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Consol-Type Perpetual Bonds and the Debt Limit: In Brief

July 31, 2023

Congressional Research Service
https://crsreports.congress.gov
R47638

CRS REPORT
Prepared for Members and
Committees of Congress

Contents

Figures

Contacts

During recent debt limit episodes, some economists and journalists have contended that the U.S. President or Treasury Secretary could assert authorities to sidestep constraints posed by the statutory limit on outstanding federal debt.[1] Such proposals, they argue, would avoid disruptions in federal operations or financial markets that might follow the lack of congressional action to modify the debt limit. One suggestion is that "consol" bonds or similar debt instruments that lack a set maturity date—once a staple of 18th and 19th century public finances—might allow the U.S. Treasury to avoid the constraints of the statutory limit on federal debt without the need for congressional action.[2] Although no apparent legal bar would prevent issuance of undated consol-style bonds, the resort to 18th and 19th century debt management techniques might not suit 21st century fiscal challenges.

"Consol" Bonds and Debt Instruments Without Maturity Dates

National governments have at times issued long-maturity bonds and have sometimes issued bonds without a specified maturity date. A "consol" bond is one example of a debt instrument without a set maturity date.

A consol bondholder, in exchange for an initial payment, receives a steady stream of coupon payments until the government opts to redeem or "call" the bond. A bond coupon is an interest payment, typically paid semiannually or quarterly. For instance, a 4% bond with a face value of $1,000 would yield either two $20 payments or four $10 payments each year.

In the 18th and 19th century, the United Kingdom (UK) rolled over older debts by issuing "consol" bonds—short for consolidated bonds—that carried lower interest rates than the older debts that were then paid off.[3] In particular, wars severely strained public finances, which impelled Treasury officials to borrow funds in less regular ways and on less-than-attractive terms. During a following peacetime, consol bonds provided a means to pay off wartime debts and lower public borrowing costs. In 2015, the UK Treasury redeemed the last of those undated bonds, that is, bonds without a set maturity date.[4]

[1] See CRS Report R45011, *Clearing the Air on the Debt Limit: Platinum Coins, the Fourteenth Amendment, and More*, by D. Andrew Austin and Sean M. Stiff.

[2] Heather Long, "Here are President Biden's Debt Ceiling Options, Ranked," *Washington Post*, May 23, 2023, https://www.washingtonpost.com/opinions/2023/05/23/debt-ceiling-limit-ranked-biden/; Matthew Yglesias, "Don't Repay the National Debt: It's Time to Revive a British Financial Innovation from the 18th Century: Perpetual Bonds," *Slate*, January 29, 2013, https://slate.com/business/2013/01/perpetual-bonds-a-clever-way-to-manage-the-national-debt-in-a-time-of-low-interest-rates.html; Bradford DeLong, "Print the Perpetual (Consol) Bond," blog post, May 6, 2023, https://braddelong.substack.com/p/print-the-perpetual-consol-bond (DeLong, now an economics professor, was a Treasury official in the Clinton Administration); Jeanna Smialek, "The Coin, the Constitution, Premium Bonds: The Debt Limit Workarounds," *New York Times*, May 9, 2023, https://www.nytimes.com/2023/05/09/us/politics/debt-limit-coins-bonds-workarounds.html; and Matt Levine, "Financial Engineering the Debt Ceiling," *Bloomberg*, January 11, 2023, https://www.bloomberg.com/opinion/articles/2023-01-11/financial-engineering-the-debt-ceiling.

[3] Federal Reserve Bank of St. Louis, "Consols: The Never-Ending Bonds," FRED Blog, July 21, 2016, https://fredblog.stlouisfed.org/2016/07/consols-the-never-ending-bonds/. Also see James McDonald, *A Free Nation Deep in Debt* (New York: Farrar, Strauss & Giroux, 2003), pp. 232-239.

[4] UK Debt Management Office, "Gilt Market," web page, 2016, https://web.archive.org/web/20161110155438/http://dmo.gov.uk/index.aspx?page=gilts%2Fabout_gilts.

In the 19th century, many U.S. Treasury debt securities were issued without a set final maturity date, but the securities could be called after a certain number of years.[5] Unlike the UK Treasury, however, the U.S. Treasury typically sought to redeem bonds soon after they could be called, rather than allowing them to remain outstanding for centuries.

Long Bonds As a Solution to 18th Century Public Finance Challenges

Long-term or perpetual debt instruments helped solve two problems facing 18th century finance ministers and investors.

