The Net Worth of the U.S. Federal Government, 1784-1802

By Farley Grubb*

The War for Independence (1775-1783) left the federal government deeply in debt. The spoils from winning that war also gave it an empire of land. So, post-1783 was the government solvent—or at what point did it become solvent? While this question has not been addressed before, knowing the answer is important for understanding how the method for funding the national debt was chosen, how the adoption of the new Constitution in 1789 affected public finance, and how this new untried government—that was deeply in debt and had been in default on this debt for half a decade after independence—could garner an excellent credit rating by the early 1790s. Evidence is gathered on the government's liabilities and assets to estimate its net worth and so answer these questions.

I. Liabilities

Figure 1 shows the government's debt position from 1784 to 1802. During the revolution the government issued two types of liabilities, interest-bearing and non-interest-bearing debt. Official statistics exist only for the government's interest-bearing debt after 1791. The rest of the data in Figure 1 was estimated (Grubb, 2005). By 1780 a total of 200 million dollars in non-interest-bearing debt—Continental dollars (paper money)—had been issued, none after 1779, and by 1782 a total of 39 million dollars of interest-bearing debt, mostly at 6 percent annual interest, had been issued. These debts are assumed to be the government's only liabilities.

Pre-1789 the federal government (Congress) did not have the constitutional power to directly tax the public. Instead, Congress requested monies from state governments

who in turn taxed their citizens to raise the monies requested. Congress asked the states to accept its Continental dollars for payment of state taxes which could then be used to meet the states' money obligations to Congress. Continental dollars so paid into the U.S. Treasury were burnt. Desperate for specie, Congress also allowed the states after 1781 to meet their money obligations to Congress by paying one dollar in specie in place of 40 Continental dollars—temporarily defaulting on the face value of its non-interest-bearing debt. Through the above payment/retirement mechanism the outstanding face value of the non-interest-bearing debt fell from 200 million dollars in 1780 to 81 million by 1790 (Jonathan Elliot, 1843-1844; Grubb, 2005).

Congress acquired the constitutional power to directly tax the public in 1789 and so no longer requisitioned monies from the states. With this new power, Congress could have directly accepted Continental dollars at face value in payment of the taxes it levied on the public, effectively un-defaulting this debt. Instead, Congress decided not to accept its Continental dollars in payment of its taxes. The non-interest-bearing debt still outstanding in 1790 had to be swapped for interest-bearing debt at a rate of 100 Continental dollars (face value) for 1 dollar of interest-bearing debt. In effect, Congress made the default on the Continental dollar irrevocably permanent after 1790.

Pre-1789, having no power to directly tax the public and receiving insufficient sums from the states, Congress paid no principal or interest on its domestic interest-bearing debt and paid no principal on its foreign interest-bearing debt. In effect, the government was in default on most of its interest-bearing debt between 1782 and 1790. The accumulation of interest arrears caused the face value of this debt to grow from 39 million dollars in 1782 to 55 million by 1790. In 1790 the federal government also

assumed the interest-bearing war debts of the states, about 20 million dollars—an action that was not unexpected (Grubb, 2005).

In 1790, with its new power to directly tax the public, Congress could and did un-default its interest-bearing debt. It did so by turning all of these debts into callable perpetuities and making regular interest payments using the government's new tariff revenues. Between 1791 and 1802, the government paid interest but, for the most part, no principal on its interest-bearing debt, thus holding the face value of its debt roughly constant at between 77 and 83 million dollars.[1]

II. Assets

The Treaty of Paris that recognized U.S. sovereign independence also ceded to the U.S. British claims to the area between the colonies in rebellion and the Mississippi river that were south of the Great Lakes and north of Florida. Initially, individual states claimed these lands, but one by one they ceded their claims to the federal government. Adjusting for overlapping claims and lands retained or already alienated, a total of 222 million acres were ceded by the states to the federal government. Subtracting lands already sold by the federal government, the land owned by the federal government that was salable amounted to 106 million acres in 1784, growing to 164 million acres by 1787, where it more or less stayed until growing to 220 million acres in 1802 with the completion of the land cession by Georgia. In 1803, the Louisiana Purchase materially changed the borders of the United States and the government's land asset position—explaining why this study stops in 1802 (Thomas Donaldson, 1884; Grubb, 2005).

Estimating the value of the government's land is difficult. Congress sold these lands only in large chunks (minimum lots of 640 acres) and priced them at one dollar an

acre in 1785, raising it to two dollar an acre in 1796—where it stayed until 1820. These prices seem too high given that land sales were not brisk. The only large land sale in this period, large enough to belie concerns about the heterogeneity in land value and the representativeness of the sample, was the transfer of the Erie Triangle to Pennsylvania in 1792 for an average of $0.75 an acre [202,187 acres for $151,640]. This transfer also generated a tangible price that investors in federal government bonds could see and use to gauge the government's net worth. This price per acre, inflation adjusted to other years, is used here as the best-guess estimate of the average value of an acre of government land. For heuristic purposes a low estimate of $0.30 per acre will also be used. This price does not come from any actual land sale, but was the price Alexander Hamilton as Secretary of the Treasury proposed to Congress in 1790 for swapping land for debt (Donaldson, 1884; Grubb, 2005).

