

CORPORATE RESTRUCTURING AND THE BUDGET DEFICIT DEBATE

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Recent discussions of economic policy have been dominated by the conventional wisdom that large federal budget deficits have absorbed private savings and severely damaged the economic health and well-being of the United States economy. This paper examines that argument critically and contrasts it with an analysis based on alternative economic theory. The paper is organized as follows: the first section presents the argument according to the conventional wisdom, while the second section examines the alternative theory. The third section evaluates the evidence of the 1980s in the context of the two perspectives. The fourth section explores an alternative analysis connecting corporate restructuring and the budget deficit. Finally, the fifth section concludes with a discussion of the policy implications of the analysis.

THE CONVENTIONAL WISDOM

The conventional view has taken two forms, one in a domestic context and the other in an international context.

Crowding Out

In a closed economy, the argument is that budget deficits at full employment absorb the economy's available savings and thus "crowd out" domestic investment. According to the familiar national income and product account identity,¹

$$(1) \quad S = I + BD.$$

If savings (S) are fixed, an increase in the budget deficit (BD) will imply a lower level of investment (I).

In the international context, I can be interpreted to include both domestic and foreign investment. In the words of Benjamin Friedman, "The principal reason why large government deficits sustained under conditions of full employment are economically damaging is that they absorb private saving that would otherwise be available to finance either new capital formation at home or net investment abroad" [1992, 7].

The Twin Deficits

Equation (1) can be rewritten for the international context to explicitly incorporate the effect on the trade deficit (*TD*):

$$(2) \quad S + TD \equiv I + BD.$$

In this interpretation, large federal budget deficits at full employment will either crowd out private domestic investment or increase the trade deficit, or both.²

The Savings Shortfall

Some proponents of the conventional wisdom claim that not only do large budget deficits at full employment absorb the available fixed supply of savings, but that the savings rate itself has declined [Friedman, 1992, 7]. In other words, despite a ceiling on available savings determined by normal saving out of full-employment national income, we are actually falling below that ceiling because the propensity to save has decreased in the 1980s in the United States.

The Role of Real Interest Rates

The mechanism linking the increase in the budget deficit to the decline in investment and the increase in the trade deficit operates through an increase in real interest rates. Because the federal government is the most creditworthy borrower, it is always able to obtain whatever funds it needs to fund its deficits. By doing so, however, it pushes up real interest rates and crowds out other borrowers in the credit markets.

Assuming that real interest rates in other countries do not increase more than those in the United States, the increase in U.S. rates will make foreign financial investment more attractive here.³ Increased demand for the dollar will push up its value and result in increased prices for U.S. exports and decreased prices for U.S. imports. Over time, the U.S. trade deficit will increase. The relative proportions in which investment and the trade deficit will be affected will depend on the relative responsiveness to interest rate changes of the demand for investment and the value of the dollar, and the responsiveness of export and import demand to a change in the value of the dollar.

Assumptions

The conventional argument makes a number of assumptions. The most important of these are discussed below.

Full Employment. Full employment is a key assumption. Given a fixed propensity to save out of income, if income is constrained to be fixed at the full-employment level, then savings will also be fixed.

Savings Determines Investment. The assumption of a fixed supply of savings is important because, in the conventional view, the level of investment is determined by the supply of savings.⁴ Another way of expressing this is to say that the national income and product identity, true at all times, should be interpreted to mean that the causal arrow runs from savings to investment.

Savings, from the perspective of the conventional wisdom, provide the funds to make investment possible. If a large budget deficit absorbs much of the fixed supply of savings, then interest rates will rise, decreasing investment and/or increasing the trade deficit, so as to balance equation 2. The significance of the level of private domestic investment is that it is seen to be responsible for increasing the level of productivity in the economy and that productivity in turn affects international competitiveness [Friedman, 1989, 187, 200].

The Importance of the Real Sector. At the most basic level, real variables predominate in the view of the conventional wisdom. Money is neutral, and financial and monetary variables are capable of changing nominal values only. The real interest rate is determined by the interaction of a supply and demand for real loanable funds. In this interpretation, this supply and demand for real loanable funds can be traced directly to the basic national income and product identity.

The supply of funds is derived from real savings, either domestic savings or foreign savings (reflecting net foreign investment in the United States). Likewise, the demand for real loanable funds comes from two sources: the private sector demand for funds for real investment and the government sector demand for funds for real spending. The real interest rate is then determined by the interaction of supply and demand. If the government budget deficit increases, the demand for funds increases. Given the supply of funds, the interest rate increases and affects investment and the trade deficit. The important point is that the analysis is conducted in real terms.

AN ALTERNATIVE THEORY

An alternative literature has developed which challenges the conventional wisdom on nearly every point. This section will briefly describe the relevant aspects of this analysis.

Unemployment

A key assumption of the alternative analysis is that the normal state of the economy is one of unemployment. Indeed, there are powerful forces which prevent the economy from reaching full employment [Kalecki, 1971; Boddy and Crotty, 1975]. The significance of this assumption is that since income is not fixed at the full-employment level, neither are savings out of income.

Investment Determines Savings

It is thus possible for investment spending (and government spending for goods and services) to raise income via the traditional Keynesian effect on aggregate demand. As James Tobin observed about the U.S. economy in 1975: "the problem is not the supply of saving. In the current underemployed economy new investment would generate saving to match, by familiar Keynesian processes" [1975].

Of course, in an open economy, part of the increased spending generated by the multiplier may go to imports, as the twin deficit argument correctly points out. Nonetheless, the result of this import leakage will be to reduce the total multiplier effect on income, not to invalidate the basic relationship between investment and savings.

In the alternative analysis, moreover, investment is not necessarily crowded out by higher real interest rates because investment is a function of more than interest rates. Accelerator effects are possible due to changes in aggregate demand, "animal spirits" can affect the outlook for future profits, and current profits can play an important role [Crotty, 1992; Fazzari, 1993]. Thus in the alternative theory, an increase in the budget deficit, by increasing total spending and output or perhaps by increasing profits or profit expectations, can increase investment — despite a possible increase in real interest rates. In fact, large federal budget deficits have likely helped to prevent a repeat of the Great Depression in the United States [Minsky, 1982].

The alternative theory also challenges the conventional wisdom's focus on the real exchange rate as the primary determinant of the trade balance. Trade deficits can persist due to differences in international competitiveness. These differences, in turn, can be due to different national policies towards business and labor, different employee relations policies, and different strategies towards industrial development [Blecker, 1992; Howes, 1992].

Finally, productivity is not simply, or perhaps even primarily, a function of private investment in plant and equipment. Shop floor relations of production and the institutions of the labor market are both important [Naples, 1987; Weisskopf, Bowles, and Gordon, 1983]. Higher wages also can play a role, through the "efficiency wage" effect [Shapiro and Stiglitz, 1984] or by making management more efficient [Wilkinson, 1981]. Finally, others have stressed the significance of public, as opposed to private, investment [Aschauer, 1991].

