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The Budget,
Deficit, and
Debt of
the U.S.
Government

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Table 3.3**U.S. Government Outlays, Receipts and Deficits
(FY 1979–1996, \$ billions)**

Year	Outlays	% Growth outlays	Receipts	% Growth receipts	Deficit
1979	504.0		463.3		40.7
1980	590.9	17.2	517.1	11.6	73.8
1981	678.2	14.8	599.3	15.9	79.0
1982	745.7	10.0	617.8	3.1	128.0
1983	808.4	8.4	600.6	-2.8	207.8
1984	851.8	5.4	666.5	11.0	185.4
1985	946.4	11.1	734.1	10.1	212.3
1986	990.3	4.6	769.1	4.8	221.2
1987	1,003.9	1.4	854.1	11.1	149.8
1988	1,064.1	6.0	909.0	6.4	155.2
1989	1,143.2	7.4	990.7	9.0	152.5
1990	1,252.7	9.6	1,031.3	4.1	221.4
1991	1,323.4	5.6	1,054.3	2.2	269.2
1992	1,380.8	4.3	1,090.5	3.4	290.4
1993	1,408.7	2.0	1,153.5	5.8	255.1
1994	1,460.9	3.7	1,257.7	9.0	203.2
1995	1,519.1	4.0	1,355.2	7.8	163.9
1996	1,560.1	2.7	1,452.4	7.2	107.3

Source: Budget of the United States Government, Historical Tables, Fiscal Year 1996.

outlays grew 7.72% and receipts grew 6.85%), and by the end of the decade the government was consistently running deficits of \$250 billion.

In the years that immediately followed the Economic Recovery Tax Act, more sober recognition of the emerging deficit defused some of the enthusiasm for tax cuts, and some reductions were reversed or eliminated as other taxes were gradually raised.

A second major piece of tax legislation, the Tax Reform Act, was passed in 1986. This law reduced the number of marginal tax brackets from 14 to 4 and it substantially reduced the top marginal individual income tax bracket from 50 to 28%, while the maximum corporate tax rate was cut from 46 to 34%. To offset this the maximum tax rate on capital gains was increased from 20 to 28% and extremely generous accelerated depreciation schedules, allowable passive losses and \$2000 IRA deductions were eliminated by this law. Additionally, during the entire

decade Social Security taxes crept relentlessly upward. These changes in the tax structure, especially when compared to the lasting impact of those features of the Economic Recovery Tax Act that were retained, did very little to provide budgetary relief.⁸

It should be remembered that supply-side economics and the tax cuts of the early 1980s were not justified as a means of reducing deficits. In the sweep of conservative enthusiasm during that era, they were viewed as a nearly revolutionary and long-overdue stimulus to an ailing economy—or to use language reflective of the excitable rhetoric of the time—they rekindled the fires of private enterprise. This aggressive policy, oriented toward improving business conditions and increasing economic growth, was promoted with the promise that it also would not produce red ink. But it did.⁹

Debt and Interest on the Debt in the Present Era

If we remember from earlier discussions the connection between *deficits* and the *federal debt*, what we have seen so far would lead us to believe that the debt would have grown markedly over the period in question. As is made evident in Figure 3.3, that has clearly been the case. The higher line shows total gross debt outstanding, which includes nonmarketable interagency debt within the U.S. government (such as the Social Security Trust Fund, for example). The lower line, labeled net debt, represents debt by the U.S. government to outside parties—the real net debt of the U.S. government to everyone else.¹⁰

In looking at the graph, a couple of interesting observations can be made:

1. We remember that most of the debt accumulated before the modern era was generated in World War II (in 1946 it stood at \$271 billion). More than 2 decades later at the point when the data presented in Figure 3.3 begins, the debt had grown by only 35% (in 1968 it stood at \$369 billion). In the 10 years that followed (until 1978) it would more

⁸The impact of the 1986 Tax Reform Act has also been debated a great deal. For a good description of the 1986 law and a suitable starting point for the debate see the article by Barry Bosworth and Gary Burtless, Bibliography, Section 9.

⁹It should be noted here that the new supply-side economics of the mid-1990s has moved away from support for a general reduction in tax rates to advocacy for reductions in the highest marginal tax rates and a flatter tax structure. We return to this subject, with citations, in Chapter 9.

¹⁰If this is confusing, refer back to Table 1.7 in Chapter 1.

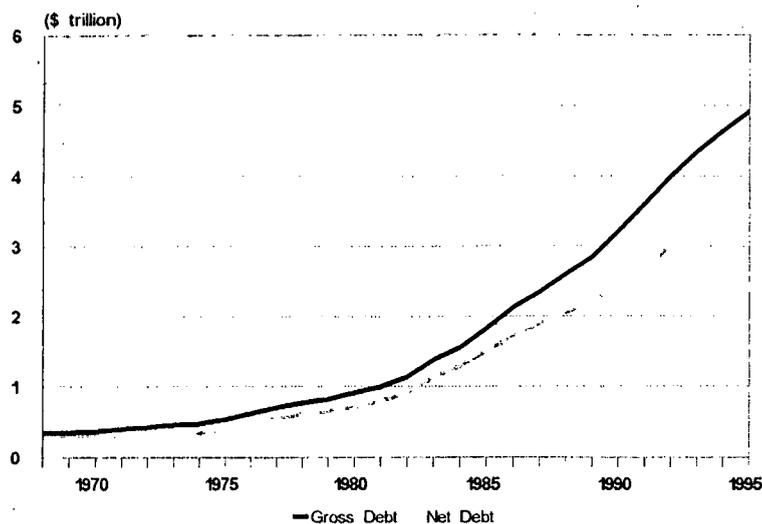


Figure 3.3
Total Federal Debt, 1968-1995

than double, and in the next ten years (from 1979 until 1988) it would more than triple.

2. Total debt did not reach \$1 trillion until 1982, having required nearly two centuries (from 1789) to reach this level. The debt increased to \$2 trillion by 1986, in only four years. The \$3 trillion debt level was surpassed in 1990 and the fourth trillion-dollar increase was reached two years later in 1992. In 1996 the level of debt reached \$5 trillion.¹¹

One would expect the debt to increase in a growing economy,¹² but these figures are unusually large even when nominal economic growth is taken into account. National income or gross domestic product, even when it is not adjusted for inflation, does not double every 4 years.

The primary *internal* problem associated with rapidly growing debt for any economic entity, whether government, business, or consumer borrowing is *debt service*, or in a few words, finding the means to make payments associated with the debt. The higher the debt relative to the means to pay, usually some form of income, the more serious the debt burden.

¹¹Net debt (gross federal debt less the amount held by government accounts); more representative of the government's true debt burden, took a little longer to reach these milestones. The \$1-trillion mark was passed one year later than gross debt in 1983, the second trillion in 1988, and the third in 1993.

¹²This will be discussed in the next section.

Debts are normally *amortized* in some form or another, meaning that periodic payments are required on the interest and usually on the principal.

In this regard, the task is a little easier for a federal government than it is for a corporate or a consumer borrower. The payment obligation for corporate or consumer borrowers assumes some principle reduction. For the federal government debt service essentially consists of making only the interest payments on the outstanding debt. As discussed earlier, governments do not reduce the debt principal.

Even so, the task of debt service can be formidable. Figure 3.4 illustrates the amount of interest paid for the securities outstanding that make up the debt. In recent years this has been above \$200 billion.

Interest expense is part of the line-item federal budget (as will be seen in the next chapter), so any potential debt service problem would be reflected in interest as a percentage of outlays as shown in Figure 3.5. Here we see that interest expense has risen from about 6% at the beginning of this era to about 14%. Note the flattening of this expense after 1990 (we will discuss this later).

