Should We Fret about Our Low Net National Saving Rate?

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Introduction

Relative to most other industrial countries, the United States has recorded low ratios of saving and investment to GNP since the end of World War II. The official accounts show a further decline in the 1980s in the U.S. net saving rate, which counts the U.S. budget deficit as a negative component. Many analysts maintain that this recent decline in the ratio of net national saving to GNP threatens accustomed improvements in our national living standards and makes the United States highly vulnerable to a cutoff of foreign investment funds.

Thus, Alan Greenspan (1989, p. 15) has argued:

> The U.S. [budget] deficits of recent years are threatening precisely because they have been occurring in the context of private saving that is low by both historical and international standards. Historically, net personal plus business saving in the United States in the 1980s is about 3 percentage points lower relative to GNP than its average in the preceding three decades. . . .
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> Under these circumstances, such large and persistent deficits are slowly but inexorably damaging the economy. The damage occurs because deficits tend to pull resources away from net private investment. *And a reduction in net investment has reduced the rate of growth of the nation's capital stock.* This, in turn, has meant less capital per worker than would otherwise have been the case, and

this will surely engender a shortfall in labor productivity growth and, with it, a shortfall in growth of the standard of living [italics supplied].

In the same vein, George N. Hatsopoulos (1989) has written:

The U.S. economy during the late 1980s has devoted a far higher share of national output to consumption, and a lower share to investment and saving, than in any comparable period of this century. The result: Despite very recent gains, we aren't saving enough to maintain the growth in living standards we've come to expect.[1]

And the International Monetary Fund (1989, p. 41) has asserted:

Among the deficit countries the task of raising domestic saving is particularly urgent in the United States, given the magnitude of that country's reliance on external funds and the sharp decline in the private saving rate in the past several years. These factors, coupled with a *net investment performance* that is poor by historical standards and in comparison to other industrial countries, underscores the vulnerability of the U.S. economy to a possible reduction in the inflow of foreign saving [italics supplied].

This paper will explore issues raised by each of these three statements. We begin with Hatsopoulos (1989) who claims to define consumption "the way the U.S. government does: [as] all purchases of goods and services by households and government, except purchases of houses by individuals and purchases of plants and equipment by businesses."[2]

This definition of consumption seems too broad. Along with inventory accumulation, it also counts as consumption: (a) household purchases of durables; (b) government outlays for social capital (e.g., schools, highways, sewage facilities, and airports); (c) spending on education and training by households, government, and business; and (d) R&D outlays by business and government. Because such items augment the economy's productive potential, it is logical to count them—at least in part—as investment outlays.[3] Moreover, if these components of expenditure and product are relatively more important in the United States than in other industrial countries,

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[1]For a detailed discussion, see Hatsopoulos, Krugman, and Poterba (1989). Similar views are expressed by Feldstein (1988) and by *The Economist* in "The Wasting Disease" (1989). The summary line atop *The Economist* article reads; "Behind the fuss over the dollar and the trade deficit lies a far bigger fear: that America is giving up investment."

[2]Hatsopoulos should have included increases in business inventories as a component of domestic investment. His definition of "consumption" implicitly includes the net budget deficit of all sectors of government as a negative component of saving.

[3]See Lipsey and Kravis (1988) and Eisner (1989).

counting them as investment (and in-kind saving) would raise the saving-investment ranking of the United States among the G-10 countries.[4]

Although the issue of definition and classification is important, I stress different considerations in this paper. Specifically, I proceed along the following lines: (a) I note that the very sharp dip in the net U.S. saving rate in the 1980s far exceeds the drop in the gross U.S. saving rate—the ratio of gross saving to GNP; (b) I argue that the gross saving rate—and its counterpart in a closed-economy setting, the gross investment rate—is a far more important influence on economic growth than the net saving rate, *when both gross and net saving rates are measured in their customary way*; (c) observing that there has recently been a rise, not a drop, in the ratio of (conventionally measured) real gross domestic investment spending to real GNP, I argue that it is this *real gross investment ratio* that is critical for future economic growth; (d) I argue that the deterioration of the U.S. external creditor position associated with the recent string of current account deficits poses no significant threat to continuing increases in U.S. living standards; and (e) contrary to the IMF's staff assessment, I argue that the large current-account deficit does not increase the economy's vulnerability "to a possible reduction in the inflow of foreign saving."[5]

[4]In an extremely interesting exercise, Lipsey and Kravis (1988) estimate that in 1980, on a narrowly defined "nominal basis," U.S. gross investment as a percentage of GNP was only 84.1 percent as high as the weighted average of the corresponding percentage for a group of eight other industrial countries (Japan, Belgium, Denmark, France, Gemany, Italy, the Netherlands, and the United Kingdom). But when they make comparisons using a broad definition of investment spending that includes as investment expenditures on education, R&D, consumer durables, and military capital formation, and when they adjust for relative-price differences (thus comparing "real investment outlays to real GNP"), they estimate that the gross U.S. investment ratio was 99.1 percent of the average ratio for the other eight countries in 1980.

They conclude that "the U.S. is close to the average of other developed countries in the degree to which it has used its income for forward-looking purposes—capital formation in a broad sense." And noting further that the price of capital goods has been relatively low in the United States and that the United States is a high-income country, they conclude that in real terms, the U.S. has invested "more per capita than almost all the individual countries."

[5]This general approach to questioning the conventional wisdom regarding the problems posed by the low net saving and investment ratios in the United States has been forcefully set forth in an insightful editorial in the *Wall Street Journal* entitled "The Quality of Investment" (1989). In addition to arguing that the critical magnitude to focus on is real gross investment, to noting that conventionally measured consumption has many investment-like components (e.g., "your son's engineering education"), and to pointing out that depreciation allowances are suspect numbers, the editorial argues that the ending of distortions from high inflation, high tax rates, and the pre-1981 tax code has probably improved the quality of U.S. investment outlays. Thus the editorial

A Thought Experiment

To appreciate why gross saving and investment rates are likely to be more important than net saving and investment rates for future economic growth, let us imagine that the U.S. economy is at its present stage of economic development but that the following simplifying conditions hold: The current account is balanced; net private saving is zero; the consolidated government budget deficit is zero; nominal gross investment just equals depreciation allowances, which amount to 10 percent of GNP[6]; and population and the labor force are fixed. If this state of affairs persisted for (say) 50 years, would we expect living standards to rise? Surely we would.