The Importance of the Financial Sector

Probably one of the biggest differences between the conventional wisdom and the alternative theory is the importance attached to the financial sector. The conventional view focuses primarily on real variables; in the alternative theory, real variables are still relevant, but the financial system has a significant and independent influence. An important way in which the alternative theory incorporates the role of the financial system is by focusing on the demand and supply of *credit*, rather

than on the demand and supply of real loanable funds. This permits an important number of influences to be addressed.

Monetary Policy. One of these influences is monetary policy. In the full-employment model of the conventional wisdom, money is neutral, and monetary policy can affect only nominal values. A stimulative monetary policy at full employment will serve only to increase prices, while real variables remain at their full-employment values. In contrast, if the economy is not at full employment, as in the alternative theory, monetary policy will have important effects on real variables and on the real interest rate.

Endogenous Money. Despite the importance of monetary policy, the banking system can play an independent role in determining the supply of credit [Moore, 1988]. By liability management and other means, the banking system can continue to lend, partly frustrating a tight monetary policy [Earley and Evans, 1982].

Credit Rationing and the "Credit" View. Likewise, by rationing credit, the banking system can supply less credit than expected by the monetary authorities. Recent research has suggested that credit rationing might be an equilibrium response to the presence of imperfect information [Stiglitz and Weiss, 1981] and that it has been an important ingredient in recent recessions [Cantor and Wenninger, 1993; Wolfson, 1986].

In general, Hyman Minsky refers to "a fundamental maxim of economics, namely, only that which is financed can occur" [1982, 194]. Building on this insight, the new "credit" literature has highlighted the importance of financial considerations in the supply of credit and in economic performance [Gertler, 1988; Sinai, 1992].

Financial Fragility and Financial Crises. Increasing financial fragility and financial crises can affect bank lending negatively [Bernanke, 1983; Wolfson, 1986]. In addition, the disruption of credit can have powerful effects on the real economy [Caskey and Fazzari, 1992; Isenberg, 1991]. As Minsky, the theoretical inspiration for much of this literature, has put it:

Any significant increase in the failure of business to meet payment commitments will lead to a decline in the amount of financing available to business. A decline in financing means a decline in investment, which implies a decline in income and employment. [1982, 197]

The Independence of Finance. Ultimately, this perspective contends that the banking system can change its amount of lending independently of the supply of savings [Terzi, 1986-87]. Davidson [1986], in a particularly important article,

argues that the bank lending required for the production costs of new investment can be supplied by creating new loans. The financing to purchase the new assets created does draw upon available savings, but by this time new savings have been created by the increase in income due to the production of the investment goods. This view, and the general financial perspective described here, traces in large part from the work of Keynes [1930; 1936].

Financial Innovation. Not only can the banks lend independently of the supply of savings, but at times, due to financial innovation, they can do so without contributing to an increase in interest rates. In an important early contribution, Minsky [1982, 162-78] showed that the federal funds market, an innovation in response to tight monetary policy, enabled the banking system to expand the supply of credit without further increases in interest rates. The survey of credit crunches by Albert Wojnilower [1980] is a particularly instructive example of the importance of the institutional environment and the banking system's ability to expand credit by the use of financial innovation.

The Supply of Credit. The significance of this brief survey of alternative financial theory is that the supply of credit is not determined simply by the supply of real savings. To understand the sources of the supply of credit, it is necessary to incorporate the institutional structure of the financial system.

The Demand for Credit. As with the supply of credit, the demand for credit is importantly dependent on financial variables. In the conventional wisdom, the government and business sectors meet in the credit market, with the government trying to finance the budget deficit and the business sector trying to finance real investment in plant and equipment. Although, other things equal, an increase in investment demand may lead to an increase in the demand for credit by the business sector, in general the demand for credit from the business sector is only partially related to the level of real investment.

In the first place, a significant fraction of the demand for investment is met through internal funds. While this is indeed a use of (corporate) savings, it does not represent a demand for credit. Secondly, business may have a demand for credit that is unrelated to investment in plant and equipment. In particular, as will be explored in more detail below, business can demand credit for the purposes of taking over other companies, engaging in leveraged buyouts, and other forms of corporate restructuring.

The demand for credit, then, represents the demand for borrowing in credit markets for all purposes. In addition, it represents the credit demands of not only business and government, but also households, the foreign sector, and financial institutions.

In the demand for credit, many considerations can play a role. *Financial fragility* is an important reason for borrowing. Business firms whose revenues fall short of interest payments must borrow to meet payment commitments [Minsky, 1982]. In the household sector, declining real wages in the 1980s for the bottom 40

percent of the income distribution led to a demand for credit to maintain living standards [Pollin, 1987]. Pollin has also argued that the wealthy added to the demand for credit in order to speculate in financial assets.

In summary, from the point of view of the alternative theory, there are two overall perspectives. First, interest rates are determined by the interaction of the demand and supply of credit, not the demand and supply of real loanable funds.⁵ Second, the demand and supply of credit are influenced greatly by financial variables and the institutional structure of the financial system.

WHICH THEORY EXPLAINS THE 1980s?

With the background given above, it will now be useful to examine the empirical record of the 1980s, in order to begin to evaluate the relative merits of the two perspectives.

Measurement Issues

Before doing so, however, it would be useful to discuss the issue of the measurement of the federal budget deficit. There are a number of corrections that have been suggested to the conventional budget numbers, and a number of authors have investigated the question in much detail [Eisner, 1986; Blejer and Cheasty, 1991]. The most important of the suggested modifications is the *high employment budget deficit*. There is generally universal agreement that the effects of the state of the economy should be removed from the estimation of the impact of fiscal policy.

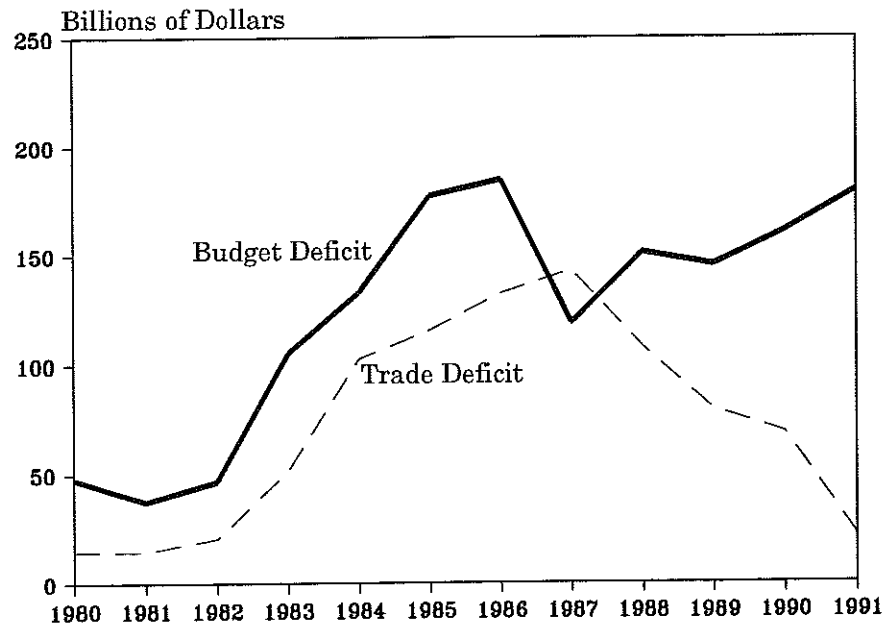
Other modifications include taking account of the following: state and local government surpluses, inflation, and government capital expenditures. Proponents argue that making these corrections would significantly reduce the size of the budget deficit [Eisner, 1986; Heilbroner and Bernstein, 1989]. Critics do not question the legitimacy of the adjustments, but contend that there is no need to incorporate these changes to the budget deficit (except for the high-employment correction) because it will not change the effect of the budget deficit on the economy [Gramlich, 1991, 177-8; Blinder, 1991, 214]. In what follows, in measuring the budget deficit we will use only the noncontroversial high-employment correction. The purpose is to maintain the focus of the argument on the economic issues involved.

