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

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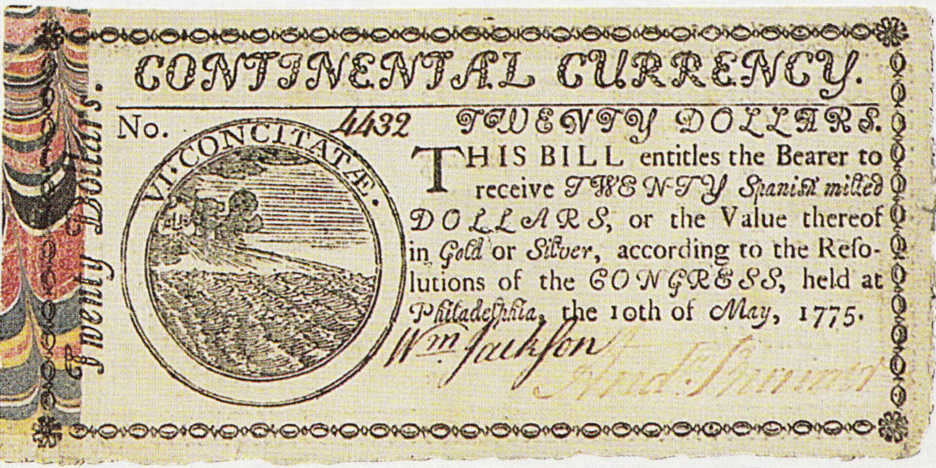
"I know no subject that is so little understood or has been less profoundly examined by the legislative Characters of America, than that of Finance…" William Bingham, a director of the *Bank of North America*, to Alexander Hamilton, U.S. Treasury Secretary, November 25, 1789.

INTRODUCTION:

The War for American Independence (1775-1783) left the U.S. 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 when did it become solvent? Did winning that war in effect pay for the war?

Knowing the answer to this question 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 by year between 1784 and 1802. The results indicate that the U.S. Federal Government was solvent, but only after it made the default on its non-interest-bearing debt—the Continental Dollar—irrevocably permanent.


CONTINENTAL CURRENCY.
No. 4432
TWENTY DOLLARS.
VI. CONCITATÆ.
THIS BILL entitles the Bearer to receive TWENTY Spanish milled DOLLARS, or the Value thereof in Gold or Silver, according to the Resolutions of the CONGRESS, held at Philadelphia, the 10th of May, 1775.
Wm. Jackson
Twenty Dollars.

400 DOLLARS Numb. 4863

THE UNITED STATES of AMERICA acknowledge the Receipt of FOUR Hundred Dollars from which they promise to pay to the said or Bearer, on the Day of 1784 with Interest annually, at the Rate of Six per Cent. per Annum, agreeable to a Resolution of the United States, passed the Third Day of February, 1779. Witness my Hand this Day of Anno Domini 1781.

F. Hopkinson

Counter-signed.