Again, a number of observations can be made:

1. Any such increase of debt service in any budget, government or otherwise, puts a tremendous overall strain on the budget. Every dollar

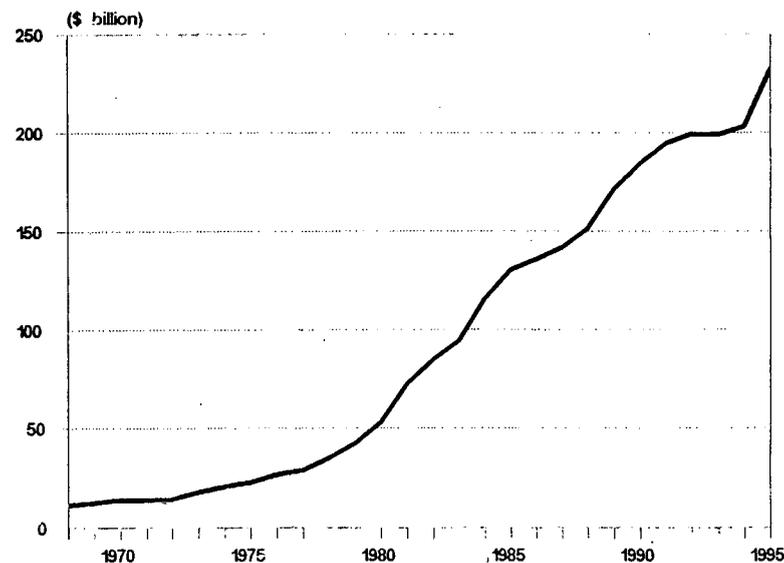


Figure 3.4
Interest on the Debt, 1968-1995

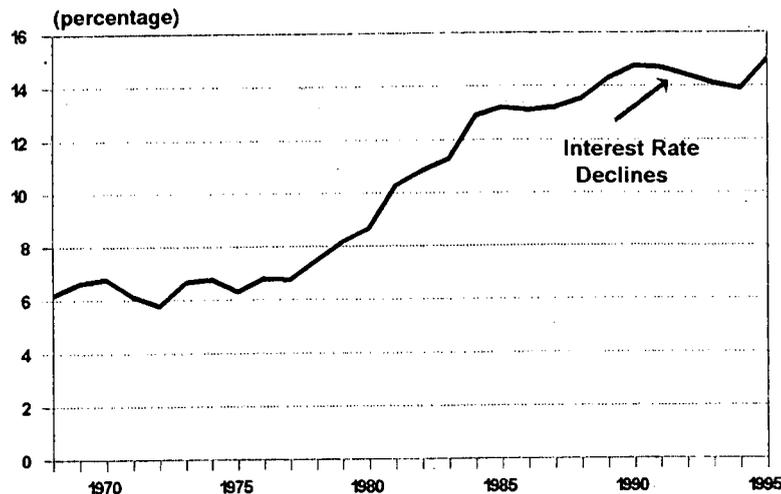


Figure 3.5
Net Interest as a Percentage of Outlays, 1968-1995

spent for debt service is a dollar that cannot be spent for traditional government services.

2. As this percentage grows, ever larger cuts must be made in the discretionary part of the budget (such as defense, education, and so on) merely to maintain the status quo.

3. The 6% figure at the beginning of the era (1968) is fairly large given the budgetary moderation seen through the 1950s and 1960s. That 6% almost entirely reflects the interest-service cost of the debt built up in World War II, more than two decades earlier. This shows how much of the interest burden of debt can “stick” intergenerationally. Whether deficits are the result of efforts to finance wars or are due to political problems, they result in episodic surges of debt. Because there is never any debt reduction even in years of balanced budgets, interest as a percentage of the budget tends to ratchet up stepwise. This reflects an old problem and it becomes a new one.

Interest Rates and the Interest on the Debt

The level of interest payments, in absolute terms and as a percentage of outlays, reflects the size of the debt itself, as was shown earlier in Figure 3.3 and in Table 1.3, and the level of interest rates paid by the gov-

ernment for the myriad U.S. Treasury securities that make up the debt. As a rule of thumb, an increase of 1% (for example, from an average of 7% to 8%) in the average interest paid by the U.S. Treasury for its portfolio of securities will increase this interest expense (and hence the deficit) by approximately \$30 billion. A decrease in interest rates of the same amount would have an equivalent effect in the opposite direction.

There is a difference between the effective interest rate paid by the U.S. Treasury and the prevailing, often volatile, market rates of the same securities. Once the Treasury issues a note or a bond, the rate is locked in for the duration of that issue. When market rates rise by, say, 1%, rates paid by the Treasury will slowly follow as old debt is redeemed and new debt is issued. The effective rate paid lags behind market rates, where the extent of the lag is determined by the average maturity of the securities that make up the debt—the longer the average maturity, the longer the lag.

In Figure 3.4 we saw that interest flattened after 1990, remaining just under \$200 billion, but not growing even though the debt grew. Figure 3.5 showed that interest as a percentage of outlays declined slightly after 1990. This reflects declining interest rates in those years, which can be seen very closely in Figure 3.6. The more volatile line represents the market rate paid on newly issued 3-month Treasury Bills. Effective interest

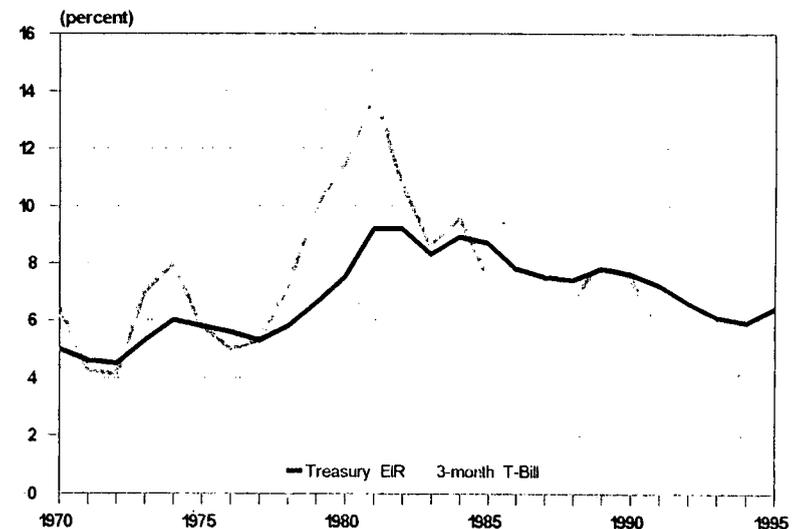


Figure 3.6
Effective Interest Paid on Federal Debt and 3-Month T-Bill Rate

paid, which is essentially a long-weighted moving average of the full range of previous bill, note, and bond rates, is relatively smooth. The effective interest followed market rates up during the inflationary period of the late 1970s, rising above 9% in the early 1980s. Both rates then began to decline with the abatement of inflation through the remainder of the decade. Market rates fell so sharply in the recession that began in 1990 that they were well below the effective rate and they pulled it down in the early 1990s. It's for that reason that interest expense stabilized in the early 1990s, despite continued high deficits and growing debt.

Interest rates have remained low since a small increase in 1994. But a substantial rise in market rates of perhaps 2% would increase the effective rate only slightly, around 0.25%. Even so, that would add approximately \$10 billion to the deficit.