The Twin Deficits

The strongest evidence for the conventional wisdom (at least until 1986) comes from Figure 1, which plots the twin deficits: the budget deficit and the trade deficit.⁶ The remarkable co-movement between the two data series has provided the inspiration for a good deal of the twin deficits literature.

These twin deficits no longer remained twins in the late 1980s, however. The trade deficit narrowed (in large part due to the fall in the value of the dollar), while the budget deficit (after declining briefly in 1987) continued to widen. In addition, there is no similarity before the 1980s. Nonetheless, the 5-year experience in the

FIGURE 1
The Twin Deficits



Sources: U.S. Congressional Budget Office [1993, 123], Economic Report of the President [January 1993, 349]

first half of the decade of the 1980s seems to provide important confirmation of the conventional wisdom.

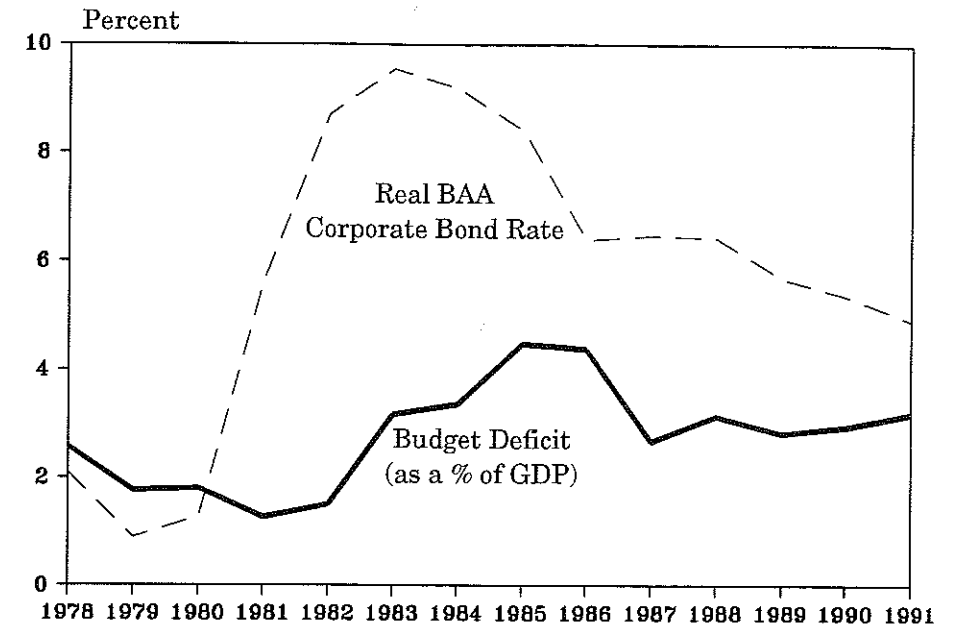
The Budget Deficit and Real Interest Rates

How well does the conventional wisdom's explanation hold up? As regards the basic link between the budget deficit and real interest rates, the general historical and econometric evidence is, at best, inconclusive. As Benjamin Friedman notes, "The link between government deficits and real interest rates has been notoriously difficult to document in any irrefutable way" [1991, 152].

The evidence for the decade of the 1980s is examined in Figure 2.⁷ The real interest rate rose sharply in 1981 and 1982, hit a peak of nearly 10 percent in 1983, and has been falling ever since.

From these data, it is difficult to see how large federal budget deficits could be the primary cause of high real interest rates. Real interest rates rose dramatically in 1981 and 1982, but the budget deficit did not start to climb until 1983 (when the fiscal changes from the Reagan Revolution began to take effect). It is only in 1983 that both the budget deficit and the real interest rate rose. Since 1983, real interest rates have trended down, even as the budget deficit hit record heights in 1985 and 1986, and has remained high above its historical trend ever since.⁸

FIGURE 2
Budget Deficit and Real Interest Rates



Sources: U.S. Congressional Budget Office [1993, 123]; Economic Report of the President, [January 1993, 415, 428].

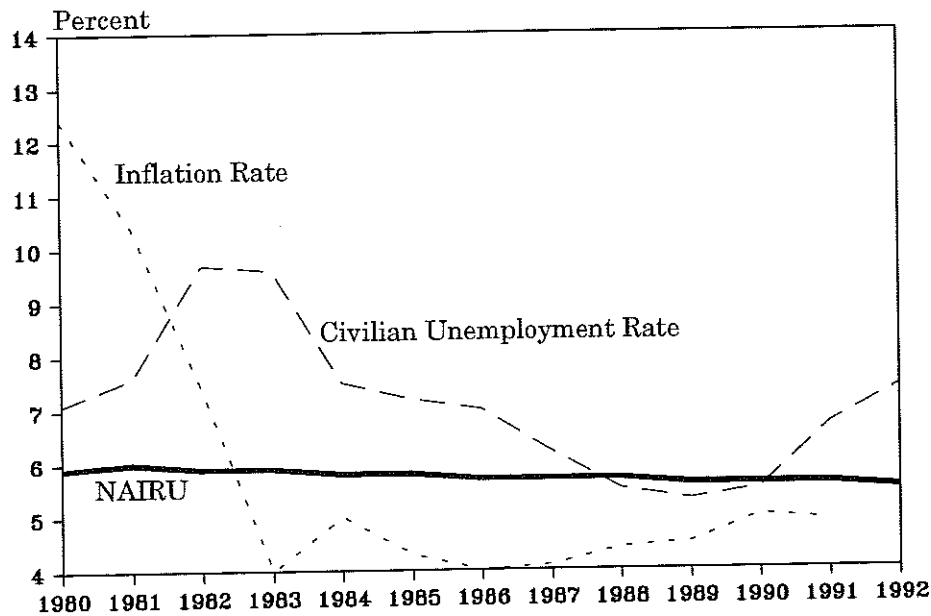
Also, real interest rates in the 1980s have remained above trend. Presumably the fact that real interest rates and the federal budget deficit both have been above trend in the 1980s is what proponents of the conventional wisdom have in mind when they argue that large budget deficits push up real interest rates. But the direction of movement of these data series in the 1980s seems to weaken that case considerably.

Full Employment?

Ironically, 1983 was the only year in the 1980s in which the association between budget deficits and real interest rates fits the alleged pattern. For it was also in 1983 (and 1982) that the unemployment rate hit its peak for the decade of the 1980s. Yet according to the conventional wisdom interest rates are supposed to be forced up by high budget deficits only at full employment.

