Hamiltonian Principles of Public Finance as a Guide to Current U.S. Debt Dilemmas

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Abstract

As U.S. deficit-spending, public debt accumulation, and rates of fiat money-creation break historic records, traditional public finance remedies seem inapplicable or, to critics, even reckless. Both Keynesian-inspired calls for still faster rates of deficit spending ("stimulus") and Monetarist-inspired calls for still-faster rates of money creation seem less viable or justified and, might even be part of the problem. Now many economists worry that fiscal and monetary policy alike lack potency. Growing proportions of the public, politicians, and policymakers now seem anxious about the future of U.S. fiscal integrity, financial stability and economic prosperity.

New perspectives on present-day public finance dilemmas in America might be gained by examining earlier and seemingly similar episodes. Notably, in the 1790s, America's first Treasury Secretary, Alexander Hamilton, faced many of the same public finance dilemmas that officials face today. Post-Revolution America in the 1780s was an infant and nearly broke, as it strained under rampant deficit-spending, a burgeoning public debt, and a glut of paper money. Yet by the mid-1790s these problems were solved. Hamilton's programs put the U.S. on a solid financial footing that enabled it to achieve a robust and sustainable prosperity over the next century.

After a brief review of present-day dilemmas in American public finance, this paper proceeds to examine America's public-financial status around the time of its founding (1780s), recounts the unique principles and practices of what may be termed "Hamiltonian public finance" (during the 1790s), and concludes by suggesting how the principles might be applied again, but also, how contemporary democratic norms and institutions constitute major impediments.

Address: richard.salsman@duke.edu. Graduate student in Political Science, Duke University. Prepared for the meeting of the Midwest Political Science Association (Chicago, Illinois), April 14, 2012. Section 54 ("Politics and History"). Session Title: "Fiscal and Monetary Policy and the Formation of the Modern American State." My dissertation-in-progress analyzes the normative aspects of American public finance, a field in which Alexander Hamilton, main author of the Federalist Papers (1787-1788) and the nation's first Treasury Secretary (1789-1795), is a seminal figure. I thank Michael Munger, Geoffrey Brennan, Dick Sylla, Robert Wright, Lawrence White, and George Selgin for scholarship, insight, and advice on this topic.

I. Introduction

Soon after taking office in 2009, U.S. President Obama defended his newly-appointed Treasury Secretary, Timothy Geithner, from charges that his prior performance as President of the New York Federal Reserve (2003-2008) contributed to the financial crisis of 2008 or else did little to prevent it. The President said "we've got a big mess that we're having to clean up," and then set a goal "to make sure that we never put ourselves in this kind of position again." While expressing confidence in Mr. Geithner's abilities, Mr. Obama insisted that "there has never been a Secretary of the Treasury, except maybe Alexander Hamilton, after the Revolutionary War, who's had to deal with the multiplicity of issues that Secretary Geithner is having to deal with all at the same time," and added that Geithner, with his "intelligence and diligence," was "making all the right moves in terms of playing a bad hand."[1]

Although one can dispute whether Timothy Geithner and Alexander Hamilton trade at par when it comes to public finance acumen, it seems undeniable that upon assuming office – Hamilton as the first U.S. Treasury Secretary under George Washington, in 1789, and Geithner as the most recent Secretary, in 2009 – each man truly faced a "multiplicity of issues at the same time," and each arrived at the job having been dealt a "bad hand," in that private and public finances were in turmoil. Before examining the issues faced by Hamilton more than two centuries ago, we review those faced by Geithner over the past five years. In each case these U.S. Treasury Secretaries faced challenges on fiscal, monetary, and economic dimensions – and thus they ran the full gamut of public finance policy and controversy.

That Hamilton and his principles remain relevant to current debates about the modes and mores of public finance, and that the meaning of the man and his principles remain controversial, especially regarding the propriety and efficiency of a large public debt, is perhaps best illustrated by the counter-position of two recent titles: *Hamilton's Blessing* (Gordon 1997) and *Hamilton's Curse* (DiLorenzo 2008). America's first Treasury Secretary had once written in a letter that "a national debt, if it is not excessive, will be to us a national blessing."[2] Detractors among the advocates of smaller government

[1] Kevin Hechtkopf, "Obama Stands By Geithner, Says 'The Buck Stops With Me,'" *CBS News*, March 18, 2009. (available at /www.cbsnews.com/8301-503544_162-4874210-503544.html).

[2] From a 1781 letter to Robert Morris, then superintendent of American finances, when Hamilton was 26 years old. Alexander Hamilton, *The Works of Alexander Hamilton* (Federal Edition, 1904), ed. by Henry Cabot Lodge, Volume 3, p. 387. The full context of what Hamilton wrote is this: "A national debt, if it is not excessive, will be to us a national blessing. It will be a powerful cement to our union. It will also create the necessity for keeping up taxation to a degree which, without being oppressive, will be a spur to industry"

tend to omit Hamilton's crucial qualifier and paint him as a closet statist (or "monarchist") who championed unlimited government and a huge public debt. In fact Hamilton endorsed constitutionally-limited government, together with the rule of law, private property rights, and sanctity of contracts (including contracts between creditors and debtors). He believed sovereign debt was a just and viable financial tool but also, if excessive, a grave threat to a nation's prosperity, which in turn could cause "national bankruptcy." In 1795, having already fixed the infant nation's finances and reduced the U.S. public debt as a share of GDP, Hamilton actually advised a steady retirement of the remaining debt.

It is telling, also, that today's popular financial press increasingly references and re-examines Hamiltonian principles – often asking what Hamilton might say or do – mainly because of the recent, unprecedented rise in the U.S. debt and the disarray in the public finances of Euro-zone sovereigns.[3]

In this paper I suggest that the public finance principles and policies adopted to cure the latest financial crises are nearly the opposite of those promulgated by Hamilton and adopted by the U.S. in the 1790s; indeed, recent policies are more likely to aggravate public finance dilemmas rather resolve them.