Using the $0.75 per acre estimate, the value of federal government land rose from 86 million dollars in 1784, to 120 million by 1787, to 171 million by 1795, and finally to 215 million by 1802. Land is assumed to be the government's only potentially saleable tangible asset.

III. Net Worth

Figure 2 shows the government's net worth (assets minus liabilities) by year from 1784 through 1802—including the expected and actual assumption of the state war debts. Before 1790 the federal government was insolvent. It did not have enough assets nor did it have enough yearly revenue to un-default all its debts at their face value—either by swapping assets for debt or by converting all its debts into perpetuities and making annual interest payments.

Using the $0.75 per acre estimate, the federal government was solvent pre-1790 only with regard to its interest-bearing debt. As such, the assumption of state war debts was not the problem. Insolvency was driven by the overhang of Continental dollars. Once Congress made the default on outstanding Continental dollars irrevocably permanent in 1790—removing it from the balance sheet—the federal government became substantially solvent for the rest of the period. Its net worth rose from 44 million dollar in 1791 to 100 million by 1796 and finally to 138 million by 1802. Given this net worth position, the government's excellent credit rating first achieved in the early 1790s is not surprising.

Alternatively, using Hamilton's proposed price of $0.30 an acre, the federal government was never solvent before 1802. Under this Hamiltonian alternative, Congress' assumption of state war debts and refusal to un-default outstanding Continental dollars in 1790 (also advocated by Hamilton) were reckless financial acts. The first pushed the government deeper into insolvency and the second was not enough to overcome this insolvent position—incurring a reputation cost for defaulting in exchange for little benefit. Given its net worth position under this Hamiltonian alternative, the government's excellent credit rating first achieved in the early 1790s is hard to explain.

IV. Discussion

To achieve a solvent net worth position the government had to permanently and irrevocably default on its outstanding Continental dollars—which it finally did in 1790. How could it do so with impunity and why did it wait so long to do so? First, it wasn't until Congress adopted the new Constitution in 1789 that the power to issue non-interest-bearing debt (paper money) was constitutionally taken away from it. At the 1787

Constitutional Convention the founding fathers explicitly voted to remove granting that particular power to Congress in the new Constitution (Farley Grubb, 2006). Defaulting on a class of debt that the government was constitutionally disbarred from ever issuing again mitigated the cost of such a default.

Second, the government had to distinguish in the marketplace between un-defaulting its interest-bearing debt and not un-defaulting its non-interest-bearing debt. It could do this by refusing to pay principal on any debt, namely turning all interest-bearing debts into callable perpetuities—which it did in 1790. Meeting regular interest payments on this debt out of its new tariff revenues raised the tradable value of this debt to its face value in the marketplace. With a policy of paying only interest and no principal on debt, nothing had to be paid on the non-interest-bearing debt because it paid no interest. Distinguishing between non-interest-bearing and interest-bearing debt in this way allowed the government to maintain the default on its non-interest-bearing debt with impunity. But doing so also meant that Congress had to stop considering plans to directly swap land for debt, because such swaps would be payments of principal. Hamilton may have intentionally proposed an excessively low price for swapping government land for debt ($0.30 per acre) in 1790 in order to dissuade Congress from such schemes, thus preserving a meaningful marketplace distinction between un-defaulting the interest-bearing debt and not un-defaulting the non-interest-bearing debt.

In 1790 Congress also committed its land assets to backing its interest-bearing debt. The August 4, 1790 Funding Act (United States Congress, *Register of Debates in Congress (House of Representatives)*, 2: 2311) stated, "That the proceeds of the sales…of lands in the western territory, now belonging, or that may hereafter belong, to the united

states, shall be…appropriated towards sinking or discharging the debts…whereof the United States now are…holden, and shall be applied solely to that use, until the said debts shall be fully satisfied." The government's positive net worth position after 1790 along with committing its land assets to back its debt position may help explain how the government could garner an excellent credit rating by the early 1790s despite its prior history of default and its massive debt position.[2]

V. Conclusion

Not only was the United States born wealthy and born literate (Alice Hanson Jones, 1980; Farley Grubb, 1990), but its post-Constitution federal government was born solvent. The new Constitution allowed the government to permanently default on the Continental dollar with impunity and thus reap the financial benefits of the spoils of war—an interest-bearing debt position fully backed by assets.