Figure 3 plots the unemployment rate since 1980. From its high point near 10 percent in 1982 and 1983 (as a result of the 1981-82 recession), the unemployment rate fell to 5.5 percent in 1989. It climbed back up to 7.5 percent in 1992, following the 1990-91 recession. It is difficult to see when, if at all, there was "full" employment. The definition relevant to the budget deficit argument would seem to be an economy in which all resources are fully employed, i.e., everyone who is seeking work is able to find employment (allowing for perhaps 2 percent frictional unemploy-

FIGURE 3
Unemployment and Inflation Rates



Sources: U.S. Congressional Budget Office [1993, 123]; Economic Report of the President, [January 1993, 390, 415].

ment). Only then would national income and savings be fixed and could business investment be crowded out.

Yet the convention among many economists has been to define full employment as the non-accelerating inflation rate of unemployment (NAIRU). Indeed, there is a situation in which NAIRU would be the relevant definition of full employment for the argument of the conventional wisdom: if, at NAIRU, further increases in aggregate demand were fully translated into inflation, so that it was effectively impossible to increase the real level of national income and savings. But the unemployment rate was near or below the NAIRU in only 1987-89 (Figure 3).⁹ From 1983 to 1986, the years of the significant increase in the budget deficit, the unemployment rate was above even the NAIRU definition of full employment.

During 1987-89 the inflation rate, also plotted in Figure 3, did increase, but only gradually — by less than one percentage point. Such a performance raises questions about the validity of the whole concept of NAIRU, below which inflation necessarily “accelerates”.¹⁰ And by doing so it also questions the validity of a budget deficit argument which is based upon full employment, even full employment defined to be NAIRU.

Monetary Policy

If large budget deficits were not responsible for the high real interest rates in the early 1980s, then what was? The obvious candidate is monetary policy. The period from 1979 to the summer of 1982 corresponded to the “monetarist experiment” — the switch to a nonborrowed reserves operating procedure in order to slow inflation, and the resultant high and volatile interest rates.

Proponents of the conventional wisdom who are attuned to the empirical record, such as Benjamin Friedman, readily admit that the high real interest rates up through 1982 were due to tight monetary policy [Friedman, 1989, 173; 1991, 153]. But after 1982, the influence of monetary policy seems to disappear. Monetary policy did indeed ease in the summer of 1982. But it did not remain loose for the rest of the decade. Monetary policy tightened again in 1984 and in 1987 [Board of Governors, 1985; 1988]. In general, the Federal Reserve, anxious to avoid a return of the inflationary expectations of the late 1970s, maintained a relatively tight monetary policy during most of the 1980s (in comparison with that characterizing other recent expansions).

The curious disappearance of monetary policy from the purview of proponents of the conventional wisdom may reflect the emphasis on full employment. Friedman, referring to the years after 1982, argues that “[o]ur new fiscal policy, generating ever larger deficits even in a fully employed economy, had long since replaced tight monetary policy as the reason for high real interest rates” [1989, 174]. If it is incorrect to characterize the U.S. economy as “fully employed,” then monetary policy may very well have played an important role after 1982.

Real Investment

Finally, did the large federal budget deficits of the 1980s crowd out real investment? To some extent, the answer to this question depends on what measure of investment one is using. Real total gross investment, the most general measure of investment in the national income and product accounts, averaged 16.46 percent of annual real GDP in the 1970s, compared to 16.25 percent in the 1980s. In contrast, the narrower concept of real net investment in business plant and equipment showed more of a decline; it fell from 3.23 percent in the 1970s to 2.81 percent in the 1980s.

The failure of gross investment to decline was perhaps responsible for the shift of the focus of the conventional wisdom argument in the mid-1980s to the twin deficit formulation. However, with the decline in the trade deficit in the late 1980s, attention has shifted back again to investment [Feldstein and Bacchetta, 1989]. And the decline in net business investment seems to provide at least some evidence that the business sector was crowded out by large budget deficits. In the next section, however, it will be argued that this was not the case. A new argument will be formulated which, it is asserted, better explains the experience of the 1980s.

THE BUDGET DEFICIT AND CORPORATE RESTRUCTURING

The conventional wisdom maintains that borrowing to finance budget deficits, which are by definition an excess of government spending over tax revenues, takes savings from the private sector for the purpose of financing government spending. Since there is no provision for investment by the government sector in the national income accounts, all of this spending is counted as consumption. Therefore, because savings have been diverted for the use of government consumption, less are available to finance private investment.

Origins of Large Budget Deficits

Does this analysis characterize the way in which large budget deficits emerged in the 1980s? To the extent that the large deficits were due to the rapid buildup of military spending under the Reagan administration, it is probably fair.¹¹ However, the large budget deficits of the 1980s resulted from not only increased military spending, but also large tax cuts. In particular, the Economic Recovery Tax Act (ERTA) of 1981 reduced the following taxes:

Individual Income Taxes. There was a 25 percent phased reduction of income tax rates between 1981 and 1984, an immediate decline in the top tax rate from 70 to 50 percent, and the indexing of tax brackets beginning in 1985.

Corporate Taxes. The accelerated cost recovery system (ACRS) of depreciation was introduced, along with a more generous investment tax credit.

Other Taxes. Among others, estate and gift taxes were drastically reduced.

Individual income taxes fell from 9.6 percent of GDP in 1981 to 8.3 percent in 1986; corporate income taxes fell in those same years from 2.1 to 1.5 percent of GDP [U.S. Congressional Budget Office, 1993, 127]. Although it is true that the savings of the private sector were accessed to finance the resulting budget deficits, the funds raised were used not for government spending, but to "return" to the private sector.

Were these funds saved? Or were they spent by the private sector on consumption goods? By definition, the reduction in corporate taxes went to boost after-tax profits. To the extent that these profits increased corporate retained earnings, the savings of the business sector increased.

Of the individual income tax cuts, certainly some fraction was saved and some was consumed. Since under the supply-side logic the tax cuts were aimed at the relatively wealthy, presumably a fairly large part of these tax cuts was saved. Moreover, to the extent that the consumption spending induced increased income via the multiplier, savings would increase further.¹²

We should expect, therefore, that a budget deficit due to tax cuts would *not* result in a diversion of private savings into government consumption.¹³ Much of the tax savings for both corporations and individuals would be as available to finance investment (or other purposes such as corporate restructuring, discussed below) as if it never left — which, in fact, it never did.

What, then, of the much publicized decline in private savings? It turns out that all of this decline can be attributed to a decline in the personal savings rate; corporate savings as a share of GDP remained relatively constant in the 1980s. Moreover, it has been argued [Block and Heilbroner, 1992] that the supposed fall in personal savings is due to incorrect measurement. If realized capital gains, government pension funds, and owner-occupied housing depreciation are taken into account, the personal savings rate also remains fairly steady.

