous decades.

Some indication of what has caused indebtedness to swing so widely since the Civil War can be gained by examining the behavior of saving and investment over this period. Chart 3 shows national saving, gross domestic private investment, and government saving as shares of national income. While private saving is not presented in the chart, it can be derived as

**CHART 3**  
**National saving, government saving, and investment**



Note: For the pre-1929 period, there are only two data points per decade. This accounts for the appearance of greater smoothness in the pre-1929 data.

Sources: Ransom and Sutch 1984 (1874-1928); U.S. Department of Commerce, Bureau of Economic Analysis, various issues (1929-87).

national saving minus government saving.

Investment and national saving reached record rates near 20 percent as net indebtedness peaked in the early 1890s. The period between 1890 and the middle of the Great Depression was one of decline from these record levels in both saving and investment. This decline was associated with a rapid fall in U.S. net indebtedness, especially during World War I and at the beginning of the Great Depression.

U.S. net indebtedness fell during this period because investment declined more steeply than saving. As noted above, the dif-

ference between saving and investment, rather than their levels, leads to changes in indebtedness. Thus, as investment suffered more than saving, excess saving flowed abroad, increasing the net credit position of the United States.

Indebtedness rose sharply during the period of U.S. involvement in World War II. During this period both saving and investment fell sharply, but saving fell more sharply than investment. Thus, there were capital inflows that increased the rate of indebtedness.

The period from World War II to 1982 was one of relatively steady investment, saving, and

government deficits. Saving generally exceeded investment during this period, leading to capital outflows. These outflows contributed to a very gradual increase in the dollar value of the U.S. net credit position with the rest of the world. Because income grew more rapidly than the net credit position, however, the size of the net credit position as a share of income declined steadily.

The most striking feature of the period since 1982 is the sustained excess of investment over saving. The capital inflows required to finance the excess of investment over saving from 1983 to 1987 have averaged over 2.5 percent of income. These inflows exceed by over a percentage point any capital inflows sustained since the Civil War. The only previous periods since the Civil War when capital inflows have exceeded even 1 percent of income were from 1884 to 1893 and again in 1943.

This review of history gives mixed signals about the implications of the recent surge in U.S. indebtedness. It may be comforting that large swings in indebtedness have occurred before, and that some periods of rising indebtedness have been associated with good times. However, the fact that the current capital inflows are without precedent is disconcerting. The next section explains the central role investment plays in determining whether indebtedness will enhance or diminish growth in living standards.

## **II. THE IMPORTANCE OF INVESTMENT TO DEBTORS**

The essential reason why investment is important to debtors is the same for individuals, businesses, and countries: successful investments yield income. Suppose a country uses

borrowed funds to finance investment projects and that these projects generate more than enough income to pay the interest on the loan. In this case the debt can be serviced with income left over to increase living standards. In contrast, suppose that a country finances a higher level of consumption by cutting back on investment and by borrowing from abroad. In this case, the results could be quite different. The slower accumulation of capital due to slower investment could lead to slower income growth. Furthermore, a portion of income would have to be diverted to pay interest on the debt. The combination of these two effects could significantly diminish growth in living standards.

This simple argument assumes that an increased rate of investment leads to increased growth in income for the nation. Economists generally agree that investment in productive physical capital allows workers to be more productive, thereby promoting growth in national income. Just as a carpenter can create more cabinets with power tools than with manual tools, workers all across the economy might be expected to be more productive with increased capital. Evidence for many developed countries shows a strong positive relation between investment and income growth. The precise nature of this relation, however, is still widely debated by economists, and the many other factors that affect income growth make it difficult to pin down the role of investment.<sup>6</sup> Most economists would probably agree, however, that slower growth in capital poses a significant risk of slower economic growth.

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<sup>6</sup> A good discussion of the relation between investment and income growth is provided in Lipsey and Kravis 1987.