REFERENCES

Donaldson, Thomas. 1884. *The Public Domain*. Washington, D.C.: U.S. Government Printing Office.

Jonathan Elliot. 1843-1844. "Funding System of the United States and Great Britain." *House Document No. 15* (Vol. II. Executive Documents), 28th Congress, 1st Session.

Grubb, Farley. 1990. "Growth of Literacy in Colonial America: Longitudinal Patterns, Economic Models, and the Direction of Future Research." *Social Science History*, 14(4): 451-482.

Grubb, Farley. 2005. "The Net Asset Position of the U.S. National Government, 1784-1802: Hamilton's Blessing or the Spoils of War?" NBER Working Paper #11868. http://www.nber.org/papers/w11868 .

Grubb, Farley. 2006. "The US Constitution and Monetary Powers: An Analysis of the 1787 Constitutional Convention and the Constitutional Transformation of the US Monetary System." *Financial History Review*, 13(1): 43-71.

Jones, Alice Hanson. 1980. *Wealth of a Nation to Be*. New York: Columbia University Press.

United States Congress. 1825-1837. *Register of Debates in Congress (House of Representatives). 5 vols.* Washington, D.C.: Gales & Seaton.

Figure 1. The Federal Government's Interest and Non-Interest-Bearing Debt, 1784-1802

Source: Grubb (2005).

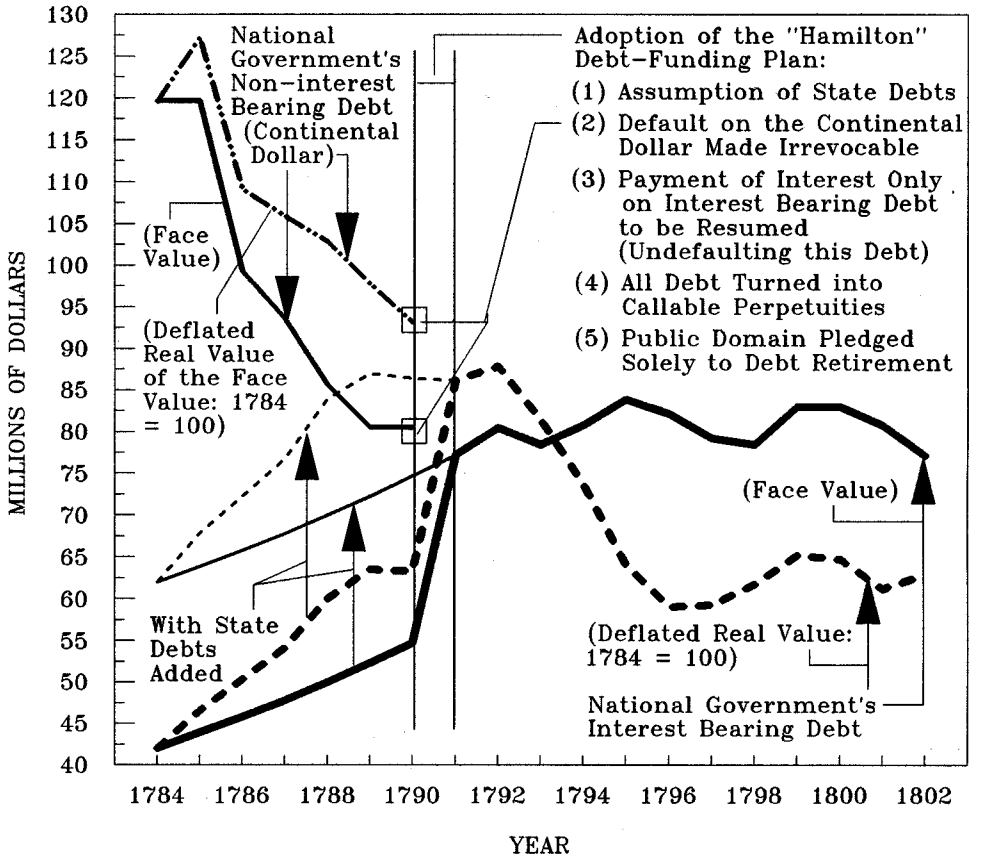
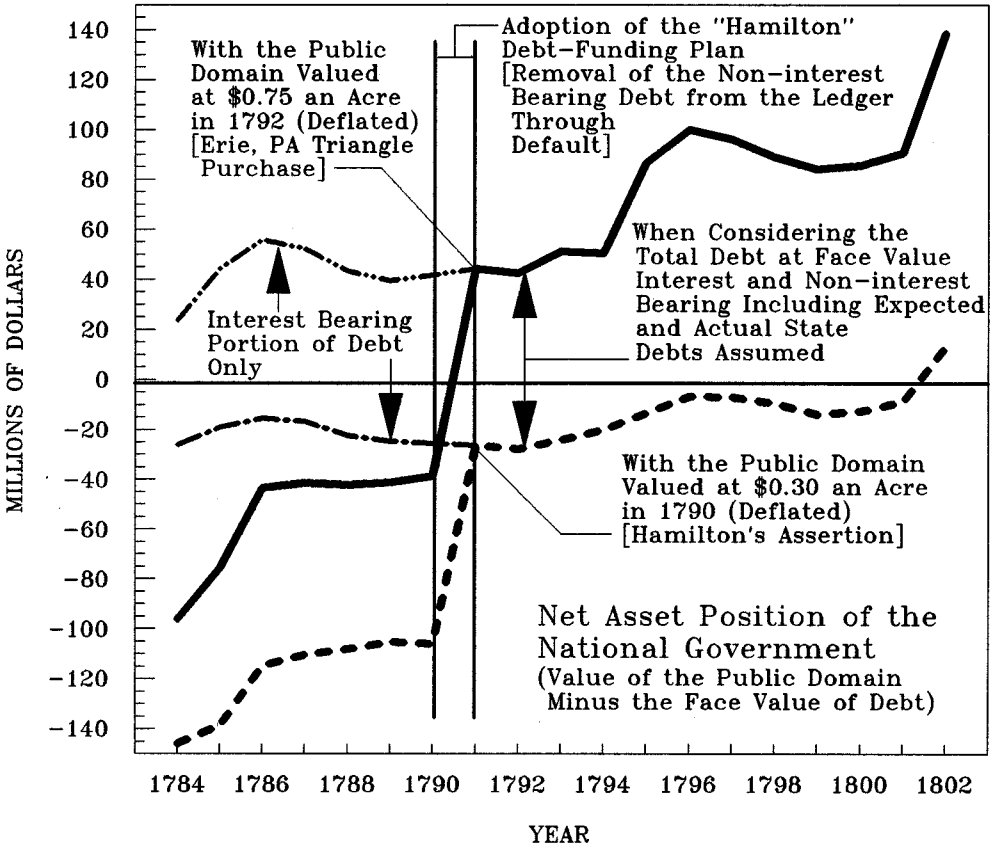