Tax Law Changes and Corporate Restructuring

The significance of the changes in fiscal policy that were undertaken in 1981 go beyond the issue of tax cuts versus spending increases. The specific tax changes that were introduced not only led to large federal budget deficits. They also provided significant incentives for the corporate restructuring — the wave of mergers and acquisitions, takeovers, leveraged buyouts (LBOs), leveraged stock repurchases, etc. — that was to explode onto the corporate scene in the 1980s. Some examples of these tax changes include the following:

Step-up Depreciation. The value of this procedure was significantly increased by the accelerated depreciation allowances introduced by ERTA. The basic idea is to increase, or "step-up" the basis (the value subject to depreciation) of depreciable assets acquired in a merger or takeover. Thus depreciation allowances can be immediately increased, as they were, for example, in the LBO of Houdaille Industries by Kohlberg Kravis Roberts & Co. (KKR) [Anders, 1992, 33].

NOL and Tax-Credit Carryforwards. ACRS depreciation, along with the more liberal investment tax credit, helped to put some companies in the position of having more tax deductions than income. This resulted in an increase in net operating losses (NOL) and tax-credit carryforwards on corporate balance sheets. Mergers with more profitable companies would enable these tax advantages to be utilized. The pressure to merge was especially great in an environment of high interest rates, which magnified the advantage of using the tax-credit carryforwards as soon as possible [Scholes and Wolfson, 1991, 9].

Asset sales. These are often used in connection with LBOs or takeovers, as a way of paying down the debt incurred in the acquisition. The Installment Sales Revision Act of October 1980 reduced the tax costs of these sales [Scholes and Wolfson, 1991, 9].

In addition, taxes associated with restructurings were further reduced by the following:

The "General Utilities" Doctrine. This interpretation of the tax law enabled corporations, with certain exceptions, to avoid recognizing a capital gain in those corporate restructuring events in which the distribution of assets to shareholders resulted in a complete liquidation of the company [Pickering, 1991, 3].¹⁴

Mirror subsidiaries. Also known as "mirror imaging," this technique involved setting up a string of new subsidiaries of a newly acquired company. By allocating the purchase price disproportionately to those subsidiaries expected to be sold off in a divestiture, the acquirer was able to minimize the amount of capital gains taxes paid [Pickering, 1991, 3]. This technique was used by KKR in its 1986 acquisition of Beatrice Cos. [Anders, 1992, 71-2].

Debt. One of the largest incentives for corporate restructuring was, of course, the tax advantage of increased leverage. The tax deduction for interest expense for nonfinancial corporations jumped from \$52.7 billion in 1976 to \$205.6 billion in 1985, from 24 percent of taxable income (before interest) in 1976 to 47 percent in 1985 [U.S. Joint Committee on Taxation, 1989, 80]. Moreover, the tax savings from substituting debt for equity can explain much of the premium paid to stockholders. For example, it has been estimated that "81% of the premium paid for RJR-Nabisco can be explained by the tax benefits following from greater leverage" [Leland, 1989, 21].

Corporate Restructuring and the Budget Deficit

The discussion above indicates that tax considerations played an important part in encouraging corporate restructuring activity. Other researchers also document this conclusion [Kaplan, 1989; Schipper and Smith, 1991]. As summarized by Bulow, Summers, and Summers, "There is clear evidence that the current American tax system subsidizes corporate restructurings and raises the premiums that acquirers can afford to pay for corporations" [1990, 136]. By taking advantage of these tax changes, of course, corporations reduced their taxes paid to the federal government. Indeed, "[t]he evidence suggests that firms that have undergone a leveraged buyout pay very little corporate tax, at least for some period, after the buyout" [U.S. Joint Committee on Taxation, 1989, 58].

We would expect, then, that reduced tax revenue from these tax effects was responsible for increasing the federal budget deficit.¹⁵ To fully assess this conclusion, however, it is necessary to take into account potentially offsetting tax considerations. These include, most importantly, possible increased capital gains taxes paid by stockholders who sell their stock, and increased taxes on interest received by creditors holding the new debt obligations.

Indeed, a study by Jensen, Kaplan, and Stiglin [1990] argues that LBOs on balance result in an increase in taxes paid to the Treasury.¹⁶ In addition to taxes paid on capital gains and interest received, they contend that the Treasury benefits from (1) increased operating income of the firm following the LBO, (2) increased capital efficiency, and (3) capital gains from the sale of assets by the LBO firm.¹⁷ The notion of increased capital efficiency is a result of their assumption that LBO firms reduce wasteful capital expenditures (which, by assumption, earn only enough to offset tax depreciation). The firms return these funds to shareholders who invest them to earn a taxable return.

However, in their calculations Jensen, Kaplan, and Stiglin do not take account of the particular ways in which capital gains tax liabilities following upon corporate restructurings were avoided (mirror subsidiaries, General Utilities doctrine, Installment Sales Revision Act). Neither do they calculate the important tax advantages due to step-up depreciation, net operating losses, and tax-credit carryforwards.

In addition, their conclusion is dependent upon some relatively strong assumptions: first, that the investment spending by LBO firms is wasteful, and that payment to shareholders of these funds results in productive investment (producing taxable returns) rather than consumption, and second, that the increases in operating income following LBOs are entirely attributable to increases in efficiency. Bulow, Summers, and Summers [1990, 150] characterize this assumption as "questionable". Shleifer and Summers [1988] contend that these increases in income are due to transfers from stakeholders, such as reduced wages of workers. If they are correct, then taxes forgone from reduced wages should be considered in calculating the cost to the Treasury.¹⁸

Bulow, Summers, and Summers recalculate the tax consequences for an LBO that had no effects on operating income or capital investment decisions. They conclude that "[t]here is no evidence that the government recoups these losses [due to interest deductibility] in the form of extra capital gains collections" [1990, 151]. Their result reverses the conclusion of Jensen, Kaplan, and Stiglin: there is a net loss in revenue to the Treasury; "LBOs are tax subsidized" [1990, 151].

It might also be noted that Jensen, Kaplan, and Stiglin apply tax rates appropriate to the post-1986 period to a data base on management buyouts from 1979 to 1985. Replacing their tax rates with those appropriate to the period before the Tax Reform Act (TRA) of 1986 increases the amount of tax calculated to be paid to the Treasury [Walsh, 1993].

Nonetheless, a number of provisions in the TRA reduced the tax advantages of corporate restructuring. The General Utilities doctrine was repealed, annual limits were placed on the amount of net operating loss carryovers, the corporate capital gains tax was increased from 28 to 34 percent, and the deductibility of greenmail payments (to corporate raiders to bribe them into dropping their takeover attempt) was reduced. In addition, the technique of mirror imaging was disallowed (by the Omnibus Budget Reconciliation Act of 1987).

Perhaps even more importantly, TRA reduced the corporate income tax rate from 46 percent to 34 percent. Thus it reduced the significance of the tax deduction of corporate interest payments. At the same time, though, TRA reduced the marginal individual income tax rate for those in the top bracket from 50 to 28 percent and eliminated the special tax treatment of capital gains income. From the point of view of the shareholder, this change favored debt as opposed to equity financing because income paid to stockholders in the form of interest would be taxed at a lower rate than income from dividends and capital gains.¹⁹ From the perspective of the corporation, the tax changes reduced the premium paid by the corporation to offset the tax disadvantage of debt at the personal level.