Treasurer of Loans

FOUR HUNDRED DOLLARS

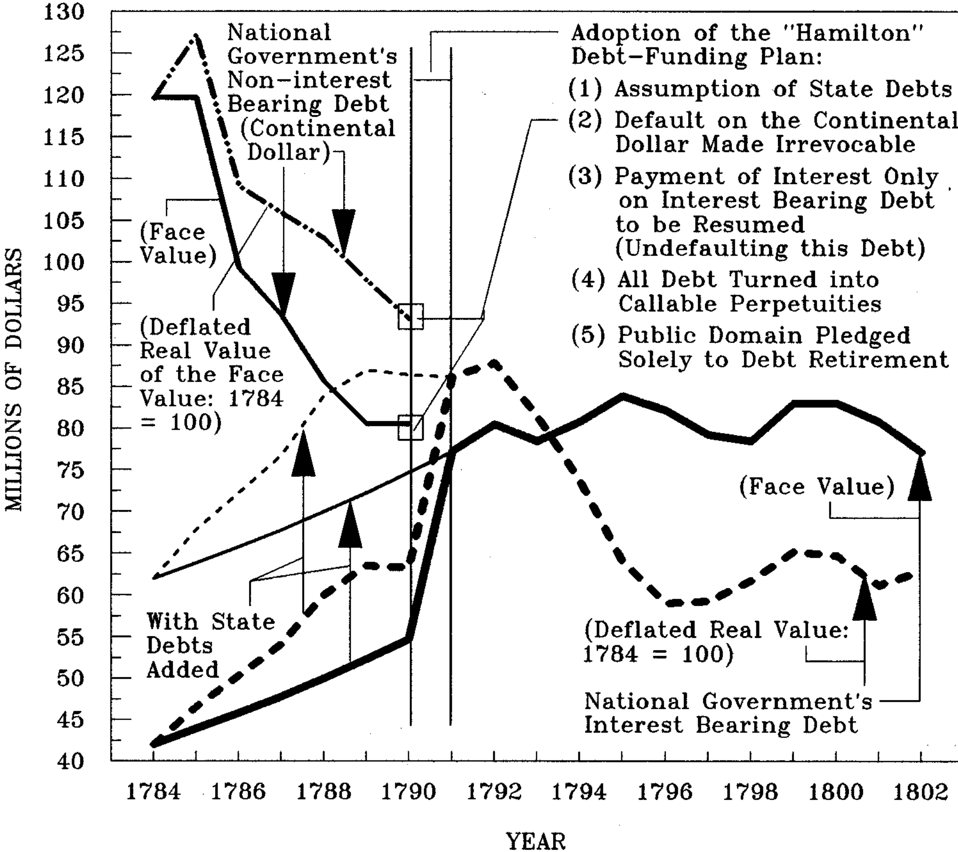
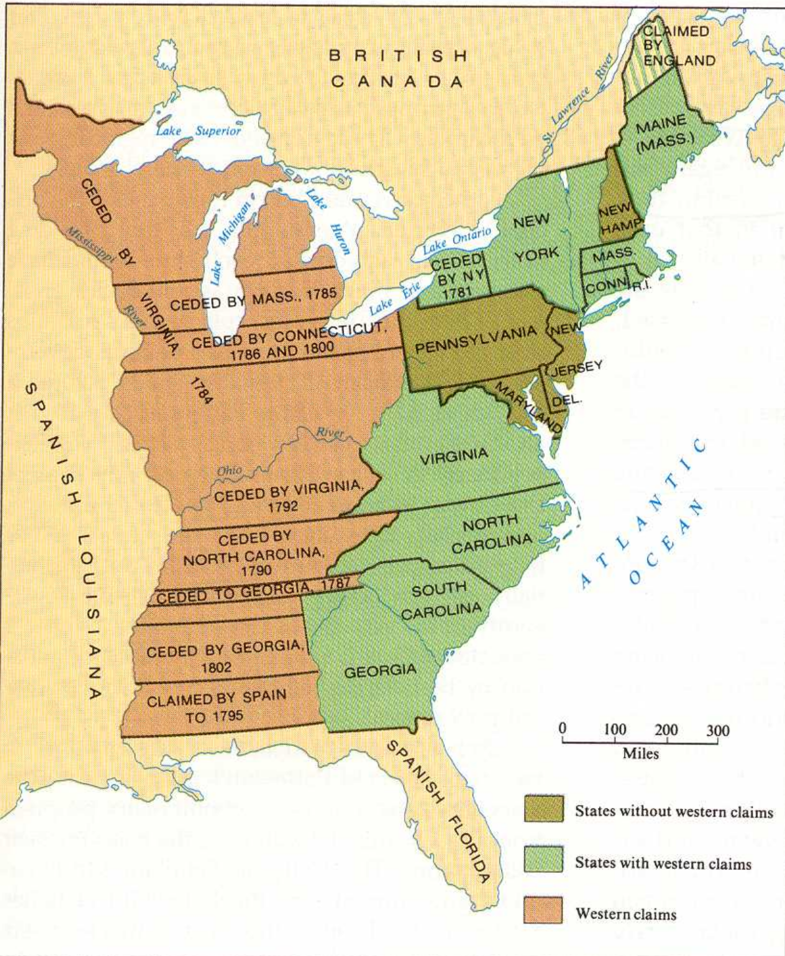