MILLIONS OF DOLLARS
130
125
120
115
110
105
100
95
90
85
80
75
70
65
60
55
50
45
40
1784
1786
1788
1790
1792
1794
1796
1798
1800
1802
YEAR
National Government's Non-interest Bearing Debt (Continental Dollar)
(Face Value)
(Deflated Real Value of the Face Value: 1784 = 100)
Adoption of the "Hamilton" Debt-Funding Plan:
(1) Assumption of State Debts
(2) Default on the Continental Dollar Made Irrevocable
(3) Payment of Interest Only on Interest Bearing Debt to be Resumed (Undefaulting this Debt)
(4) All Debt Turned into Callable Perpetuities
(5) Public Domain Pledged Solely to Debt Retirement
(Face Value)
With State Debts Added
(Deflated Real Value: 1784 = 100)
National Government's Interest Bearing Debt

Figure 2. The Federal Government's Net Worth, 1784-1802

Source: Grubb (2005).


Adoption of the "Hamilton" Debt-Funding Plan [Removal of the Non-interest Bearing Debt from the Ledger Through Default]
With the Public Domain Valued at $0.75 an Acre in 1792 (Deflated) [Erie, PA Triangle Purchase]
When Considering the Total Debt at Face Value Interest and Non-interest Bearing Including Expected and Actual State Debts Assumed
Interest Bearing Portion of Debt Only
With the Public Domain Valued at $0.30 an Acre in 1790 (Deflated) [Hamilton's Assertion]
Net Asset Position of the National Government
(Value of the Public Domain Minus the Face Value of Debt)
MILLIONS OF DOLLARS
140
120
100
80
60
40
20
0
-20
-40
-60
-80
-100
-120
-140
1784
1786
1788
1790
1792
1794
1796
1798
1800
1802
YEAR

Footnotes

* Department of Economics, University of Delaware, Newark, DE 19716, and NBER (e-mail: *grubbf@lerner.udel.edu*). See Farley Grubb (2005) for an expanded version.

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[1] Figure 1 also shows that deflation contributed to the government's pre-1790 debt crisis and inflation reduced the real value of federal liabilities post-1790.

[2] The actual revenue from land sales was not expected to meet current interest payments or pay down debt principal anytime soon. Yearly interest payments were expected to be met out of current tariff revenues. What concerned creditors was that current tax revenues were highly constrained, unpredictably variable, and barely enough to meet current government expenses. They could not be counted on to cover yearly interest payments. As such, it was the potential sale of land assets, and the possession of enough land assets, to cover the possibility of tax revenue short-falls that mattered to creditors (Grubb, 2005). Thus, land backed debt—a positive net worth position—can explain the government's excellent credit rating post-1790.