First, governments with major expenses due to war or other causes could not be certain when they could pay off or roll over debts. Perpetual debt instruments gave finance ministers more flexibility to choose when debt would be retired, rather than having to repay principal at a fixed maturity rate.

Sinking funds were a standard tool to accumulate funds over time to pay off major debts once they could be called. Finance ministers often created sinking funds—special treasury funds designed to receive taxes earmarked for debt service or other revenues—in order to spread the burden of debts over time. Such sinking funds, however, provided a tempting resource to meet other governmental exigencies, often leaving insufficient means for the prompt redemption of debts.[6] In an era of rudimentary financial markets and weakly ringfenced sinking funds, when disruptions to tax collections were common and wars were not, the option to delay payment of principal was valuable.[7]

Second, for households with means to invest, perpetual debt instruments and annuities provided a means to preserve buying power into the future or to avoid penury in old age. In the 1690s, the English government relied heavily on the sale of annuities to raise funds, a strategy local governments in Holland had used in the late 15th and 16th centuries when raising funds via taxation was resisted.[8]

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[5] Most federal bond issues from 1790 through 1880 had some call provision. See Charles Calomiris, "The Motives of U.S. Debt-Management Policy, 1790-1880: Efficient Discrimination and Time Consistency," *Research in Economic History*, vol. 13 (1991), pp. 67-105 (hereinafter cited as Calomiris, "Motives of U.S. Debt-Management Policy"). The U.S. Treasury also borrowed using other debt instruments, such as notes, short-term certificates of indebtedness, and syndicated loans.

[6] Adam Smith, *The Wealth of Nations* (New York: Modern Library, 1937), p. 868 (hereinafter cited as Smith, *The Wealth of Nations*). "A sinking fund, though instituted for the payment of old, facilitates very much the contracting of new debts. It is a subsidiary fund always at hand to be mortgaged in aid of any other doubtful fund, upon which money is proposed to be raised in any exigency of the state." Calomiris, "Motives of U.S. Debt-Management Policy," argues sinking funds solidified a government's resolve to raise taxes and pay back debt. Some might argue that issuing tax-exempt debt might be an imperfect signal of willingness to raise future taxes.

[7] Treasury Secretaries Hamilton and Gallatin understood that shortening the period before a call option could be exercised made bonds harder to sell or would require higher interest rates. See Calomiris, "Motives of U.S. Debt-Management Policy," pp. 93-94.

[8] Smith, *The Wealth of Nations*, pp. 868-870, 874-875. Also see Daniel Dematos, "Creating the Consols," Tontine Coffeehouse Blog, March 7, 2022, https://tontinecoffeehouse.com/2022/03/07/creating-the-consols/. Also see W. Fritschy, "A 'Financial Revolution' Reconsidered: Public Finance in Holland during the Dutch Revolt, 1568-1648," *Economic History Review*, vol. 56, no. 1 (February 2003). Also see James D. Tracy, *Holland Under Habsburg Rule, 1506-1566: The Formation of a Body Politic* (Berkeley: Univ. of California Press, 1990), http://ark.cdlib.org/ark:/13030/ft1779n76h/. Some earlier Italian antecedents are noted in James McDonald, *A Free Nation Deep in Debt* (New York: Farrar, Strauss & Giroux, 2003), pp. 101-104.

U.S. Treasury and Consol Bonds in the 19th Century

The U.S. Treasury's debt management operations in its first decades drew upon British practices. The lack of a standing army, the distance from European wars, and the absence of a monarch with extravagant tastes, however, reduced the U.S. Treasury's funding requirements relative to those of European states. Nonetheless, Treasury officials understood the necessity of retaining the option of delaying redemption of debt. For instance, Treasury Secretary Alexander Hamilton, in setting out requirements for the funding of federal debt, noted that for a 1790 debt issue that consolidated seven categories of old debt, "the United States, though have a right to redeem ... , should not be obliged to do it."[9] The prospect of improved public credit and falling interest rates motivated holders of those old debts to convert to new debts that would pay set rates of interest into the then-coming century.[10]

A common structure for a 19th century Treasury bond set an interest rate and a period in which the bond could not be redeemed, typically 5, 10, 15, 20, or 30 years. After that period, bonds were redeemable at the pleasure of the Treasury. A longer period made the bonds more attractive to investors, who could lock in a fixed return on their investment. Most 19th century bonds specified a nonredemption period and a final date when the principal would be repaid and coupon payments would cease.[11] For instance, "five-twenty" bonds of 1862 could not be redeemed within 5 years and would be paid off in 20 years if not redeemed beforehand.