To summarize the point raised at the beginning of this section, the primary *internal*¹³ problem posed by growing debt is the debt-service burden, here represented as interest expense. As the relative importance of this category grows, more Draconian choices have to be made in the discretionary areas of the budget if deficit reduction is the goal.

Perspectives

In a prosperous economy one would expect debt and deficit figures to grow larger over time. Economic growth and inflation ensure that all measures of economic activity rise over time. For that reason some comparative yardsticks will put the deficit and the debt in better historical perspective.

Figure 3.7 shows the deficit as a percentage of gross domestic product. This ratio normalizes the deficit in relation to the size of the economy. It would be difficult to find a consensus among economists about what a prudent ceiling for this ratio should be. Many conservative economists promote a balanced budget, which would imply that 0% should be the ceiling. The European standard, in contrast, sets a ceiling of 3%. The omnibus 1992 Maastricht Treaty,¹⁴ which governs the formation of the European Union (EU)—or more precisely, it governs the transformation

¹³By this we mean the internal *accounting* problem of dealing with an unbalanced budget—where governmental budgetary integrity is the issue. There is also the *external* problem of the effects of all budgetary decisions upon the economy, which is discussed in Chapter 9.

¹⁴All references to the Maastricht Treaty are taken directly from the Treaty, which is available at the EU Europa Web Site, <http://europa.eu.int>.

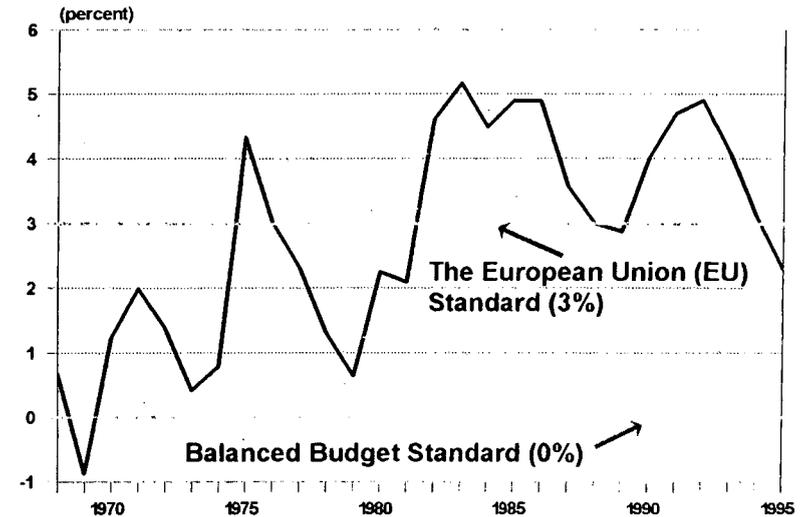


Figure 3.7

The Deficit as a Percentage of GDP, 1968-1995

from the old European Economic Community (EEC) to the more extensive and ambitious European Union (EU), also called the European Community (EC)—includes very specific provisions on deficit targets. Article 104c of Title II of the Treaty mandates that EU member nations generally “shall avoid excessive governmental deficits,” and Treaty protocols specifically define acceptable upper limits as “3% for the ratio of planned or actual government deficit to gross domestic product at market prices; [and] 60% for the ratio of government debt to gross domestic product at market prices.” In other words, this means that EU member nations are expected to keep their deficits below 3% of GDP and their net debt below 60% of GDP.¹⁵ Failure to comply can result in a substantial penalty;

¹⁵These limits refer to *general* rather than *federal* government deficits and debts. In the United States, this would be equivalent to combining all levels of government; federal, state, and local, into one budget. The issues that arise in this difference and the means of comparing the European *general* standard to the U.S. *federal* standard are discussed in the next section. The requirement that “planned or actual” budget deficits fall below 3% of GDP implies that in a situation where recession or slow growth causes high unemployment and the actual budget deficit exceeds the 3% limit, an estimate of what the deficit would be under the assumption of full employment—the “planned” deficit—which, of course, would be lower than the actual deficit—might be regarded as an acceptable substitute for the actual deficit number.

instead is to provide suitable and humane health care to the indigent at reasonable cost. And as was the case with Medicare, the concerns of the elderly, especially with respect to the funding of long-term nursing-home care, are likely to strongly influence the tone of the debate.

What's Next?

Our discussion of Social Security and Medicare is incomplete. The real controversies surrounding both of these programs concern their financial integrity going into the twenty-first century. The financing of these programs is the ultimate issue. Given the present status of the programs, their costs are destined ultimately to rise above revenues, depleting trust fund reserves and jeopardizing the financial integrity of the overall budget.

Social Security, Medicare, and many other federal programs are financially managed as trust funds. Therefore to understand the long-range financial issues, the peculiar and complicated rules that govern federal trust-fund financing must be probed. The next chapter, which should be seen as a continuation of this chapter, will begin with a discussion of trust-fund financing, using the Aviation Trust Fund as a simple example. Once the essentials of trust-fund financing are covered, we will explore the more detailed accounting of the four major trust funds that comprise the Social Security and Medicare systems. That will finally enable us to explore some of the more controversial (and disturbing) twenty-first century issues.

Trust Funds and the Emerging Issues of the Twenty-First Century

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From the previous chapter we know that presently both the Social Security and the Medicare programs extend benefits to around 40 million people and are therefore immensely popular and important. Yet the media in recent years have entertained us with dark and gloomy forecasts about the financial viability of these programs as we approach the twenty-first century. The Social Security retirement program is sometimes described as virtually doomed and eventually bankrupt, and Medicare is characterized as hopelessly under-funded.

Are the modern-day critics of these huge programs being unnecessarily alarmist? Is there any merit to their dark and depressing prophecies?

Unfortunately, the answer to the second question is yes. Social Security and Medicare may work reasonably well right now, but for reasons to be explored in this chapter, the funding of these systems becomes increasingly problematic as the years go by.

The Social Security and Medicare systems, or at least their financial aspect, are represented on the books as four large trust funds. Therefore, to understand their financial status, we must begin by exploring the arcane world of federal trust funds.

Trust Funds: What Are They?

A **trust fund**, represented schematically by Figure 7.1, is very little more than an accounting procedure used by the federal government. It is a series of bookkeeping entries that keeps a tally of funds available for some designated purpose. Incoming receipts that are intended for the trust fund are credited to the account and outlays are deducted. If the account runs a surplus over the fiscal year—if receipts exceed outlays, the fund's balance grows by the amount of the difference. If the account runs a deficit where outlays exceed receipts, then the fund's balance drops by the amount of the deficit. It works exactly like a checkbook, except it is more like a checkbook within a checkbook, where funds are being moved around internally to some extent.

