

4. FEDERAL BORROWING AND DEBT

Debt is the largest legally and contractually binding obligation of the Federal Government. At the end of 2020, the Government owed \$21,017 billion of principal to the individuals and institutions who had loaned it the money to fund past deficits. During that year, the Government paid the public approximately \$387 billion of interest on this debt.¹ At the same time, the Government also held financial assets, net of financial liabilities other than debt, of \$2,993 billion. Therefore, debt held by the public net of financial assets was \$18,024 billion.

The \$21,017 billion debt held by the public at the end of 2020 represents an increase of \$4,216 billion over the level at the end of 2019. This increase is the result of the \$3,129 billion deficit in 2020 and other financing transactions that increased the need to borrow by \$1,087 billion. Debt held by the public grew from 79.2 percent of Gross Domestic Product (GDP) at the end of 2019 to 100.1 percent of GDP at the end of 2020. The deficit is estimated to increase to \$3,669 billion in 2021, and then to fall to \$1,837 billion in 2022. The deficit is projected to fall again in 2023, and then to remain relatively stable as a percent of GDP throughout the remainder of the Budget window. Debt held by the public is projected to grow to \$24,167 billion (109.7 percent of GDP) at the end of 2021 and \$26,265 billion (111.8 percent of GDP) at the end of 2022. After 2022, debt held by the public as a percent of GDP is projected to increase more slowly, reaching 117.0 percent in 2031. Debt held by the public net of financial assets is expected to similarly grow to 98.4 percent of GDP at the end of 2021, 100.1 percent at the end of 2022, and 108.5 percent at the end of 2031.

Trends in Debt Since World War II

Table 4–1 depicts trends in Federal debt held by the public from World War II to the present and estimates from the present through 2031. (It is supplemented for earlier years by Tables 7.1–7.3 in the Budget’s *Historical Tables*, available as supplemental budget material.²) Federal debt peaked at 106.1 percent of GDP in 1946, just after the end of the war. From that point until the 1970s, Federal debt as a percentage of GDP decreased almost every year because of relatively small deficits, an expanding economy, and unanticipated inflation. With households borrowing large amounts to buy homes and consumer durables, and with businesses borrowing large amounts to buy plant and equipment, Federal debt also decreased almost every year as a percentage of total credit market debt outstanding. The cumulative effect was impressive. From 1950 to 1975, debt held by the public declined from

78.6 percent of GDP to 24.6 percent, and from 53.3 percent of credit market debt to 17.9 percent. Despite rising interest rates during this period, interest outlays became a smaller share of the budget and were roughly stable as a percentage of GDP.

Federal debt relative to GDP is a function of the Nation’s fiscal policy as well as overall economic conditions. During the 1970s, large budget deficits emerged as spending grew faster than receipts and as the economy was disrupted by oil shocks and rising inflation. Federal debt relative to GDP and credit market debt stopped declining for several years in the middle of the decade. Federal debt started growing again at the beginning of the 1980s, and increased to almost 48 percent of GDP by 1993. The ratio of Federal debt to credit market debt also rose during this period, though to a lesser extent. Interest outlays on debt held by the public, calculated as a percentage of either total Federal outlays or GDP, increased as well.

The growth of Federal debt held by the public was slowing by the mid-1990s. In addition to a growing economy, two major budget agreements were enacted in the 1990s, implementing spending cuts and revenue increases and significantly reducing deficits. The debt declined markedly relative to both GDP and total credit market debt, with the decline accelerating as budget surpluses emerged from 1998 to 2001. Debt fell from 47.9 percent of GDP in 1993 to 31.5 percent of GDP in 2001. Over that same period, debt fell from 26.2 percent of total credit market debt to 17.4 percent. Interest as a share of outlays peaked at 16.5 percent in 1989 and then fell to 8.9 percent by 2002; interest as a percentage of GDP fell by a similar proportion.

The progress in reducing the debt burden stopped and then reversed course beginning in 2002. The attacks of September 11, 2001, a recession, two major wars, and tax cuts all contributed to increasing deficits, causing debt to rise, both in nominal terms and as a percentage of GDP. Following the recession that began in December 2007, the deficit began increasing rapidly in 2008 and 2009, as the Government intervened in the potential collapse of several major corporations and financial institutions as well as enacting a major stimulus bill. Debt as a percent of GDP continued to grow, increasing from 35.2 percent at the end of 2007 to 79.2 percent in 2019.

As a result of the COVID-19 pandemic and the Government’s actions to address the pandemic and support the economy, debt held by the public increased sharply in 2020, growing from 79.2 percent of GDP at the end of 2019 to 100.1 percent at the end of 2020.

In 2021, due largely to continued Government action, such as the American Rescue Plan, to end the pandemic and provide economic stimulus, the deficit is projected to

¹ This is 2020 nominal interest on debt held by the public. For a discussion of real net interest, see Chapter 3, “Long-Term Budget Outlook.”

² The *Historical Tables* are available at <https://www.whitehouse.gov/omb/historical-tables/>.

Table 4-1. TRENDS IN FEDERAL DEBT HELD BY THE PUBLIC AND INTEREST ON THE DEBT HELD BY THE PUBLIC

(Dollar amounts in billions)

Fiscal Year	Debt held by the public		Debt held by the public as a percent of		Interest on the debt held by the public ³		Interest on the debt held by the public as a percent of ³	
	Current dollars	FY 2020 dollars ¹	GDP	Credit market debt ²	Current dollars	FY 2020 dollars ¹	Total outlays	GDP
1946	241.9	2,635.0	106.1	N/A	4.2	45.5	7.6	1.8
1950	219.0	1,927.7	78.6	53.3	4.8	42.6	11.4	1.7
1955	226.6	1,753.1	55.8	42.1	5.2	40.1	7.6	1.3
1960	236.8	1,623.7	44.3	33.1	7.8	53.6	8.5	1.5
1965	260.8	1,675.6	36.8	26.4	9.6	61.5	8.1	1.4
1970	283.2	1,516.4	27.1	20.3	15.4	82.3	7.9	1.5
1975	394.7	1,556.8	24.6	17.9	25.0	98.6	7.5	1.6
1980	711.9	1,952.4	25.5	18.4	62.8	172.1	10.6	2.2
1985	1,507.3	3,150.5	35.3	22.2	152.9	319.6	16.2	3.6
1990	2,411.6	4,330.7	40.9	22.5	202.4	363.4	16.2	3.4
1995	3,604.4	5,709.1	47.7	26.3	239.2	378.9	15.8	3.2
2000	3,409.8	4,976.9	33.7	18.8	232.8	339.8	13.0	2.3
2005	4,592.2	5,998.4	35.8	17.1	191.4	250.0	7.7	1.5
2010	9,018.9	10,671.0	60.8	25.0	228.2	270.0	6.6	1.5
2015	13,116.7	14,227.3	72.5	30.4	260.6	282.7	7.1	1.4
2016	14,167.6	15,233.3	76.4	31.4	283.8	305.2	7.4	1.5
2017	14,665.4	15,492.8	76.0	31.3	309.9	327.3	7.8	1.6
2018	15,749.6	16,262.9	77.4	31.8	371.4	383.5	9.0	1.8
2019	16,800.7	17,012.0	79.2	32.4	423.3	428.6	9.5	2.0
2020	21,016.7	21,016.7	100.1	36.2	387.4	387.4	5.9	1.8
2021 estimate	24,166.7	23,764.3	109.7	N/A	360.5	354.5	5.0	1.6
2022 estimate	26,264.8	25,361.0	111.8	N/A	355.8	343.6	5.9	1.5
2023 estimate	27,683.1	26,222.3	112.7	N/A	374.9	355.1	6.2	1.5
2024 estimate	29,062.2	26,988.7	113.8	N/A	423.6	393.4	6.8	1.7
2025 estimate	30,538.7	27,803.7	115.2	N/A	500.6	455.8	7.7	1.9
2026 estimate	31,957.9	28,525.3	116.1	N/A	576.9	515.0	8.6	2.1
2027 estimate	33,266.1	29,110.7	116.4	N/A	657.7	575.5	9.5	2.3
2028 estimate	34,690.9	29,762.2	116.8	N/A	729.8	626.1	10.0	2.5
2029 estimate	35,996.2	30,276.4	116.6	N/A	799.3	672.3	10.8	2.6
2030 estimate	37,480.8	30,906.9	116.8	N/A	883.7	728.7	11.3	2.8
2031 estimate	39,059.3	31,576.9	117.0	N/A	970.7	784.8	11.8	2.9

N/A = Not available.

¹ Amounts in current dollars deflated by the GDP chain-type price index with fiscal year 2020 equal to 100.² Total credit market debt owed by domestic nonfinancial sectors. Financial sectors are omitted to avoid double counting, since financial intermediaries borrow in the credit market primarily in order to finance lending in the credit market. Source: Federal Reserve Board flow of funds accounts. Projections are not available.³ Interest on debt held by the public is estimated as the interest on Treasury debt securities less the "interest received by trust funds" (subfunction 901 less subfunctions 902 and 903). The estimate of interest on debt held by the public does not include the comparatively small amount of interest paid on agency debt or the offsets for interest on Treasury debt received by other Government accounts (revolving funds and special funds).

increase to \$3,669 billion³ and debt held by the public is projected to grow to 109.7 percent of GDP. The deficit is projected to fall to \$1,837 billion in 2022, and debt held by the public is projected to grow more slowly, to 111.8 percent of GDP. After 2022, the deficit is projected to roughly stabilize at around 5 percent as a percent of GDP. As a result, debt held by the public will increase more gradually, reaching 117.0 percent of GDP by 2031. Debt held by the public net of financial assets as a percent of GDP is estimated to grow to 98.4 percent of GDP at the end of 2021, 100.1 percent at the end of 2022, and 108.5 percent by the end of 2031.