Setting longer nonredemption periods helped ensure that bonds would be sold to raise large sums in emergency situations. Such bonds locked Treasury into high debt service costs in years following the issue.[12] Buying bonds in open markets before a date of first redemption could also be expensive because bond prices rose as interest rates fell in the post-Civil War years.[13]

Treasury Bonds and the Resumption of the Gold Standard After the Civil War

Measures taken to meet the extraordinary financial demands of the Civil War complicated federal fiscal policy for the following half century. First, the U.S. Treasury was given control of currency and banking policy, which required bank charters and that banks' notes be backed by federal bonds.[14] Second, in 1862 the U.S. government left the gold standard by issuing paper money

[9] Treasury Secretary Alexander Hamilton, *Report on Public Credit*, section II, January 16, 1795, https://founders.archives.gov/documents/Hamilton/01-18-02-0052-0002.

[10] Davis R. Dewey, *Financial History of the United States* (New York, Longmans, Green, 1928), pp. 94-95 (hereinafter cited as Dewey, *Financial History of the United States*).

[11] Ibid., pp. 306-308.

[12] Remarks of House Ways and Means Chairman Nelson Dingley, Jr., *Congressional Record*, April 27, 1898, p. H4299. "But in order to make this absolutely sure—for it would be a serious misfortune not to have the loan taken—in order to make it sure, these bonds are made redeemable after ten years, at the option of the Government, and become payable in twenty years. The reason for making the bonds in this form is that it is believed that a five-year period, in the first place, might affect the placing of the bonds, especially the later issues; and it is important, therefore, in this view of the case, that they should run at least ten years, in order to make it certain that the bonds will be taken."

[13] U.S. Treasury, *Annual Report of the Secretary of the Treasury on the State of the Finances*, December 1882, pp. 25-26, https://fraser.stlouisfed.org/title/194/item/5526/toc/129584.

[14] National Currency Act, Act of February 25, 1863, 12 Stat. 665; and National Bank Act, Act of June 3, 1864, 13 Stat. 99. See Office of the Comptroller of the Currency, "Founding of the OCC & the National Banking System," at https://www.occ.treas.gov/about/who-we-are/history/founding-occ-national-bank-system/index-founding-occ-national-banking-system.html.

notes, known as "greenbacks" (see **Figure 1**).[15] Those measures charged the U.S. Treasury with dual roles of managing debt policy and monetary policy, until the Federal Reserve System assumed control of monetary policy in 1913.

With the inauguration of President Grant in 1869, closing a spell of extreme contention between Congress and President Andrew Johnson, federal finances began to normalize.[16] In 1870 and 1871, Congress authorized issuance of up to $1.5 billion in new bonds to take advantage of lower interest rates, including $1 billion in bonds that were only callable in 30 years and lacked a fixed maturity date, which were labeled as consols.[17] Some financial historians judged the lack of an earlier Treasury call option on those bonds an expensive "mistake."[18]

Figure 1. Fractional Treasury 10¢ "Greenback" Note

Source: Author.

[15] See CRS Report R41887, *Brief History of the Gold Standard in the United States*, by Craig K. Elwell. Interest on Treasury bonds, however, was still payable in gold.

[16] Franklin Noll, "Repudiation: The Crisis of United States Civil War Debt, 1865-1870," conference paper, December 2012, https://mpra.ub.uni-muenchen.de/43540/1/MPRA_paper_43540.pdf.

[17] Joe I. Herbstman Memorial Collection of American Finance, "Four Percent Consols of 1877," https://www.theherbstmancollection.com/1877-consol-bonds. Bonds authorized by Acts of July 14, 1870, and January 20, 1871. Bonds were not issued until 1877 due to the Franco-Prussian War of 1870 and the Panic of 1873.

[18] Paul Studenski and Herman Kroos, *Financial History of the United States* (New York: McGraw-Hill, 1963), p. 173 (hereinafter cited as Studenski, *Financial History of the United States*).