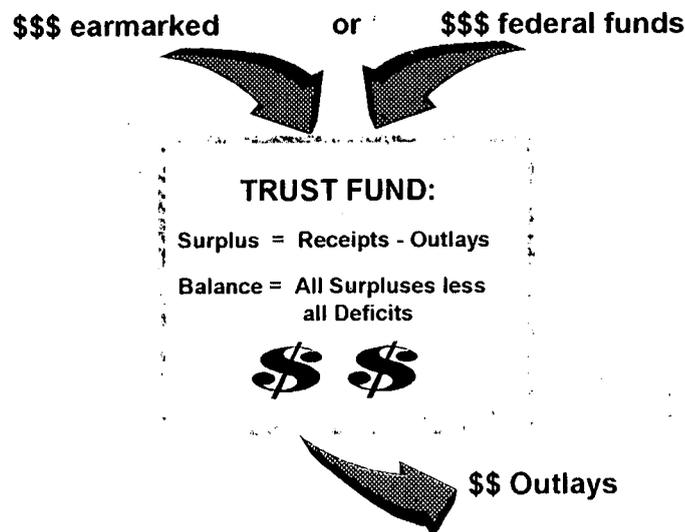


Figure 7.1
Federal Trust Funds

Table 7.1

**The Aviation Trust Fund
FY1995 (\$ millions)**

ID 20-8103-0-7-402	Rec & out	Balance
Starting balance		12,386
Receipts		
Ticket tax	+ 4,768	
Waybill tax	+ 361	
Fuel tax	+ 211	
International departure tax	+ 233	
Interest earned	+ 757	
Other receipts	+ 33	
Total receipts	+ 6,363	
Outlays		
Trust fund share FAA operations	- 2,546	
Grants-in-aid for airports	- 1,826	
Facilities and equipment (net)	- 2,572	
Other outlays	- 440	
Total outlays	- 7,384	
Net change	- 1,021	<1,021>
Ending balance		11,365

Source: Budget of the U.S. Government, FY 1997, Appendix, p. 747.

The Aviation Trust Fund and the Federal Civilian Employees Retirement Trust Funds

The best way to see how a trust fund works is by example. Table 7.1 shows the fiscal year 1995 status of a relatively simple trust fund, the Aviation Trust Fund which is found in the budget of the Department of Transportation. (This trust fund is not an entitlements trust fund.) This fund began the fiscal year with a balance of \$12.4 billion, and ended the year with \$1 billion less. Receipts for this fund mostly came from special taxes earmarked for the fund, including nearly \$4.8 billion in ticket taxes on airline travel. Some outlays by this fund were included in general outlays by the Federal Aviation Administration, which was seen in Table 5.7. Because outlays exceeded receipts, producing a deficit within the fund of almost exactly \$1 billion, the fund's balance declined by that amount during the fiscal year.

As a note of interest, this fund's strength was substantially weakened in fiscal year 1996. Many of the taxes shown in Table 7.1, including the

Table 7.2**Federal Civilian Employees Retirement Funds FY 1995 (\$ billions)**

		Rec & out	Balance
Starting balance			346.4
Receipts—federal funds			
Transfer from other agencies	+	33.6	
Interest earned from Treasury	+	28.7	
Receipts—other	+	4.5	
Total receipts	+	66.8	
Total outlays	-	38.9	
Net change (surplus)	+	27.9	27.9
Ending balance			374.3

Source: Budget of the U.S. Government, FY 1997, Analytic Perspectives, p. 264. This is a composite of more than one trust fund.

ticket tax, expired on December 31, 1995, and were supposed to be renewed. But because of the legislative gridlock at the time (this was the period when the government was being shut down every few weeks) this did not happen, so the trust fund was slated to lose somewhere between \$3 and \$4 billion in revenues, severely reducing its balance.

The aviation trust fund is an example of a fund that earns its receipts by special taxes earmarked for the fund. The Social Security Trust Fund also works this way, as we will see later. Most federal trust funds, though, gain their receipts from funds merely transferred from other federal accounts. All funds in federal budgets are classified either as trust funds or as federal funds¹ (essentially, all outlays that are not from trust funds are classified as “federal funds”). Therefore, to be precise, many trust funds gain their receipts in the form of federal funds transferred as a bookkeeping entry from some other federal account,

A good example of the latter is the Federal Civilian Employees Retirement Fund, summarized in Table 7.2, which had a balance of \$346.4 billion at the beginning of fiscal year 1995. Of this fund's \$66.8 billion in receipts in 1995, almost all were in the form of federal funds transferred from other government accounts. Each federal agency is required to transfer federal funds to this retirement account trust fund as a provision

¹This budgetary term has no connection whatsoever to the benchmark interest rate called the “federal funds rate” targeted by the Federal Reserve System. The terms are coincidental.

Table 7.3**U.S. Public Debt
Total Interest-Bearing Debt of the U.S. Government
as of December 1995 (\$ billions)**

Instrument	Maturity	Interest category	Amount
Marketable debt			3,307.2
U.S. Treasury Bills	13, 26, 52 week	Discount	760.7
U.S. Treasury Notes	1–10 years	Coupon	2,010.3
U.S. Treasury Bonds	10 + years	Coupon	521.2
Non-marketable debt			1,657.2
U.S. government accounts			1,299.6
Foreign governments			40.8
U.S. Savings Bonds			181.9
Other			134.9
Total debt			4,964.4

Source: Treasury Bulletin, March 1996.

for the eventual retirement of civilian employees employed by that agency. These payments are included in the totals for outlays by that agency. That this fund has a \$374 billion balance does *not* mean that this amount of cash is set aside or is available to fund future retirement liabilities—not even close.²

Trust Funds and Nonmarketable Treasury Debt

In both the aviation trust fund and the retirement trust fund there are two rather large entries for “interest earned,” in the former case contributing \$757 million dollars to the fund's receipts and in the latter about 40% of the total. This is evidence of yet another complication of trust-fund financing: federal trust funds hold their balances in the form of yield-bearing Nonmarketable U.S. Treasury Debt. To explain this, a summary of the U.S. public debt shown in Chapter 1 as Table 1.3 is reproduced here as Table 7.3 (it has exactly the same information). In Chapter 1 we explained that the debt category labeled U.S. government accounts

²The aggregation of most of these federal funds transferred to the retirement account shows up in the unified budget under the large negative entry labeled *undistributed offsetting receipts*, which was discussed in Chapter 4 (see also the definition of the term in the glossary).

(equal to approximately \$1.3 trillion in December 1995) was technically debt of the U.S. Treasury to government trust funds. Therefore, the aviation and retirement trust funds—their approximate balances—and all other trust funds constitute this category of treasury debt. The aviation fund owns about \$11 billion of it, for example (some tiny amount of a trust fund's balance is typically in some other form), and earns interest on those securities.

Again, though, it must be stressed that this is merely an internal bookkeeping convention used by the federal government. Because the U.S. Treasury is the fiscal agent for all branches of the federal government, the federal government is, in effect, issuing debt and paying interest to itself. For each financial asset created, a matching liability is generated. The accounting entity called the trust fund gains the asset and the U.S. Treasury gains the offsetting liability. On *net*, there is no change in the fiscal stature of the government as a whole. In the use of this accounting convention, the government is neither richer nor poorer, more indebted nor less, *nor more able to nor less able to* meet future funding commitments for programs linked to trust funds.

The payment of interest into these trust fund accounts is also an arbitrary accounting convention. These interest payments, typically classified as federal funds, are *not* included in the amounts for net interest in the unified budget, nor should they be. Interest payments to trust funds such as the aviation fund alter the surplus or deficit generated by the fund (reducing the deficit or increasing the surplus). A surplus is funded by the bookkeeping transfer to the fund of yet more nonmarketable U.S. Treasury securities.

A Summary of Trust Fund Financing

Because this relationship is sometimes hard to understand (and to explain) the points made above will be summarized:

1. A federal trust fund is like a checkbook: if receipts exceed outlays, the balance in the fund will grow by the amount of the difference; if outlays exceed receipts, the balance in the trust fund will decline by the difference;

2. In some trust funds, most receipts come from taxes earmarked for the trust fund, whereas in other trust funds most or all receipts come from federal funds transferred as outlays from elsewhere in the federal budget or simply from general Treasury revenues;

3. When a trust fund runs a surplus, the U.S. Treasury issues to the trust fund nonmarketable interest-bearing securities equal to the amount of the surplus, such that over the years the trust fund's balance consists of these securities. Interest paid on these securities becomes part of a trust fund's receipts;

4. When a trust fund runs a deficit, total securities held on the books by the trust fund are reduced by the amount of the deficit;

5. Although this point has not been demonstrated, it will be shown later when we look at the financing of the Social Security Trust Fund. We will see that when a trust fund using earmarked taxes for receipts runs a surplus, *the overall deficit of the unified budget is reduced by the amount of this trust fund's surplus*. This important feature of trust fund financing will be explored in detail later in the chapter.