The financial crisis of 2008 and "Great Recession" of 2007-2009 engendered a large increase in U.S. federal government spending – whether for "stimulus" schemes, jobless benefits, or bailouts – and this spending boom coincided with a material plunge in tax revenues, which in turn caused a material widening of the budget deficit and thus increased national indebtedness, not only in the U.S., but globally. As exceptional as recent fiscal-monetary developments may appear – and as we'll see, key measures of public finance have set new records lately – in truth they do not constitute a fundamental departure from the trends of the past century, especially compared to trends in the prior century.

[3] See, for example, Thomas J. Sargent, "An American History Lesson for Europe," *The Wall Street Journal*, February 3, 2012; Alan Wheatley, "What Europe Can Learn from Alexander Hamilton," *Reuters*, January 17, 2012; Michael McConnell, "What Would Alexander Hamilton Do?" *Defining Ideas*, Hoover Institution, July 22, 2011; Michael S. Greve, "The EU Misses Hamilton's Moment," *National Review*, December 13, 2011; Thomas Cooley, Matthew Richardson and Kermit Schoenholtz, "What Alexander Hamilton Can Teach the Euro Zone," *Politico*, December 6, 2011; Roger Cohen, "Greece, Europe and Alexander Hamilton," *International Herald Tribune*, March 2, 2010; Neil Hrab, "To Promote U.S. Economic Recovery, Think Nationally – and Study Alexander Hamilton," *The Washington Examiner*, July 14, 2010; William Fowler, "Memo to Geithner: Learn from Hamilton," *The Boston Globe*, March 27, 2009; and Michael M. Phillips, "Government Bailouts: A U.S. Tradition Dating to Hamilton," *The Wall Street Journal*, September 20, 2008.

First, let us consider key public finance facts from the past 220 years (1792-2012), at the U.S. federal level, regarding government spending, budget deficits, debt, and taxes – each measured in context, which is to say, relative to the size of the American economy (GDP). We will also review those facts pertinent to rates of debt monetization, money-creation, and inflation in the U.S..

U.S. federal spending in FY2012 will reach $3.8 trillion, or 24% of the value of annual U.S. economic output (GDP), up from an 18% share in 2000 and the highest share since World War II, when it peaked at 47% of GDP. From 1792 to 1930 U.S. federal spending tended to comprised only a fifth of today's level, or 5% of GDP (Figure 1). On a real per capita basis, U.S. federal spending in FY2012 will be 37% higher than a decade ago and nearly double the average, decade-long increases (20%) observed in the post-WWII period up to 2002 (Figure 2).

The U.S. federal deficit in FY 2012 will exceed $1 trillion for the fourth consecutive year (a record) and will comprise 8% of GDP (Figure 3), whereas annual federal deficits averaged only 3% of GDP over the past 25 years (1987-2012) and even less than that – and average of 2% of GDP – in the prior 25 years (1962-1987). Over the first half of U.S. public finance history (110 years: 1792-1902) deficits averaged just 0.03% of GDP (Figure 3), and the budget was in surplus 75% of the time; in contrast, over the last half of U.S. finance history (110 years: 1902-2012) deficits averaged 2.54% of GDP (Figure 3), and budgets were in surplus only 31% of the time. Over the past four years (2008-2011) the federal government has had to borrow on average of 34 cents of every dollar spent, versus an average of just 10 cents borrowed for each dollar spent between 1902 and 2007 (Table One).

Meanwhile the U.S. federal debt – which is the past accumulation of annual budget deficits (financed by Treasury debt securities), offset by budget surpluses devoted to repaying existing debt – has been sky-rocketing. Given the vast expansion of deficit-spending in recent years, the U.S. federal debt now totals $16 trillion, double the level of seven years ago (2005, $8 trillion), which itself was double the level of twelve years earlier (1992, $4 trillion). Thus the national debt's growth rate has accelerated. Today's debt of $16 trillion is 105% of annual GDP, up from a 58% ratio a decade ago (2002) and more than triple the low ratio of 31% in 1981 (Figure 4). The national debt averaged just 12% of GDP during the first half of U.S. public finance history (1792-1902) but has averaged 46% of

GDP over the last half of the history (1902-2012). The Congressional Budget Office projects that if current policies persist the U.S. federal debt ratio itself will nearly double to 190% by 2035.[4]

Although here I do not stress the global context of current-day public finance dilemmas – such as in Greece and other over-indebted sovereigns in the Euro-zone – it is worth noting that among the major (G-7) nations, Japan now has the highest national debt ratio (currently 233% of GDP, up from 100% in 1996), followed by Italy (121% of GDP) and the U.S. (105%). In 2011 the average debt ratio of G-7 governments was 113%, or double the average ratio in 1990 (56%), which itself was double the average ratio in 1979 (28%). Reinhart and Rogoff (2009), documenting sovereign debt trends over recent centuries, have identified, as a rule, that sovereign debt ratios of 90% or more entail something like a tipping point, from which sovereigns find it difficult to recede without debt repudiation, budget austerity, or lower living standards; but this breeds civil unrest and political upheaval. Thus it is no coincidence that Japan has stagnated economically since the mid-1990s, having more than doubled its debt ratio to the highest among G-7 nations, or that civil unrest, work stoppages, and political upheavals are now chronic in Greece, Spain and Italy. As long as interest rates remain low, worse trouble might be averted. Unlike Euro-zone members, the U.S. may for a while foreswear an overtly inflationary financial policy, mainly because it has contracted its debt in a currency (the U.S. dollar) which it alone issues, and which, at the same time, is held in great demand as a reserve asset by central banks abroad; but perhaps this "exorbitant privilege" (Eichengreen 2011) can only temporarily forestall an eventual reckoning.