Changes in the tax law in 1989 (the Revenue Reconciliation Act), continued to limit the tax subsidy for corporate restructurings [Bulow, Summers, and Summers, 1990, 164], and this time there was no offsetting change in personal income tax rates. The tax treatment of "high-yield original issue discount obligations," with a maturity of five years or more, was changed. These securities, the junk-bond version of zero coupon Treasury bonds, were popular in corporate restructurings. They enabled the issuing corporation to avoid cash interest payments while at the same time taking a tax deduction for accrued interest payments. Under the 1989 law, interest payments above the relevant federal government rate plus six points are not tax deductible (they are considered payments on preferred stock), and no deductions are allowed on the remaining interest until cash payments are actually distributed.

Another change in the 1989 Act concerned "corporate equity reduction transactions." Net operating losses resulting from these transactions can no longer be carried back to reduce taxable income in previous years. Also, deductions for interest paid to nontaxable foreign-related parties were limited, and the Treasury is authorized to consider nominally debt instruments as part equity, thus potentially further limiting interest deductions.

Thus, to summarize, it seems likely that corporate restructuring, at least through 1986 and likely also through 1989, contributed to an increase in the federal budget deficit. After 1989 the tax subsidy was reduced. Although more definitive results will have to await a more complete study of the tax consequences of restructuring, the evidence thus far seems suggestive.

Corporate Restructuring and Crowding Out

It is instructive now to examine the implications of corporate restructuring for corporate balance sheets, and ultimately the issue of the crowding out of private investment. Table 1 is a general representation of the flow of funds data collected by the Federal Reserve Board. It shows the sources and uses of funds of the nonfinancial corporate business sector. (The most important sources and uses of funds for our purposes are highlighted in bold.)

The "normal" condition is for corporations to use both internal and external sources of funds, including new equity issues, to finance their most important use of funds, investment in plant and equipment. In the 1980s, however, due to restructuring, corporations retired much more equity than they issued. In a leveraged buyout, for instance, borrowed funds (primarily) are used to finance the purchase of the shares of a company, which is then "taken private." The purchase of the company's shares removes them from the market.

In order to pay down the heavy debt loan incurred in the LBO, the acquirer will often divest (sell) parts of the company; the divestiture itself is often structured as an LBO. In addition, operating expenses are generally slashed. These can include spending for research and development and investment in plant and equipment, as well as wages, benefits, and other costs. Although some have applauded these

TABLE 1
Sources and Uses of Funds
Nonfinancial Corporate Business Sector

SOURCES	USES
Internal Funds	Capital Expenditures
Retained Earnings	Investment in Plant and Equipment
Profits Before Tax	Inventory Investment
- Corporate Income Tax	
- Dividends	
Depreciation	Financial Investment
External Funds	
Debt	Retirement of Equity
New Equity Issues	

actions [Jensen, 1988], critics have argued that these reductions in expenses involve the breaking of implicit contracts, and may very well adversely affect economic efficiency [Scherer, 1988; Shleifer and Summers, 1988].

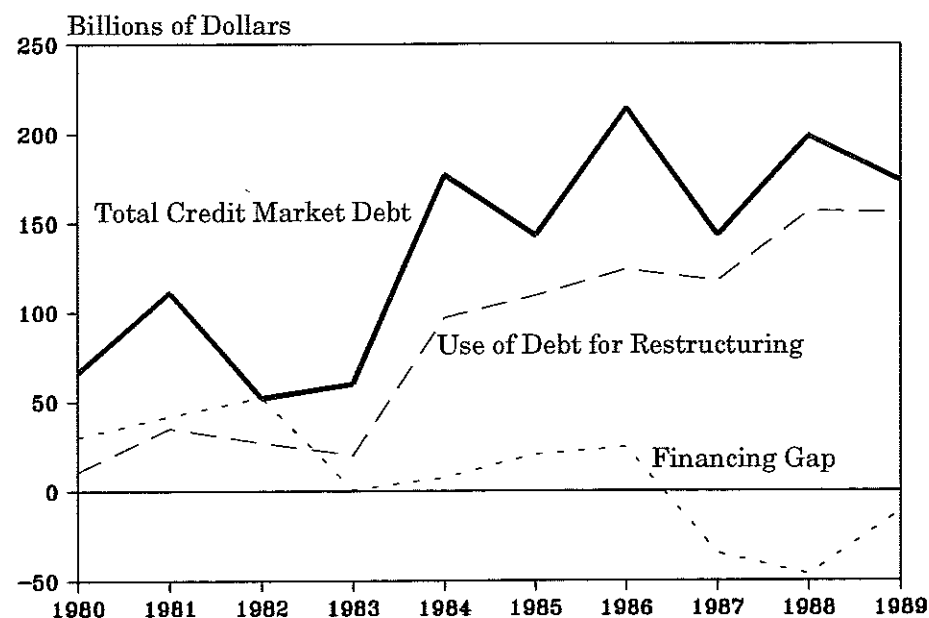
Equity is also retired in a merger or acquisition. Here the acquiring company remains a public corporation, but the transaction is similar to an LBO in that typically much of the cash used to purchase the shares of the target company is borrowed. A third transaction which retires equity is a repurchase by a company of some of its own shares. Often this is done to attempt to ward off a hostile takeover. By borrowing to finance the share repurchase, the company makes its balance sheet less attractive to a potential raider.

These three types of equity retirements are plotted in Figure 4 as "use of debt for restructuring."²⁰ The concept corresponds to the entry in Table 1 of "retirement of equity." The assumption made is that these equity retirements were financed by debt. Since some small amount of nonborrowed funds was used in these transactions, this is somewhat of an overestimate. On the other hand, the data plotted do not include the use of debt for "leveraged divestitures" (borrowing to purchase part of a company) or "leveraged recapitalizations" (payments of extraordinary dividends). Leveraged recapitalizations, like the repurchase of shares, involve borrowing to make payments to stockholders; again, these have been used to ward off hostile takeovers.

An important point to note is that the nonborrowed cash, in the case of corporate mergers, comes most likely from retained earnings.²¹ As can be seen from Table 1, retained earnings were boosted by the reduction in corporate income taxes discussed above.

The top line in Figure 4 is the total credit market debt issued (on a flow basis) by the nonfinancial corporate business sector. It corresponds to the debt entry in Table 1. As can be seen, most of this debt has been used for activities connected with

FIGURE 4
Corporate Use of Debt



Sources: Board of Governors of the Federal Reserve System, Flow of Funds Accounts, Statistical Release Z.1 [9 December 1992, 3, 13]; Pickering [1991, 2].

corporate restructuring. The bottom line represents the financing gap, or the amount by which investment in plant and equipment exceeds internal funds, i.e., the amount companies need to borrow to finance investment spending. It is equal to the difference between the entries, investment in plant and equipment and internal funds, in Table 1. For most of the 1980s this gap has been relatively low; in recent years it has been negative.²²

The important point to emerge from Figure 4 is the following: from 1983 through the rest of the decade, corporations were able to meet most of their needs for investment through internal funds. Yet during the same period of time (corresponding, it should be noted, to the time period of large federal budget deficits), corporations greatly increased their borrowing in credit markets. This debt was not used to finance investment, but corporate restructurings: LBOs, mergers and acquisitions, and share repurchases. Thus corporations were not crowded out of credit markets. They simply chose to use their borrowed funds for restructuring rather than for investment.