Debt Held by the Public and Gross Federal Debt

The Federal Government issues debt securities for two main purposes. First, it borrows from the public to provide for the Federal Government's financing needs, including both the deficit and the other transactions requiring financing, most notably disbursements for direct student loans and other Federal credit programs.⁴ Second, it issues debt to Federal Government accounts, primarily trust funds, that accumulate surpluses. By law, trust fund surpluses must generally be invested in Federal securities. The gross Federal debt is defined to consist of both the debt held by the public and the debt held by Government accounts. Nearly all the Federal debt has been issued by the Treasury and is sometimes called "public debt," but a small portion has been issued by other Government agencies and is called "agency debt."⁵

Borrowing from the public, whether by the Treasury or by some other Federal agency, is important because it represents the Federal demand on credit markets. Regardless of whether the proceeds are used for tangible or intangible investments or to finance current consumption, the Federal demand on credit markets has to be financed out of the saving of households and businesses, the State and local sector, or the rest of the world. Borrowing from the public can thus affect the size and composition of assets held by the private sector and the amount of saving imported from abroad and increase the amount of future resources required to pay interest to the public on Federal debt. Borrowing from the public is therefore an important consideration in Federal fiscal policy. Borrowing from the public, however, is an incomplete measure of the Federal impact on credit markets. Different types of Federal activities can affect the credit markets in different ways. For example, under its direct loan programs, the Government uses borrowed funds to acquire financial assets that might otherwise require financing in the cred-

it markets directly. (For more information on other ways in which Federal activities impact the credit market, see the discussion at the end of this chapter.) By incorporating the change in direct loan and other financial assets, debt held by the public net of financial assets adds useful insight into the Government's financial condition.

Issuing debt securities to Government accounts performs an essential function in accounting for the operation of these funds. The balances of debt represent the cumulative surpluses of these funds due to the excess of their tax receipts, interest receipts, and other collections over their spending. The interest on the debt that is credited to these funds accounts for the fact that some earmarked taxes and user fees will be spent at a later time than when the funds receive the monies. The debt securities are assets of those funds but are a liability of the general fund to the funds that hold the securities, and are a mechanism for crediting interest to those funds on their recorded balances. These balances generally provide the fund with authority to draw upon the U.S. Treasury in later years to make future payments on its behalf to the public. Public policy may result in the Government's running surpluses and accumulating debt in trust funds and other Government accounts in anticipation of future spending.

However, issuing debt to Government accounts does not have any of the current credit market effects of borrowing from the public. It is an internal transaction of the Government, made between two accounts that are both within the Government itself. Issuing debt to a Government account is not a current transaction of the Government with the public; it is not financed by private savings and does not compete with the private sector for available funds in the credit market. While such issuance provides the account with assets—a binding claim against the Treasury—those assets are fully offset by the increased liability of the Treasury to pay the claims, which will ultimately be covered by the collection of revenues or by borrowing. Similarly, the current interest earned by the Government account on its Treasury securities does not need to be financed by other resources.

The debt held by Government accounts may differ from the estimated amount of the account's obligations or responsibilities to make future payments to the public. For example, if the account records the transactions of a social insurance program, the debt that it holds does not necessarily represent the actuarial present value of estimated future benefits (or future benefits less taxes) for the current participants in the program; nor does it necessarily represent the actuarial present value of estimated future benefits (or future benefits less taxes) for the current participants plus the estimated future participants over some stated time period. The future transactions of Federal social insurance and employee retirement programs, which own 90 percent of the debt held by Government accounts, are important in their own right and need to be analyzed separately. This can be done through information published in the actuarial and financial reports for these programs.⁶

³ The estimated deficit for 2021 is based on partial year actual data and generally incorporates actuals through March.

⁴ For the purposes of the Budget, "debt held by the public" is defined as debt held by investors outside of the Federal Government, both domestic and foreign, including U.S. State and local governments and foreign governments. It also includes debt held by the Federal Reserve.

⁵ The term "agency debt" is defined more narrowly in the budget than customarily in the securities market, where it includes not only the debt of the Federal agencies listed in Table 4-4, but also certain Government-guaranteed securities and the debt of the Government-sponsored enterprises listed in Table 15-7 in the supplemental materials to the "Credit and Insurance" chapter. (Table 15-7 is available on the internet at: <https://www.whitehouse.gov/omb/analytical-perspectives/>.)

⁶ Extensive actuarial analyses of the Social Security and Medicare programs are published in the annual reports of the boards of trustees

Table 4-2. FEDERAL GOVERNMENT FINANCING AND DEBT

(In billions of dollars)

	Actual 2020	Estimate										
		2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Financing:												
Unified budget deficit	3,129.2	3,668.7	1,837.0	1,371.9	1,359.0	1,469.8	1,414.2	1,303.5	1,423.7	1,306.8	1,477.2	1,567.9
Other transactions affecting borrowing from the public:												
Changes in financial assets and liabilities:¹												
Change in Treasury operating cash balance	1,399.2	-1,031.7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Net disbursements of credit financing accounts:												
Direct loan and Troubled Asset Relief Program (TARP) equity purchase accounts	198.3	159.3	110.0	43.7	16.8	3.5	2.5	1.4	-1.5	-3.9	4.6	7.6
Guaranteed loan accounts	-499.2	354.3	153.6	4.9	5.7	5.5	4.9	5.5	4.7	4.6	4.5	4.5
Subtotal, net disbursements	-300.9	513.7	263.7	48.6	22.5	9.0	7.4	6.9	3.2	0.7	9.1	12.1
Net purchases of non-Federal securities by the National Railroad Retirement Investment Trust	-0.5	*	-2.1	-1.8	-1.8	-1.8	-1.8	-1.7	-1.6	-1.5	-1.2	-1.0
Net change in other financial assets and liabilities ²	-11.1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Subtotal, changes in financial assets and liabilities	1,086.8	-518.0	261.6	46.9	20.6	7.2	5.6	5.3	1.6	-0.9	8.0	11.1
Seigniorage on coins	—*	-0.6	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.6	-0.6	-0.6	-0.6
Total, other transactions affecting borrowing from the public	1,086.7	-518.6	261.1	46.4	20.1	6.6	5.1	4.7	1.0	-1.4	7.4	10.5
Total, requirement to borrow from the public (equals change in debt held by the public)	4,216.0	3,150.1	2,098.1	1,418.3	1,379.1	1,476.5	1,419.3	1,308.2	1,424.7	1,305.4	1,484.6	1,578.5
Changes in Debt Subject to Statutory Limitation:												
Change in debt held by the public	4,216.0	3,150.1	2,098.1	1,418.3	1,379.1	1,476.5	1,419.3	1,308.2	1,424.7	1,305.4	1,484.6	1,578.5
Change in debt held by Government accounts	17.0	173.0	121.5	163.0	201.8	105.6	64.9	-93.1	-208.7	-120.2	-233.7	-273.4
Less: change in debt not subject to limit and other adjustments	0.8	1.4	0.9	1.1	1.1	-0.3	0.5	1.0	0.3	*	-1.1	-1.0
Total, change in debt subject to statutory limitation	4,233.8	3,324.5	2,220.4	1,582.4	1,582.0	1,581.8	1,484.7	1,216.1	1,216.3	1,185.2	1,249.8	1,304.0
Debt Subject to Statutory Limitation, End of Year:												
Debt issued by Treasury	26,881.0	30,204.3	32,423.5	34,004.6	35,585.7	37,167.4	38,651.7	39,867.0	41,082.5	42,267.0	43,516.9	44,820.9
Less: Treasury debt not subject to limitation (-) ³	-7.7	-6.5	-5.3	-4.1	-3.2	-3.2	-2.8	-2.0	-1.1	-0.5	-0.5	-0.5
Agency debt subject to limitation	*	*	*	*	*	*	*	*	*	*	*	*
Adjustment for discount and premium ⁴	47.2	47.2	47.2	47.2	47.2	47.2	47.2	47.2	47.2	47.2	47.2	47.2
Total, debt subject to statutory limitation ⁵	26,920.4	30,244.9	32,465.3	34,047.7	35,629.7	37,211.4	38,696.1	39,912.2	41,128.6	42,313.7	43,563.6	44,867.6
Debt Outstanding, End of Year:												
Gross Federal debt:⁶												
Debt issued by Treasury	26,881.0	30,204.3	32,423.5	34,004.6	35,585.7	37,167.4	38,651.7	39,867.0	41,082.5	42,267.0	43,516.9	44,820.9
Debt issued by other agencies	21.5	21.3	21.6	21.7	21.6	21.8	21.7	21.5	22.1	22.7	23.8	24.8
Total, gross Federal debt	26,902.5	30,225.6	32,445.1	34,026.3	35,607.2	37,189.3	38,673.5	39,888.6	41,104.6	42,289.8	43,540.6	44,845.7
As a percent of GDP	128.1%	137.2%	138.1%	138.5%	139.4%	140.3%	140.5%	139.5%	138.4%	137.0%	135.7%	134.3%
Held by:												
Debt held by Government accounts	5,885.8	6,058.8	6,180.3	6,343.2	6,545.0	6,650.6	6,715.5	6,622.4	6,413.7	6,293.5	6,059.8	5,786.4
Debt held by the public ⁷	21,016.7	24,166.7	26,264.8	27,683.1	29,062.2	30,538.7	31,957.9	33,266.1	34,690.9	35,996.2	37,480.8	39,059.3
As a percent of GDP	100.1%	109.7%	111.8%	112.7%	113.8%	115.2%	116.1%	116.4%	116.8%	116.6%	116.8%	117.0%

* \$50 million or less.