National Government's Non-interest Bearing Debt (Continental Dollar)
Adoption of the "Hamilton" Debt-Funding Plan:
(1) Assumption of State Debts
(2) Default on the Continental Dollar Made Irrevocable
(3) Payment of Interest Only on Interest Bearing Debt to be Resumed (Undefaulting this Debt)
(4) All Debt Turned into Callable Perpetuities
(5) Public Domain Pledged Solely to Debt Retirement
(Face Value)
(Deflated Real Value of the Face Value: 1784 = 100)
With State Debts Added
(Face Value)
(Deflated Real Value: 1784 = 100)
National Government's Interest Bearing Debt
MILLIONS OF DOLLARS
YEAR
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

Figure 1
The U.S. National Government's Debt Position, 1784-1802



MAP 7.3 THE CONFEDERATION AND WESTERN LAND CLAIMS

The Confederation government devised a brilliantly successful solution to the conflicting land claims of the several states. Beginning in 1781, the states ceded their claims to the Confederation, thus ending a generation of legal disputes and violent conflicts among rival groups of settlers. By 1802, a vast "national domain" stretched from the Appalachian Mountains to the Mississippi River and was open to settlement by citizens of all the states.

Figure 2
Land Assets Ceded to the U.S. National Government, 1784-1802

Table 1 *Land Cessions to the Federal Government by the 13 Original States, 1781-1802*

Year	State	Acres	Notes
1781	New York	202,187	jointly claimed by Massachusetts
1784	Virginia	229,917,493	some acres jointly claimed by other states, excludes Kentucky, and includes lands reserved in Ohio to Virginia
1785	Massachusetts	34,560,000	jointly claimed by other states
1786	Connecticut	25,600,000	jointly claimed by other states, but with 3,800,000 of Ohio held back as a reserve
1787	South Carolina	3,136,000	solely claimed
1790	North Carolina	26,679,600	mostly Tennessee which had already been alienated and so is typically not counted
1802	Georgia	56,689,920	solely claimed
Gross Total		376,785,200	simple sum
Net Total Ceded To the National Government		221,989,787	minus overlapping claims, the North Carolina cession, and Virginia and Connecticut reserve lands in Ohio

Sources: Map 1; Donaldson (1884, 11); Gates (1968, 57); Grubb (2007b, 146-7); Hibbard (1939, 13); *Historical Statistics* (1975, 1: 428); *JCC* (19: 208-13; 26: 110-7; 28: 271-5, 280-4, 382-7, 408-10; 30: 159-60, 307-8, 310-11; 31: 654-5; 33: 466-77; 34: 320-6).

Notes: The *Net Total* is not consistently estimated across the sources see Grubb (2007b, 147).