## **A previous period of indebtedness: the late 1800s**

The experience of the United States in the 1800s provides a useful illustration of the importance of investment to debtors. As noted above, the period from 1884 to 1893 was one of large capital inflows and rising indebtedness. It was also a period of record rates of investment and saving (Chart 3). National saving was about 19 percent of income, and the combined government budget was in surplus, making a positive contribution to national saving during the period. Although the national saving rate was the highest of the post-Civil-War era, it was exceeded by the record investment rate of over 20 percent of income. Thus, capital inflows of over 1 percent of income were required to finance the extraordinary rate of investment.

The 1884-93 period provides a clear example of indebtedness facilitating enhanced investment and economic growth. The high rate of investment financed rapid industrialization and railroad building. As a result, manufacturing output during the period grew by about 10 percent per year. Thus, investment opportunities in the United States attracted foreign capital, and high rates of investment promoted increased industrial output. Because some analysts see a strong parallel between the events of 100 years ago and those of today, this historical episode provides an interesting backdrop for evaluating the possible effects of today's indebtedness.

## **Two views of the current U.S. indebtedness**

Those who are optimistic about the recent

rise in U.S. indebtedness have argued that something very similar to the events of a century ago is happening in the United States today. This contention is strongly debated by a group that foresees more austere times resulting from U.S. indebtedness. The accounts these two camps give of U.S. economic prospects make clear the important role investment will have in resolving this debate.<sup>7</sup>

*Prosperity ahead?* The prosperity view of economic prospects begins with the proposition that, since 1982, investment opportunities in the United States have been much better than those in the 1970s and early 1980s.<sup>8</sup> Proponents of this view have put forward several reasons for this central proposition. President Reagan was vocal in support of free market capitalism, championing changes in government policies and taxes to benefit businesses. Supporters of supply-side economics believe that these tax cuts and regulatory reforms may have greatly stimulated investment in the United States. Some analysts have also argued that the deep recession that ended in 1982 enhanced business prospects by promoting efficiency, by moderating wage demands, and perhaps most important, by lowering the inflation rate to under 5 percent.

According to the prosperity view, the improvement in business prospects has had four implications. First, a boom in investment began in 1983, when businesses became aware of the rosy economic future reflected in these invest-

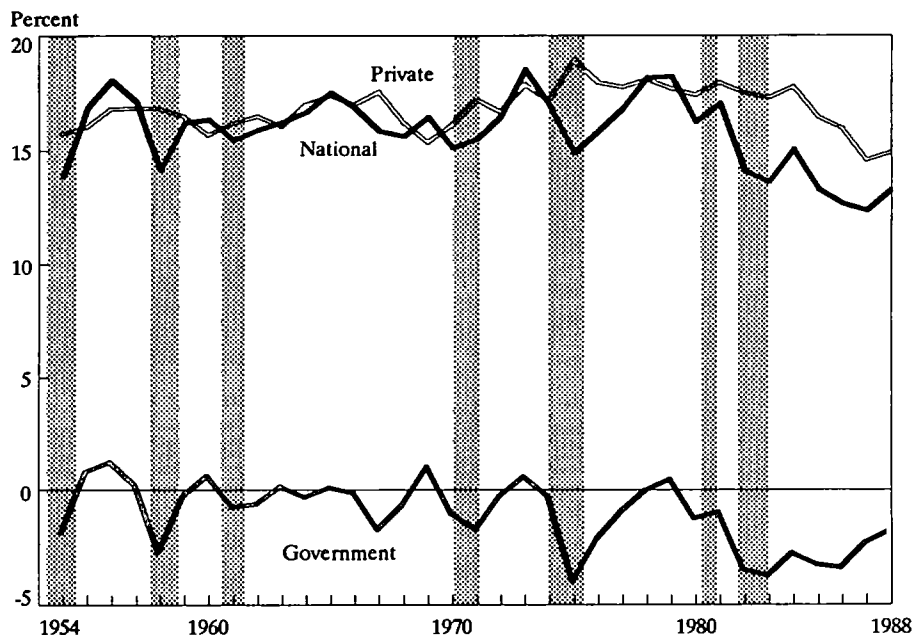
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<sup>7</sup> The views presented here are an amalgam of positions that have been expressed. They are greatly simplified to highlight the importance of investment.