¹ A decrease in the Treasury operating cash balance (which is an asset) is a means of financing a deficit and therefore has a negative sign. An increase in checks outstanding (which is a liability) is also a means of financing a deficit and therefore also has a negative sign.

² Includes checks outstanding, accrued interest payable on Treasury debt, uninvested deposit fund balances, allocations of special drawing rights, and other liability accounts; and, as an offset, cash and monetary assets (other than the Treasury operating cash balance), other asset accounts, and profit on sale of gold.

³ Consists primarily of debt issued by the Federal Financing Bank.

⁴ Consists mainly of unamortized discount (less premium) on public issues of Treasury notes and bonds (other than zero-coupon bonds) and unrealized discount on Government account series securities.

⁵ Legislation enacted August 2, 2019 (P.L. 116-37), temporarily suspends the debt limit through July 31, 2021.

⁶ Treasury securities held by the public and zero-coupon bonds held by Government accounts are almost all measured at sales price plus amortized discount or less amortized premium. Agency debt securities are almost all measured at face value. Treasury securities in the Government account series are otherwise measured at face value less unrealized discount (if any).

⁷ At the end of 2020, the Federal Reserve Banks held \$4,445.5 billion of Federal securities and the rest of the public held \$16,571.2 billion. Debt held by the Federal Reserve Banks is not estimated for future years.

This Budget uses a variety of information sources to analyze the condition of Social Security and Medicare, the Government's two largest social insurance programs. The excess of future Social Security and Medicare benefits relative to their dedicated income is very different in concept and much larger in size than the amount of Treasury securities that these programs hold.

For all these reasons, debt held by the public and debt held by the public net of financial assets are both better gauges of the effect of the budget on the credit markets than gross Federal debt.

Government Deficits or Surpluses and the Change in Debt

Table 4–2 summarizes Federal borrowing and debt from 2020 through 2031.⁷ In 2020, the Government borrowed \$4,216 billion, increasing the debt held by the public from \$16,801 billion at the end of 2019 to \$21,017 billion at the end of 2020. The debt held by Government accounts grew by \$17 billion, and gross Federal debt increased by \$4,233 billion to \$26,902 billion.

Debt held by the public.—The Federal Government primarily finances deficits by borrowing from the public, and it primarily uses surpluses to repay debt held by the public.⁸ Table 4–2 shows the relationship between the Federal deficit or surplus and the change in debt held by the public. The borrowing or debt repayment depends on the Government's expenditure programs and tax laws, on the economic conditions that influence tax receipts and outlays, and on debt management policy. The sensitivity of the budget to economic conditions is analyzed in Chapter 2, "Economic Assumptions and Overview," in this volume.

The total or unified budget consists of two parts: the on-budget portion; and the off-budget Federal entities, which have been excluded from the budget by law. Under present law, the off-budget Federal entities are the two Social Security trust funds (Old-Age and Survivors Insurance and Disability Insurance) and the Postal Service Fund.⁹ The on-budget and off-budget surpluses or deficits are added together to determine the Government's financing needs.

of these funds. The actuarial estimates for Social Security, Medicare, and the major Federal employee retirement programs are summarized in the *Financial Report of the United States Government*, prepared annually by the Department of the Treasury in coordination with the Office of Management and Budget, and presented in more detail in the financial statements of the agencies administering those programs.

⁷ For projections of the debt beyond 2031, see Chapter 3, "Long-Term Budget Outlook."

⁸ Treasury debt held by the public is measured as the sales price plus the amortized discount (or less the amortized premium). At the time of sale, the book value equals the sales price. Subsequently, it equals the sales price plus the amount of the discount that has been amortized up to that time. In equivalent terms, the book value of the debt equals the principal amount due at maturity (par or face value) less the unamortized discount. (For a security sold at a premium, the definition is symmetrical.) For inflation-protected notes and bonds, the book value includes a periodic adjustment for inflation. Agency debt is generally recorded at par.

⁹ For further explanation of the off-budget Federal entities, see Chapter 7, "Coverage of the Budget."

Over the long run, it is a good approximation to say that "the deficit is financed by borrowing from the public" or "the surplus is used to repay debt held by the public." However, the Government's need to borrow in any given year has always depended on several other factors besides the unified budget surplus or deficit, such as the change in the Treasury operating cash balance. These other factors—"other transactions affecting borrowing from the public"—can either increase or decrease the Government's need to borrow and can vary considerably in size from year to year. The other transactions affecting borrowing from the public are presented in Table 4–2 (where an increase in the need to borrow is represented by a positive sign, like the deficit).

In 2020 the deficit was \$3,129 billion while these other factors increased the need to borrow by \$1,087 billion, or 26 percent of total borrowing from the public. As a result, the Government borrowed \$4,216 billion from the public. The other factors are estimated to reduce borrowing by \$519 billion (16 percent of total borrowing from the public) in 2021, and increase borrowing by \$261 billion (12 percent) in 2022. In 2023–2031, these other factors are expected to impact borrowing by annual amounts ranging from a \$1 billion decrease to a \$46 billion increase.

Three specific factors presented in Table 4–2, and discussed below, have historically been especially important.

Change in Treasury operating cash balance.—The cash balance increased by \$1,399 billion in 2020, to \$1,782 billion. This was a significantly larger change than in previous years; over the prior 10 years, annual increases and decreases in the cash balance ranged from \$2 billion to \$252 billion. The higher 2020 cash balance was needed to manage the changes to outlays and receipts associated with the COVID-19 impacts and the Federal response. For risk management purposes, Treasury seeks to maintain a cash balance roughly equal to one week of Government outflows, with a minimum balance of about \$150 billion. The operating cash balance is projected to decrease by \$1,032 billion, to \$750 billion, at the end of 2021. Changes in the operating cash balance, while occasionally large, are inherently limited over time. Decreases in cash—a means of financing the Government—are limited by the amount of past accumulations, which themselves required financing when they were built up. Increases are limited because it is generally more efficient to repay debt.

Net financing disbursements of the direct loan and guaranteed loan financing accounts.—Under the Federal Credit Reform Act of 1990 (FCRA), the budgetary program account for each credit program records the estimated subsidy costs—the present value of estimated net losses—at the time when the direct or guaranteed loans are disbursed. The individual cash flows to and from the public associated with the loans or guarantees, such as the disbursement and repayment of loans, the default payments on loan guarantees, the collection of interest and fees, and so forth, are recorded in the credit program's non-budgetary financing account. Although the non-budgetary financing account's cash flows to and from the public are not included in the deficit (except for their

impact on subsidy costs), they affect Treasury's net borrowing requirements.¹⁰

In addition to the transactions with the public, the financing accounts include several types of intragovernmental transactions. They receive payment from the credit program accounts for the subsidy costs of new direct loans and loan guarantees and for any upward reestimate of the costs of outstanding direct and guaranteed loans. They also receive interest from Treasury on balances of uninvested funds. The financing accounts pay any negative subsidy collections or downward reestimate of costs to budgetary receipt accounts and pay interest on borrowings from Treasury. The total net collections and gross disbursements of the financing accounts, consisting of transactions with both the public and the budgetary accounts, are called "net financing disbursements." They occur in the same way as the "outlays" of a budgetary account, even though they do not represent budgetary costs, and therefore affect the requirement for borrowing from the public in the same way as the deficit.

The intragovernmental transactions of the credit program, financing, and downward reestimate receipt accounts do not affect Federal borrowing from the public. Although the deficit changes because of the budgetary account's outlay to, or receipt from, a financing account, the net financing disbursement changes in an equal amount with the opposite sign, so the effects are cancelled out. On the other hand, financing account disbursements to the public increase the requirement for borrowing from the public in the same way as an increase in budget outlays that are disbursed to the public in cash. Likewise, receipts from the public collected by the financing account can be used to finance the payment of the Government's obligations, and therefore they reduce the requirement for Federal borrowing from the public in the same way as an increase in budgetary receipts.

Credit net financing disbursements reduced borrowing by \$301 billion in 2020. Credit financing accounts are projected to increase borrowing by \$514 billion in 2021 and by \$264 billion in 2022. From 2023 to 2031, the credit financing accounts are expected to increase borrowing by amounts ranging from \$1 billion to \$49 billion.

In some years, large net upward or downward reestimates in the cost of outstanding direct and guaranteed loans may cause large swings in the net financing disbursements. In 2021, upward reestimates for student loans are partly offset by downward reestimates for Small Business Administration Disaster Assistance loans and Federal Housing Administration (FHA) guarantees, resulting in a net upward reestimate of \$3.8 billion. In 2020, there was a net upward reestimate of \$51.1 billion.