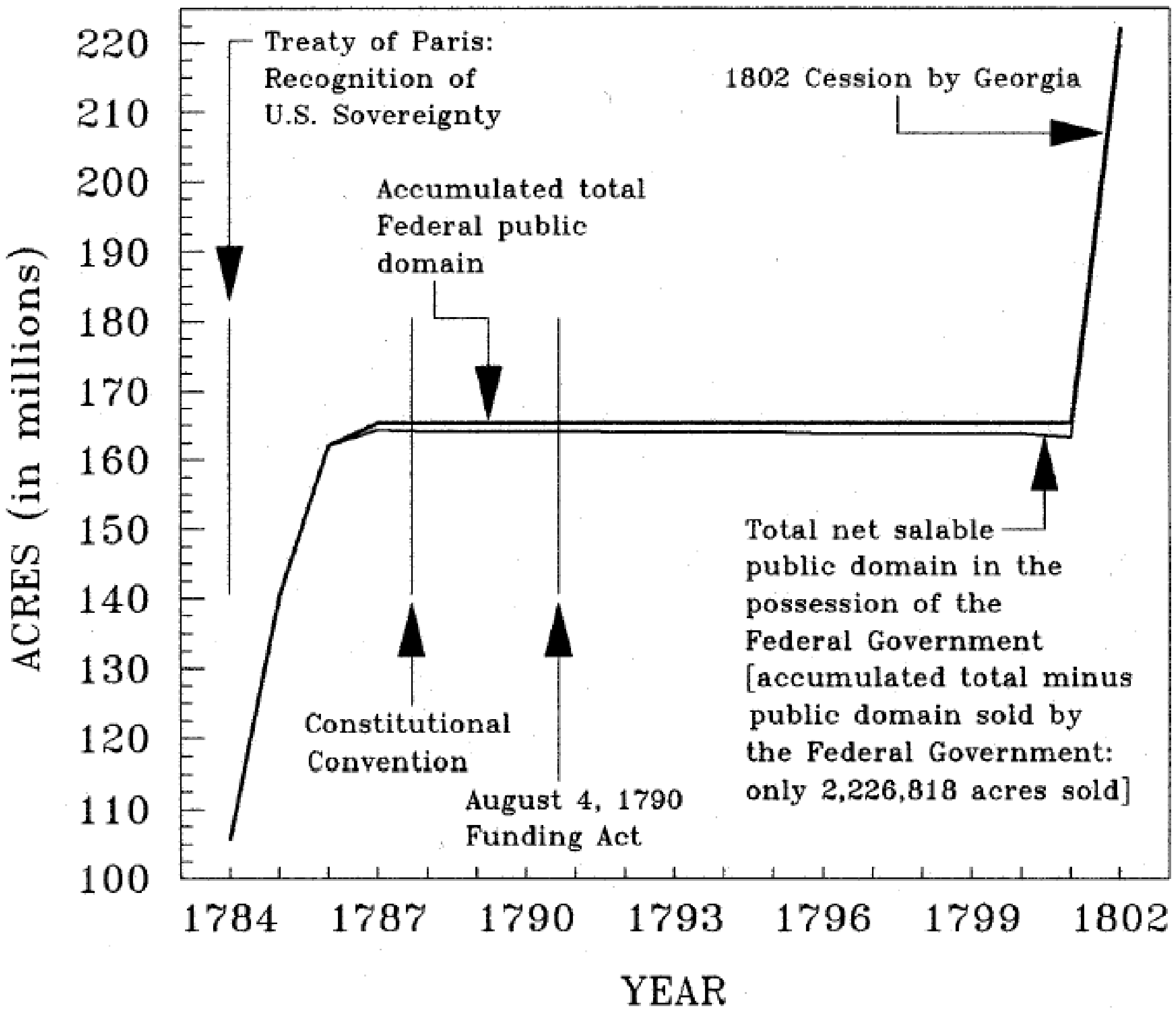


Figure 1 *Total and Net (Total minus Sales) Accumulated Salable Acres Possessed by the Federal Government*

Source: Derived from Grubb (2007b, 146-7).