Turning to U.S. federal tax revenues, they will total 16% of GDP in FY 2012, well short of the federal spending share (24%), such that the budget deficit will comprise 8% of GDP. Whereas federal spending in recent decades has been rising as a share of GDP, federal tax revenues as a share of GDP have been declining – from a peak of 24% in the last year of World War II (1945) to 19% in 1980 and 16% at present. Still, the federal tax burden has been roughly five times greater over the last half of U.S. history (1902-2012, when tax revenues average 13% of GDP) than it was over the over the first half (1792-1902, when tax revenues averaged 2.7% of GDP), primarily because of new taxes beginning in 1913 (federal individual income taxes, corporate income taxes, estate taxes), 1935 (Social Security taxes), and 1965 (Medicare and Medicaid taxes). Despite the larger tax burdens seen in the past half of

[4] Congressional Budget Office, *CBO's 2011 Long-Term Budget Outlook*, June 2011; updated and corrected through February 29, 2012 (page xi). Available at http://www.cbo.gov/publication/41486.

U.S. fiscal history, compared to the first half, on average federal budget deficits have been 85 times larger during the second half (2.54% of GDP) than during the first half (0.03% of GDP).

As the U.S. federal government has accumulated debt in recent decades, more of it has been purchased by the Federal Reserve Bank, in a process known as “debt monetization,” which some economists contend is a precursor to excessive rates of money creation and price inflation (the latter depending on offsetting changes in demand for money balances). Most of the Federal Reserve’s assets are comprised of federal government debt securities, and it assets have increased by more in the past five years than at any other time in its 99-year history, from $900 billion in March 2007 to $2.9 trillion in March 2012. This increase of $2 trillion largely reflects the Fed’s purchases of Treasury debt securities, at a time when the total U.S. federal debt was increasing by $7 trillion (from $9 trillion in 2007 to $16 trillion in 2012). Thus the Fed has effectively purchased 29% of the U.S. Treasury’s new debt securities since 2007, a rate of debt monetization not see since World War II, and nearly quadruple the monetization rate (8%) over the previous five years (2002-2007), when total federal debt increased by $2.8 trillion (from $6.2 trillion to $9.0 trillion) while Fed assets increased by only $218 billion (from $655 billion to $873 billion). To the extent U.S. federal deficit spending persists at high levels over the coming decades, the U.S. federal debt also will grow, perhaps from 105% of GDP in 2012 to as high as 190% of GDP by 2035 (as the CBO currently projects), and one might expect the Fed to monetize much more of that new debt also.

The near quadrupling of the Federal Reserve’s assets since 2007, due mostly to its vast new purchases of U.S. debt securities, corresponds closely to the expansion of its liabilities, consisting mainly of reserves supplied to banks, which in turn supplement the monetary base, which banks can transform (through increased lending) into large new sums of circulating money supply – which could cause higher price inflation. Bank reserves totaled $1.6 trillion at the end of 2011, compared to $1.1 trillion at the end of 2009 and 2010, $675 billion at the end of 2008, and an average of only $80 billion in the prior two decades (1987-2007). Meanwhile, between 2006 and 2011, the U.S. money supply (M-1) jumped 62%, the biggest five-year rise since 1987, yet by far less than the rise in reserves. Many banks have elected to hoard cash amid recent financial crises and thus to hold excess reserves beyond the minimums required by the Fed. So far, U.S. retail price inflation has been mild, with the CPI rate no higher than 4% p.a. over the past decade, far below the average rate of the 1970s (7.4%) and 1980s (5.1%).

Despite – or perhaps because of – the large magnitudes of deficit-spending and money-creation enacted by U.S. policymakers in recent years, the U.S. economy cannot seem to sustain a vigorous growth rate, the national jobless rate remains, and real household incomes are shrinking (for the past three years). Keynesian economists and policy advisors have endorsed increased deficit spending (or "stimulus"), and precisely to the extent that policy seems not to have worked so far, they advise still larger doses of it. Meanwhile Monetarists have called for faster rates of money creation, to prevent a 1930s-type collapse of banks and the money supply and a potential deflation, and precisely to the extent that policy seems to have avoided deflation, while failing to induce new bank lending, they too have advised still larger doses of it. Some of these same economists, joined by others who are neither Keynesian nor Monetarist, now worry that their respective "medicines" may have done more harm than good, and regardless of which may be true, all sides further worry that fiscal and monetary policy alike now lack potency. There seem to be deficient degrees of theoretical surety, policy confidence, political will, or popular demand for still more aggressive debt creation and money creation.

Nor do we observe politicians or policy-makers today offering longer-term solutions to contemporary public finance dilemmas. Aging populations are scheduled to inflict deep strains on entitlement spending programs in the coming decades, which would cause persistent (and still wider) budget deficits, faster-accumulating public debts, and thus a greater likelihood of ultimate debt defaults that could trigger still further financial crises, in a vicious, downward spiral. Brave (hence unelectable) political souls who dare to reject naive calls for still further "stimulus," whether by deficit-spending or money-creation, and who instead purse "austerity" measures, whether by budget-cutting or tax-hiking, are sure to be met with career-ending civil unrest, work stoppages, and infrastructure damage that leaves the "fiscal house" in even less order than it began.

On first (and superficial) reflection, one might surmise that Alexander Hamilton, were alive to advise us today, might recommend that government issue still more public debt, that it create more bank reserves, or that it concoct additional special-purpose vehicles and bailout measures to assist struggling cronies on Wall Street, with the aim of extending further the size and scope of the plutocratic state. This is the reputational portrait of Hamilton that friends and foes alike have painted over the decades, to the point that it now inspires the more intervention-friendly economists and political advisors among us.[5]

Yet this reading of Hamilton as the champion of larger, more-invasive government is neither fair nor accurate, and most of the public finance prescriptions advanced and enacted in recent years run violate the core principles of Hamiltonian public finance. Had Hamilton favored a materially greater role for government in American political economy, he also would have welcomed (indeed, applauded) the trend of the past century; far more likely, he would have preferred the trends of the 19th Century – those that followed his untimely death (in 1804) – when in America, for the most part, government's footprint was quite small (spending less than 10% of GDP), taxes were light, budget deficits were rare, the dollar was "good as gold," banks were safe, manufacturing was robust, and infrastructure was desired.