In fact, some have argued that it has been the focus on restructuring that has discouraged investment in the 1980s. As noted above, corporations, burdened by huge debt loads and under pressure to cut costs and show a short-term profit, have cut expenses, including research and development and investment spending. More-

over, the pressure to maintain short-term profits to keep up the price of the company's stock has encouraged a short-term focus which has hurt investment [Crotty and Goldstein, 1993; Singh, 1992].

A New Twin Deficits?

To summarize, the large budget deficits of the 1980s contributed to the after-tax cash flows of business corporations (and also to corporate savings). The changes in the tax laws introduced by the Economic Recovery Tax Act increased the incentives to engage in various types of corporate restructuring. These restructurings were financed overwhelmingly by debt (indicating that corporations were not crowded out of credit markets).

Thus the budget deficit contributed to the increase in corporate debt (or what might be called the corporate deficit), and the use of corporate debt for corporate restructurings also contributed to the increase in the budget deficit. So perhaps the real twin deficits of the 1980s were the budget deficit and the corporate deficit. These two data series are plotted in Figure 5. They track each other quite closely. The budget deficit and the corporate deficit diverge only in 1990, after the legislation in 1989 that limited the tax advantages of using debt in corporate restructuring, and after the wave of restructurings of the past decade had slowed dramatically.

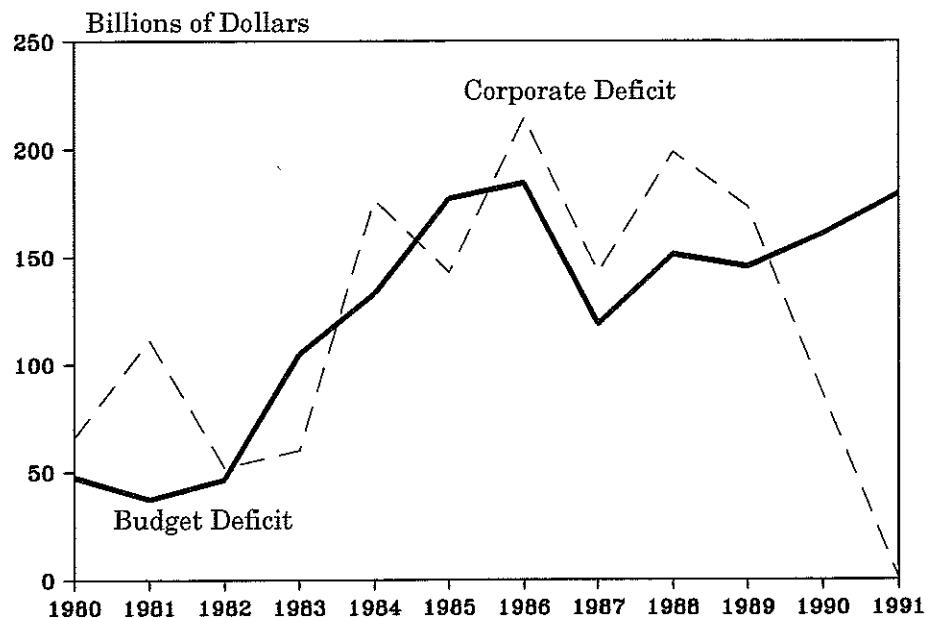
Of course, there were other reasons for restructuring besides taxes. And the fact that the budget deficit continued to increase after 1989 indicates that there are other sources of the deficit besides the tax loss from restructuring. Nonetheless, the similarity of the two series up to 1990 is quite suggestive. They track each other more closely in fact than the budget deficit and the trade deficit shown in Figure 1. The economic interrelationships between the phenomena of corporate restructuring and federal budget deficits should therefore give one pause before uncritically accepting the twin deficits and crowding out arguments of the conventional wisdom.

POLICY

Likewise, the policy recommendation of the conventional wisdom — to make cutting the budget deficit the main economic priority — also should be examined critically.²³ The conventional argument is that a smaller budget deficit will absorb less savings and thus result in lower interest rates and higher private investment. Proponents point to the decline of long-term interest rates during the first half of 1993 as the President proposed, and Congress passed, a budget reduction measure; supposedly the bond market was anticipating less crowding out.

However, it seems quite possible that the expectations of the bond market were that a smaller budget deficit would reduce aggregate demand and thus keep the economy and, most importantly, inflation growing slowly. In fact, the economy is still sluggish, and the lowest interest rates in two decades have not initiated an

FIGURE 5
A New Twin Deficits?



Sources: U.S. Congressional Budget Office [1993, 123]; Board of Governors of the Federal Reserve System, Flow of Funds Accounts, Statistical Release Z.1 [9 December 1992, 3].

investment boom. Recent research indicates that interest rates are much less important in business investment decisions than are variables tied to the health of the economy such as profits and sales [Fazzari, 1993].

What, then, are the policy recommendations of the alternative analysis? Perhaps surprisingly, there is agreement with the conventional wisdom that the budget deficits of the 1980s have been harmful to the health of the U.S. economy.²⁴ The budget deficits in the 1980s have *not* promoted investment, but not because they have been so big that they crowded out business investment. The way in which the deficits were created, i.e., the composition of the budget deficits, has been inimical to investment.

As noted above, the tax cuts of the early 1980s encouraged corporate restructuring. Critics charge that the need to meet debt payments incurred from restructuring has promoted a short-term focus harmful to investment [Singh, 1992].²⁵ Greatly accelerated military spending in the 1980s likewise did little to encourage private investment.

The federal government, however, is capable of promoting investment. Public investment includes both physical investment in infrastructure and, more broadly, investment in people (education, worker training, child health and nutrition, etc.). Aschauer [1991] has argued that public infrastructure investment can promote

private investment, productivity, and profitability. Yet federal outlays in the 1980s for infrastructure, and also for education, training, employment, and social services, have deteriorated dramatically [U.S. Congressional Budget Office, 1991, 14, 49].

An explicit capital budget would be a useful tool in reorienting government spending and tax policy towards greater productive investment. Such a budget, which has been proposed by a number of people [Eisner, 1986; Heilbroner and Bernstein, 1989; Reich, 1992] would separate federal government spending into two categories: public investment, broadly defined, and other public spending. Because public investment creates benefits in the future, it is properly funded by borrowing. Other public spending should be funded by taxes.

Creating such a budget would not be a simple task. It would involve much debate and discussion about what properly should be included as public investment, what level of taxation is appropriate to fund current spending, etc. But debating these issues in the public arena is superior to a single-minded focus on cutting the size of the budget deficit.²⁶

Does this mean that the size of the budget deficit is irrelevant? No. As Eisner points out, budget deficits can be both too big and too small. But even aside from their relationship to aggregate demand, the current large budget deficits are creating two real problems. The first is that interest on the federal debt has dramatically increased, which may have worsened the distribution of income [Michl, 1991]. The second is that large interest payments, in the context of a general public perception that the budget deficit is too large, can create political obstacles to more productive uses of government funds. However, a capital budget could help address these problems. Limiting government borrowing to investment spending would incur debt, and interest payments, only for those activities which would be expected to result in higher economic growth, and thus higher incomes and tax payments, in the future.