Our assumptions do not imply a stationary state because we have not ruled out continuing advances in science and technology. Thus, the continuing replacement of old machinery by new machinery, implicit in ongoing *gross investment*, would still promote the introduction of new and better products and more efficient methods of production. In short, nominal net investment and nominal net saving—as conventionally measured in the national income and product accounts—need not be positive for the economy to experience growing per capita productivity and output.

Without advances in science and technology, new machines would be replicas of old machines and the only way to augment the capital stock would be by increasing the number of such machines. But once we introduce technical and scientific progress, the capital stock can be augmented not only by increasing the number of machines of the pre-existing type but also by replacing old machines with superior new machines. In principle, an allowance for the superior quality of new machines can be made in estimating real gross and real net investment (along with corresponding values for "real saving"). But in practice that allowance is bound to be very rough. Moreover, no such allowance is made in computing nominal gross and net investment ratios.

Note, also, that technological progress can take the form of a superior *final product* that emerges from the application of a variety of recent advances in science, design, engineering, and materials—as, for example, with Toyota's new Lexus car; Boeing's latest model jet airliner; or Compaq Computer's latest laptop computer. To produce such new products, companies may well require a certain range of

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suggests that the incremental output to capital ratio is likely to be higher in the future than in the past.

[6]In the U.S. economy currently, depreciation allowances amount to about 11 percent of GNP and gross nominal investment outlays amount to about 16 percent of GNP.

new machinery (e.g., dies, jigs, presses, and plastic molding machinery). In an engineering sense, this new machinery may be no more efficient than the corresponding specialized machinery used to produce predecessor final products. But only the new machinery has the special features needed to produce the new, improved final product. Thus, the gross investment that corresponds to the production and acquisition of such new machinery promotes real economic growth even though the new machinery is not itself intrinsically superior to the machinery that it supersedes.

Uncertainties about the Accuracy of Depreciation Allowances

Net national product differs from gross national product by the sum of depreciation allowances. In making quantitative comparisons, however, economists usually use GNP rather than NNP because they recognize that depreciation allowances are likely to be very rough estimates of actual wear-and-tear and obsolescence. More important, the extent of the error in estimates of depreciation will probably vary over time, depending on a variety of influences.[7] Relying on GNP comparisons avoids this difficulty.

Yet this recognition of the imprecision and arbitrariness of depreciation allowances, implicit in the profession's preference for comparisons of GNP rather than of NNP, often seems forgotten when saving comparisons are made. As the quoted passages above indicate, many analysts seem fixated on the net saving rate—net national saving divided by GNP. This ratio is suspect because its numerator is obtained by subtracting a highly unreliable total for depreciation allowances from a relatively reliable gross saving figure. Since the resulting difference—net saving—must also be unreliable, so too must be any ratio with net saving as the numerator.

In sum, gross saving and gross investment ratios are likely to be better predictors of potential growth in output and living standards

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[7]Tatom (1989, p. 10) states: "The methods of estimating discard and obsolescence rates used in the national income and product accounts have not been altered since they were introduced in the late 1940s." Actually, some 15 years ago the Department of Commerce ceased to estimate depreciation on the basis of companies' IRS returns. Commerce then adopted a "useful lives procedure" under which each of several dozen different categories of new capital formation is given a different average estimated service life to which a straight-line depreciation procedure is applied (modified by a frequency distribution around the average). However, as Pieper (1989, p. 15) notes: "Depreciation is subject to a number of serious measurement problems. Little is known of actual service lives and rates of depreciation and even less is known of how these variables might change over time."

than net saving and net investment ratios for two reasons. First, gross investment incorporates the influence of "embodied new technology" in a much more comprehensive fashion than does net investment. Second, gross investment and gross saving are not subject to the measurement errors generated by the subtraction of questionable estimates for depreciation.

Some Statistical Comparisons

Figure 1 plots the share of gross domestic investment spending financed by depreciation allowances, taking a four-year moving average of the annual ratios of depreciation allowances to investment spending. Whereas depreciation allowances financed about 55 percent of gross investment spending in the 1950s and 1960s, they financed about 70 percent of such spending in the 1980s. The "new-technology effect" associated with the capital equipment financed by reinvested depreciation allowances (as opposed to that associated with capital equipment financed by other sources) has thus become increasingly important in recent years.

Figure 2 compares the time paths of aggregate depreciation flows and net saving, both measured as fractions of GNP. The net national saving ratio—which, as a fraction of GNP, corresponds to that part of gross investment spending financed by flows other than depreciation allowances—fell sharply after 1973, whereas depreciation allowances as a share of GNP rose. Because the rise in depreciation allowances was less than the drop in net savings, there had to be some fall in the gross savings ratio.

Figure 3 plots four series: (a) nominal gross investment, (b) nominal gross saving, (c) nominal net investment, and (d) nominal net saving—each as a share of nominal GNP. The gap between the gross saving and gross investment exactly matches the gap between net saving and net investment. In each case, that gap measures net foreign investment—positive or negative—as a share of GNP and the corresponding current-account surplus or deficit. In years when gross (net) domestic saving exceeded gross (net) domestic investment, the United States ran a corresponding current account surplus; in years when gross (net) domestic saving fell short of gross (net) domestic investment, the United States ran a corresponding current account deficit.[8]

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[8]Let I = gross domestic investment, F = net foreign investment (corresponding to the current account surplus), S = gross domestic saving, D = depreciation allowances, i = net domestic investment, and s = net domestic saving. Then, by definition, we have

$$(1) \quad I + F = S, \text{ which implies } S - I = F.$$

Trends in these ratios are shown more clearly in Figure 4, which plots four-year moving averages of the same four ratios. Note the following three points:

1. The gross investment ratio—though a bit lower after 1982 than in the 1978–82 period—shows no secular decline over the broad period, 1953–88. Thus, if only the measured gross investment ratio is considered, the United States did not suddenly become a low-investment country in the 1980s.

2. The moving average of the gross saving ratio varies between 14.5 and 16.5 percent over the 1953–82 period but then dips noticeably in the most recent six years. Even so, the mean of the (moving average) gross saving ratio in these last six years was only 14 percent less than the mean in the preceding 20 years.

3. Both net ratios edge downward during 1953–81 before declining sharply after 1981. The net saving ratio fell considerably more sharply than the net investment ratio, however, as a large current-account deficit emerged. In contrast to the 14 percent drop in the mean gross saving ratio, the mean net saving ratio in the 1982–88 period was 61 percent below its value in 1953–82.