In short, Hamilton was a true "classical liberal" on all matters of state and public finance. To understand best what he accomplished in the 1790s, and how his institutional reforms provided the foundation for America's unprecedented financial-economic achievements during the 1800s, it is necessary first to recall the monetary-fiscal chaos that prevailed in the 1780s, and how it resembles today's chaos.

II. Post-Revolution Public Finance in America (1780s)

The public finance chaos in America during the 1780s was born of the financial dilemmas of the Revolutionary War (1775-1781). Robert Morris was the able Superintendent of Finance, but the Continental Congress was both unwilling and ill-equipped to assist him in responsibly financing the long war effort against Britain – a shortcoming well known to a young Alexander Hamilton, who during the war was a top military and financial aid to General Washington and who corresponded with Morris on financial matters. Under the Articles of Confederation the Continental Congress lacked an adequate capacity to tax, so instead it resorted to excessive borrowing and to paper-money printing, to the point of creating a hyperinflation (of the "Continentals").

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[5] See "The Hamilton Project," at the venerable (and liberal) Brookings Institution: http://www.hamiltonproject.org/about_us/our_people/.

By the mid-1780s, only a few years after the British finally evacuated New York City, not only the Continental Congress but many Americans were suffering from a painful deflation – that is, a rise in the value of money, a condition not uncommon after a hyperinflation. The deflation meant that debtors had to repay their obligations in progressively more valuable money, and when they could not do so, creditors lost capital, which deterred them from lending anew. Debtor revolts against creditors and tax collectors alike became more common during the 1780s – Shays Rebellion (1786-1787) being the most infamous – and creditors grew alarmed at the enactment of "debtors legislation," which re-caste loan contracts by means of stay laws (which impose moratoria on debt collections), tender acts (which permitted debtors to pay in depreciating commodities instead of depreciating money), and paper money (which permitted repayment in depreciating media instead of in gold or silver-backed money that held its value). As Ferguson (1961) documented, American public finance in the 1780s was in chaos.

Hamilton, James Madison and other leading political figures in the 1780s were instrumental in lobbying for the Constitutional Convention that eventually convened in Philadelphia in May 1787; the initial goal of federally-minded founders *other* than Hamilton was to retain but strengthen the existing Articles of Confederation, in order to address the defects made so apparent during the Revolutionary War, not only sustain a standing army in peacetime and thus a steady national defense, but also to address and resolve such dilemmas as the lack of a national revenue source, excessive debt, volatile paper money, and the spread of protectionist barriers among the states. Of course, both Hamilton and Madison were also instrumental in publically (albeit anonymously) advocating for ratification of the final draft of the Constitution, by the now-famous *Federalist Papers* (1781-1788),[6] and also pushing for its passage in their respective ratifying conventions (New York, Virginia). Instead of a mere revision to the Articles, the Conventioneers established a new federal government and a structural hierarchy of federalism with the states; the Bill of Rights, required by the anti-federalists as condition for ratifying the Constitution, was passed in 1791.

The U.S. Constitution and related Convention debates (1787), as well as the *Federalist Papers* (1787-1788) and the Bill of Rights (1791), had much to say about American public finance. Article I Section 8 of the Constitution gave Congress the "Power to lay and collect Taxes, Duties, Imposts and Excises" (provided that all duties, imposts and excises were "uniform" throughout the country)" in order

[6] Hamilton wrote 51 of the 85 total *Federalist Papers* while Madison wrote 29 of them and John Jay wrote 5.

“to pay the Debts and provide for the common Defence and general welfare” of the United States,” as well as “to borrow money on the credit of the United States,” “to coin Money, regulate the Value thereof, and of foreign Coin,” to prevent and punish counterfeiting of U.S. debt securities and U.S. coins, and to make all laws “necessary and proper” to these enumerated powers.

As to limits on Congressional powers, Article I Section 2 permitted the House to impose direct taxes (such as excise, capitation, and land taxes), but by implication – since the Constitution’s grants of power were only of those explicitly enumerated, while implied powers derived from explicit ones, and “necessary and proper” to their full exercise – the House could not impose indirect taxes (most commonly, income taxes) – so those would come much later to the U.S. (in 1913).[7] Article I Section 9 also prohibited Congress from imposing any “Tax or Duty” on “Articles exported from any State,” and said “No Money shall be drawn from the Treasury, but in Consequence of Appropriations made by Law.” Together with the appropriations process, a budget also would have to be published (“a regular Statement and Account of the Receipts and Expenditures of all public Money”).

As to the Constitution’s limits on the public finance powers of states, Article I Section 10 said that “No State” shall “coin money,” or “emit Bills of Credit” (paper money not redeemable in gold or silver coin), “make any Thing but gold and silver Coin a Tender in Payment of Debts,” or pass any law “impairing the Obligation of Contracts.” Again, by implication, and seeing the Constitution’s grants of power, whether to states or the federal government, as those explicitly enumerated, the framers also did not permit the U.S. to “emit bills of credit – or what’s known today as “fiat paper money.” The recorded debates at the Philadelphia convention in 1787 make quite clear that most of the framers did not want the federal government to have the power to issue paper money; some delegates tried to insert such a power into the document, but it was explicitly rejected by a large majority; the winning position was carried by delegates who cited the chaos of paper money issuance in the 1780s and in prior historical episodes; opponents of fiat paper money argued that to allow it would prove too tempting to profligate government which much inflate away its debts, do an injustice to creditors, and harm the economy.

[7] Congressional efforts to skirt this clause in Article I Section 2 and impose a federal income tax were nullified in a few Supreme Court in the late 1800s, so proponents of the income tax (mostly progressives) had to seek a Constitutional Amendment to allow for such a tax, and one was finally adopted (the 16th Amendment) in 1913, which reads: “Congress shall have power to lay and collect taxes on incomes, from whatever source derived, without apportionment among the several States, and without regard to any census or enumeration.”) Thereafter the Federal government could impose both direct and indirect (income) taxes. Technically, the first U.S. income tax was imposed during the Civil War, but then rescinded in 1866.