Net purchases of non-Federal securities by the National Railroad Retirement Investment Trust (NRRIT).—This trust fund, which was established by the Railroad Retirement and Survivors' Improvement Act of 2001, invests its assets primarily in private stocks and bonds. The Act required special treatment of the purchase or sale

of non-Federal assets by the NRRIT trust fund, treating such purchases as a means of financing rather than as outlays. Therefore, the increased need to borrow from the public to finance NRRIT's purchases of non-Federal assets is part of the "other transactions affecting borrowing from the public" rather than included as an increase in the deficit. While net purchases and redemptions affect borrowing from the public, unrealized gains and losses on NRRIT's portfolio are included in both the "other transactions" and, with the opposite sign, in NRRIT's net outlays in the deficit, for no net impact on borrowing from the public. In 2020, net decreases, including redemptions and losses, were \$0.5 billion. A \$21 million net increase is projected for 2021 and net annual decreases ranging from \$1.0 billion to \$2.1 billion are projected for 2022 and subsequent years.¹¹

Debt held by Government accounts.—The amount of Federal debt issued to Government accounts depends largely on the surpluses of the trust funds, both on-budget and off-budget, which owned 89 percent of the total Federal debt held by Government accounts at the end of 2020. Net investment may differ from the surplus due to changes in the amount of cash assets not currently invested. In 2020, there was a total trust fund deficit of \$53 billion,¹² while trust fund investment in Federal securities fell by \$29 billion. The remainder of debt issued to Government accounts is owned by a number of special funds and revolving funds. The debt held in major accounts and the annual investments are shown in Table 4–5.

Debt Held by the Public Net of Financial Assets and Liabilities

While debt held by the public is a key measure for examining the role and impact of the Federal Government in the U.S. and international credit markets and for other purposes, it provides incomplete information on the Government's financial condition. The U.S. Government holds significant financial assets, which can be offset against debt held by the public and other financial liabilities to achieve a more complete understanding of the Government's financial condition. The acquisition of those financial assets represents a transaction with the credit markets, broadening those markets in a way that is analogous to the demand on credit markets that borrowing entails. For this reason, debt held by the public is also an incomplete measure of the impact of the Federal Government in the United States and international credit markets.

One transaction that can increase both borrowing and assets is an increase to the Treasury operating cash balance. When the Government borrows to increase the Treasury operating cash balance, that cash balance also represents an asset that is available to the Federal Government. Looking at both sides of this transaction—

¹¹ The budget treatment of this fund is further discussed in Chapter 6, "Budget Concepts."

¹² 2020 was the first time in several decades that the trust funds group ran a deficit rather than a surplus, due to the impacts of the COVID-19 pandemic and the Federal response. For further discussion of trust funds, see Chapter 18, "Trust Funds and Federal Funds."

¹⁰ The FCRA (sec. 505(b)) requires that the financing accounts be non-budgetary. They are non-budgetary in concept because they do not measure cost. For additional discussion of credit programs, see Chapter 15, "Credit and Insurance," and Chapter 6, "Budget Concepts."

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the borrowing to obtain the cash and the asset of the cash holdings—provides much more complete information about the Government's financial condition than looking at only the borrowing from the public. Another example of a transaction that simultaneously increases borrowing from the public and Federal assets is Government borrowing to issue direct loans to the public. When the direct loan is made, the Government is also acquiring an asset in the form of future payments of principal and interest, net of the Government's expected losses on the loan. Similarly, when NRRIT increases its holdings of non-Federal securities, the borrowing to purchase those securities is offset by the value of the asset holdings.

The acquisition or disposition of Federal financial assets very largely explains the difference between the deficit for a particular year and that year's increase in debt held by the public. Debt held by the public net of financial assets is a measure that is conceptually closer to the measurement of Federal deficits or surpluses; cumulative deficits and surpluses over time more closely equal the debt held by the public net of financial assets than they do the debt held by the public.

Table 4–3 presents debt held by the public net of the Government's financial assets and liabilities. Treasury debt is presented in the Budget at book value, with no adjustments for the change in economic value that results from fluctuations in interest rates. The balances of credit financing accounts are based on projections of future cash flows. For direct loan financing accounts, the balance generally represents the net present value of anticipated future inflows such as principal and interest payments from borrowers. For guaranteed loan financing accounts,

the balance generally represents the net present value of anticipated future outflows, such as default claim payments net of recoveries, and other collections, such as program fees. NRRIT's holdings of non-Federal securities are marked to market on a monthly basis. Government-sponsored enterprise stock and Air carrier worker support warrants and notes are measured at market value.

Due largely to the \$1,399 billion increase in the Treasury operating cash balance, partly offset by other transactions, net financial assets grew by \$1,087 billion, to \$2,993 billion, in 2020. This \$2,993 billion in net financial assets included a cash balance of \$1,782 billion, net credit financing account balances of \$1,147 billion, and other assets and liabilities that aggregated to a net asset of \$65 billion. At the end of 2020, debt held by the public was \$21,017 billion, or 100.1 percent of GDP. Therefore, debt held by the public net of financial assets was \$18,024 billion, or 85.8 percent of GDP. As shown in Table 4–3, the value of the Government's net financial assets is projected to fall, to \$2,483 billion in 2021. The projected 2021 decrease is principally due to the anticipated decrease in the Treasury operating cash balance, partly offset by the expected increase in the value of the credit financing accounts. While debt held by the public is expected to increase from 100.1 percent to 109.7 percent of GDP during 2021, debt held by the public net of financial assets is expected to increase from 85.8 percent to 98.4 percent of GDP.

Debt securities and other financial assets and liabilities do not encompass all the assets and liabilities of the Federal Government. For example, accounts payable occur in the normal course of buying goods and services;

Table 4–3. DEBT HELD BY THE PUBLIC NET OF FINANCIAL ASSETS AND LIABILITIES

(Dollar amounts in billions)

	Actual 2020	Estimate										
		2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Debt Held by the Public:												
Debt held by the public	21,016.7	24,166.7	26,264.8	27,683.1	29,062.2	30,538.7	31,957.9	33,266.1	34,690.9	35,996.2	37,480.8	39,059.3
As a percent of GDP	100.1%	109.7%	111.8%	112.7%	113.8%	115.2%	116.1%	116.4%	116.8%	116.6%	116.8%	117.0%
Financial Assets Net of Liabilities:												
Treasury operating cash balance	1,781.7	750.0	750.0	750.0	750.0	750.0	750.0	750.0	750.0	750.0	750.0	750.0
Credit financing account balances:												
Direct loan and TARP equity purchase accounts	1,613.3	1,772.6	1,882.6	1,926.3	1,943.1	1,946.6	1,949.1	1,950.6	1,949.0	1,945.1	1,949.7	1,957.3
Guaranteed loan accounts	-466.7	-112.4	41.3	46.2	51.9	57.3	62.2	67.7	72.4	77.0	81.6	86.1
Subtotal, credit financing account balances	1,146.5	1,660.2	1,923.9	1,972.5	1,995.0	2,004.0	2,011.4	2,018.3	2,021.5	2,022.2	2,031.3	2,043.4
Government-sponsored enterprise stock ¹	108.9	108.9	108.9	108.9	108.9	108.9	108.9	108.9	108.9	108.9	108.9	108.9
Air carrier worker support warrants and notes ²	5.3	13.0	13.0	13.0	13.0	13.0	12.5	11.9	11.9	11.9	11.9	6.6
Non-Federal securities held by NRRIT	24.0	24.0	21.9	20.1	18.3	16.5	14.7	13.1	11.4	9.9	8.7	7.7
Other assets net of liabilities	-73.4	-73.4	-73.4	-73.4	-73.4	-73.4	-73.4	-73.4	-73.4	-73.4	-73.4	-73.4
Total, financial assets net of liabilities	2,993.0	2,482.7	2,744.4	2,791.2	2,811.9	2,819.0	2,824.2	2,828.8	2,830.4	2,829.5	2,837.5	2,843.3
Debt Held by the Public Net of Financial Assets and Liabilities:												
Debt held by the public net of financial assets	18,023.6	21,684.0	23,520.5	24,891.9	26,250.4	27,719.6	29,133.8	30,437.3	31,860.5	33,166.7	34,643.3	36,216.0
As a percent of GDP	85.8%	98.4%	100.1%	101.3%	102.8%	104.5%	105.8%	106.5%	107.3%	107.5%	107.9%	108.5%

*\$50 million or less.

¹ Treasury's warrants to purchase 79.9 percent of the common stock of the enterprises expire after September 7, 2028. The warrants were valued at \$13 billion at the end of 2020.

² Of the notes and warrants issued under Air carrier worker support (Payroll support program), \$0.5 billion are scheduled to expire by the end of 2026, \$0.6 billion are scheduled to expire by the end of 2027, and \$5.3 billion are scheduled to expire by the end of 2031.

Social Security benefits are due and payable as of the end of the month but, according to statute, are paid during the next month; and Federal employee salaries are paid after they have been earned. Like debt securities sold in the credit market, these liabilities have their own distinctive effects on the economy. The Federal Government also has significant holdings of non-financial assets, such as land, mineral deposits, buildings, and equipment. The different types of assets and liabilities are reported annually in the financial statements of Federal agencies and in the *Financial Report of the United States Government*, prepared by the Treasury in coordination with OMB.

Treasury Debt

Nearly all Federal debt is issued by the Department of the Treasury. Treasury meets most of the Federal Government's financing needs by issuing marketable securities to the public. These financing needs include both the change in debt held by the public and the refinancing—or rollover—of any outstanding debt that matures during the year. Treasury marketable debt is sold at public auctions on a regular schedule and, because it is very liquid, can be bought and sold on the secondary market at narrow bid-offer spreads. Treasury also sells to the public a relatively small amount of nonmarketable securities, such as savings bonds and State and Local Government Series securities (SLGS).¹³ Treasury nonmarketable debt cannot be bought or sold on the secondary market.