Figure 5 compares the ratio of nominal gross investment to nominal GNP with the ratio of real gross investment to real GNP. When the average price of investment goods falls relative to the price of other components of GNP, as occurred during the 1980s, the ratio of the two real variables will exceed the ratio of the two nominal variables. This relationship held in the 1980s largely because of the substantial fall in the cost of computers per unit of estimated computer power.[9] As Figure 5 indicates, there has been no evident secular decline in either gross investment series. If anything, there has been a slight uptrend. In particular, the ratio of real investment to real GNP averaged 15.9 percent during the 10 years of 1951–60 inclusive but averaged 17.6 percent during the 5 years ending in 1988[10]

Subtracting depreciation from both sides gives the following expression:

$$(2) \quad (I - D) + F = (S - D).$$

Using the definition of net investment and net saving, we substitute into (2) to get

$$(3) \quad i + F = s, \text{ which implies } s - i = F.$$

If the current account is in deficit so that F equals, say, -150, then gross saving falls short of gross domestic investment by 150, and net saving falls short of net domestic investment by 150.

[9]This point is discussed in some detail in Bailey and Gordon (1988). See also de Leeuw (1989).

[10]In a penetrating paper, de Leeuw (1989) points out that the conventionally measured value for "real investment spending" is significantly affected by the base year chosen

Figure 6 contrasts movements in a four-year moving average of the net saving rate with the time path of the growth rate of potential GNP as estimated by staff members of the Federal Reserve Board.[11] The growth rate of potential GNP is stable at about 3.4 to 3.5 percent from 1953 through 1973 but then dips to about 2.8 percent with the advent of the first oil shock; it dips further in 1980 with the second oil shock and then remains stable at about 2.5 percent. The moving average of the net saving rate fluctuates around a fairly stable level from 1953 through 1981—varying from 6.5 percent to 9.0 percent—before dropping sharply in 1982 and subsequent years, with the advent of simultaneous declines in government and private saving relative to GNP.

Although the four-year moving average of the net saving rate has been unusually low for the past seven years, no corresponding fall in the growth rate of potential GNP has occurred. Evidently, the net saving rate, at least as generated by the official statistics, has little bearing on the path of potential GNP in a country with ready access to foreign capital and a stable free-market environment. As long as this environment persists the odds are good that profit-seeking enterprises will undertake gross real investment expenditures on a substantial scale regardless of the state of domestic net savings. By introducing improved technology, such gross investment outlays will continue to raise the economy's productive potential.

If domestic savings are insufficient to finance the desired level of gross investment spending, a country with the reputation and prospects of the United States will have no trouble tapping external funds from both foreign financial intermediaries and primary foreign lenders and investors. The corresponding real resource transfer will manifest itself in a current-account deficit and in a decline in the country's net international investor position. So long, however, as the domestic rate of return on the incremental real investment financed by external resources exceeds the interest or interest-equiv-

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for the selection of "constant dollar" prices because of the combination of a sharply falling price trend for computers coupled with a big increase (however measured) in the quantity produced. To cope with this index-number problem, he constructs a special series to estimate real gross investment (actually, real nonresidential fixed-gross investment) using a "chain-weighted" price series as his weights. He finds that the ratio of this real gross investment to a corresponding estimate of real GDP rises significantly over the period from 1952 to 1987, and he concludes that this rising trend should promote continuing gains in U.S. output during the 1990s.

[11]See Hallman, Porter, and Small (1989, Appendix A, p. 25). The estimated figures are based on the methodology expounded in Clark et al. (1982).

Potential GNP is supposed to be a level of GNP that the economy can sustain in a given year without inducing—*ceteris paribus*—an acceleration or deceleration of the inherited rate of inflation. Estimates of such a variable are inherently tenuous, and my use of this particular series is not meant as an endorsement of its indisputable validity.

FIGURE 1

DEPRECIATION AS A SHARE OF GROSS INVESTMENT
(FOUR-YEAR MOVING AVERAGES)
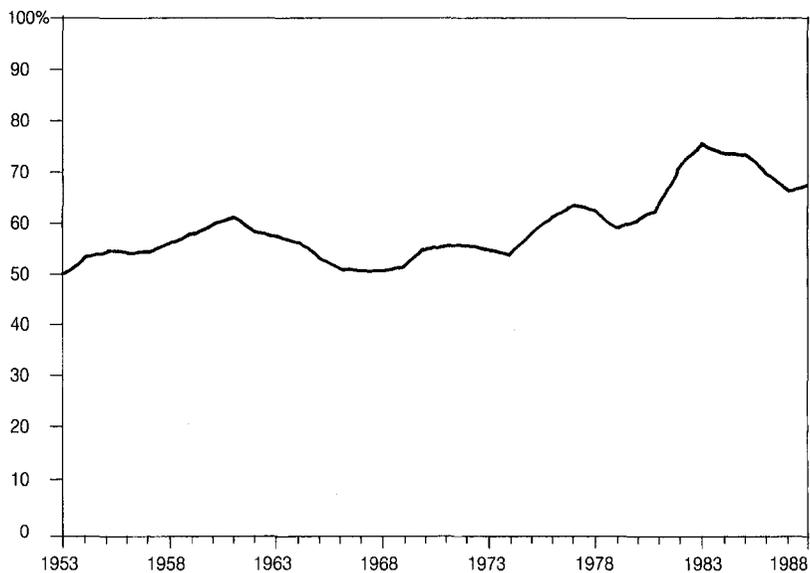
*FIGURE 2*