<sup>8</sup> See, for example, debate in Poole and others 1989 and *The Economic Report of the President* 1989.



**CHART 4**  
**National, private, and government saving as a share of national income**



Note: Periods of economic recession are shaded.

Sources: U.S. Department of Commerce, Bureau of Economic Analysis, various issues.

ment opportunities. Second, consumption rose as consumers became more confident about economic prospects. Third, the strong demand for credit to finance the new investment and consumption pushed up real interest rates (interest rates adjusted for inflation) in this country. Fourth, investors across the world sought to take advantage of the high interest rates available in this country, leading to inflows of foreign capital.

*Austerity ahead?* The second view of the current situation predicts austerity in the future.<sup>9</sup>

<sup>9</sup> See, for example, Friedman 1988 and Summers 1988.

This view of U.S. foreign indebtedness begins with the proposition that the United States has cut back saving for the future in favor of consuming in the present. Proponents of the austerity view support their central proposition by pointing to the data on rates of saving and consumption since 1982.

The reduction of government saving is reflected in the budget deficits registered in the 1980s (Chart 4). From 1983 to 1988 the budget deficit averaged 2.9 percent of gross national product, much higher than the average of 1.0 percent for the 1954-88 period. In the post-Civil-War era, budget deficits of this size in

relation to national income have occurred only during wars and the deepest recessions. The fall in private saving has been smaller. Private saving as a share of national income has fallen to 16.3 percent in the current economic expansion, down from an average 16.9 percent in the 1954-88 period, and well under the average rate of 17.1 percent for expansions since 1954. The counterpart of the decrease in saving has been an increase of over two percentage points in personal consumption expenditures as a share of national income, rising from an average of 62.8 percent in previous expansions since 1954 to 65.8 percent in the current expansion.

As with the prosperity view, four steps are predicted to follow from the central assertion of the austerity view. First, consumption rises and saving falls. Second, reduced saving reduces the domestic pool of funds available for lending. Third, competition among borrowers for the reduced pool of investment funds drives interest rates upward, squeezing some borrowers out of the market and reducing investment. Fourth, as in the previous account, increased interest rates attract foreign capital.

The predictions of both the prosperity and austerity views of the U.S. economic outlook are quite similar. Both views predict strong consumption, high real interest rates, and inflows of foreign capital.<sup>10</sup> Each of these predictions has been borne out since 1982. The debate between backers of these two views has been

difficult to resolve precisely because the predictions of the views are so similar. There is, however, one important difference in the two views. The prosperity view predicts strong investment, while the austerity view predicts weak investment.

The overall message from this review of the competing views of U.S. economic prospects is that the behavior of investment is among the most important issues determining the effect of U.S. external indebtedness.<sup>11</sup> If strong investment has been laying the groundwork for rapid economic growth, then widespread concern about the foreign debt may be misplaced. Rapid economic growth can allow the United States to pay interest and dividends on foreign-held assets, while still allowing U.S. living standards to increase. On the other hand, weak investment—investment that is insufficient to support growth—may be doubly bad. Slower income growth, undesirable by itself, is made worse if a significant share of future income must go to pay interest on a large foreign debt.

### **III. WEAK INVESTMENT IN THE 1980s**

There has been considerable debate as to whether investment in the 1980s has been weak or strong. Economists supporting the prosperity

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<sup>10</sup> A more detailed examination of both views would uncover other differences in the two views, notably in their predictions regarding the behavior of the exchange rate and stock market. Because the behavior of the stock market and the exchange rate tend to be erratic and difficult to interpret, however, the focus here will be on investment.

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<sup>11</sup> This conclusion is about the likely outcome of the current situation and says nothing about what may have gotten the United States into this situation. The holders of the two views may have beliefs about the importance of interactions of budget deficits, trade deficits, and personal saving behavior in precipitating the recent indebtedness. The conclusion here does not relate to these issues, however; it simply addresses the importance of investment in determining the outcome of a period of indebtedness.

view assert convincingly that an investment boom has followed the recession in 1982, whereas economists supporting the austerity view make as strong a case that investment has been weak. The opposing camps measure investment differently and apply different standards to determine when investment is strong or weak. This section evaluates these two positions and concludes that investment in the 1980s has been weak.