Treasury issues marketable securities in a wide range of maturities, and issues both nominal (non-inflation-protected) and inflation-protected securities. Treasury's marketable securities include:

Treasury Bills—Treasury bills have maturities of one year or less from their issue date. In addition to the regular auction calendar of bill issuance, Treasury issues cash management bills on an as-needed basis for various reasons such as to offset the seasonal patterns of the Government's receipts and outlays. In 2020, Treasury began issuing cash management bills on a weekly basis in relation to the financing needed due to the impacts of the COVID-19 pandemic and the Government's response.

Treasury Notes—Treasury notes have maturities of more than one year and up to 10 years.

Treasury Bonds—Treasury bonds have maturities of more than 10 years. The longest-maturity securities issued by Treasury are 30-year bonds. In 2020, Treasury began issuing a monthly 20-year bond.

Treasury Inflation-Protected Securities (TIPS)—Treasury inflation-protected—or inflation-indexed—securities are coupon issues for which the par value of the security rises with inflation. The principal value is adjusted daily to reflect inflation as measured by changes in the Consumer Price Index (CPI-U-NSA, with a two-month lag). Although the principal value may be adjusted downward if inflation is negative, at maturity, the securities will be redeemed at the greater of their inflation-adjusted principal or par amount at original issue.

Floating Rate Securities—Floating rate securities have a fixed par value but bear interest rates that fluctuate based on movements in a specified benchmark market interest rate. Treasury's floating rate notes are benchmarked to the Treasury 13-week bill. Currently, Treasury is issuing floating rate securities with a maturity of two years.

Historically, the average maturity of outstanding debt issued by Treasury has been about five years. The average maturity of outstanding debt was 63 months at the end of 2020.

In addition to quarterly announcements about the overall auction calendar, Treasury publicly announces in advance the auction of each security. Individuals can participate directly in Treasury auctions or can purchase securities through brokers, dealers, and other financial institutions. Treasury accepts two types of auction bids: competitive and noncompetitive. In a competitive bid, the bidder specifies the yield. A significant portion of competitive bids are submitted by primary dealers, which are banks and securities brokerages that have been designated to trade in Treasury securities with the Federal Reserve System. In a noncompetitive bid, the bidder agrees to accept the yield determined by the auction.¹⁴ At the close of the auction, Treasury accepts all eligible noncompetitive bids and then accepts competitive bids in ascending order beginning with the lowest yield bid until the offering amount is reached. All winning bidders receive the highest accepted yield bid.

Treasury marketable securities are highly liquid and actively traded on the secondary market, which enhances the demand for Treasuries at initial auction. The demand for Treasury securities is reflected in the ratio of bids received to bids accepted in Treasury auctions; the demand for the securities is substantially greater than the level of issuance. Because they are backed by the full faith and credit of the United States Government, Treasury marketable securities are considered to be credit "risk-free." Therefore, the Treasury yield curve is commonly used as a benchmark for a wide variety of purposes in the financial markets.

Whereas Treasury issuance of marketable debt is based on the Government's financing needs, Treasury's issuance of nonmarketable debt is based on the public's demand for the specific types of investments. Increases in outstanding balances of nonmarketable debt, such as occurred in 2020, reduce the need for marketable borrowing.¹⁵

Agency Debt

A few Federal agencies other than Treasury, shown in Table 4–4, sell or have sold debt securities to the public and, at times, to other Government accounts. Currently, new debt is issued only by the Tennessee Valley Authority (TVA) and the Federal Housing Administration; the remaining agencies are repaying past borrowing. Agency debt was \$21.5 billion at the end of 2020. Agency debt is

¹³ Under the SLGS program, the Treasury offers special low-yield securities to State and local governments and other entities for temporary investment of proceeds of tax-exempt bonds.

¹⁴ Noncompetitive bids cannot exceed \$5 million per bidder.

¹⁵ Detail on the marketable and nonmarketable securities issued by Treasury is found in the *Monthly Statement of the Public Debt*, published on a monthly basis by the Department of the Treasury.

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around one-tenth of one percent of Federal debt held by the public. Primarily as a result of TVA activity, agency debt is estimated to fall to \$21.3 billion at the end of 2021 and then increase to \$21.6 billion at the end of 2022.

The predominant agency borrower is TVA, which had borrowings of \$21.4 billion from the public as of the end of 2020, or over 99 percent of the total debt of all agencies other than Treasury. TVA issues debt primarily to finance capital projects.

TVA has traditionally financed its capital construction by selling bonds and notes to the public. Since 2000, it has also employed two types of alternative financing methods, lease financing obligations and prepayment obligations. Under the lease financing obligations method, TVA signs long-term contracts to lease some facilities and equipment. The lease payments under these contracts ultimately secure the repayment of third-party capital used to finance construction of the facility. TVA retains substantially all of the economic benefits and risks related to ownership of the assets.¹⁶ Under the prepayment obligations method, TVA's power distributors may prepay a portion of the price of the power they plan to purchase in the future. In return, they obtain a discount on a specific quantity of the future power they buy from TVA. The quantity varies, depending on TVA's estimated cost of borrowing.

OMB determined that each of these alternative financing methods is a means of financing the acquisition of assets owned and used by the Government, or of refinancing debt previously incurred to finance such assets. They are equivalent in concept to other forms of borrowing from the public, although under different terms and conditions. The budget therefore records the upfront cash

¹⁶ This arrangement is at least as governmental as a "lease-purchase without substantial private risk." For further detail on the current budgetary treatment of lease-purchase without substantial private risk, see OMB Circular No. A-11, Appendix B.

proceeds from these methods as borrowing from the public, not offsetting collections.¹⁷ The budget presentation is consistent with the reporting of these obligations as liabilities on TVA's balance sheet under generally accepted accounting principles. At the end of 2020, lease financing obligations were \$1.3 billion and there were no outstanding obligations for prepayments. Table 4-4 presents lease financing obligations separately from TVA bonds and notes to distinguish between the types of borrowing.

Although the FHA generally makes direct disbursements to the public for default claims on FHA-insured mortgages, it may also pay claims by issuing debentures. Issuing debentures to pay the Government's bills is equivalent to selling securities to the public and then paying the bills by disbursing the cash borrowed, so the transaction is recorded as being simultaneously an outlay and borrowing. The debentures are therefore classified as agency debt.

A number of years ago, the Federal Government guaranteed the debt used to finance the construction of a building for the Architect of the Capitol, and subsequently exercised full control over the design, construction, and operation of the building. This arrangement is equivalent to direct Federal construction financed by Federal borrowing. The construction expenditures and interest were

¹⁷ This budgetary treatment differs from the treatment in the *Monthly Treasury Statement of Receipts and Outlays of the United States Government* (Monthly Treasury Statement) Table 6 Schedule C, and the *Combined Statement of Receipts, Outlays, and Balances of the United States Government* Schedule 3, both published by the Treasury. These two schedules, which present debt issued by agencies other than Treasury, exclude the TVA alternative financing arrangements. This difference in treatment is one factor causing minor differences between debt figures reported in the Budget and debt figures reported by Treasury. The other factors are adjustments for the timing of the reporting of Federal debt held by NRRIT and treatment of the Federal debt held by the Securities Investor Protection Corporation and the Public Company Accounting Oversight Board.

Table 4-4. AGENCY DEBT
(In millions of dollars)

	2020 Actual		2021 Estimate		2022 Estimate	
	Borrowing/ Repayment(-)	Debt, End-of-Year	Borrowing/ Repayment(-)	Debt, End-of-Year	Borrowing/ Repayment(-)	Debt, End-of-Year
Borrowing from the public:						
Housing and Urban Development:						
Federal Housing Administration		19		19		19
Architect of the Capitol	-12	58	-13	45	-14	31
Tennessee Valley Authority:						
Bonds and notes	-1,293	20,074	16	20,090	422	20,512
Lease financing obligations	-105	1,346	-242	1,104	-71	1,033
Total, borrowing from the public	-1,409	21,496	-239	21,258	337	21,595
Borrowing from other funds:						
Tennessee Valley Authority ¹	1	1		1		1
Total, borrowing from other funds	1	1		1		1
Total, agency borrowing	-1,408	21,497	-239	21,259	337	21,596
Memorandum:						
Tennessee Valley Authority bonds and notes, total	-1,292	20,075	16	20,091	422	20,513

¹ Represents open market purchases by the National Railroad Retirement Investment Trust.

therefore classified as Federal outlays, and the borrowing was classified as Federal agency borrowing from the public.

Several Federal agencies borrow from the Bureau of the Fiscal Service (Fiscal Service) or the Federal Financing Bank (FFB), both within the Department of the Treasury. Agency borrowing from the FFB or the Fiscal Service is not included in gross Federal debt. It would be double counting to add together (a) the agency borrowing from the Fiscal Service or FFB and (b) the Treasury borrowing from the public that is needed to provide the Fiscal Service or FFB with the funds to lend to the agencies.

Debt Held by Government Accounts

Trust funds, and some special funds and public enterprise revolving funds, accumulate cash in excess of current needs in order to meet future obligations. These cash surpluses are generally invested in Treasury securities.