DEPRECIATION AND NET SAVING AS SHARES OF GNP

— Net Saving   --- Depreciation

649
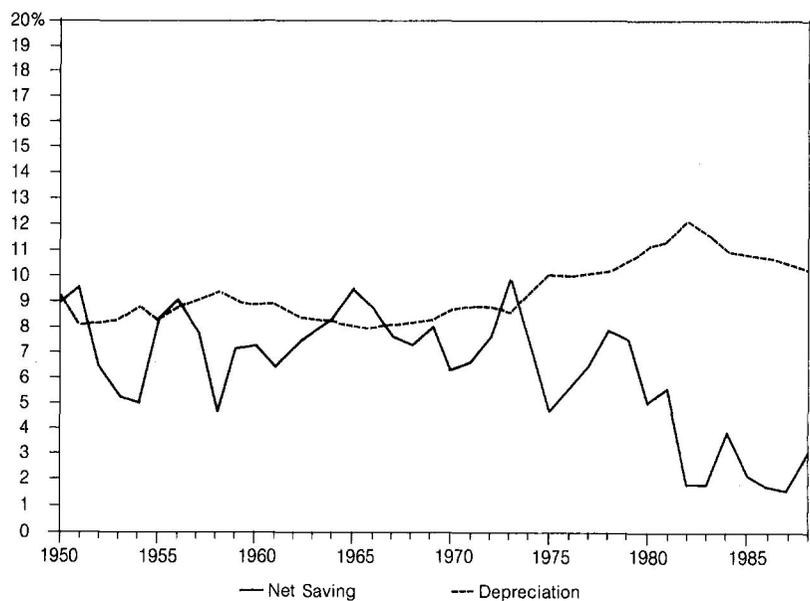
FIGURE 3

SAVING AND INVESTMENT AS SHARES OF GNP

| | Gross Saving | | Net Saving |
| | Gross Investment | | Net Investment |
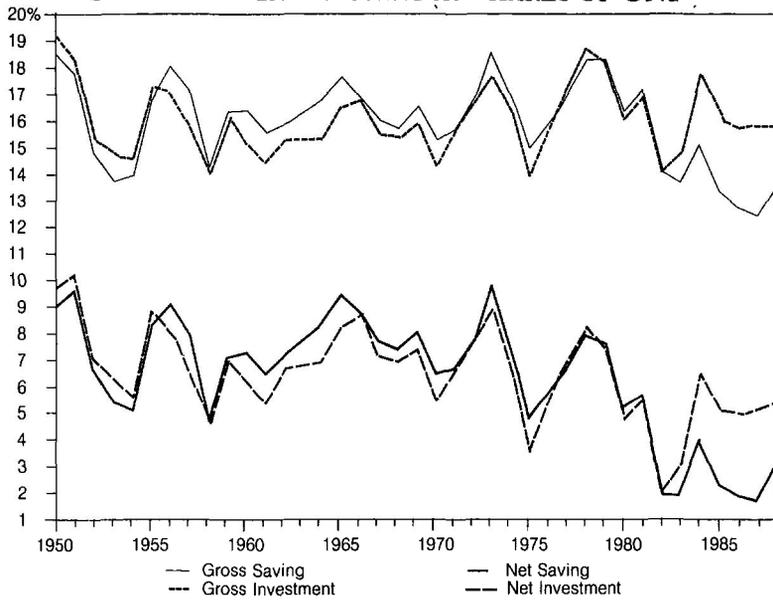
FIGURE 4

SAVING AND INVESTMENT AS SHARES OF GNP
(FOUR-YEAR MOVING AVERAGES)

| | Gross Saving | | Net Saving |
| | Gross Investment | | Net Investment |
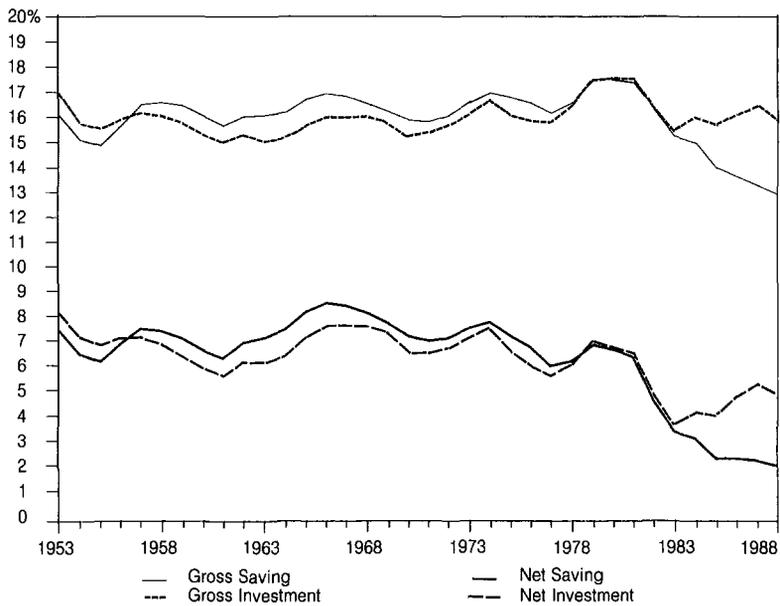
FIGURE 5

REAL VERSUS NOMINAL GROSS INVESTMENT RATIOS

— Real Gross Investment
   as % Real GNP

--- Nominal Gross Investment
   as % Real GNP
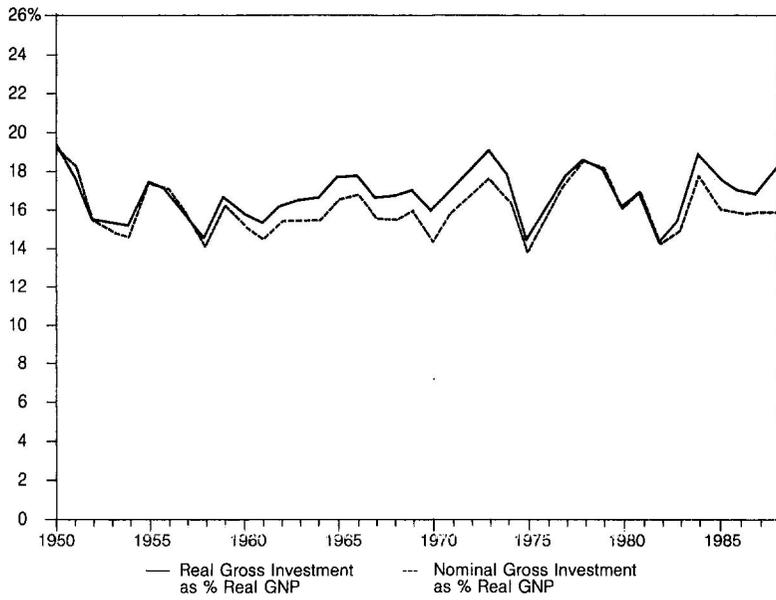
FIGURE 6

NET SAVING RATE VERSUS POTENTIAL GNP GROWTH

+ Net Saving Rate
 (Four-Year Moving Averages)