The most important point in the entire discussion, however, is what Eisner [1991] has called "our real deficits." These refer to the real problems of our society: workers permanently displaced from closed down factories, poverty, homelessness, the unavailability of health care, the conditions of the inner cities, malnutrition among our children. Perhaps if we can view the budget deficit in proper perspective, we can more adequately address these human needs.

NOTES

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1. In some formulations, the negative of the budget deficit (the budget surplus) is taken to be government savings. Thus total national savings, composed of private savings plus government savings, are equal to investment.
2. The trade deficit on current account will be reflected in a surplus in the capital account in the balance of payments; in other words, net foreign investment in the United States will increase, or U.S. net foreign investment abroad will decrease.
3. It is also necessary to assume that there are no exchange-rate considerations, e.g., offsetting expectations of a decline in the value of the dollar.
4. Likewise, in a growth context, it is the ratio of savings to income that determines the rate of growth of the economy: "the allocation of resources between present and future consumption or saving is perhaps the most fundamental choice facing any economy . . . The rate of saving determines the rate of growth a country can enjoy" [Summers, 1986, 65].
5. Given the stability of the inflation rate from 1983 to the present (see Figure 3), and presumably therefore the relative stability also of inflationary expectations, the determination of nominal interest rates in credit markets would also apply to real interest rates.
6. The figure plotted for the budget deficit is the standardized (high) employment budget deficit as calculated by the U.S. Congressional Budget Office [1993, 123]. In 1989 and after, it does not include the funds spent by the government for the bailout of the deposit insurance fund of the savings and loan associations.
7. Here the federal budget deficit is measured as a percentage of gross domestic product (GDP); the real interest rate is on long-term corporate bonds (those rated BAA by *Moody's*), presumably the interest rate most relevant for funding business investment in plant and equipment. The real interest rate is obtained by subtracting from the BAA rate the percentage change in the Consumer Price Index (CPI) for all items less food and energy. Of course, the relevant inflation rates are those that will occur over the life of the loan. But since the future is unpredictable, and expectations of future inflation rates are both subjective and not easily documented, the change in the CPI has been used.
8. It might be possible to argue that real interest rates were high in the early 1980s because of expectations of large budget deficits in the future. Such an argument, however, leaves unexplained why continued increases in the budget deficit between 1983 and 1986 did not lead to higher real interest rates.
9. The NAIRU plotted in Figure 3 is that level of unemployment used by the Congressional Budget Office to calculate the standardized employment budget deficit plotted in Figures 1 and 2.
10. Of course it is possible to retain the theoretical validity of NAIRU, but to argue that its actual level had been overestimated. To some extent that is what economists did in the late 1980s, when unemployment fell below 6 percent but inflation did not begin to accelerate. Customary definitions of NAIRU in the vicinity of 6 percent were revised downward closer to 5 percent. To follow this procedure very far, though, seems to undercut the idea of NAIRU. Certainly everyone would agree that inflation will accelerate at *some* level of unemployment above zero.
11. Some have argued that military spending can benefit private investment by transferring new technology and other synergies. This conclusion is disputed, however, by Markusen and Yudken [1992]. They argue that military spending has distorted research and development efforts, inhibited the competitiveness of the United States, and not spurred private investment.
12. Under the assumption of an increase in income equal to the full multiplier effect, i.e., equal to the increase in consumption times one divided by the marginal propensity to save, the induced savings plus the initial savings from the tax cut would exactly balance the increase in the budget deficit. Of course, in an open economy one would expect the multiplier to be less than this.
13. Some people would argue that the increase in the budget deficit was due also to increased entitlement spending, interest payments, and the deposit insurance bailout for the thrift industry. It is true that

Social Security benefits, which form a large part of the entitlement category, have increased significantly. However, the increase in the Social Security tax in 1983 has led to a surplus in the overall Social Security accounts.

In any event, entitlements, interest payments, and the thrift bailout all involve the same types of payments to the private sector that were discussed in the case of tax cuts. Moreover, there is reason to think that payments for interest and for the thrift bailout ultimately go to the relatively wealthy [Michl, 1991].

14. Prior to the Tax Equity and Fiscal Responsibility Act of 1982, it was possible to avoid capital gains taxes on partial liquidations as well.
15. The analysis of Shleifer and Summers [1988], which argues that the value created in hostile takeovers can be attributed to transfers from stakeholders, then might be expanded to include an additional stakeholder, the federal taxpayer.
16. It should be kept in mind that their study focuses on only one aspect, LBOs, of the panoply of events that constitute the phenomenon of corporate restructuring. In fact, they focus on a particular type of LBO in which former management achieves an equity interest in the firm taken private (management buyouts).
17. They also take note of the loss of revenue to the Treasury from forgone dividend payments. (Since equity disappears in the LBO transaction, dividends are no longer paid.)
18. Jensen, Kaplan and Stiglin note this possibility, but do not take account of it in their calculations.
19. To see this, consider the following [Shoven and Waldfogel, 1990, 3]: let t_p be the marginal personal income tax rate, t_c the corporate tax rate, t_{CG} the effective marginal tax rate on accrued capital gains, α the fraction of equity income distributed as dividends, and T_E and T_D the total marginal taxation to equity and debt payments. Then
 - (3)
$$T_E = t_c + (1 - t_c)[\alpha t_p + (1 - \alpha) t_{CG}]$$
 - (4)
$$T_D = t_p \quad \text{and}$$
 - (5)
$$T_E - T_D = t_c - t_p + (1 - t_c)[\alpha t_p + (1 - \alpha) t_{CG}]$$
 If $t_c > t_p$, then debt financing will be tax advantaged ($T_E > T_D$) since the expression $(t_c - t_p)$ will be positive and the rest of the right-hand side of equation (5) will also be greater than zero.
20. The data come from Pickering [1991, 2].
21. In the case of LBOs, the equity (the nonborrowed share of the financing) was likely to come from "bank holding company subsidiaries, insurance companies, corporate and state pension funds, college endowment funds, individuals, and foreign investors" [Pickering, 1991, 3].
22. Thanks to Don Goldstein and Jim Crotty for the idea for the presentation used in Figure 4.
23. A complementary policy recommendation is to encourage private savings by taxing consumption. Proposals include a national sales tax, a value-added tax, or taxes on particular consumption goods such as gasoline or cigarettes.
24. Thus there is not agreement with the view known as Ricardian equivalence. According to this theory, large budget deficits are benign. Rational individuals will respond to budget deficits by increasing their savings enough to pay for anticipated future taxes.
25. Restructuring often had a devastating impact on workers and their communities. Plant closings, cuts in wages and benefits, and pension fund terminations were all justified in the wake of corporate restructurings.
26. Likewise, it would be beneficial to direct more attention to the public usefulness of corporate borrowing. One implication of the alternative analysis is to orient public policy towards discouraging business borrowing to finance hostile takeovers and LBOs (see Crotty and Goldstein [1993] for some specific suggestions), and encouraging business activity that promotes job growth, decent wages, and productivity. This would include borrowing to finance investment in plant and equipment, but not be limited to it. The important point is to analyze the purpose of the borrowing.

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