The total investment holdings of trust funds and other Government accounts increased by \$17 billion in 2020. Net investment by Government accounts is estimated to be \$173 billion in 2021 and \$121 billion in 2022, as shown in Table 4–5. The holdings of Federal securities by Government accounts are estimated to grow to \$6,180 billion by the end of 2022, or 19 percent of the gross Federal debt. The percentage is estimated to decrease gradually over the next 10 years.

The Government account holdings of Federal securities are concentrated among a few funds: the Social Security Old-Age and Survivors Insurance and Disability Insurance trust funds; the Medicare Hospital Insurance and Supplementary Medical Insurance trust funds; and four Federal employee retirement funds. These Federal employee retirement funds include two trust funds, the Military Retirement Fund and the Civil Service Retirement and Disability Fund (CSRDF), and two special funds, the uniformed services Medicare-Eligible Retiree Health Care Fund (MERHCF) and the Postal Service Retiree Health Benefits Fund (PSRHBF). At the end of 2022, these Social Security, Medicare, and Federal employee retirement funds are estimated to own 79 percent of the total debt held by Government accounts. During 2020–2022, the Military Retirement Fund has a large surplus and is estimated to invest a total of \$253 billion, 81 percent of total net investment by Government accounts. Some Government accounts are projected to have net disinvestment in Federal securities during 2020–2022.

Technical note on measurement.—The Treasury securities held by Government accounts consist almost entirely of the Government account series. Most were issued at par value (face value), and the securities issued at a discount or premium are traditionally recorded at par in the OMB and Treasury reports on Federal debt. However, there are two kinds of exceptions.

First, Treasury issues zero-coupon bonds to a very few Government accounts. Because the purchase price is a small fraction of par value and the amounts are large, the holdings are recorded in Table 4–5 at par value less unamortized discount. The only Government accounts that held zero-coupon bonds during 2020 are the Nuclear

Waste Disposal Fund in the Department of Energy, the Military Retirement Fund, and MERHCF. The unamortized discount on zero-coupon bonds held by these three funds was \$24.3 billion at the end of 2020.

Second, Treasury subtracts the unrealized discount on other Government account series securities in calculating “net Federal securities held as investments of Government accounts.” Unlike the discount recorded for zero-coupon bonds and debt held by the public, the unrealized discount is the discount at the time of issue and is not amortized over the term of the security. In Table 4–5 it is shown as a separate item at the end of the table and not distributed by account. The amount was \$1.4 billion at the end of 2020.

Debt Held by the Federal Reserve

The Federal Reserve acquires marketable Treasury securities as part of its exercise of monetary policy. For purposes of the Budget and reporting by the Department of the Treasury, the transactions of the Federal Reserve are considered to be non-budgetary, and accordingly the Federal Reserve’s holdings of Treasury securities are included as part of debt held by the public.¹⁸ Federal Reserve holdings were \$4,445 billion (21 percent of debt held by the public) at the end of 2020. Over the last 10 years, the Federal Reserve holdings have averaged 17 percent of debt held by the public. The historical holdings of the Federal Reserve are presented in Table 7.1 in the Budget’s *Historical Tables*. The Budget does not project Federal Reserve holdings for future years.

Limitations on Federal Debt

Definition of debt subject to limit.—Statutory limitations have usually been placed on Federal debt. Until World War I, the Congress ordinarily authorized a specific amount of debt for each separate issue. Beginning with the Second Liberty Bond Act of 1917, however, the nature of the limitation was modified in several steps until it developed into a ceiling on the total amount of most Federal debt outstanding. This last type of limitation has been in effect since 1941. The limit currently applies to most debt issued by the Treasury since September 1917, whether held by the public or by Government accounts; and other debt issued by Federal agencies that, according to explicit statute, is guaranteed as to principal and interest by the U.S. Government.

The third part of Table 4–2 compares total Treasury debt with the amount of Federal debt that is subject to the limit. Nearly all Treasury debt is subject to the debt limit.

A large portion of the Treasury debt not subject to the general statutory limit was issued by the Federal Financing Bank. The FFB is authorized to have outstanding up to \$15 billion of publicly issued debt. The FFB has on occasion issued this debt to CSRDF in exchange for equal amounts of regular Treasury securities. The FFB securities have the same interest rates and maturities as the Treasury securities for which they were exchanged.

¹⁸ For further detail on the monetary policy activities of the Federal Reserve and the treatment of the Federal Reserve in the Budget, see Chapter 7, “Coverage of the Budget.”

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Table 4-5. DEBT HELD BY GOVERNMENT ACCOUNTS¹
(In millions of dollars)

Description	Investment or Disinvestment (-)			Holdings, End of 2022 Estimate
	2020 Actual	2021 Estimate	2022 Estimate	
Investment in Treasury debt:				
Judicial Branch:				
Judicial Officers' Retirement Fund	111	127	123	1,104
Commerce:				
Public Safety Trust Fund	105	4,519	100	12,285
Defense--Military:				
Host Nation Support Fund for Relocation	61	-422	-199	1,167
Energy:				
Nuclear Waste Disposal Fund ¹	1,740	508	514	43,361
Uranium Enrichment Decontamination Fund	-837	-836	6	21
Health and Human Services:				
Federal Hospital Insurance Trust Fund	-64,890	-13,736	1,289	121,288
Federal Supplementary Medical Insurance Trust Fund	-17,239	99,528	5,042	192,047
Vaccine Injury Compensation Fund	118	75	84	4,126
Child Enrollment Contingency Fund .....	.....	15,979	6	15,985
Homeland Security:				
Aquatic Resources Trust Fund	86	67	54	2,204
Oil Spill Liability Trust Fund	460	724	725	8,764
National Flood Insurance Reserve Fund	120	860	600	3,105
Housing and Urban Development:				
Federal Housing Administration Mutual Mortgage Insurance Capital Reserve	17,336	12,891	9,681	90,509
Guarantees of Mortgage-Backed Securities Capital Reserve	-7,258	3,859	2,790	15,049
Interior:				
Bureau of Land Management Permanent Operating Funds	82	82	82	1,207
Abandoned Mine Reclamation Fund	-46	-41	-27	2,565
Federal Aid in Wildlife Restoration Fund	40	80	62	2,202
Environmental Improvement and Restoration Fund	24	15	14	1,571
Natural Resource Damage Assessment Fund	132	104	100	2,100
National Parks and Public Land Legacy Restoration Fund .....	.....	1,615	938	2,553
Justice:				
Assets Forfeiture Fund	1,118	1	-36	3,189
U.S. Victims of State Sponsored Terrorism Fund	-872	*	.....	168
Labor:				
Unemployment Trust Fund	-33,847	-7,089	9,157	52,583
Pension Benefit Guaranty Corporation	8,840	3,474	4,265	53,292
State:				
Foreign Service Retirement and Disability Trust Fund	663	599	370	20,950
Transportation:				
Airport and Airway Trust Fund	-7,118	5,735	-652	12,983
Highway Trust Fund	-16,112	-1,113	-10,968	.....
Aviation Insurance Revolving Fund	10	35	11	2,348
Treasury:				
Exchange Stabilization Fund	-11,453	12,256	367	23,793
Treasury Forfeiture Fund	74	79	84	1,381
Gulf Coast Restoration Trust Fund	136	101	113	1,895
Comptroller of the Currency Assessment Fund	13	5	5	1,993
Veterans Affairs:				
Servicemembers' Group Life Insurance Fund	961	1,262	630	3,154
National Service Life Insurance Trust Fund	-510	-498	-405	1,043
Veterans Special Life Insurance Fund	-135	-156	-146	920
Corps of Engineers:				
Harbor Maintenance Trust Fund	-222	780	-928	8,912

Table 4-5. DEBT HELD BY GOVERNMENT ACCOUNTS¹—Continued

(In millions of dollars)

Description	Investment or Disinvestment (-)			Holdings, End of 2022 Estimate
	2020 Actual	2021 Estimate	2022 Estimate	
Other Defense-Civil:				
Military Retirement Fund ¹	79,613	72,628	100,630	1,080,285
Medicare-Eligible Retiree Health Care Fund ¹	11,947	5,268	15,825	287,217
Education Benefits Fund	-29	-24	-23	1,003
Environmental Protection Agency:				
Hazardous Substance Superfund	-318	70	70	5,073
Leaking Underground Storage Tank Trust Fund	122	200	40	1,135
International Assistance Programs:				
Overseas Private Investment Corporation	-5,864	.....	.....	.....
Development Finance Corporation Corporate Capital Account	6,165	94	-450	5,809
Office of Personnel Management:				
Civil Service Retirement and Disability Trust Fund	22,381	20,369	19,202	1,001,654
Postal Service Retiree Health Benefits Fund	-2,743	-2,808	-3,308	35,752
Employees Life Insurance Fund	930	623	624	50,376
Employees and Retired Employees Health Benefits Fund	529	3,634	1,527	33,492
Social Security Administration:				
Federal Old-Age and Survivors Insurance Trust Fund ²	6,817	-64,800	-42,313	2,704,100
Federal Disability Insurance Trust Fund ²	690	-7,412	2,741	92,538
District of Columbia:				
Federal Pension Fund	18	71	23	3,909
Farm Credit System Insurance Corporation:				
Farm Credit System Insurance Fund	221	307	504	5,964
Federal Deposit Insurance Corporation:				
Deposit Insurance Fund	4,934	5,269	6,883	121,101
National Credit Union Administration:				
Share Insurance Fund	1,334	1,463	2,395	20,468
Central Liquidity Facility	702	30	32	1,095
Postal Service:				
Postal Service Fund ²	5,650	-4,154	-7,129	3,708
Railroad Retirement Board:				
Railroad Retirement Board trust funds	-917	599	234	2,536
Securities Investor Protection Corporation ³	289	279	265	4,224
United States Enrichment Corporation Fund	14	-248	-496	973
Other Federal funds	-70	46	295	5,214
Other trust funds	-345	172	154	3,322
Unrealized discount ¹	13,386	.....	.....	-1,392
Total, investment in Treasury debt¹	17,032	173,017	121,454	6,180,270
Investment in agency debt:				
Railroad Retirement Board:				
National Railroad Retirement Investment Trust	1	.....	.....	1
Total, investment in agency debt¹	1	.....	.....	1
Total, investment in Federal debt¹	17,033	173,017	121,454	6,180,271
Memorandum:				
Investment by Federal funds (on-budget)	26,957	61,993	42,056	759,279
Investment by Federal funds (off-budget)	5,650	-4,154	-7,129	3,708
Investment by trust funds (on-budget)	-36,467	187,391	126,099	2,622,036
Investment by trust funds (off-budget)	7,507	-72,213	-39,572	2,796,638
Unrealized discount ¹	13,386	.....	.....	-1,392

* \$500 thousand or less.