■ Potential GNP Growth
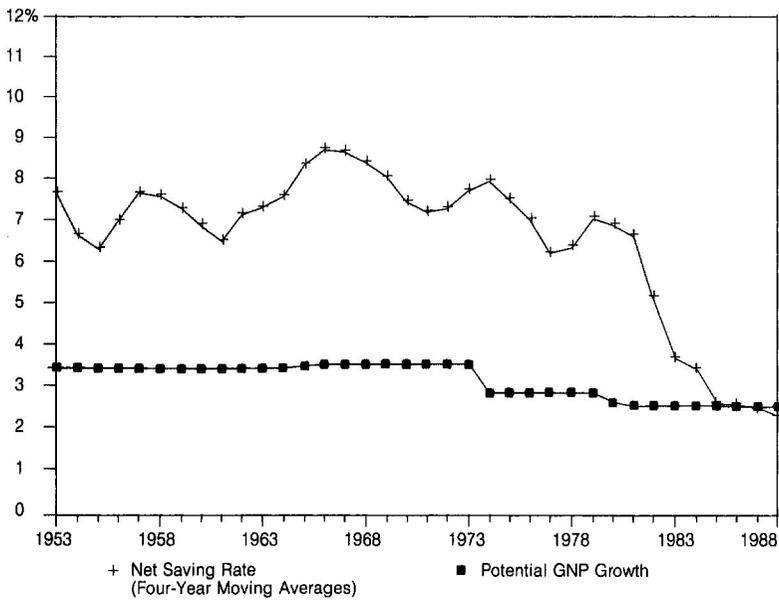
alent cost of those external resources, the domestic economy will benefit. If the new embodied technology associated with gross investment is the key consideration, the most relevant savings and investment ratio for explaining future growth in a situation of substantial reliance on external resources would be the estimated ratio of real gross investment to real GNP.[12] And, contrary to the quoted statement by Greenspan, no significant slowdown in the growth of real capital per worker has accompanied the emergence of recent large government budget deficits and the dip in the overall net U.S. savings rate.

Output versus Claims on Real Income

The process just described does mean, of course, that an increasing share of our capital stock has come to be owned by foreign residents either directly or indirectly. It follows that we are likely to witness an increasing divergence in future years between our gross domestic product (GDP), which measures the total value of output produced by factors of production physically located in the United States, and our gross national product (GNP), which measures the value of the product that corresponds to gross income of U.S. residents. Even if the economy's output (or real income) continues to grow handily, an increasing share of it will accrue to foreigners rather than to U.S. residents. Thus, it can be argued, we should still worry about our low overall net saving rate.

Herbert Stein (1989) has responded to this concern by arguing that the inflow of foreign *financial* capital has enabled us to install additional *real* capital that would otherwise not have been put in place. In his view, the resulting additional flow of output and income that will result will enable us to readily service our incremental external debt. Others take a different view. For example, Benjamin Friedman (1988, p. 230) argues that "Reaganomics"—a sequence of tax cuts, budget deficits, high real interest rates, capital inflows, current-account deficits, and an adverse tilt in our net international investment position—"will profoundly affect how Americans live in the future, for hereafter an increasing share of our income will go abroad in the form of interest on what we owe." To resolve these

[12]For a similar explanation, see Tatom (1989) and Pieper (1989). See also de Leeuw (1989) who uses a relatively rigorous analysis that is quite independent of the embodied technology point that we stress to demonstrate that the ratio of real gross investment to real GDP has more relevance for future economic growth than the ratio of net real investment to real net national product—especially when there is a shift in the expected average life of real investment, such as has occurred in the United States recently with the increased importance of computers in the total mix of investment spending.

divergent assessments, we need to assess whether the overall growth in the productive capacity of the U.S. economy during these recent years of consecutive large current-account deficits will enable us to cope with the additional net foreign claims that have accompanied those deficits. As we service our external debts in future years, are the adverse effects on our living standards likely to be severe or not?

As I argue below, they seem almost certain to be trivial: Prospective *net* debt service payments (i.e., gross external payments less gross external receipts) turn out to be quite small compared with prospective increments in the economy's real output.

The Capital Longevity Issue

In his recent "Statement to the Deficit Commission," Alan Greenspan (1989, p. 17) argues that budget deficits drive up domestic interest rates, which leads to a shift to shorter-lived investment goods. He goes on to state:

> Parenthetically, the resulting shift toward shorter-lived investment goods means that more *gross* investment is required to provide for replacement of the existing capital stock as well as for the *net* investment necessary to raise tomorrow's living standards. Thus, the current relatively high ratio of gross investment to GNP in this country is a deceptive indicator of the additions to our capital stock.

Does the transition to a shorter-lived capital stock necessarily handicap an economy's performance and potential? Frank de Leeuw (1989) has explored this issue in some detail using a formal mathematical model. His key conclusion is that for a given constant flow of gross investment, a permanent shift to shorter-lived investments leads to a temporary bulge in capital services and, hence, to a period of faster growth in potential output. Eventually, however, the growth rate in the flow of capital services dips below its initial level, as does the growth rate of potential output.[13] His analysis thus provides some support for Greenspan's concern. However, de Leeuw takes no account of the embodiment-of-new-technology argument. Because ongoing technological advances are embodied in new plant and

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[13]See de Leeuw (1989, pp. A7, A8); see also his instructive Figure A1. To grasp the point intuitively, imagine that the economy switches over from investing a given amount of money each year in steel bridges to investing that same amount in wooden bridges. The total number of bridges in service will rise for a while, as will the economy's potential flow of services from bridges, but eventually the number of bridges will decrease as wooden bridges go out of service sooner than alternative steel bridges would have done. (The plot thickens if later-model bridges, whether of steel or wood, are able—because of technical progress—to contribute a greater flow of productive services per period than their respective wooden or steel predecessors.)

equipment, it is possible that a reduction in average capital durability (which implies a more rapid turnover of the existing stock of capital) will promote, rather than retard, output growth. That would, in any event, certainly seem to be the case when applied to the main cause of reduced durability in the U.S. capital stock in recent years—the rapidly growing use of computers.[14]

Gramlich's Comparisons

Gramlich (1989) claims to find a strong positive association between "real national saving" and real economic growth in the United States. To derive real national saving, he subtracts depreciation allowances from the sum of gross private and government saving and divides the result by a price index. As estimated by Gramlich (1989, p. 34), the flow of real national saving in 1982 dollars rose from about $125 billion in 1955 to a peak of $240 billion in 1978; then it dropped sharply to average only about $100 billion a year for the six years of 1982–87 inclusive. Thus, he observes, real national saving has fallen sharply below the extension of its 1955–80 trend line.

Gramlich argues that this sharp decline in real national saving has been associated with a decline in the underlying U.S. growth rate for real output. He finds that "from the 1955 cyclical peak to the 1979 peak, the average annual real growth rate was 3.2 percent. From the 1979 cyclical peak to the 1987 peak, it was just 2.2 percent" (Gramlich 1989, p. 34, n. 4). On the basis of this comparison, Gramlich infers that the reduction in real national saving has, in fact, reduced our underlying rate of economic growth.