Before beginning the analysis, however, an alternative approach to addressing the question about investment should not be ruled out. This approach involves examining the actual inflows of foreign funds and determining whether or not the funds have been spent on productive capital. Pursuing this line of analysis, for example, would involve analyzing whether the capital flowing from Japan has gone to build factories or to pay for corporate takeovers. This approach is not very useful in evaluating U.S. economic prospects. Total productive investment in the United States is the more important issue for economic growth, and it is relatively unimportant whether Americans or foreigners fund the investment. For example, even if all of the foreign funds were spent on productive capital, slow income growth could still result if total investment fell. Thus, this section examines whether the rise in foreign indebtedness has been mirrored by a rise in investment, and it leaves aside the issue of whose money paid for which asset.

## **The weakness of net fixed investment**

Two of the most fundamental measures of investment are considered first: gross fixed investment and net fixed investment.<sup>12</sup> Gross fixed investment represents all private spending

on structures, plant, and equipment. Because physical capital wears out, some portion of gross fixed investment always goes simply to replace worn-out capital. Net fixed investment is equal to gross fixed investment less depreciation on existing capital. Because it excludes the portion of fixed investment going toward replacement of worn-out capital, net fixed investment is intended to measure additions to the capital stock. Since it is additions to the capital stock that contribute to increased productive capacity, economists believe that net fixed investment, if properly measured, is more informative about future growth than is gross fixed investment.

Net fixed investment has been weak in the current expansion (Chart 5).<sup>13</sup> About 4.9 percent of income has gone to net fixed investment in the current expansion, 1.6 percentage points less than the average of 6.5 percent in previous expansions. This weakness has been extremely persistent, as net fixed investment has been below the 1954-88 average for the entire seven years of the current expansion.

## **Net versus gross fixed investment**

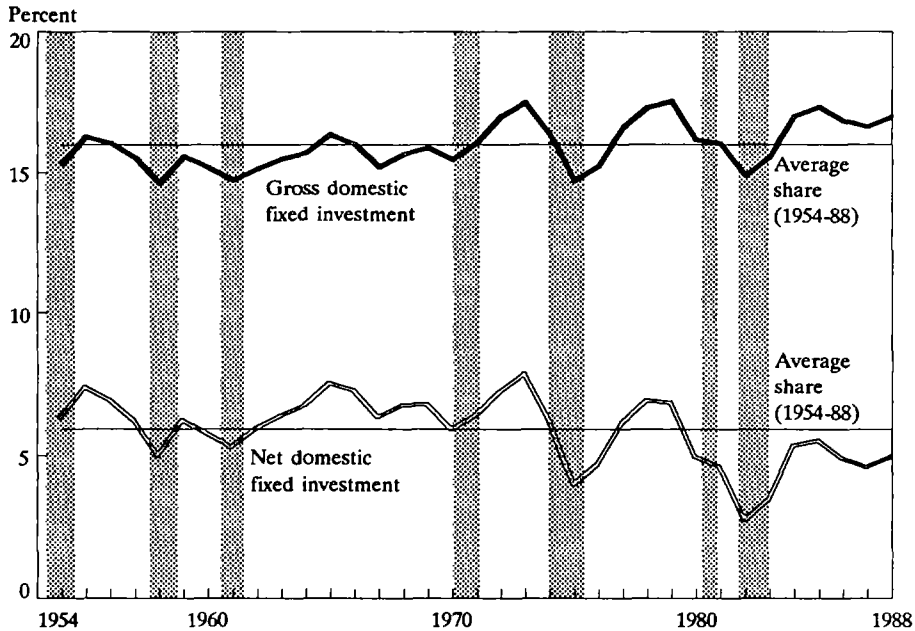
Many supporters of the prosperity view argue that the investment situation is reflected more accurately by gross fixed investment than

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<sup>12</sup> The investment figures quoted in the historical section were for gross investment, which is the sum of gross fixed investment and changes in stocks of inventories.