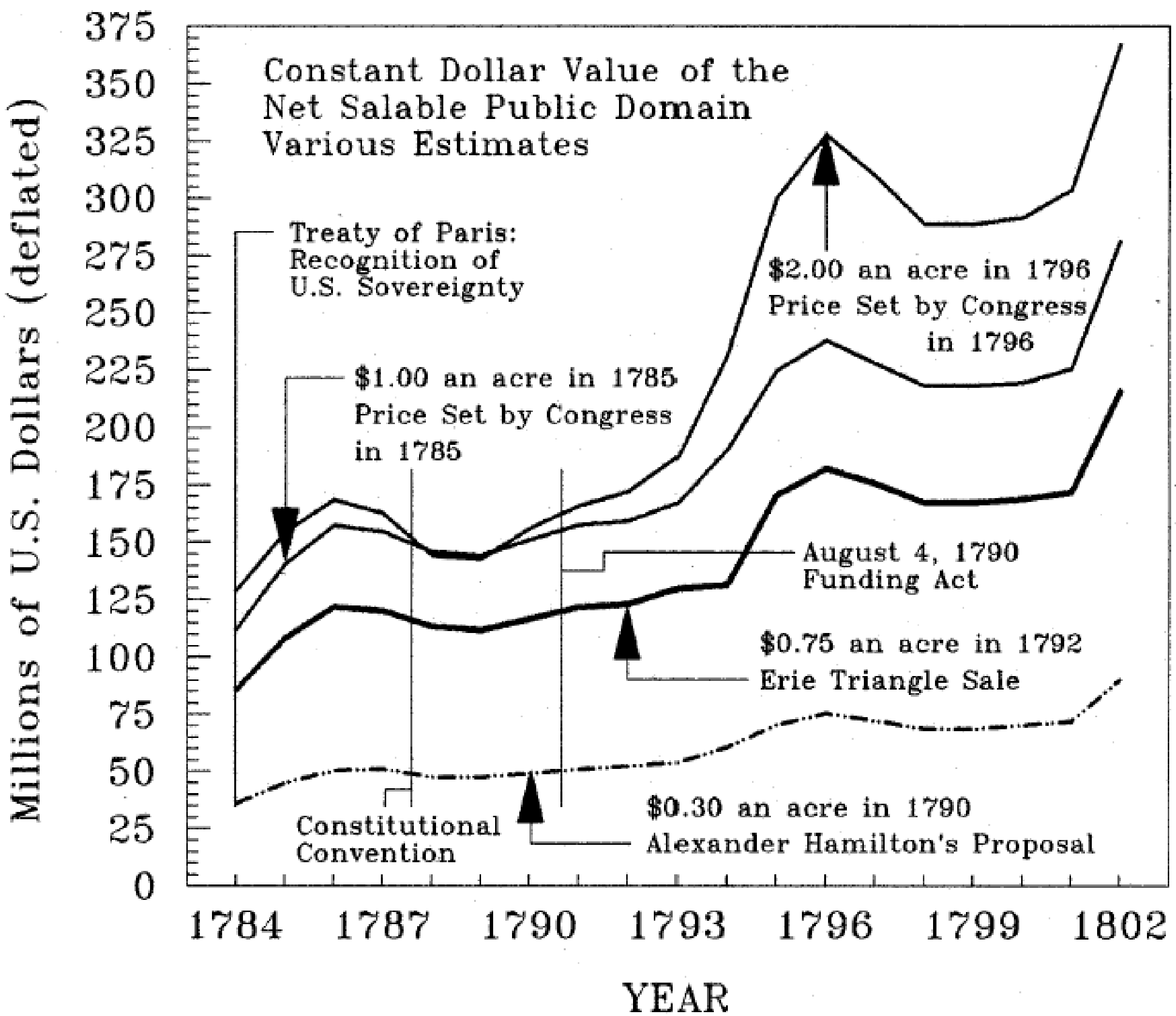