This inference seems unwarranted. The prolonged double-dip recession that occurred in 1980, 1981, and 1982 was a result of the strenuous efforts of the Federal Reserve to reverse the inflationary expectations that had gathered force during the previous two decades and that were intensified by the second oil-price shock. This *policy-induced* recession materially reduced the economy's average growth rate during 1979–87. Indeed, from 1979 to 1983—the first half of the "new epoch" in Gramlich's comparison—real GNP grew at an annual rate of only 0.7 percent. Small wonder that the entire eight-year period ending in 1987 shows such a weak performance.

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[14]Even though he ignores this embodied technology point, de Leeuw (1989, p. 11) concludes, as this paper does, that real gross investment divided by real GNP (actually, de Leeuw prefers to divide by real GDP) is a better gauge of future potential output growth than real net investment divided by real net national product when the economy is experiencing, as it has in recent years, a shortening in the expected average life of new capital equipment.

If, instead, we compute the average annual growth rate of real GNP for the five-year period beginning in the second quarter of 1984 and ending in the second quarter of 1989, we get a figure of 3.46 percent. The corresponding annual growth rate for real GNP from 1955 to 1979 was 3.08 percent.[15] This comparison—which seems more reasonable than Gramlich's—suggests that the economy's underlying growth rate has risen slightly since the new low-savings epoch began. Invoking a fall in real national saving to explain a fall in the nation's *underlying* growth rate is not a useful exercise if the underlying growth rate never fell in the first place.

But What about the Net External Debt?

According to the Department of Commerce, the United States had a *negative* net international investment position (NIIP) of $533 billion at the end of 1988 as against a positive position of $141 billion seven years earlier, at the end of 1981. This deterioration of almost $700 billion reflected, of course, the intervening current-account deficits.

Without doubt, the U.S. NIIP has deteriorated substantially in recent years. Nonetheless, as Eisner (1989), Ulan and Dewald (1989), and others have observed, the actual U.S. NIIP at the end of 1988 was surely much less negative than the official estimate, mainly because of the enormous undervaluation of U.S. direct investments abroad.

All direct investments abroad are measured at book value. Because of conservative accounting procedures and past inflation, this procedure markedly understates the true market value of most U.S. corporate assets held abroad. The same procedure also understates the true market value of foreign direct investment in the United States. But this latter undervaluation is relatively minor because most foreign direct investments occurred more recently than most U.S. direct investments abroad, so inflation and excessive depreciation allowances have had less time to create a gap between market values and book values.

In this regard, we should note that the official estimates of the year-end values for U.S. direct investment abroad were $308.9 billion for 1987 and $259.6 billion for 1986. Averaging these two figures, we get a mid-1987 stock estimate of $284.3 billion. After-tax income earned

[15]To compute growth rates, I used the formula
$$\text{(Initial value)}(1 + g)^n = \text{(Ending value)}$$
where n represents the number of years involved and g represents the growth rate to be solved for.

by U.S. corporations on their direct investments abroad in 1987, *excluding capital gains from exchange rate and other effects*, amounted to $36.7 billion. Dividing this income figure by the mid-year stock estimate gives a return of 12.9 percent.

Corresponding year-end values for foreign direct investment in the United States were $261.9 billion in 1987 and $220.4 billion in 1986 for an estimated 1987 midyear average of $241.2 billion. After-tax income from these direct investments, excluding capital gains, amounted to $10.7 billion—a return, after corporate taxes, of only 4.4 percent.

It is not credible, however, to believe that U.S. direct investments abroad have been almost three times as profitable *per dollar of market value* as foreign direct investment in the United States. The most plausible explanation is the relatively greater undervaluation of U.S. direct investments abroad. If we adjust the estimated book value of U.S. assets so that the adjusted value also yields an after-tax return of 4.4 percent, that adjusted value at end-1987 would be $905.6 billion. Such an adjustment suggests that at the end of 1987 the United States was not—in any important sense—an international debtor nation.[16] During 1988, as it happens, the United States recorded a surplus of $2.3 billion on net investment-income transactions (which include all flows of interest, dividends, and direct-investment income between U.S. and foreign residents, both official and private).

Even so, the United States will almost certainly experience continuing current-account deficits over the next several years so that its net investment income will probably soon turn negative. Is the payment of that net investment income likely to impose a significant burden on the U.S. economy, as Hatsopoulos—and many others—have suggested?

Consider the following sequence of current-account deficits for the five-year period 1989 through 1993: $120 billion in 1989, $90 billion in 1990, $60 billion in 1991, $30 billion in 1992, and $10 billion in 1993. Such a continued reduction in our external deficits might occur through some combination of (a) persisting lagged effects of the depreciation of the U.S. dollar since early 1985 and (b) continued strong economic growth in Europe and Japan. Any such reduc-

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[16]Other adjustments also make sense. The Department of Commerce values the U.S. gold stock at $42.88 an ounce. Its true market value is clearly considerably higher. Working in the other direction is the substantial overstatement of U.S. bank claims on Third World governments, and also the overstatement of U.S. government claims on such borrowers. Though mostly carried at book value, in many instances these claims are probably worth less than 25 cents on the dollar.

tion also requires some rise in total U.S. saving relative to U.S. domestic investment spending simply because, as a matter of national income accounting, a nation's current account balance necessarily equals its total saving (inclusive of the government sector's budget surplus) less its total domestic investment spending.

Such an outcome seems quite plausible—especially if a continued easing of tensions between the Soviet Union and the United States leads to a significant reduction in U.S. military outlays that are not offset by corresponding increases in other categories of government spending. In that event, even with no new taxes, we might anticipate a material cut in the federal budget deficit over the next five years—hence, a significant rise in aggregate U.S. savings relative to domestic investment with positive effects on the current account.

If this sequence of current-account improvements were to materialize, the U.S. NIIP, aside from valuation changes, would still deteriorate by $310 billion between the end of 1988 and the end of 1993, leading to some corresponding combination of reduced U.S. assets abroad and increased foreign assets in the United States. At an interest rate of 10 percent, external servicing costs would rise by $31 billion per year; at an interest rate of 6 percent, costs would rise by $19 billion per year.

Could the U.S. economy cope with these costs? In 1988 nominal GNP amounted to $4,864 billion. If it grows at 6 percent per annum through, say, annual real growth of 2.5 percent and inflation of 3.5 percent, it would amount to $6,509 billion by 1993—$1,645 billion higher than its 1988 level. Since the projected increments in nominal debt service costs of $19 billion to $31 billion per year are less than 3 percent of the projected increment in nominal GNP, our collective incremental debt-service burden seems trivial.