¹Debt held by Government accounts is measured at face value except for Treasury zero-coupon bonds, which are recorded at market or redemption price; and the unrealized discount on Government account series, which is not distributed by account. If recorded at face value, at the end of 2020 the debt figure would be \$12.3 billion higher for the Nuclear Waste Disposal Fund, \$9.2 billion higher for the Military Retirement Fund, and \$2.8 billion higher for the Medicare-Eligible Retiree Health Care Fund than recorded in this table. Changes are not estimated in the unrealized discount.

² Off-budget Federal entity.³ Amounts on calendar-year basis.

Most recently, the FFB issued: \$9 billion to the CSRDF on October 1, 2013, with maturity dates from June 30, 2015, through June 30, 2024; and \$3 billion of securities to the CSRDF on October 15, 2015, with maturity dates from June 30, 2026, through June 30, 2029. The outstanding balance of FFB debt held by CSRDF was \$7 billion at the end of 2020 and is projected to be \$6 billion at the end of 2021.

The other Treasury debt not subject to the general limit consists almost entirely of silver certificates and other currencies no longer being issued. It was \$478 million at the end of 2020 and is projected to gradually decline over time.

The sole agency debt currently subject to the general limit, \$209 thousand at the end of 2020, is certain debentures issued by the Federal Housing Administration.¹⁹

Some of the other agency debt, however, is subject to its own statutory limit. For example, the Tennessee Valley Authority is limited to \$30 billion of bonds and notes outstanding.

The comparison between Treasury debt and debt subject to limit also includes an adjustment for measurement differences in the treatment of discounts and premiums. As explained earlier in this chapter, debt securities may be sold at a discount or premium, and the measurement of debt may take this into account rather than recording the face value of the securities. However, the measurement differs between gross Federal debt (and its components) and the statutory definition of debt subject to limit. An adjustment is needed to derive debt subject to limit (as defined by law) from Treasury debt. The amount of the adjustment was \$47 billion at the end of 2020 compared with the total unamortized discount (less premium) of \$64 billion on all Treasury securities.

Changes in the debt limit.—The statutory debt limit has been changed many times. Since 1960, the Congress has passed 85 separate acts to raise the limit, revise the definition, extend the duration of a temporary increase, or temporarily suspend the limit.²⁰

The seven most recent laws addressing the debt limit have each provided for a temporary suspension followed by an increase in an amount equivalent to the debt that was issued during that suspension period in order to fund commitments requiring payment through the specified end date. The Bipartisan Budget Act of 2018 suspended the \$20,456 billion debt ceiling from February 9, 2018, through March 1, 2019, and then raised the debt limit on March 2, 2019, by \$1,532 billion to \$21,988 billion. The Bipartisan Budget Act of 2019 suspended the \$21,988 billion debt ceiling from August 2, 2019, through July 31, 2021.

At many times in the past several decades, including 2018 and 2019, the Government has reached the statutory debt limit before an increase has been enacted. When this has occurred, it has been necessary for the Treasury to

take “extraordinary measures” to meet the Government’s obligation to pay its bills and invest its trust funds while remaining below the statutory limit.

One such extraordinary measure is the partial or full suspension of the daily reinvestment of the Thrift Savings Plan (TSP) Government Securities Investment Fund (G-Fund).²¹ The Treasury Secretary has statutory authority to suspend investment of the G-Fund in Treasury securities as needed to prevent the debt from exceeding the debt limit. Treasury determines each day the amount of investments that would allow the fund to be invested as fully as possible without exceeding the debt limit. The TSP G-Fund had an outstanding balance of \$292 billion at the end of April 2021. The Treasury Secretary is also authorized to suspend investments in the CSRDF and to declare a debt issuance suspension period, which allows him or her to redeem a limited amount of securities held by the CSRDF. The Postal Accountability and Enhancement Act of 2006 provides that investments in the Postal Service Retiree Health Benefits Fund shall be made in the same manner as investments in the CSRDF.²² Therefore, Treasury is able to take similar administrative actions with the PSRHB. The law requires that when any such actions are taken with the G-Fund, the CSRDF, or the PSRHB, the Treasury Secretary is required to make the fund whole after the debt limit has been raised by restoring the forgone interest and investing the fund fully. Another measure for staying below the debt limit is disinvestment of the Exchange Stabilization Fund. The outstanding balance in the Exchange Stabilization Fund was \$13 billion at the end of April.

As the debt has neared the limit, including in 2019, Treasury has also suspended the issuance of SLGS to reduce unanticipated fluctuations in the level of the debt. At times, Treasury has also adjusted the schedule for auctions of marketable securities.

In addition to these steps, Treasury has previously exchanged Treasury securities held by the CSRDF with borrowing by the FFB, which, as explained above, is not subject to the debt limit. This measure was most recently taken in October 2015.

The debt limit has always been increased prior to the exhaustion of Treasury’s limited available administrative actions to continue to finance Government operations when the statutory ceiling has been reached. Failure to enact a debt limit increase before these actions were exhausted would have significant and long-term negative consequences. The Federal Government would be forced to delay or discontinue payments on its broad range of obligations, including Social Security and other payments to individuals, Medicaid and other grant payments to States, individual and corporate tax refunds, Federal employee salaries, payments to vendors and contractors, principal and interest payments on Treasury securities, and other obligations. If Treasury were unable to make timely interest payments or redeem securities, investors would

¹⁹ At the end of 2020, there were also \$18 million of FHA debentures not subject to limit.

²⁰ The Acts and the statutory limits since 1940 are listed in Table 7.3 of the Budget’s *Historical Tables*, available at <https://www.whitehouse.gov/omb/historical-tables/>.

²¹ The TSP is a defined contribution pension plan for Federal employees. The G-Fund is one of several components of the TSP.

²² Both the CSRDF and the PSRHB are administered by the Office of Personnel Management.

cease to view U.S. Treasury securities as free of credit risk and Treasury's interest costs would increase. Because interest rates throughout the economy are benchmarked to the Treasury rates, interest rates for State and local governments, businesses, and individuals would also rise. Foreign investors would likely shift out of dollar-denominated assets, driving down the value of the dollar and further increasing interest rates on non-Federal, as well as Treasury, debt.

The debt subject to limit is estimated to increase to \$30,245 billion by the end of 2021 and to \$32,465 billion by the end of 2022. The Budget anticipates timely congressional action to address the statutory limit as necessary before exhaustion of Treasury's extraordinary measures.

Federal funds financing and the change in debt subject to limit.—The change in debt held by the public, as shown in Table 4–2, and the change in debt held by the public net of financial assets are determined primarily by the total Government deficit or surplus. The debt subject to limit, however, includes not only debt held by the public but also debt held by Government accounts. The change in debt subject to limit is therefore determined both by the factors that determine the total Government deficit or surplus and by the factors that determine the change in debt held by Government accounts. The effect of debt held by Government accounts on the total debt subject to limit can be seen in the second part of Table 4–2. The change in debt held by Government accounts is equal to 5 percent of the estimated total 2021 increase in debt subject to limit.

The Budget is composed of two groups of funds, Federal funds and trust funds. The Federal funds, in the main, are derived from tax receipts and borrowing and are used for the general purposes of the Government. The trust funds, on the other hand, are financed by taxes or other receipts dedicated by law for specified purposes, such as for paying Social Security benefits or making grants to State governments for highway construction.²³

A Federal funds deficit must generally be financed by borrowing, which can be done either by selling securities to the public or by issuing securities to Government accounts that are not within the Federal funds group. Federal funds borrowing consists almost entirely of Treasury securities that are subject to the statutory debt limit. Very little debt subject to statutory limit has been issued for reasons except to finance the Federal funds deficit. The change in debt subject to limit is therefore determined primarily by the Federal funds deficit, which is equal to the difference between the total Government deficit or surplus and the trust fund surplus. Trust fund surpluses are almost entirely invested in securities subject to the debt limit, and trust funds hold most of the debt held by Government accounts. The trust fund surplus reduces the total budget deficit or increases the total budget surplus, decreasing the need to borrow from the public or increasing the ability to repay borrowing from the public. When the trust fund surplus is invested in Federal securities, the debt held by Government accounts increases, offsetting the decrease in debt held by the public by an equal amount. Thus, there is no net effect on gross Federal debt.