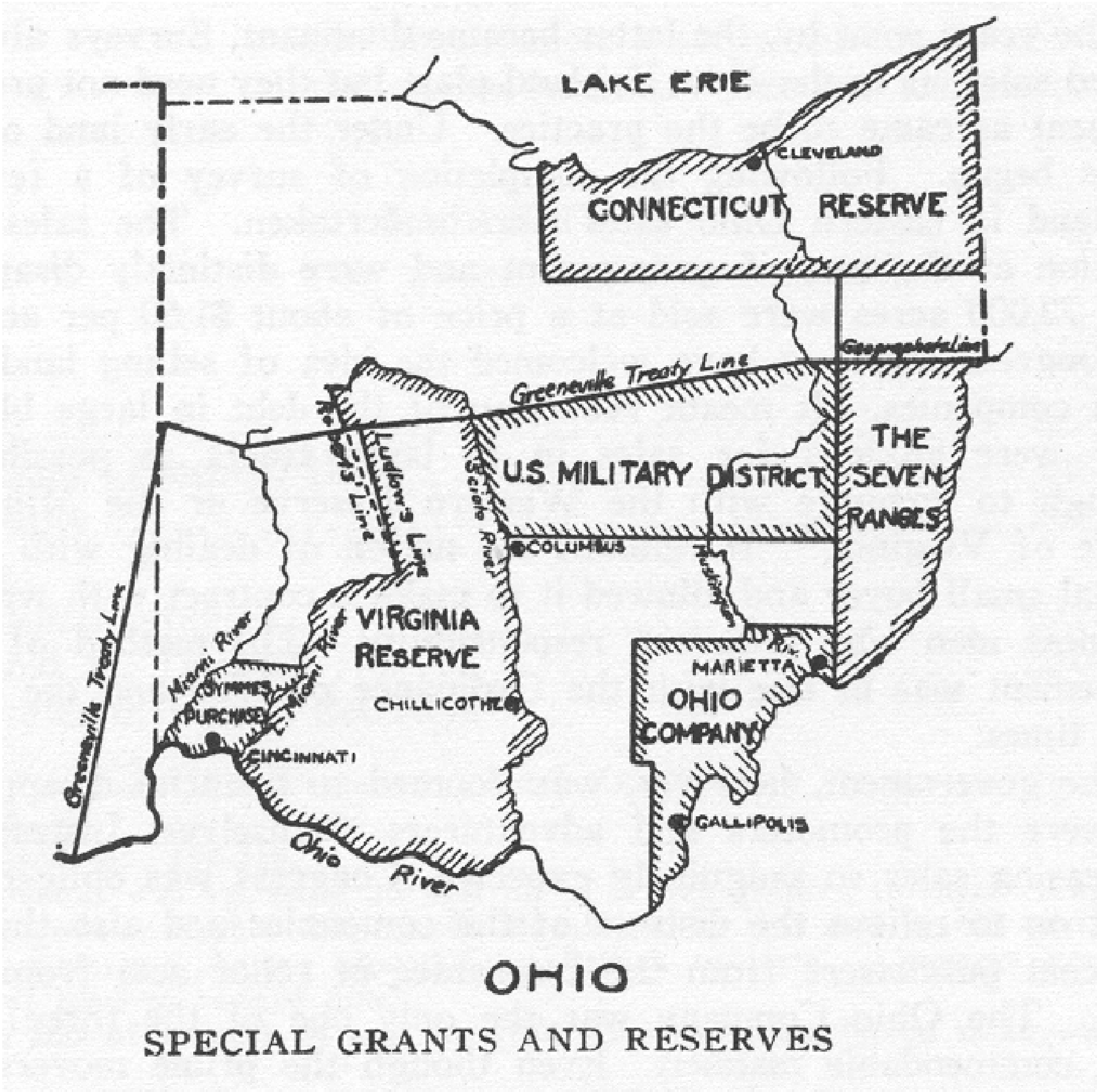