Of course, one could make much more pessimistic projections. In particular, one could argue that the considerable improvement in the current-account deficit will cease or even be reversed. Indeed, most recent published projections, which rely on econometric models, show the U.S. current-account deficit increasing markedly after 1989, barring either a U.S. recession or a further significant depreciation of the dollar.[17] However, these projections seem suspect for three reasons: First, they assume that the recovery in U.S. competitiveness because of the dollar's decline from early 1985 until end-1987 will

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[17]See Cline (1989) for a summary and discussion of two recent models—notably the Helkie-Hooper model and the so-called EAG model and for deficit projections based on those models and particular assumptions about the budget deficit and other "exogenous" inputs.

generate no significant further improvements in the trade balance after 1989. Second, they assume that the United States will run fiscal deficits of $155 billion in 1989, $141 billion in 1990, $140 billion in 1991, and $135 billion in 1992—the Congressional Budget Office projections as of March 1989.[18] Third, they assume that Western Europe and Japan will experience some slowdown in their recent rates of growth.[19] In my judgment, all of these assumptions are suspect.

But let us suppose that these projections prove correct so that, over the next five years, the United States runs the following sequence of current account deficits: $120 billion in 1989, $130 billion in 1990, $145 billion in 1991, $155 billion in 1992, and $165 billion in 1993.[20]

A 10 percent nominal interest rate applied to this further cumulative deterioration of the U.S. NIIP implies additional net debt-service payments to foreign residents of $72 billion a year by 1993. But if nominal U.S. GNP rises by $1,645 billion between now and then on the plausible assumptions already indicated, the burden involved in servicing this incremental net external debt would still be less than 5 percent of incremental GNP. Even in this case, the transfer problem seems negligible.

Indeed, even if our (nominal) current-account deficit rose by $30 billion a year forever, no significant threat to U.S. living standards would emerge. If we achieve 6 percent *nominal* GNP growth by starting from an initial base of $5,000 billion (the level of nominal

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[18]See Cline (1989, p. 11).

[19]In some instances, they also assume that the United States has a higher income elasticity of import demand than most of its major trading partners—the so-called "Houthakker-Magee" phenomenon.

Houthakker and Magee (1969) regressed the volume of U.S. exports on "rest of world" (ROW) real incomes and on relative prices, using data for the 1950s and 1960s. Their regressions found that the ROW income elasticity of demand for U.S. goods was relatively low as compared with the income elasticity of U.S. demand for imports from the ROW estimated from a parallel regression using U.S. real income and relative prices as explanatory variables. But that result was virtually inevitable given that U.S. exports grew more slowly than other countries' exports during the 1950s and 1960s. In fact, it is a spurious result.

The regressions failed to allow for nonprice developments that made non–U.S. goods increasingly competitive during that period. The current supply-side situation is quite different. For example, the quality gap between U.S. and foreign automobiles has clearly narrowed in recent years; similar observations apply to a wide range of other goods. Yet econometric models incorporating such questionable "income elasticities" of import demand are still relied on by respected analysts. See Cline (1989, p. 10).

[20]These figures are very close to those assumed in a central projection by Cline (1989, p. 15). That projection is based on two leading econometric models and on the exogenous assumptions noted in the text above. Similar projections are made by Howard (1989).

GNP in the fourth quarter of 1988), the absolute yearly increase in U.S. nominal GNP comes to $300 billion in 1989, to $318 billion in 1990, to $337 billion in 1991, etc. Because these numbers are some 10 times the assumed $30 billion per year deterioration in the current-account deficit, the debt-service burden involved remains negligible.[21]

The Confidence Problem

The ongoing U.S. current-account deficit requires financing by some combination of reduced claims on the rest of the world by U.S. residents and increased claims on U.S. residents by foreign residents.[22] According to the International Monetary Fund (1989, p. 41), this ongoing financing requirement increases "the vulnerability of the U.S. to a possible reduction in the inflow of foreign saving."

Taken literally, the argument does not withstand examination: As it happens, the United States is no more vulnerable to a reduced inflow of foreign saving when it runs a current-account deficit than when it has a current-account balance or a current-account surplus. To see this, consider the simplified case of Illyria (whose currency is the I$). Suppose that Illyria has a current-account deficit of I$200 and a capital-account surplus of the same amount. Thus, it requires I$200 of net foreign saving per period.

Now suppose that foreign residents suddenly decide—in an ex ante sense—to reduce the rate at which they are willing to acquire claims on Illyria by I$300 per period. This planned reduction implies a corresponding excess supply of Illyrian dollars in the foreign exchange market with consequent repercussions on the exchange rate, interest rates, real incomes, exports, imports, and capital flows as the foreign-exchange market readjusts to a new equilibrium. The likely result is a hard landing.

Alternatively, suppose Illyria has a balanced current account and (necessarily) a balanced capital account as well. Illyria does not

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[21]A recession would, of course, temporarily reduce nominal GNP growth. But it would also temporarily strengthen the trade and current-account balances by leading to a reduced demand for imports and by reducing interest payments to foreigners holding dollar-denominated claims at variable interest rates.

[22]Some analysts might object to this phrasing because it suggests that the current-account imbalance is necessarily the active force that induces net capital flows. The chain of causation could, of course, just as well run the other way—capital flows could be the exogenous factor that induces a matching current-account adjustment through the exchange rate or other channels.

depend on a net inflow of foreign saving to finance its current-account deficit because it has no such deficit.

But once again suppose that foreign residents decide suddenly to reduce the rate at which they want to acquire claims on Illyria by I$300 per period. In this event, an identical ex ante shortfall of foreign exchange would materialize with impacts on the exchange rate, interest rates, and aggregate demand very similar to those experienced in the first situation. A given ex ante portfolio shift "against" assets denominated in Illyrian dollars hits the Illyrian economy just as hard whether it initially has a current-account deficit, a current-account balance, or a current-account deficit. Illyria's economy is just as vulnerable to "a possible reduction in the inflow of foreign saving" in all three situations. And so is the economy of the United States.

But the alleged greater vulnerability of the United States to the whims of foreign residents because of a persisting U.S. current-account deficit should be questioned from a much broader perspective. The U.S. economy is highly integrated with the rest of the world through flows of goods and services; transfers of managerial, technical, and entrepreneurial talent; shifts of financial claims; and ongoing transfers of technology. That openness exists regardless of whether the United States has a deficit or surplus on its current account. So long as the United States pursues policies that provide attractive business and investment opportunities, neither U.S. nor foreign investors are likely to suddenly shift out of dollar-denominated claims on a massive scale.