²³ For further discussion of the trust funds and Federal funds groups, see Chapter 18, "Trust Funds and Federal Funds."

Table 4–6 derives the change in debt subject to limit. In 2020 the Federal funds deficit was \$3,076 billion, and other factors increased financing requirements by \$1,087 billion. The change in the Treasury operating cash balance increased financing requirements by \$1,399 billion, partly offset by the net financing disbursements of credit financing accounts and other Federal fund factors, which together reduced financing requirements by \$312 billion. In addition, special funds and revolving funds, which are part of the Federal funds group, invested a net of \$33 billion in Treasury securities. Adjustments are also made for the difference between the trust fund surplus or deficit and the trust funds' investment or disinvestment in Federal securities (including the changes in NRRIT's investments in non-Federal securities) and for the change in unrealized discount on Federal debt held by Government accounts. As a net result of all these factors, \$4,233 billion in financing was required, increasing gross Federal debt by that amount. Since Federal debt not subject to limit fell by \$3 billion and the adjustment for discount and premium changed by \$2 billion, the debt subject to limit increased by \$4,234 billion, while debt held by the public increased by \$4,216 billion.

Debt subject to limit is estimated to increase by \$3,325 billion in 2021 and by \$2,220 billion in 2022. The projected increases in the debt subject to limit are caused by the continued Federal funds deficit, supplemented by the other factors shown in Table 4–6. While debt held by the public increases by \$18,043 billion from the end of 2020 through 2031, debt subject to limit increases by \$17,947 billion, due to projected outyear net disinvestment by Government accounts.

Foreign Holdings of Federal Debt

Foreign holdings of Federal debt are presented in Table 4–7. During most of American history, the Federal debt was held almost entirely by individuals and institutions within the United States. In the late 1960s, foreign holdings were just over \$10 billion, less than 5 percent of the total Federal debt held by the public. Foreign holdings began to grow significantly in the early 1970s, and then remained about 15–20 percent of total Federal debt until the mid-1990s. During 1995–97, growth in foreign holdings accelerated, reaching 33 percent by the end of 1997. Since 2004, foreign holdings of Federal debt have generally represented around 40 percent or more of outstanding debt. Foreign holdings increased to 48 percent by the end of 2008 and then remained relatively stable through 2015. After 2015, foreign holdings began to decline as a percent of total Federal debt held by the public, falling from 47 percent at the end of 2015 to 40 percent at the end of 2018. In 2019, foreign holdings increased slightly, to 41 percent.

By the end of 2020, foreign holdings of Treasury debt had grown to \$7,069 billion, but fell to 34 percent of the total debt held by the public.²⁴ The dollar increase in foreign holdings was about 3 percent of total Federal bor-

²⁴ The debt calculated by the Bureau of Economic Analysis is different, though similar in size, because of a different method of valuing securities.

Table 4-6. FEDERAL FUNDS FINANCING AND CHANGE IN DEBT SUBJECT TO STATUTORY LIMIT
(In billions of dollars)

Description	Actual 2020	Estimate										
		2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Change in Gross Federal Debt:												
Federal funds deficit	3,076.4	3,783.4	1,983.2	1,504.2	1,527.9	1,541.4	1,445.8	1,173.8	1,176.8	1,146.1	1,199.2	1,245.7
Other transactions affecting borrowing from the public— Federal funds ¹	1,087.2	−518.6	263.2	48.1	21.9	8.4	6.9	6.4	2.6	0.1	8.5	11.5
Increase (+) or decrease (−) in Federal debt held by Federal funds	32.6	57.8	34.9	31.8	34.1	35.2	34.4	36.7	38.3	40.6	44.4	48.8
Adjustments for trust fund surplus/deficit not invested/ disinvested in Federal securities ²	23.4	0.5	−61.8	−2.9	−3.0	−3.0	−3.0	−1.8	−1.7	−1.7	−1.2	−1.1
Change in unrealized discount on Federal debt held by Government accounts	13.4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total financing requirements	4,233.0	3,323.1	2,219.5	1,581.3	1,580.9	1,582.1	1,484.2	1,215.1	1,216.1	1,185.1	1,250.9	1,305.0
Change in Debt Subject to Limit:												
Change in gross Federal debt	4,233.0	3,323.1	2,219.5	1,581.3	1,580.9	1,582.1	1,484.2	1,215.1	1,216.1	1,185.1	1,250.9	1,305.0
Less: increase (+) or decrease (−) in Federal debt not subject to limit	−3.0	−1.4	−0.9	−1.1	−1.1	0.3	−0.5	−1.0	−0.3	—*	1.1	1.0
Less: change in adjustment for discount and premium ³	2.2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total, change in debt subject to limit	4,233.8	3,324.5	2,220.4	1,582.4	1,582.0	1,581.8	1,484.7	1,216.1	1,216.3	1,185.2	1,249.8	1,304.0
Memorandum:												
Debt subject to statutory limit ⁴	26,920.4	30,244.9	32,465.3	34,047.7	35,629.7	37,211.4	38,696.1	39,912.2	41,128.6	42,313.7	43,563.6	44,867.6

* \$50 million or less.

¹ Includes Federal fund transactions that correspond to those presented in Table 4-2, but that are for Federal funds alone with respect to the public and trust funds.

² Includes trust fund holdings in other cash assets and changes in the investments of the National Railroad Retirement Investment Trust in non-Federal securities.

³ Consists of unamortized discount (less premium) on public issues of Treasury notes and bonds (other than zero-coupon bonds).

⁴ Legislation enacted August 2, 2019 (P.L. 116-37), temporarily suspends the debt limit through July 31, 2021.

rowing from the public in 2020 and 12 percent over the last five years. Increases in foreign holdings have been almost entirely due to decisions by foreign central banks, corporations, and individuals, rather than the direct marketing of these securities to foreign investors. All of the foreign holdings of Federal debt are denominated in dollars.

In 2020, foreign central banks and other foreign official institutions owned 59 percent of the foreign holdings of Federal debt; private investors owned the rest. At the end of 2020, the nations holding the largest shares of U.S. Federal debt were Japan, which held 18 percent of all foreign holdings, and China, which held 15 percent.

Foreign holdings of Federal debt are around 20-25 percent of the foreign-owned assets in the United States, depending on the method of measuring total assets. The foreign purchases of Federal debt securities do not measure the full impact of the capital inflow from abroad on the market for Federal debt securities. The capital inflow supplies additional funds to the credit market generally, and thus affects the market for Federal debt. For example, the capital inflow includes deposits in U.S. financial intermediaries that themselves buy Federal debt.

Federal, Federally Guaranteed, and Other Federally Assisted Borrowing

The Government's effects on the credit markets arise not only from its own borrowing but also from the direct loans that it makes to the public and the provision of assistance to certain borrowing by the public. The Government guarantees various types of borrowing by individuals, businesses, and other non-Federal entities, thereby providing assistance to private credit markets. The Government is also assisting borrowing by States through the Build America Bonds program, which subsidizes the interest that States pay on such borrowing. In addition, the Government has established private corporations—Government-sponsored enterprises—to provide financial intermediation for specified public purposes; it exempts the interest on most State and local government debt from income tax; it permits mortgage interest to be deducted in calculating taxable income; and it insures the deposits of banks and thrift institutions, which themselves make loans.

Federal credit programs and other forms of assistance are discussed in Chapter 15, "Credit and Insurance," in this volume. Detailed data are presented in tables accompanying that chapter.

Table 4-7. FOREIGN HOLDINGS OF FEDERAL DEBT

(Dollar amounts in billions)

Fiscal Year	Debt held by the public			Change in debt held by the public ²	
	Total	Foreign ¹	Percentage foreign	Total	Foreign
1965	260.8	12.2	4.7	3.9	0.3
1970	283.2	14.0	4.9	5.1	3.7
1975	394.7	66.0	16.7	51.0	9.1
1980	711.9	126.4	17.8	71.6	1.3
1985	1,507.3	222.9	14.8	200.3	47.3
1990	2,411.6	463.8	19.2	220.8	72.0
1995	3,604.4	820.4	22.8	171.3	138.4
2000	3,409.8	1,038.8	30.5	-222.6	-242.6
2005	4,592.2	1,929.6	42.0	296.7	135.1
2010	9,018.9	4,324.2	47.9	1,474.2	753.6
2011	10,128.2	4,912.1	48.5	1,109.3	587.9
2012	11,281.1	5,476.1	48.5	1,152.9	564.0
2013	11,982.7	5,652.8	47.2	701.6	176.7
2014	12,779.9	6,069.2	47.5	797.2	416.4
2015	13,116.7	6,105.9	46.6	336.8	36.7
2016	14,167.6	6,155.9	43.5	1,050.9	50.0
2017	14,665.4	6,301.9	43.0	497.8	146.0
2018	15,749.6	6,225.9	39.5	1,084.1	-76.0
2019	16,800.7	6,923.5	41.2	1,051.1	697.6
2020	21,016.7	7,069.2	33.6	4,216.0	145.7

¹ Estimated by Treasury Department. These estimates exclude agency debt, the holdings of which are believed to be small. The data on foreign holdings are recorded by methods that are not fully comparable with the data on debt held by the public. Projections of foreign holdings are not available.

² Change in debt held by the public is defined as equal to the change in debt held by the public from the beginning of the year to the end of the year.