Consol bonds helped finance a return to the gold standard, in part by funding purchase of gold bullion to back the dollar's value. In 1875, a lame-duck Congress empowered the Treasury Secretary to issue bonds to finance the redemption of greenbacks in order to return the United States to the gold standard in 1879.[19] High tariff rates in the post-Civil War decades gave Treasury the means to redeem its debts at a relatively rapid pace, at the cost of reduced economic competition and elevated prices for imported goods.[20]

A severe global financial crisis in 1893, however, revealed the vulnerabilities of that 1875 authority, which allowed the Treasury Secretary to choose the amount and timing of bond issues, but restricted the terms on which bonds were offered, forcing the U.S. Treasury to issue long-term debt to address short-term challenges. The U.S. Treasury issued 4% consol bonds in 1895 and 1896 to replenish its gold reserve and cover deficits.[21] The restrictions on Treasury's ability to tailor its bond issues resulted in financial policies and practices some historians found "irrational," "illogical," and "clumsy."[22]

In 1900, a last consol bond, callable in 30 years, was issued to refund various older bonds bearing higher interest rates.[23] That bond issue reduced interest costs, but those savings were nearly offset by the premiums paid to induce bondholders to redeem older bonds. Moreover, banks that purchased the 1900 bonds were exempted from certain taxes.[24] Whether that refunding was a net gain for federal finances was therefore unclear.

The next Treasury bond issues, which financed the Panama Canal's construction, had definite maturities, ending federal reliance on consol bonds.[25] By the time that the 4% bonds issued in 1895-1896 were called in 1925 and the last 2% 1900 consol bonds were redeemed in 1935, the U.S. Treasury's debt management had evolved in a more modern and efficient direction.[26]

Consol-Type Bonds and Current Debt Limit Restrictions

Contentions that Treasury could use nonstandard types of bonds as a means of easing the debt limit's constraints vary. One notion would be to issue a bond with a low face value and a high coupon. For instance, a perpetual bond with a face value of $1,000 and a coupon of 2% would generate the same cash flow as a bond with a face value of $500 and a coupon of 4%, as would a bond with a face value of $100 and a coupon of 20%. Some describe such debt instruments with

[19] An act to provide for the resumption of specie payments, 18 Stat. 296, January 1875, https://memory.loc.gov/cgi-bin/ampage?collId=llsl&fileName=022/llsl022.db&recNum=325. Also see Studenski, *Financial History of the United States*), pp. 182-185.

[20] See Dewey, *Financial History of the United States*, chapters XIV-XX. Also see Studenski, *Financial History of the United States*, pp. 168-175. Jeremy Atack and Peter Passell, *A New Economic View of American History*, 2nd ed., (New York: Norton, 1994) state that federal debt was reduced from $2.33 billion in 1866 to $587 million in 1893.

[21] See Dewey, *Financial History of the United States*, pp. 447-462. Also see Kenneth D. Garbade, *Birth of a Market*, (Cambridge: MIT Press, 2012), pp. 29-41 (hereinafter cited as Garbade, *Birth of a Market*).

[22] Studenski, *Financial History of the United States*, pp. 230-231.

[23] Act of March 14, 1900, 31 Stat. 45. See Garbade, *Birth of a Market*, pp. 44-45.

[24] Dewey, *Financial History of the United States*, pp. 469-473.

[25] Act of June 28, 1902, 32 Stat. 484; Act of December 21, 1905, 24 Stat. 5; Act of August 5, 1909. See Dewey, *Financial History of the United States*, pp. 486-487 and Garbade, *Birth of a Market*, pp. 45-46. Bonds authorized by the 1902 act were callable after 10 years and matured in 30 years.

[26] Garbade, *Birth of a Market*, pp. 319, 328-330.

elevated coupon rates as "premium bonds."[27] A rational investor who focused narrowly on advertised cash flows would then be willing to pay the same price for each of those bonds.

The debt limit (31 U.S.C. §3101(b) as amended) places a limit on the face value of debt obligations outstanding at one time. By issuing debt securities with high coupons and lower face values, the contention would run, the U.S. Treasury could borrow more with a lesser increase in the face value of federal debt subject to limit. As noted above, replacing a bond with a face value of $100 and a 2% coupon with another bond with one-tenth of the face value and ten times the coupon would then arguably reduce the constraint imposed by the debt limit.

Another notion would be to issue a six-month debt security renewable at the holder's option every half year.[28] That security's face value, some contend, would only reflect the face value of a six-month security, rather than the larger long-term debt service commitment it would create.

Another conceivable variant would be to sell a contract giving the holder the right to a regular and periodic stream of payments, an instrument that would lack a face value. That option would mark a return to the sale of annuities, such as those sold by 16th century Dutch cities and provinces, as a means of raising public funds.