If the United States pursued different policies, both groups of investors would seek to shift their wealth into claims denominated in other currencies and subject to other national jurisdictions. But that (incipient) shift would occur on about the same scale regardless of whether the United States had been running a deficit or surplus on current account and regardless of the size of its pre-existing net creditor or net debtor position.[23] Dollar-denominated assets exist in

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[23]The shift would be incipient—rather than realized—because in the aggregate it is impossible for a massive net capital outflow to materialize without a matching current-account surplus. Because of J-curve effects, however, it is virtually impossible for the trade account to change—in short order—from an annual deficit of $120 billion to, say, an annual surplus of $800 billion. But if a massive current-account turnaround cannot occur in the short run, neither can a *realized reversal* of net capital flows.

Instead, a sudden "flight from the dollar" would presumably lead to (a) sharply higher nominal U.S. interest rates and (b) a plunge in the foreign-currency price of the dollar. As a result of these valuation changes, investors would, *in a net sense*, be content to hold dollar-denominated claims, without—*on balance*—switching into assets denominated in other currencies.

Massive official intervention in support of the dollar would permit private investors,

the trillions, and wealth-conserving and wealth-maximizing private owners—regardless of their nationality—constantly seek to benefit from prospective changes in after-tax returns on assets denominated in different currencies. Thus, potential capital flows between the dollar and other currencies are virtually unlimited.

In many instances, moreover, it is not even clear that we can distinguish U.S. from foreign investors in any meaningful sense. Manufacturing companies such as General Electric, Ford, General Motors, IBM, Exxon, and Compaq Computer generate one-third to one-half (or more) of their production and profits from their overseas affiliates. They are truly international in scope and vision. Financial institutions such as Citicorp, Nikko Securities, and National Westminster Bank have an obvious international perspective. If the dollar seems overvalued, all things considered, such global companies will rush to acquire DMs, yen, or other foreign currencies on a massive scale. If the dollar seems at an appropriate level, all things considered, they will maintain their present mix of currency claims. As they make these ongoing decisions, the U.S. current account is certainly a consideration that investors will take into account—but it is only *one* consideration.

It is by no means clear that current-account imbalances—even large and sustained imbalances relative to past levels—should be viewed as undesirable in an open and dynamic world economy. In any event, financial markets, massaged a bit by central-bank intervention, exert powerful pressures that tend to erase nonviable imbalances. In particular, if market participants, in the aggregate, begin to view a current account imbalance as unsustainable, their portfolio adjustments will induce prompt exchange-rate changes that will tend to narrow that imbalance.

Conclusion

We should stop fretting about the alleged dearth of U.S. saving, about the alleged threat to our future living standards stemming from our current-account deficit, and about our alleged vulnerability to a withdrawal of foreign investment funds. Upon examination, these concerns seem either chimerical or inconsequential.

References

Bailey, Martin N., and Gordon, Robert J. "The Productivity Slowdown, Measurement Issues, and the Explosion of Computer Power." *Brookings Papers on Economic Activity* 2 (1988): 347–431.

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on balance, to switch out of the dollar; but by the same token it would lead to an offsetting capital inflow by foreign official institutions.

Clark, Peter K. "Okin's Law and Potential GNP." Washington, D.C.: Board of Governors of the Federal Reserve System, October 1982.

Cline, William R. *American Trade Adjustment: The Global Impact.* Washington, D.C.: Institute for International Economics, March 1989.

de Leeuw, Frank. "Interpreting Investment-to-Output Ratios: Nominal/Real, Net/Gross, Stock/Flow, Narrow/Broad." Bureau of Economic Analysis, Discussion Paper 39, March 1989.

Eisner, Robert. "Divergences of Measurement and Theory and Some Implications for Economic Policy." *American Economic Review* 79 (March 1989): 1–3.

Feldstein, Martin. "A National Savings President." *Wall Steet Journal,* 21 November 1988, p. A16.

Friedman, Benjamin M. *Day of Reckoning: The Consequences of American Economic Policy Under Reagan and After.* New York: Random House, 1988.

Gramlich, Edward M. "Budget Deficits and National Saving: Are Politicians Exogenous?" *Journal of Economic Perspectives* 3 (Spring 1989): 23–35.

Greenspan, Alan. "Statement to the Deficit Commission." Reprinted in *Federal Reserve Bulletin* (January 1989): 15–17.

Hallman, J. J.; Porter, R. D.; and Small, D. H. "M2 per Unit of Potential GNP as an Anchor for the Price Level." *Staff Study No. 157,* Washington, D.C.: Board of Governors of the Federal Reserve System, April 1989.

Hatsopoulos, George N. "Saving Decline Wasn't Just the Deficit." *Wall Street Journal,* 4 May 1989, p. A14.

Hatsopoulos, George N.; Krugman, Paul; and Poterba, James. "Overconsumption: The Challenge to U.S. Economic Policy." A study cosponsored by the American Business Conference and Thermo Electron Corp., 1989.

Howard, David H. "The United States as a Heavily Indebted Country." International Discussion Paper no. 353. Washington, D.C.: Board of Governors of the Federal Reserve System, May 1989.

Houthakker, Hendrik S., and Magee, Stephen P. "Income and Price Elasticities in World Trade." *Review of Economics and Statistics* 51, no. 2 (May 1969): 111–25.

International Monetary Fund. *World Economic Outlook.* April 1989.

Lipsey, Robert E., and Kravis, Irving B. "Comparative National Savings and Investment: A Different View." Paper presented at 63rd Annual Meetings of the Western Economic Association, Los Angeles, 1–3 July 1988.

Pieper, Paul. "Why Net Investment Has Fallen." Paper presented at 64th Annual Meetings of Western Economic Association, 20 June 1989.

"The Quality of Investment." *Wall Street Journal,* 23 June 1989, p. A38.

Tatom, John A. "U.S. Investment in the 1980s: The Real Story." Federal Reserve Bank of St. Louis *Review* (March/April 1989): 3–15.

Stein, Herbert. "Problems and Not-Problems of the American Economy." *The AEI Economist* (June 1989): 1–8.

Ulan, Michael, and Dewald, William G. "The U.S. Net International Investment Position: Misstated and Misunderstood." *Dollars, Deficits, and Trade,* pp. 363–94. Edited by James A. Dorn and William A. Niskanen. Boston: Kluwer Academic Publishers, 1989.

"The Wasting Disease." *The Economist,* 27 May 1989, pp. 12–13.