The accounting convention for trust funds used by the federal government is somewhat arbitrary, but to recognize that does not necessarily invite criticism of the procedure. Corporations use internal accounts and budgets to help estimate the true costs of the many programs that might be administered by the corporation. For example, a corporation might have a large internal equipment maintenance fund to smooth out the infrequent but high costs of large-scale equipment failure, or they might have a fund that reflects future pension obligations. Nor would it be unheard of for one of the funds to pay interest as a bookkeeping entry to another, especially if the funds transferred were a true loan from one agency to another (possibly made to avoid borrowing from an external source and having to pay actual interest to the outside lender). In the case of federal procedures, to require an agency like the Department of Defense to reflect funding for future military retirement is a sound good accounting practice, because to fail to do so would understate the true cost of defense.

The real problem arises not in the fact that the trust funds are managed this way, but rather in the interpretation, and especially in the interpretation provided in political debates that describes what these funds actually *are*!

Again, as stated above, these funds do not represent the means for the U.S. Treasury nor for anyone else to fund future obligations of the federal government. They represent internal debts of one agency of government to another, and all federal programs *on net* must be funded ultimately from *external* sources through either taxes or through borrowing from the private sector. In no sense are they like money set aside by an individual into a family of mutual funds. The balances in the trust funds (and the

nonmarketable debt that represents those balances) cannot be *raided* or used by the Treasury for other purposes, such as to balance the budget. The nonmarketable debt that makes up the trust funds is, by definition, a *liability* of the U.S. Treasury, the fiscal arm of the government, and the Treasury can no more raid its own liabilities than the owner of a credit card can "raid" the balance due and payable to the bank on the credit card bill.

Trust-fund financing, though, does have one very important implication for the program the trust fund represents: under current law a trust-fund balance guarantees *long-range financing for the program*. This is because federal law (with some exceptions, as always) limits allowable spending by a trust fund to the amount of receipts collected by the trust fund over the years. Therefore, if receipts in the early years of a program vastly exceed outlays, as is the case for the Social Security Trust Funds and for the federal retirement trust funds, and those trust funds grow even more with interest earned over the years, the upper limit on the amount the program can spend is stretched into the distant future. Receipts (from any source) realized in 1996, if not used in 1996, can be turned into nonmarketable Treasury securities earning interest and can be used in 2024, or in any other year. This is *not* the case for programs funded out of federal funds.

There is a contrary feature of this trust-fund financing arrangement as well: if the trust fund's balances are depleted, spending by the program financed by the trust fund is no longer allowable. There is no automatic provision that would continue a depleted program with financing taken from federal funds.

The issue of trust funds is complicated and easily misunderstood. It is difficult to discuss entitlements without understanding them, because most of the largest entitlements accounts are trust funds. (There are some significant exceptions, including the huge Medicaid need-based medical program discussed in the previous chapter, which is not operated as a trust fund.)

Now that the groundwork has been laid, it is appropriate to look at the trust funds for the two largest entitlements programs, Social Security and Medicare.

The Social Security and Medicare Trust Funds

College students graduating in 1997 will begin paying, as soon as they find work, 7.65% of their earned income into three federal trust funds, and their employers will make a matching contribution. These students

will be expected to make at least this contribution, and possibly more, throughout the 45 years or so they are employed. One of these trust funds, the Medicare Hospital Insurance Trust Fund, ran a deficit for the first time in 1995 and is expected to run out of funds in the year 2003. Another, the Social Security *Disability* Trust Fund had been running deficits for years and saw its reserves nearly exhausted in 1994, provoking an immediate crisis and a dubious solution, which is described below. But the largest share of taxes goes to the third, the Social Security *Retirement* Trust Fund, currently running a small surplus that contributes to a large fund balance at this time. For these college students the present-day status of this fund is not very important. What for them matters is the condition of the fund around the year 2040. Unfortunately, the outlook is not good. By current projections the retirement fund will begin running a deficit around the year 2018, and the fund's reserves are expected to be exhausted in the year 2031, about the time these students turn 55.

In other words, young people today are paying very high taxes into trust funds that are projected by reliable actuarial standards to be hopelessly bankrupt by the time these same contributors are eligible to receive their benefits. And the dire projections are not being made by polemicists or zealous politicians hell-bent on wrecking the system—they are being made by the actual trustees of the systems, the Boards of Trustees for the Social Security and Medicare Trust Funds. Their projections and warnings are published every year in the *Social Security Bulletin* and in their annual reports.³

The Social Security Trust Funds (OASI and DI)

To understand these doomsday predictions we have to look at the present status of the funds. Table 7.4 shows the two Social Security Trust funds. The two Medicare Trust Funds will be shown in the next section.

The 7.65% (employer and employee) payroll tax, called the FICA (Federal Insurance Contribution Act) tax or SECA (Self-Employed Contribution Act) tax (if one is self-employed and pays the immensely unpopular

³The titles of the most recent annual reports of the trustees of the large trust funds are: *1996 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and the Disability Insurance Trust Fund* (hereafter *OASDI Trustees' Report*), *1996 Annual Report of the Board of Trustees of the Federal Hospital Insurance Trust Fund* (hereafter *HI Trustees' Report*); and *1996 Annual Report of the Board of Trustees of the Federal Supplementary Medical Insurance Trust Fund* (hereafter *SMI Trustees' Report*).

Table 7.4

**The Social Security Trust Funds
Funds Status, FY 1995 (\$ millions)**

Federal Old Age and Survivors Insurance Trust Fund (OASI)				Federal Disability Insurance Trust Fund (DI)			
ID 20-8006-0-7-651	Rec & out	Totals	Balance	ID 20-8006-0-7-651	Rec & out	Totals	Balance
Starting Balance			416,335	Starting Balance			6,370
Receipts				Receipts			
FICA taxes	272,848			FICA taxes	64,339		
SECA taxes	16,815			SECA taxes	3,580		
Income tax on benefits	5,115			Income tax on benefits	335		
Interest earned	31,417			Interest earned	1,888		
Other	2,127			Other (incl refunds)	73		
TOTAL RECEIPTS		328,322		TOTAL RECEIPTS		70,215	
Outgo				Outgo			
Benefits	288,624			Benefits	40,201		
Administrative costs	1,798			Administrative costs	1,070		
Other	6,289			Other	109		
TOTAL OUTGO		296,711		TOTAL OUTGO		41,380	
SURPLUS		31,611	31,611	SURPLUS		28,835	28,835
Memo				Memo			
Surplus less interest		194		Deficit less interest		26,947	
Ending Balance			447,946	Ending balance			32,205

Status: The trust fund is running a small surplus presently, is expected to go to deficit around FY 2018, and is expected to be exhausted around FY 2031

Status: This trust fund was running a deficit in 1994. Some receipts from the FICA tax were transferred to OASI to ensure solvency, but this will now exhaust OASI Trust Fund earlier than was projected two years ago. Expected to be exhausted around FY 2015

Notes: FICA taxes are ordinary payroll taxes. SECA are payroll taxes for the self-employed. Sources: Budget of the United States Government, FY 1997, Appendix, and 1996 Annual Report of the Trustees of the Federal OASI DI Trust Funds. Data are not identical from these sources because Appendix uses fiscal year, trustees use calendar year.