Figure 2 *Constant Dollar Value of Salable Federal Government Land Assets, 1784-1802: Various Estimates*

Source: Derived from Grubb (2007b, 148-51).

Notes: The four estimates here all take the total acres of salable public domain remaining in the Federal Government's possession each year presented in Figure 1 and multiplies that amount by the nominal price per acre for the year that that nominal price was mentioned. From the year when the nominal price was stated, each estimate then inflation-adjusts the price to other years using the Bezanson et al. (1936, 392-3) price index renormalized to the year the nominal price was given.

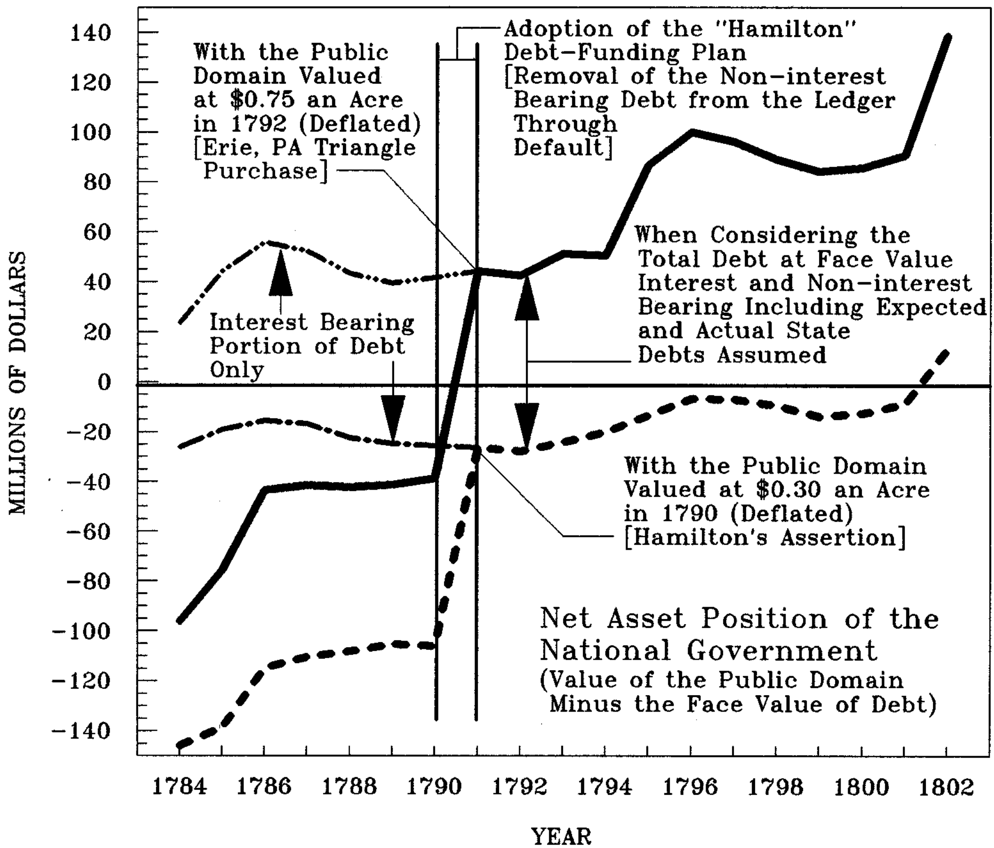


Map 2 *Example of Lands Not Ceded to the Federal Government But Retained by the States, Plus Some Early Prospective Land Sales, Grants, and Reserves, in the Ohio Territory*

Source: Hibbard (1939, 53). See a similar map in Sakolski (1932, 100).

Aug. 4, 1790 Funding Act

That the proceeds of the sales which shall be made of lands in the western territory, now belonging, or that may hereafter belong, to the united states, shall be, and are hereby appropriated towards sinking or discharging the debts, for the payment whereof the United States now are, by virtue of this act may be, holden, and shall be applied solely to that use, until the said debts shall be fully satisfied. (United States Congress, *The Debates and Proceedings in the Congress of the United States*, 2: 2251)



MILLIONS OF DOLLARS
140
120
100
80
60
40
20
0
−20
−40
−60
−80
−100
−120
−140
With the Public Domain Valued at $0.75 an Acre in 1792 (Deflated) [Erie, PA Triangle Purchase]
Adoption of the "Hamilton" Debt−Funding Plan [Removal of the Non−interest Bearing Debt from the Ledger Through Default]
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)
1784
1786
1788
1790
1792
1794
1796
1798
1800
1802
YEAR

Figure 3
The Net Asset Position of the U.S. National Government, 1784-1802

Conclusions

In the aftermath of the War for Independence, the U.S. National Government would be solvent only if it maintained the default on its non-interest-bearing debt (the Continental Dollar) and make that default irrevocable—which it did in 1791. The excellent credit rating U.S. National Government debt garnered in Europe by the mid-1790s may have been in part due to **(1)** its positive net asset position attained after 1791. And **(2)** to the fact that in order to default on its non-interest-bearing debt and not ruin its creditworthiness it had to credibly distinguish, legally and in the marketplace, between its interest-bearing and its non-interesting-bearing debt.