As we've seen, under the Constitution only the legislative branch had monetary powers, and these were to "to coin Money, regulate the Value thereof, and of foreign Coin," and prevent counterfeiting of U.S. coins. For this reason Hamilton, as Treasury Secretary, would later submit his report on the details associated with the establishment of the U.S. Mint, which was enacted through the Coinage Act of 1792.

As for federal debt, Article VI of the Constitution stressed that the debt owed by the then-superseded Continental Congress under the Articles of Confederation was to be an obligation of the new U.S. government; it read that "All Debts contracted and Engagements entered into, before the Adoption of this Constitution, shall be as valid against the United States under this Constitution, as under the Confederation." Many current-day critics of the U.S. national debt and its origins too often neglect to stress that as the nation's first Treasury Secretary Alexander Hamilton did not "advocate" for a new and large debt, nor did he reveal himself as a proto-Keynesian eager to deploy deficit-spending so as to "stimulate" the economy, nor did he deny that some high level of national debt could eventually prove harmful to national honor, unjust to creditors, and dangerous to prosperity. Hamilton inherited the debt, which would not have been incurred had there not first been a Jeffersonian Declaration of Independence, followed by a long and costly Revolutionary War. In 1790-1791, to lessen this burden of inherited debt – which annual federal revenues covered by only 2% (compared to 15% coverage today) – Hamilton worked to restructure it and thus to make better provision for its full servicing. Whereas federal interest expense actually exceeded federal revenues in 1790 and 1791, only six years later (1797) this expense comprised just 38% of revenues, although that was still higher than the 18% share we see today (Table One). Hamilton's program also helped cut in half the debt-GDP ratio, from 41% (1790) to 20% (1797).

Various provisions of the Bill of Rights (and subsequent amendments) also pertain directly to American public finance. The 5th Amendment (1791) declared that "no person shall be . . . deprived of life, liberty, or property, without due process of law; nor shall private property be taken for public use, without just compensation," and in principle this included creditors who lent funds by contract to debtors, and in turn held a promissory note as an asset. Later, the 14th Amendment (1868) stated that "the validity of the public debt of the United States, authorized by law, including debts incurred for payment of pensions and bounties for services in suppressing insurrection or rebellion, shall not be questioned," and further, that neither the U.S. nor any state should "assume or pay any debt or obligation incurred" by any party in the now-vanquished Southern Confederacy, and indeed, "all such debts, obligations and claims" were "held illegal and void." Thus under Article VI, the debts incurred amid the Revolutionary War by the precursor of the U.S. federal government were valid obligations of the latter when it was born in 1789, but after the Civil War the debts incurred by seceding states in the Southern Confederacy were deemed invalid and indeed, by the 14^{th} Amendment, explicitly nullified.

In the year-long period after the Constitutional Convention adjourned in September 1787, the writers of the eighty-five *Federalist Papers* (1787-1788) – primarily Hamilton and Madison – took up the challenge of defending the document and urging its ratification by the states. This advocacy permitted Hamilton especially to reinforce the case for prudent public finance: the constitutional mandate to treat the national debt honorably (without repudiation), to permit federal tax-raising (but not a federal income tax), to supply a reliable gold and silver coinage as a solid foundation for the private-sector to issue redeemable currency, and above all, as guaranteed by the 5^{th} Amendment, that "no person," including creditors, be "deprived of life, liberty, or property without due process of law," nor have his private property taken "for public use without a just compensation." Hamilton did not have to pretend to uphold such principles; in private letters, public articles, and consultations with other founders he made clear that he was a staunch advocate of constitutionally-limited government, the rule of law, private property, the sanctity of contract, lightness of taxation, an unquestionable reputation and sustainable status for public credit, sound (specie-based) money, and an economy consisting not exclusively of agriculture, commerce, finance, or manufacturing, but of all sectors working harmoniously and vigorously together.

Hamilton's respect for private property was driven not by an inner plutocratic desire to favor the rich over the poor, for he rejected that principle as unjust for the same reason he rejected the impropriety of any egalitarian democrat's desire to do the reverse and use policy to favor the poor over the rich. For Hamilton, liberty and property were indispensable and concomitant values. Moreover, true justice required not egalitarianism but equal protection of every person (including blacks[8]) before the law, regardless of his class affiliations; thus there should be no government favoritism in any direction, no privilege for any one person or group – and a government which upheld property rights was not thereby

[8] Hamilton opposed slavery and was an early abolitionist, unlike Washington, Jefferson, or Madison..

engaged in "favoritism" (say, for those owning property), but protecting a natural human right, which protection would necessarily redound to the benefit not only of existing property owners but of the property-less seeking to earn income and wealth and thus in time become property owners themselves:

> In upholding the rights of property, Hamilton was not merely defending the cozy world of silk stockings, powdered wigs, and coats of arms against the assaults of horny-handed egalitarians . . . As he saw it, he remained true to the principles of the Revolution, whereas the advocates of paper money, stay laws and tender acts had betrayed the cause. John Locke had taught that private property antedated the state and that the primary purpose for which government was instituted was to protect property in the hands of those who possessed it. Hamilton sought to call Americans back to the fundamental principle of the revolutionary creed. For he recognized no real distinction between liberty and property; in his philosophy, it was syllogistic that if property were not secure, men were not free. Under a government that could invade property rights at will, none of the other rights of man had any real worth because they, too, existed at the sufferance of an arbitrary power. "If everything floats on the variable and vague opinions of the governing party," he said, "there can be no such thing as rights, property or liberty." Viewed from this perspective, property rights appeared to be the first line of defense of civil rights; the rights of man stood or fell together; if one right were permitted to go down, the other could not long endure.[9]