In summary, the Treasury issues nonmarketable debt to these two trust funds equal to the size of their surpluses (\$60.4 billion in our example), and the OASDI allocations will change slightly in FY 1997, to 5.35% OASI and 0.85% DI, which will cause the OASI Trust Fund to run a larger surplus and the DI Trust Fund to run a smaller surplus.

In the bottom half of Table 7.4 is added, the total net surplus of the surplus-less-interest total of the Disability Insurance Trust Fund shown in the bottom half of Table 7.4 is added, the total net surplus of the two funds equals \$27.1 billion, so the external deficit is reduced by about this amount. However, the deficit of the unified budget and hence net external borrowing needs are reduced by *only the surplus less interest earned*, just \$194 million in the case of the OASI Trust Fund, and *not* by the full amount of the surplus. Interest earned is not a receipt from outside the government, so it does nothing to reduce the external deficit. When the surplus-less-interest total of the Disability Insurance Trust Fund shown in the bottom half of Table 7.4 is added, the total net surplus of the two funds equals \$27.1 billion, so the external deficit is reduced by about this amount.

The huge OASI Trust Fund, with a balance of almost \$448 billion at the beginning of fiscal year 1996, is *presently* the healthiest of the funds. The fund pulled in receipts of \$328 billion in fiscal year 1995, of which \$290 billion were the tax receipts described above. Given outlays, mostly for benefits (program administration costs are remarkably low—not much of this elusive “government waste” to be found here), the fund ran a surplus of about \$32 billion.

As described earlier in this chapter, the balance in these funds is held in the form of interest-bearing, nonmarketable U.S. Treasury securities issued by the Treasury as the funds balances grow (if running a surplus, deficits are financed by, in effect, cashing them in). The importance of the interest earned on these balances can be seen in the OASI Trust Fund—it contributed \$31.4 billion in revenues, nearly equal to the surplus. This surplus can have the effect of *reducing* the deficit of the overall unified budget. Again, this is essentially a “funds-in-funds out” system that self-finances each year, and when dedicated tax receipts exceed outlays for a trust fund like this, the excess cash goes to U.S. Treasury balances and is disbursed for other purposes, reducing the net *external* borrowing needs of the Treasury. Technically, the Treasury has borrowed funds (the surplus) from the OASI Trust Funds, used them for something like defense or justice, and has shown evidence of that borrowing by issuing nonmarketable securities to the trust fund and thereafter paying interest on them. However, the deficit of the unified budget and hence net external borrowing needs are reduced by *only the surplus less interest earned*, just \$194 million in the case of the OASI Trust Fund, and *not* by the full amount of the surplus. Interest earned is not a receipt from outside the government, so it does nothing to reduce the external deficit. When the surplus-less-interest total of the Disability Insurance Trust Fund shown in the bottom half of Table 7.4 is added, the total net surplus of the two funds equals \$27.1 billion, so the external deficit is reduced by about this amount.

and the deficit of the unified budget and hence external borrowing needs are reduced by the size of the surplus *less interest earned* (about \$27.1 billion).⁵

The 1994 Solution to the Crisis in the Disability Trust Fund

According to the 1993 trustees report for the Social Security and Medicare Trust Funds, the DI (disability) Trust Fund was “projected to be exhausted in about 2 years” (in 1995), a warning that was repeated in the 1994 report. The 1993 report also projected that the OASI Retirement Trust Fund would “be able to pay benefits for about 50 years.”

In contrast, in the 1996 *Trustees’ DI Report*, a year after the disability fund was supposed to be depleted, instead of being broke the disability fund was projected to run surpluses well past the turn of the century with fund balances remaining positive until 2015.

On the other hand, in the 1996 *Trustee’s OASI Report*, the retirement trust fund had more than a decade shaved off of its life. Whereas in the 1993 report it was expected to last another 50 years, in the 1996 report it was projected to have funds exhausted in the year 2031, for a remaining lifetime of 35 years.

Where did the lost years go?

The answer is summarized in Table 7.5, and is explained by a law entitled Public Law 103-387, passed with remarkably little fanfare on October 22, 1994, a few days before the end of the legislative session and just prior to the midterm election. Given the public’s concern over the health of the Social Security Trust Fund, to the extent that the fund has ever been “raided” (to borrow a term from the emotional debates over the balanced budget amendment that were to follow six months later), it was raided by this legislation.

Prior to this fix, the Disability Insurance Trust Fund was in dire straits, with funds projected to be exhausted by 1995. With the exhaustion of the fund’s balances there would have been no legal means for the fund to continue to meet its obligations. As was explained earlier trust fund spending is normally capped by the receipts of the fund (including interest earned), with spending authority carried over by the fund’s balance.

⁵This is a 97% definition: for complicated reasons that are not discussed here and mostly concern inter-agency transfers, the amount of deficit reduction would be a little different than this figure. Additionally, what has been said above does *not* apply to those trust funds, like federal employee retirement funds, that draw their receipts internally from federal funds. Their impact is deficit neutral.

Table 7.5

**The 1994 Fix to the DI Trust Fund
Public Law 103-387
October 22, 1994**

	1993	1995
FICA allocation (%)		
HI (hospital)	1.45	1.45
DI (disability)	0.60	0.94
OASI (retirement)	5.60	5.26
Total	7.65	7.65
Exhaustion of OASI trust fund predicted in	2043	2031
Exhaustion of DI trust fund predicted in	1995	2015

Note: Rates shown are employee only. Employer makes matching contribution.

Sources: The Boards of Trustees of the Social Security and Medicare Trust Funds Annual Reports, 1993, 1995, 1996, Public Law 103-387.

When the balance disappears, normally so does the spending authority unless special legislation allows this to be circumvented.

As Table 7.5 makes clear, the fix, recommended in the 1994 trustees’ report, was easy. Of the 6.2% (employee portion) payroll tax, the allocation between OASI and DI was changed: OASI was reduced from 5.60% to 5.26%, and DI increased from 0.60% to 0.94%. The change in allocation was made retroactive to January 1, 1994. The problem was solved overnight—the Disability Insurance Trust Fund gained 20 years of life. Of course, it all came at a cost. Billions of dollars each year that previously were earmarked for the retirement fund are permanently lost, shortening the projected life of the fund by more than a decade. This change also impacted substantially the surplus of the OASI Retirement Trust Fund. As seen in Table 7.4, this trust fund had a fiscal year 1995 surplus of \$31.6 billion, about equal to the interest paid into the trust fund by the Treasury. In fiscal year 1994, the same fund generated a surplus of \$60.7 billion, more than double the interest income for the same year. This is the primary reason that the trust fund is now projected to be depleted much earlier than predicted in the 1993 forecasts.

In summary, this “solution” has had three important effects: 1. it caused a more rapid depletion of the OASI retirement fund; 2. it rendered

unnecessary a thorough review of a program known to be abused, mismanaged, and faced with spiraling costs, and 3. the public did not notice.

Emotional public debates in the following spring about how future legislation might “raid” the Social Security fund (to reduce the deficit or to balance the budget) sounded rather hollow after Public Law 103-387. One would hope that future financial reform will provoke solutions that are a little more courageous than this.

The Medicare Trust Funds

The status of the two Medicare Trust Funds are shown in Table 7.6. The Hospital Insurance (HI) trust fund (Plan A of Medicare, as described in Table 6.5) is funded primarily from the 1.45% FICA/SECA payroll tax, plus some premiums paid by those who only marginally qualify for the program. Under federal law income taxes paid on OASI benefits must be dedicated in the budget to the OASI, DI, and the Hospital Insurance Trust Funds as program receipts, so that when combined with interest earned on the fund’s nonmarketable securities they constitute most of the rest of the receipts.