Some commentators note that the debt limit statute (31 U.S.C. §3101(c)) ties the face value of a debt obligation to its "original issue price" plus a certain technical adjustment.[29] That clause, however, applies to "obligations issued on a discount basis." Treasury bills (which have maturities of a year or less) are sold on a discount basis. That means an investor buys a bill for less than its face value (i.e., at a discount). The difference between the price paid and the face value paid at the maturity date serves as the interest payment, thus avoiding the need to pay interest separately.[30]

If Treasury created a debt security not issued on a discount basis, the bond's face amount might not be set for debt limit purposes under 31 U.S.C. §3101(b) using its original issue price.

Inefficient Strategies Are Not Necessarily Illegal

The debt limit (31 U.S.C. §3101(b) as amended), as noted above, restricts the total face value of debt obligations outstanding. This sets a clearly defined constraint on Treasury's debt management operations.

The present value of an asset is calculated by dividing each part of a cash flow by a discount factor (which is one plus a discount rate). If the discount rate equals the market rate of interest, then the face value of a bond would equal the present value of the payments of interest and principal over time.[31] In that case, a limit on total outstanding face value may be a reasonable proxy for debt service costs over time. Changing interest rates and other factors, of course, may raise or lower the total cost of debt service over time, which is the more relevant macroeconomic

[27] Joseph Fishkin, "The Fourteenth Amendment Option(s) on the Debt Ceiling: A Quick Primer," Balkanization blog, May 11, 2023, https://balkin.blogspot.com/2023/05/fourteenth-amendment-options-primer.html.

[28] Bradford DeLong, "Print the Perpetual (Consol) Bond," blog post, May 6, 2023, https://braddelong.substack.com/p/print-the-perpetual-consol-bond.

[29] Neil H. Buchanan and Michael C. Dorf, "A Debt is a Debt is a Debt: Exotic Bonds are No More Legal than Jumbo Coins or Refusing to Pay Our Obligations," *Verdict Justia*, May 9, 2023, https://verdict.justia.com/2023/05/09/a-debt-is-a-debt-is-a-debt.

[30] Law Insider, "Discount Basis Definition," https://www.lawinsider.com/dictionary/discount-basis.

[31] If one judged that the market interest rate did not reflect some risks, the appropriate social discount rate might differ.

variable for evaluating debt sustainability.[32] Thus, the debt limit is constructed for administrative clarity rather than macroeconomic assessment.

The perpetual bond proposals to ease debt limit restrictions would widen the divergence between the total face value of debt and the overall cost of debt service over time. For a premium bond, the coupon rate would be a multiple of the market rate of interest, thus breaking the approximate link between the face value of a bond and the present value of its associated cash flows.

Treasury might have the administrative flexibility to offer nonstandard types of bonds, but would have strong reasons for not doing so. Treasury securities are sold on terms specified in the U.S. Department of the Treasury's Uniform Offering Circular (UOC) rather than through documents resembling corporate bond contracts.[33] Using circulars offers the Treasury flexibility in changing how it structures and sells debt securities, particularly because circulars need not proceed through a federal rulemaking process. Treasury modifies those circulars infrequently because it seeks to issue Treasury bills and notes on a "regular and predictable" schedule to reduce uncertainty about the supply of securities and their terms, which reduces debt service costs.[34]

Rational investors care about more than advertised cash flows. The resort to a "workaround" designed to bypass congressional action in order to meet government obligations may signal to investors that the government would be less than fully willing to meet its obligations through normal channels. Nineteenth century investors were accustomed to figuring out whether they were willing to pay a premium over face value or a discount to face value of a bond. Sixteenth century Dutch officials found selling annuities easier than raising taxes. Although 21st century fixed-income investors would have no difficulty in the simple arithmetic of valuing bonds with low face values and high coupons or perpetual annuities, they might be reluctant to depart from the more transparent auction procedures used over the past 100 years, in which interest rates are set by competitive bidding for familiar bills, notes, and bonds.

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Acknowledgments

Sean Stiff and Ken Garbade are thanked for their useful comments.

[32] The paths of future revenues and noninterest outlays also matter.

[33] U.S. Treasury, *Uniform Offering Circular*, https://www.treasurydirect.gov/instit/statreg/auctreg/CFR-2014-title31-vol2-part356.pdf. In earlier years, specific circulars set terms for Treasury securities.

[34] Kenneth D. Garbade, "The Emergence of 'Regular and Predictable' as a Treasury Debt Management Strategy," *Economic Policy Review*, Federal Reserve Bank of New York, vol. 13, no. 1 (March 2007), https://www.newyorkfed.org/medialibrary/media/research/epr/07v13n1/0703garb.pdf.

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