At an early age Hamilton had also developed thoughtful and firm convictions on matters pertaining to public finance and political economy – and these were grounded in his convictions about the nature of rights, liberty and property. As early as 1780, at age 25 (and only nine years before becoming the new nation's Treasury Secretary), Hamilton wrote to James Duane, a New York Delegate to the Continental Congress, to explain what he saw as the defects of the existing form of government (under the Articles of Confederation), and as a result, the utter disrepair of its finances:

> Nothing appears more evident to me, than that we run much greater risk of having a weak and disunited federal government, than one which will be able to usurp upon the rights of the people. . . . The fundamental defect is a want of power in Congress. . . The forms of our state constitutions must always give them great weight in our affairs and will make it too difficult to bend them to the pursuit of a common interest, too easy to oppose whatever they do not like and to form partial combinations subversive of the general one. . . . The confederation too gives the power of the purse too entirely to the state legislatures. It should provide perpetual funds in the disposal of Congress--by a land tax, poll tax, or the like. All imposts upon commerce ought to be laid by Congress and appropriated to their use, for without certain revenues, a government can have no power; that power, which holds the purse strings absolutely, must rule. This seems to be a medium, which without making Congress altogether independent will tend to give reality to its authority. . . . I shall now propose the remedies . . . The first step must be to give Congress powers competent to the public exigencies. This may happen in two ways, one by resuming and exercising the discretionary powers I suppose to have been originally vested in them for the safety of the states . . . by calling immediately a convention of all the states with full authority to conclude finally upon a general confederation, stating to them beforehand

[9] John C. Miller, *Alexander Hamilton: Portrait in Paradox* (New York: HarperCollins Publishers, 1959), p. 123.

> explicitly the evils arising from a want of power in Congress. . . . The confederation in my opinion should give Congress complete sovereignty [relating] to the rights of property and life among individuals and to raising money by internal taxes. . . . Congress should have complete sovereignty in all that relates to war, peace, trade, finance, and to the management of foreign affairs . . . of regulating trade . . . of coining money, establishing banks on such terms, and with such privileges as they think proper, appropriating funds and doing whatever else relates to the operations of finance . . . The confederation should provide certain perpetual revenues, productive and easy of collection, a land tax, poll tax or the like, which together with the duties on trade and the un-located lands would give Congress a substantial existence, and a stable foundation for their schemes of finance. . . . The manner in which a thing is done has more influence than is commonly imagined. Men are governed by opinion; this opinion is as much influenced by appearances as by realities; if a Government appears to be confident of its own powers, it is the surest way to inspire the same confidence in others; if it is diffident, it may be certain, there will be a still greater diffidence in others, and that its authority will not only be distrusted and controverted, but condemned. [10]

In 1780-1781 Hamilton also wrote two lengthy letters to Robert Morris, at the time the Superintendent of Finance under the Continental Congress, explaining his views on the essential purposes and proper principles of public finance, not merely for the special case of wartime, but also for the more general and lasting case of peacetime. In the 1780 letter Hamilton wrote about the benefits of a national bank, loosely modeled on the Bank of England, which had been founded in 1694.[11] In the 1781 letter to Morris, Hamilton examined with great care and sophistication the ways and means of the state, including how and where it should tax, but not too heavily, and how best to secure the funding needed to support only the proper functions of government.[12] In these two letters Hamilton was applying the same basic principles and setting the same basic goals that would guide and motivate and guide his policy-making in 1790-1792, after being confirmed as Treasury Secretary in late 1789.

III. The Principles and Practices of Hamiltonian Public Finance (1790s)

The essential principles of Hamiltonian public finance, we have seen, entail the strong admonition that a just and effective government must abide by the rule of law and never become arbitrary, that it must respect and defend private property rights and uphold the sanctity of contracts (financial and otherwise), that it must keep its taxes light, that it must pay its debts in full and on time,

[10] Alexander Hamilton, Letter to James Duane, September 3, 1780, in Philip B. Kurland and Ralph Lerner, eds., *The Founder's Constitution* (University of Chicago Press, 1987), Vol. I, Ch. 5 ("Deficiencies of the Confederation"), pp. 150-153.
[11] Alexander Hamilton, *The Works of Alexander Hamilton* (Federal Edition, 1904), ed. by Henry Cabot Lodge, Volume 3, pp. 319-341.
[12] Alexander Hamilton, *The Works of Alexander Hamilton* (Federal Edition, 1904), ed. by Henry Cabot Lodge, Volume 3, pp. 342-387.

and not accumulate excessive debt, and that it should ensure a sound and stable money, together with an economy well-balanced among agriculture, commerce, finance and manufacturing. At his base Hamilton was a republican and as such, like most other American founders, he adamantly rejected democracy, especially in its purest (direct) form; indeed, he despised political demagoguery and those leaders who sought to elicit impassioned, mass support for excessive government spending or punitive measures against the minority rich who held cash, property, stocks, and bonds.

For Hamilton, democracy and demagoguery were inimical to the sound and fundamental principles of public finance, not only because they usually entailed government bigger in size and scope than it ought to be, but because such a government would be engaged in unnecessary and improper functions, and in time it would find its energy sapped and its resources exhausted, even while over-burdening the economy and rendering it unfit to yield revenues sufficient to balance the annual budget or service a fast-accumulating public debt. As just one example of the clash, in Hamilton's time, between the demands of democracy and the requirements of integrity in public finance, it has been argued that,