This fund is in terrible shape. The fund suffered a deficit in fiscal year 1995, and full depletion of the fund is expected in the year 2003. The 1996 HI Trustee’s Report declared that the fund “remains severely out of financial balance,” and that the “long-range outlook also remains extremely unfavorable.” Given the data presented by the trustees, the last comment would have to be regarded as remarkably upbeat given the actual fiscal data they present on the condition of the fund, which is close to hopeless. In fact, to overcome the long-range imbalance, they point out that the current 2.90% payroll tax (counting employer’s contributions) would have to be *immediately* increased to 7.42%. This, of course, is not even an option in the political sense.⁶

The same report more cheerfully describes the Supplementary Medical Insurance (SMI) Trust Fund (Plan B of Table 6.5) as sound, but only because this one is mostly financed by transfers from federal funds rather than earmarked revenue sources, unlike the OASI, DI, and HI trust funds. Additionally, these subsidies from federal funds (that is, transfers from general Treasury receipts) “are established annually at a level sufficient to cover the following year’s expenditures.”⁷ Although the trust

⁶These quotations and tax estimates are from the *FY 1996 HI Trustees’ Report*, pp 14 and 15

⁷*FY1996 SMI Trustees’ Report*, p 9 Data on the decline of the premium ratio are from Figure 1 E2

Table 7.6
The Medicare Trust Funds
Funds Status, FY 1995 (\$ millions)

Federal Hospital Insurance Trust Fund (HI)		Federal Supplementary Medical Insurance Trust Fund (SMI)	
ID 20-8005-0-7-571	Rec & out	ID 20-8004-0-7-571	Rec & out
Totals	Balance	Totals	Balance
Starting balance	129,555	Starting balance	20,919
Receipts		Receipts	
FICA & SECA taxes	98,054	Premiums collected	19,243
Income tax on OASI	3,913	Fed funds transferred	36,988
Premiums	998	Interest earned	1,935
Interest earned	10,833	Other	1,938
Other	1,049	Total Receipts	58,169
Total receipts	114,847	Outgo	
Outgo		Benefits paid	63,482
Benefits	113,402	Administrative costs	1,704
Administrative costs	1,246	Other	27
Other	235	Total outgo	65,213
Total outgo	114,883	Deficit	7,044
Deficit	36	Memo	-8,979
Memo	<36>	Deficit less interest	
Deficit less interest	-10,869	Ending balance	13,874
Ending balance	129,518		

Status: This trust fund ran a deficit for first time in 1995. The fund is expected to be exhausted in 2003 severely out of balance thereafter

Status: The trust fund is running a large deficit, but because it receives most receipts from federal funds and is financed year by year, it is not considered endangered. On the other hand, federal funds transfers will have to grow substantially over the years

fund is technically sound, the program's growth at about 10% annually is unsustainable, with most of the growth financed by general tax revenues. In the first 7 years of SMI's operation (after 1967), premiums equaled half of expenses. This balance is declining rapidly. Of the fund's \$58 billion in receipts, only one-third came from the monthly SMI premium (\$42.50 in 1996) paid by the elderly. In yet another alarming projection, the trustees warned that without a sizeable increase in premiums and assuming no change in coverage, premiums will cover less than 10% of outlays by the year 2020. Despite such warnings, the premium was actually *reduced* in 1996, an election year, from \$46.10 to \$42.50.

In summary, these large trust funds and the programs they represent, amounting to about \$520 billion in outlays yearly, do not have a very strong net impact on the present deficit or on the issue of immediate deficit reduction. As a group, they clearly help the situation somewhat. Because of the large surplus of the Disability Insurance Trust Fund, their net effect is to reduce the deficit. Together they ran in 1995 a gross surplus of \$53.8 billion and a net surplus (less interest earned) of about \$17 billion. Given the relatively small size of the net surplus, deficit reduction is not really helped much by these programs (far less than public debates on the matter would lead one to believe), but they are more or less paying their way as a group on a cash basis. Here is the problem: they will not do this for much longer and, more important, projections show the programs gravely underfinanced in a generation or so. Down the road a decade or two, we may face a crisis of profound proportions. Its earliest manifestation is with us now, mostly in the form of the projected insolvency and then the quick fix of the Disability Insurance Trust Fund and the emerging deficit in the Hospital Insurance Trust Fund.

Long-Term Issues

The Social Security retirement and medical programs are threatened partly because they pay fairly generous benefits, at least from an accounting or an actuarial perspective, given the lifelong contributions made to these programs by the present beneficiaries, especially in the case of health care. Medicare is financed largely by a substantial intergenerational subsidy.

Contributions made for the Social Security retirement program by those now retired were relatively low up until the 1980s, as is made apparent by Table 7.7, which shows tax rates, earnings caps, and average and maximum contributions for selected years. Even in the early 1980s, the average wage earner was contributing less than \$1500 per year

Table 7.7

Schedule of FICA Tax Rates for Social Security and Medicare Select Years: Employees' Rate and Employers' Matching Contribution

Year	Total FICA	TRUST FUNDS			Earnings cap (OASDI only)	Average annual wage	Average OASI contribution
		OASI	DI	HI			
1937	1 00	1 00			\$ 3,000		
1950	1 50	1 50			3,000	2,715	81
1960	3 00	2 75	0 25		4,800	4,007	220
1970	4 80	3 65	0 55	0 60	7,800	6,186	452
1980	6 13	4 52	0 56	1 05	25,900	12,513	1,131
1981	6 65	4 70	0 65	1 30	29,700	13,773	1,295
1982	6 70	4 575	0 825	1 30	32,400	14,531	1,330
1983	6 70	4 775	0 625	1 30	35,700	15,239	1,455
1984	7 00	5 20	0 50	1 30	37,800	16,135	1,678
1985	7 05	5 20	0 50	1 35	39,600	16,823	1,750
1986	7 15	5 20	0 50	1 45	42,000	17,322	1,801
1987	7 15	5 20	0 50	1 45	43,800	18,427	1,916
1988	7 51	5 53	0 53	1 45	45,000	19,334	2,138
1989	7 51	5 53	0 53	1 45	48,000	20,099	2,223
1990	7 65	5 60	0 60	1 45	51,300	21,028	2,355
1991	7 65	5 60	0 60	1 45	53,400	21,812	2,443
1992	7 65	5 60	0 60	1 45	55,500	22,935	2,569
1993	7 65	5 60	0 60	1 45	57,600	23,133	2,591
1994	7 65	5 26	0 94	1 45	60,600		
1995	7 65	5 26	0 94	1 45	61,200		
1996	7 65	5 26	0 94	1 45	62,700		
1997	7 65	5 35	0 85	1 45	Higher		

Notes (1) Self-employment taxes (SECA) are generally double rates listed for FICA

(2) For FICA, each rate shown is the employees only, the employer makes a matching contribution

(3) There is no earnings cap on the HI tax for either employer or employee, though there was between 1963 and 1993 (not shown). The cap in 1993 was \$135,000

(4) The annual average contribution is to OASI only (excludes DI and HI) and includes the employer's contribution, calculated by the product of double the OASI rate times average annual wage

(5) OASI, DI, and HI taxes are all earmarked receipts for the trust funds of the same names

Sources: Table 2 A3, Social Security Bulletin, Annual Statistical Supplement, 1994, Table 1, Factors for Indexed Earnings, Social Security Bulletin, Vol. 58, No. 1, Spring 1995, Board of Trustees of the Social Security and Medicare Trust Funds 1995 Annual Report and author's estimates

Financing the Deficit: The Market for U.S. Treasury Securities

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As was discussed in Chapter 1, the annual budget deficit is financed through the sale of a mix of United States Treasury Securities. The total amount of these securities that is outstanding at any given time makes up the marketable debt component of the total interest-bearing debt of the U.S. Government (see Table 1.3 on p. 6 for the composition of the U.S. public debt). In general, if the federal government has a budget deficit of \$100 billion in a given fiscal year, \$100 billion of new marketable U.S. Treasury securities of the kind described below must be sold to finance that deficit, and marketable debt will grow by that amount. This appendix describes the debt instruments and the market for that debt.