<sup>13</sup> The recent debate over the strength of investment has focused on many detailed issues involving the definition of investment. Because of the lack of detail in the investment data for the long historical period, comparisons in this section are for the period since 1954.

**CHART 5**  
**Investment as a share of national income**



Note: Periods of economic recession are shaded.

Sources: U.S. Department of Commerce, Bureau of Economic Analysis, various issues.

by net fixed investment. Gross fixed investment has been above average for most of the current expansion (Chart 5). The share of income going to gross fixed investment during this time has been 16.7 percent, somewhat above the 15.9 percent average share in previous expansions.

Those who prefer the gross-fixed-investment evidence agree that analysis should focus on additions to the capital stock rather than on expenditures to replace worn-out capital. They argue, however, that measuring depreciation

is extremely difficult, which leads to the possibility that the net fixed investment data are inaccurate. They further argue that when a worn-out machine is replaced, it is often replaced with an improved model. Unless such changes in the quality of capital are measured properly, the part of investment paying for these quality improvements might wrongly be attributed to the replacement of old machinery.

The net investment data used here are from the national income and product accounts compiled by the U.S. Department of Commerce.

These data are intended to reflect the true service lives and qualities of various forms of capital. Despite this fact, there is a possibility of error in the data. There is no reason, however, to assume that these errors make investment appear weaker than it actually is. The errors may in fact disguise even further weakness.

While these concerns about the accuracy of the depreciation data have merit, an important fact remains: capital wears out. This fact should not be ignored simply because it is difficult to measure depreciation. Because depreciation is measured imperfectly, however, care should be taken to see that the basic conclusion that investment has been weak remains valid even in the presence of large measurement error. The danger is that official depreciation statistics are too large, implying that net investment statistics are too small. This could lead to an erroneous conclusion that investment has been weak.

The conclusion that investment has been weak would not be overturned, however, even if measured depreciation is far larger than true depreciation. For example, suppose that measured depreciation is twice as large as true depreciation. Revised net investment data, correcting for this problem, would show that net investment in the current expansion has been 10.8 percent of income, somewhat less than the average of 11.2 percent for the revised measure in previous expansions. This evidence suggests that substantial inaccuracies in the depreciation numbers might moderate the conclusion that investment has been weak, but would provide no evidence of an investment boom.

Further evidence in support of the conclusion that investment has been weak comes from alternative measures of net investment. Two

such measures are the growth of capital inputs in the economy and the growth of net capital per member of the labor force.<sup>14</sup> Neither of these measures suggests there has been an investment boom recently. Thus, consideration of several different measures of net investment and allowance for large errors in the data do not overthrow the conclusion that investment has been weak in the current economic expansion.<sup>15</sup>

### **Misleading investment growth**

A second argument made by those holding the prosperity view is that analysts should look at the growth rate of investment, rather than the share of income spent on investment. In the first two years of the expansion beginning the first quarter of 1983, fixed investment registered very rapid growth rates. For example, the annual growth rate of net fixed investment in the second quarter of 1983 was 120 percent.

These high growth rates, however, were evidence of a fixed investment bust in 1982, not a boom in 1983. At the trough of the recession in the fourth quarter of 1982, net fixed

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<sup>14</sup> The capital input measure is prepared by the U.S. Department of Labor (various issues b). The growth of net capital per member of the labor force is computed using labor force data from the U.S. Department of Labor (various issues a), and capital stock data from the U.S. Department of Commerce (various issues).

<sup>15</sup> Some economists differ on the interpretation of the various investment data. For example, a conclusion of strong investment has been drawn by emphasizing gross investment and by comparing recent investment with a period in the 1970s that was, arguably, not typical (Tatom 1989).

investment for the entire U.S. economy was less than \$80 billion after adjustment for inflation. The level of net fixed investment had not been so low since 1958. Impressive growth rates of investment from a low starting point may still leave the economy with very little actual investment.