> Some Americans were of the opinion that the government ought to repudiate the national debt and start out with a clean financial slate. Why, they asked, should the federal government bankrupt itself in order to repay money that had served its purpose and from which everyone had profited in the form of independence of Great Britain? It seemed to them perfectly proper for the government to inform its creditors that, through no fault of its own, the debt was cancelled. . . . For Hamilton, the highest law of the state was self-preservation . . . but he emphatically did not agree that this right (to repudiate one's debts) ought to be applied to the existing debt. In his opinion, the federal government was capable of fulfilling in all essentials the terms of the contract it had made with its creditors and was therefore debarred from entering a plea of abatement. Besides the purely legal aspect, every consideration – morality, justice, and expediency – seemed to Hamilton to require that the government deal honestly with its creditors. "Establish that a government may decline a provision for its debts, though able to make it," he said, "and you overthrown all public mortality. . . . You have anarchy, despotism, or what you please, but you have no *just* or *regular* government." For governments, the first commandment was: honor thy financial obligations. According to the gospel preached by Hamilton, if "the dead corpse of the public credit" was to be resurrected, it would not be by a miracle but by the observance of probity and sound bookkeeping.[13]

In his brief but productive years as Treasury Secretary (1789-1795), Hamilton, initially by complying with official requests from Congress and the President, delivered far more than most expected. He began with well-researched, well-detailed, and well-argued plans that simultaneously incorporated the public finance requirements of the Constitution and his own considered judgments and

[13] John C. Miller, *Alexander Hamilton: Portrait in Paradox* (New York: HarperCollins Publishers, 1959), p. 231.

applications of the proper principles of public finance – in his *Report on the Public Credit* (January 1790),[14] *Report on a National Bank* (December 1790),[15] *Opinion on the Constitutionality of a National Bank* (February 1791),[16] *Report on Manufactures* (December 1791),[17] and *Report on the Establishment of Mint* (January 1791).[18] In still further efforts Hamilton revisited and reassessed prior reports and policies, if he believed they were being misconstrued, misrepresented, or misapplied, and this included his *Vindication of the Funding System* (1791),[19] his *Second Report on the Public Credit* (January 1795),[20] and finally, a fascinating and lengthier (but unfinished) manuscript by Hamilton titled *Defense of the Funding System* (July 1795)[21] which includes some previous insights but newer formulations also.

Hamilton was not, by any means, the biased, one-sided cheerleader for unlimited national debt, as his critics claim. Indeed, lodged in the *Report on Manufactures* (December 1791) are rarely-cited passages that warn how public debt can be excessive and reach a "critical point" that undermines prosperity and risks national bankruptcy. Consistent with the classical liberalism of his day, Hamilton believed government should serve the citizenry and economy, not the other way around.

Not mere passive or detached theoretical contemplations, each of Hamilton's influential reports, where necessary, also argued strenuously for an active implementation; Hamilton knew well that no one in the executive branch, not he nor the President, could decree any of his plans, yet by the power of his fact-gathering and persuasion, most of his principles of public finance were endorsed and most of his practical recommendations were adopted, for the most part rapidly incorporated in enabling legislation. As a result, by the mid-1790s, following the financial chaos and confusion of the 1780s, the new

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[14] Hamilton, his *Report on the Public Credit* (January 1790), *The Works of Alexander Hamilton* (Federal Edition, 1904), ed. by Henry Cabot Lodge, Volume 2, pp. 227-290.

[15] Hamilton, *Report on a National Bank* (December 1790), *The Works of Alexander Hamilton* (Federal Edition, 1904), ed. by Henry Cabot Lodge, Volume 3, pp. 388-442.

[16] Hamilton, *Opinion on the Constitutionality of a National Bank* (February 1791), *The Works of Alexander Hamilton* (Federal Edition, 1904), ed. by Henry Cabot Lodge, Volume 3, pp. 445-493.

[17] Hamilton, *on Manufactures* (December 1791), *The Works of Alexander Hamilton* (Federal Edition, 1904), ed. by Henry Cabot Lodge, Volume 4, pp. 70-198.

[18] Hamilton, *Report on the Establishment of Mint* (January 1791), *The Works of Alexander Hamilton* (Federal Edition, 1904), ed. by Henry Cabot Lodge, Volume 4, pp. 3-57.

[19] Hamilton, *Vindication of the Funding System* (1791), *The Works of Alexander Hamilton* (Federal Edition, 1904), ed. by Henry Cabot Lodge, Volume 3, pp. 3-23.

[20] Hamilton, *Defense of the Funding System* (January 1795), in Harold C. Syrett, *The Papers of Alexander Hamilton*, Volume 18 (Columbia University Press, 1973). See also an excerpt in excerpt in Richard B. Morris, ed., *Alexander Hamilton and the Founding of the Nation* (New York: The Dial Press, 1957), pp. 320-325.

[21] Hamilton, *Defense of the Funding System* (M.S., July 1795), in Harold C. Syrett, *The Papers of Alexander Hamilton*, Volume 19 (Columbia University Press, 1973), pp. 1-73.

nation’s finances had become well-ordered, and saw its public debt restructured and well-serviced, its tax and tariff revenues multiplying, its currency both solid (specie-based), uniform, and more widely accepted, its trade flourishing, and its economy growing. Sylla (2011) provides the best, brief account of Hamilton’s public finance accomplishments in the 1790s, and writes thus:

> The financial foundations of the United States and its federal government were created in three years, 1790 to 1792. Before 1790, the government was effectively bankrupt. Without tax revenues until late in 1789 . . . the U.S. government was in default on almost all of its large domestic debts left over from the Revolution, as well as on most of its foreign debts incurred in the struggle. The new nation lacked a national currency, a national bank, a banking system, and regularly functioning securities markets. . . . The financial revolution of the 17890s changed all that. . . Because of the events of 1790 to 1792, from that time forward Americans and most of their historians could assume, correctly, that a modern financial system always existed in their country. But, too often incorrectly, they also assumed there was nothing special, unique or even good about it. . . . The United Sates was one of the first nations to modernize its finances. Only two nations did so earlier – the Dutch Republic (the modern Netherlands) about two centuries before the United States, and Great Britain, starting perhaps a century earlier . . . [Hamilton] established the financial foundations that would make the United States the most successful emerging market in the nineteenth Century, and the economic colossus of the next that some would call “the American Century.” [22]