The necessity of making this distinction helps explain the structure of the debt-funding portion of the U.S. financial revolution. Namely, that only interest and no principal would be paid on its debts—turning all its debts into callable perpetuities (the Continental Dollar paid no interest), curtailing direct swaps of land assets for debt, and constitutionally prohibiting the U.S. National Government from issuing new non-interest-bearing debt after 1789.

Do Government Assets Matter?

Budget Constraint Model Connecting Government Spending Flows to Asset Stocks:

$$\mathbf{T}_i\,[(t * \mathbf{I}_i) + \mathbf{O}_i] \;-\; \mathbf{G}_i\,[((1 - k_i) * \mathbf{R}_g * \mathbf{D}_i) + \mathbf{E}_i] \;=\; \Delta(\mathbf{A}_i - \mathbf{D}_i)$$

(tax receipts – spending outlays = change in net asset position)

A Model of U.S. Government Creditworthiness circa 1790s:

$$(\mathbf{R}_g - \mathbf{R}_m) \;=\; f\,[(\mathbf{A}_i - \mathbf{D}_i);\ \mathrm{Ex}(\mathbf{T}_{i+n} - \mathbf{G}_{i+n});\ {}_{i=1}\sum^{i-n}(\boldsymbol{a}_i * \boldsymbol{k}_i)]$$

(loan risk premium is a function of the government's net asset position, expected budget surpluses, and past default habits)

This last scenario fits the United States in the late 1780s as James Madison explained it to Thomas Jefferson on October 24, 1787,

> **Such is the state & prospect of our fiscal department that any new loan however small, that should now be made, would probably subject us to the reproach of premeditated deception. The balance of Mr. Adams' last loan will be wanted for the interest due in Holland, and with all the income here, will, it is feared, not save our credit in Europe from further wounds. It may well be doubted whether the present Govt. can be kept alive thro' the ensuing year, or until the new one may take its place. (Rutland, 1977, v. 10, p. 218; Swanson, 1963, p. 36)**

Were Land Assets Viewed as Backing the National Government's Debt?

In the *Ordinance of 1784* Congress pledged the proceeds of the sale of public land solely to paying off the National Debt (Hibbard, 1939, pp. 4-5). Congress reaffirmed this pledge in the August 4, 1790 Funding Act (United States Congress, *Register of Debates in Congress (House of Representatives)*, v. 2, p. 2311),

> That the proceeds of the sales which shall be made of lands in the western territory, now belonging, or that may hereafter belong, to the united states, shall be, and are hereby appropriated towards sinking or discharging the debts, for the payment whereof the United States now are, by virtue of this act may be, holden, and shall be applied solely to that use, until the said debts shall be fully satisfied.

Financiers also understood the importance of a pledge of security by the government to the backing of its debts. William Bingham, a director of the *Bank of North America*, in a letter to Alexander Hamilton, U.S. Treasury Secretary, on November 25, 1789 explained,

> The Credit of the Funds [the National Debt] must essentially depend on the permanent Nature of the Security; & if that is not to be relied on, they will fall in value, the disadvantage of which, Government will experience by the payment of an exorbitant Interest, whenever it is compelled to anticipate its revenues, by the Negotiation of domestic Loans. … If we offer a less Substantial Security, we must Submit to a consequent Depreciation in the Value of our Funds…. A Government should therefore pledge every security it can offer, to engage the Confidence of the public Creditors, which, if once impaired, the pernicious Effects can be felt in all its future Dealings. (Syrett, 1962, v. 5, pp. 540-541)

And Hamilton in his January 1790 "Report on Public Credit" said,

> It is presumable, that no country will be able to borrow of foreigners upon better terms, than the United States, because none can, perhaps, afford so good security. Our situation exposes us less, than that of any other nation, to those casualties, which are the chief causes of expense; our incumbrances, in proportion to our real means, are less, though these cannot immediately be brought so readily into action, and our progress in resources from the early state of the country, and the immense tracts of unsettled territory, must necessarily exceed that of any other. The advantages of this situation have already engaged the attention of the European money-lenders… (Syrett, 1962, v. 6, p. 89)