Rather than examining growth rates from an extraordinarily low initial level, it is probably more meaningful to examine the growth of fixed investment over a period covering both the extreme decline and the rapid rebound. Over the two recessions and expansions in the 1980s, the growth rate of net fixed investment was slightly negative. In contrast, the growth rate over the previous five recessions and expansions was over 4 percent.

### **Weakness of broader investment measures**

Some supporters of the prosperity view also argue that additional categories of spending should be included in investment spending.<sup>16</sup> These categories include education spending, purchases by consumers of durable goods, defense and nondefense government capital expenditures, and research and development. This argument has some merit. For example, government expenditures on roads certainly represent important additions to the national capital stock. Economists differ, however, on how significant a contribution military capital expenditures and consumer

durable expenditures make to the productive capacity of the country.

Two issues are important in deciding whether any of these additional categories of spending alter the conclusion that investment has been weak. First, spending on the category must have been strong in the current expansion. Second, the spending must have added to the productive capacity of the country.

*Education.* The share of income devoted to education rose steadily from 1954 to 1970 and has fallen back since then.<sup>17</sup> Thus, the average share of income devoted to education in the current expansion is lower than the average share since 1970, but is slightly higher than the average share for the entire 1954-87 period. Thus, the evidence on educational investment spending is mixed.

Some analysts have also argued that the link between education spending and improved productive capacity of the economy is in doubt. Indeed, some recent evidence attributes a decline in the growth rate of productivity of American workers to their poor educational background. Evidence on this topic is far from clear, but forecasting significant improvement

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<sup>16</sup> For example, see Lipsey and Kravis 1987.

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<sup>17</sup> The sources for the broader measures of investment are as follows. Education expenditures (current dollars): U.S. National Center for Education Statistics 1988; gross consumer durables (1982 dollars): U.S. Department of Commerce, various issues; net consumer durables, net federal government defense and nondefense equipment and structures, net state and local government equipment and structures (change in the net stock in 1982 dollars): U.S. Department of Commerce 1986 and various August issues; Federal research and development (1982 dollars): Executive Office of the President 1989.

in U.S. economic prospects based on current educational investment seems unwarranted.

*Durable goods purchased by consumers.* Considerable attention has been given to the fact that the share of national income devoted to gross purchases of consumer durable goods has been almost 2.5 percentage points higher during the current expansion than its average value from 1954 to 1987. This increase probably does not represent a significant increase in the country's productive capacity, however, for two reasons. First, the share of income going to net purchases of durables (gross purchases less depreciation) has increased by less than one percentage point. Second, many consumer durables probably do not affect the economic prospects for the country. For example, while ownership of additional automobiles might contribute to the nation's productive capacity, ownership of additional televisions and jewelry might not.

*Federal nondefense capital and research and development.* Federal spending on capital and research and development has been somewhat weak in the current expansion, with the share of income devoted to each being down less than half a percentage point from the average for 1954 to 1987.

*Defense capital.* Defense investment's share of income in the current expansion has risen less than half a percentage point above its average share from 1954 to 1987. The rationale for including this category of spending in productive investment is widely debated. For example, some analysts deny that additional submarines add to the productive capacity of the country. However, defense spending might help create a secure environment for economic growth, which undoubtedly is important.

*State and local government capital.* State

and local government capital expenditures as a share of national income in the current expansion have been almost a full percentage point below the average share for 1954 to 1987, down from 1.3 percent of income to 0.4 percent. Thus, state and local governments have typically spent three times the recent share of income on capital. Some recent evidence indicates that this reduction in public capital investment could have significant negative implications for economic growth (Aschauer 1988).

The total effect of including these additional categories is to strengthen the conclusion that investment has been weak in the current expansion. There have been increases in the share of income devoted to education spending, net purchases of consumer durables, and military capital expenditures—three categories for which the link between spending and increased productivity has been questioned. These increases were more than offset by a substantial decline in state and local government capital expenditures and smaller declines in the remaining categories.