Marketable debt of the U.S. Treasury stands at over \$3.3 trillion, and consists entirely of U.S. Treasury Bills, Notes, and Bonds. These financial assets are the kind that most people who trade in the finance markets are familiar with.

Marketable U.S. Treasury Debt

Instrument	Maturity	Interest Category
U.S. Treasury Bills	13, 26, or 52 weeks	Discount
U.S. Treasury Notes	2-10 years	Coupon
U.S. Treasury Bonds	30 years	Coupon

By definition, these assets differ according to their maturity structure. A U.S. Treasury Bill will mature in 1 year or less (from its date of issue),¹ while a U.S. Treasury Note has a maturity of 2 to 10 years and a U.S. Treasury Bond has a maturity of more than 10 years, where thirty years is typical.² At maturity, the financial asset is redeemed, or "paid off" by the Treasury.

Bills also differ from notes and bonds in the manner in which the interest is paid. A U.S. Treasury Bill is called a discounted financial asset (as are most privately-issued bills) because no direct interest is paid to the owner of the bill. Instead, the bill is sold at less than its maturity value (sold at a discount), and it is redeemed at its maturity value, so the interest is implicit in its appreciation in price. For example, a \$10,000 U.S. Treasury Bill, 52-week series, might be sold to an investor by the Treasury for \$9,300. When it matures 1 year later the bill can be redeemed for \$10,000, yielding a return of \$700 (no interest would be paid otherwise). This return of \$700 to an original investment of \$9,300 amounts to an effective rate of return of about 7.5%.

In contrast, both U.S. Treasury Notes and U.S. Treasury Bonds pay coupon interest. Semiannual interest payments are made to the registered owners of these securities at the stipulated coupon rate. For example, an investor who purchases a 10-year \$10,000 U.S. Treasury Bond yielding a coupon rate of 8% will receive two payments per year of \$400 each.

U.S. Treasury Bills, Notes and Bonds are sold to whomever wants to buy them, which is why the sum of their value is classified as **marketable**

¹A yield-bearing financial asset having a maturity of 1 year or less is typically called a bill. Such assets are also called "money market assets" and money market mutual funds are made up almost entirely of bills. As financial assets, they tend to be characterized by their relatively low yields but high safety or low risk (this is especially true of Treasury Bills).

²These bonds should not be confused with the popular and inexpensive Series EE U.S. Savings Bonds, which can be purchased for as little as \$50. These are classified under Non-Marketable Debt and the amount outstanding in late 1995 was about \$182 million.

debt. These financial assets can also be resold in a huge secondary market. For example, a 5-year U.S. Treasury Note might be sold to a private investor, who might then resell it 6 months later to a bank or mutual fund. Prices for these securities fluctuate in value on the secondary markets, just like stocks, and their prices are quoted daily in the nation's larger newspapers. Virtually anyone can buy these securities, including foreign governments and foreign citizens.

U.S. Treasury Bills, Notes, and Bonds are no longer sold in discreet denominations. That is, the Treasury does not sell large numbers of gilt-edged \$10,000 bonds. Instead, the Treasury may announce an offering of 3-year notes on some future date for a total subscription of \$100 million. Purchase requests (called tenders) may be for any part of this amount that is divisible by \$1,000. The purchaser may, for example, buy notes worth \$56,000, or any other amount divisible by \$1,000. Minimum purchases vary with the type of asset; these are discussed below. The securities are sold through an auction process where potential buyers submit competitive bids on the *yield* (interest rate to be earned) of the securities being auctioned. The Treasury accepts the highest yield bids submitted, so the securities are released at competitive market rates.³ Normally, the investor no longer receives a physical certificate. The transaction is carried as a bookkeeping entry on the Treasury's books, and the investor is merely given a receipt and receives periodic updates on the status of the account, somewhat like a modern bank account.

Here is some specific information about the Bills, Notes, and Bonds currently issued by the U.S. Treasury (this information, which was current as of January, 1997, does change periodically).

13-week and 26-week bills. The minimum investment is \$10,000.

These are auctioned every Monday and are sold at a discount (paying no direct interest).

52-week bills. The minimum investment is \$10,000. These are auctioned every fourth Thursday and are sold at a discount.

2-year and 5-year notes. The minimum investment for 2-year notes is \$5,000; for 5-year notes it is only \$1,000. These are auctioned once a month, usually on the third Wednesday. These pay coupon interest semiannually.

3-year and 10-year notes. The minimum investment for 3-year notes is \$5,000; for 10 year notes only \$1,000. These are usually

³Small investors are allowed to submit *noncompetitive tenders*, which do not require a competitive bid on yield. These investors are issued securities with yields equal to the yield that are accepted on competitive bids.

auctioned during the first week of February, May, August, and November. These pay coupon interest semiannually.

30-year bonds. The minimum investment is \$1,000. They are auctioned semiannually in the first week of August and February. These pay coupon interest semiannually.

A purchaser can buy these directly from a Federal Reserve District Bank or one of its branches. As stated earlier, the purchaser submits a tender for a competitive bid or a noncompetitive tender. The latter, used normally by small purchasers, accepts the yield determined by the competitive bidding.

Regardless of the size of the issue, the securities' prices are listed in the financial press at par-equals-100. Therefore secondary market prices will fluctuate around this amount. The security is said to be trading at a premium if the quoted price is *above* 100 and at a discount if the quoted price is *below* 100. The same securities can be purchased from brokers. If they are to be sold before maturity (usually the case for everything except for bills) they *must* be sold through brokers. A broker requires a commission, but no commission is charged by a Federal Reserve District Bank. These securities are often sold in huge blocks to primary investors and are then brokered to the public by breaking up the blocks.

There are also many mutual funds that specialize in U.S. Treasury securities. These offer the investor a diversified portfolio at low cost and for small transactions.

The Difference between U.S. Government Outlays and Government Purchases

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As any good student of macroeconomics knows, the performance of the national economy is measured by the National Income and Expenditure Accounts compiled by the Department of Commerce, Bureau of Economic Analysis. It is from this important statistical series that we derive our estimates of gross domestic product, national income, personal consumption and related data that indicate income and spending trends.

The tables from the National Income and Expenditure Accounts that break down gross domestic product by expenditure categories always include an account called Government Purchases (sometimes Government Purchases of Goods and Services). This is sometimes broken down into two categories: Federal government purchases and state and local government purchases. A comparison between the spending category called federal government purchases in the national income accounts to total outlays of the federal government shows a huge difference. Compare the difference in Table B.1, which uses annualized data from the National Income Accounts for the third quarter of 1995 (the end of the federal fiscal year), and data for federal outlays from Chapter 1, p. 5. It is rather apparent that federal government outlays are nearly triple the magnitude of federal government purchases from the National Income Accounts! How