The overall conclusion of this analysis is that the large inflows of foreign capital in the 1980s were not mirrored by a rise in net investment. Each year since 1982, U.S. capital imports have averaged over 2 percent of national income. At most, this borrowing could have supported a similar two-percentage-point rise in the share of income devoted to investment. Instead, by the standard measure of net fixed investment, the share of income invested has fallen by over a percentage point. The precision of this conclusion may be called into question, but alternative measures of investment certainly provide no evidence of an investment boom.

## Implications for the future

Three risks in the current course of strong growth in foreign indebtedness and weak investment can be identified. The first risk is that weak investment will lead to slower income growth than in the past. As noted above, investment leads to growth in income by allowing workers to be more productive. Productivity growth has been sluggish in the United States since the mid-1970s, and weak investment risks further sluggishness.

A second risk comes from the burden of indebtedness. If borrowed funds are not used to generate new income, spending in some areas will ultimately have to be cut back to pay the interest and dividends on foreign-held assets in the United States. This burden is currently not large in relation to national income, but U.S. indebtedness has been growing rapidly in relation to national income. The ultimate burden will depend on how large net capital flows are in the years ahead.

A final risk is posed by the adjustments required to slow the growth of indebtedness. U.S. indebtedness cannot grow indefinitely as a share of national income; the burden of indebtedness would eventually outstrip the U.S. ability to pay. Just as market forces guarantee that corporations and individuals cannot borrow an unlimited amount, market forces will also ultimately halt the growth in the rate of U.S. indebtedness. These market forces may also have detrimental effects on living standards. For example, the interest rate at which the United States can borrow may rise, increasing the burden of indebtedness. Further, the real value of the U.S. dollar may fall relative to other currencies. This would imply that a given dollar value of interest payments to foreigners

will represent a larger sacrifice of U.S. goods than before.<sup>19</sup>

The likely importance of all of these effects is subject to debate. Some economists contend that growth in living standards will stagnate, while others contend that the likely effects may be small. Choosing between these predictions is difficult, in part because the combination of weak investment and rising indebtedness has persisted for a relatively brief period. Making drastic predictions based on currently available evidence is probably not warranted. The risks will be magnified, however, with continued rapid growth in the rate of indebtedness or with continued weakness in investment.

The fact that growth of living standards may be slower in the future does not necessarily mean the current economic course of the United States is undesirable. It may be perfectly sensible for consumers to opt for high rates of consumption today at the expense of lower growth in consumption in the future. Consumers and government policymakers must always weigh the benefits of consuming more today against the benefits of saving for the future. Economists may help to explain the available options, but the choice must be left to U.S. citizens and policymakers.

## IV. CONCLUSION

In the past six years, the United States has rapidly increased its foreign indebtedness. While many analysts have been concerned by this development, others argue that indebtedness need not be a cause for concern. This

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<sup>19</sup> A description of these effects and their likely importance is provided in Lawrence 1988.



sanguine view is partly supported by the experience of the United States in the late 1800s. Evidence from that period confirms that indebtedness can indeed facilitate rising standards of living.

The current situation, however, stands in stark contrast to the experience of a century ago. During the previous period of rapidly rising indebtedness, the United States was investing at a record rate. Moreover, the government budget was in surplus, contributing to a record national saving rate. The strong investment during that period contributed to rapid economic growth, allowing living standards to rise and the foreign indebtedness to be wiped out.

In the current expansion the United States has not invested what it borrowed. The private saving rate has been low, and government

budget deficits have been larger in relation to income than during any prior peacetime expansion. For the same reason that strong investment contributed to rising living standards a century ago, weak investment during the recent expansion poses a risk that growth in living standards will suffer.

For those who are concerned about the prospect of slower growth in living standards, a note of optimism can be found in the fact that the current period of weak investment and rising indebtedness has lasted just six or seven years. In the historical sweep of events, brief shifts in investment and indebtedness have often occurred. It is too early to draw extreme conclusions from the current course of events, and it is probably not too late for the current course of events to be reversed.

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