In his *Report on the Public Credit* Hamilton argued that “when the credit of a country is in any degree questionable, it never fails to give an extravagant premium, in one shape or another, upon all the loans it has occasion to make. Nor does the evil end here; the same disadvantage must be sustained on whatever is to be bought on terms of future payment.” That is, excessive indebtedness tended to raise the interest rate that creditors would demand of a borrowing sovereign. “From this constant necessity of borrowing and buying dear,” he went on, “it is easy to conceive how immensely the expenses of a nation, in a course of time, will be augmented by an unsound state of the public credit.” Hamilton wrote of “the variety of mischief in the whole system of the social economy” which resulted from “a neglect of the maxims that uphold public credit,” which in turn undermined “the individual and aggregate prosperity of the citizens of the United States.” The remedy, he said, was to act in “good faith,” “by a punctual performance of contracts,” for a “state, like individuals, who observe their engagements are respected and trusted, while the reverse is the fate of those who pursue an opposite conduct.”

As for the magnitude of new nation’s public debts in 1790, mainly a result of financing the Revolutionary War with few taxes, Hamilton performed the painstaking calculations (in his *Report on*

[22] Richard Sylla, “Public Credit, the National Bank, and Securities Markets,” in *Founding Choices: American Economic Policy in the 1790s* (2011), pp. 59-60, 86.

the Public Credit, January 1790), showing they that the federal government owed $12 million to foreigners ($10 million in principal plus $2 million of interest in arrears) and $40 million to domestic holders of debt and other promissory notes and certificates ($27 million in principal plus $13 million of interest in arrears). In addition, it owed some money to the thirteen states, but the states themselves owed another $25 million or so, largely to domestic creditors. The total of all such debts was roughly $77.2 million, equivalent to 41% of GDP; more problematically, the interest expense on this debt was roughly $3.7 million, and although a low effective interest rate (4.8%), the federal government's revenues in 1790 totaled just $1.6 million, so the revenues were insufficient even to pay interest expense (which is why interest on the public dent was in arrears and accruing, or adding to existing principal). Yet by 1793, thanks to Hamilton's reforms, interest expense on the public debt was lower by nearly $1 million (-25%), to $2.8 million, and revenues, at $4.6 million, were nearly $3 million more and triple what they had been in 1790, and exceeded interest expense by nearly $2 million (Table One).

By the end of the decade (1799) the U.S. national debt was only 19% of GDP, or half of what it had been at the beginning (41% in 1790), and tax-tariff revenues were more than twice the annual interest expense, whereas in 1790 revenues covered only 44% of interest expense. After Hamilton re-structured and consolidated the nation's public debts in 1790, in a way that enhanced the government's credit standing such that the U.S. could pay lower interest rates, there was no material increase in the national debt in the 1790s: it was $77.2 million in 1790 and $82.9 million by 1799 (+7.4%), while interest expense declined by 14%, from $3.7 million to $3.2 million, and in the meantime, making it even easier to service a steady debt level at lower rates, GDP grew by 134% while revenues grew by 360% (Table One). Obviously revenue gains did not come at the expense of economic prosperity; taxes were limited tariffs, excises and some land-based taxes, but the overall burden was light, primarily because government was limited to its basic functions of providing policy, courts and national defense (with only four cabinet agencies in the executive branch – Treasury, Justice, State, and Defense) and because the Constitution did not permit income taxes.

Three aspects of Hamilton's public debt policies are worth noting for what they reveal about his principles: discrimination, assumption, and sinking funds.

Discrimination was the debt-restructuring policy preferred by Hamilton's detractors at the time – James Madison together with the anti-Federalist Jeffersonians. In the 1780s the public debts had become so dubious and questioned in the market place that they traded at a deep discount to their face value; if Hamilton's restructuring plan were adopted, the government would do the conventional (and legal) thing: pay the full (face amount) that was originally contracted, and not a mere fraction of it. For Hamilton this was an issue of justice and integrity, of keeping one's promises – and the moral case had the practical effect of alerting would-be creditors worldwide that the U.S. was a trusted and credible borrower (and thus could borrow more easily, at lower interest rates, than distrusted borrowers).

Proponents of debt discrimination, in contrast, wanted the new government to discriminate between those who originally lent to it and thus initially held a bond at full face value, and those who currently held bonds at a discount to face value and thus might reap large gains if Hamilton's plan was implemented. Hamilton countered that to discriminate between those who would or would not be repaid on a sovereign bond, in full or in part, and based on the time and price current holders acquired it, or on whether he was a farmer, merchant, or speculator, sabotaged the very essence and objectivity of credit. The essence, he said, should be the sacred obligation of a borrower to meet his responsibilities, keep his promises, and pay his debts as contracted; discrimination and the cronyism that might accompany it were no part of the original contract. He won the argument; the re-organization and consolidation of U.S. public debt in the early 1790s entailed no discrimination, and, unlike the policy of sovereigns today that face a similar predicament (Greece[23]), no compulsory participation for unwilling creditors, either.

Hamilton's critics on the issue of debt discrimination, who often accuse him of by-passing Constitutional restriction or interpreting them so loosely as to make them a nullity, seemed to have forgotten Article VI of that charter – that "All Debts contracted and Engagements entered into, before the Adoption of this Constitution, shall be as valid against the United States under this Constitution, as under the Confederation." For Hamilton, the validity of a debt was lost if some part of it could go unpaid; for the discriminators, such principles as the sanctity of contract were not a priority, and the root meaning of a debt "obligation" – that which is "obligatory" – they recast to mean "optional." The discriminators charged Hamilton with seeking to favor bond speculators and the rich, but in fact many Revolutionary War obligations originated not as bonds for cash (since cash was scarce), but IOU

[23] In the biggest technical sovereign debt default in world history ($172 billion), the Greek government in March 2012 forced its bond holders and lenders to accept less than 50% of the face value of what they were owed. See Catherine Boyle, "Greece to Force Rest of Bondholders Into Swap," CNBC.com, March 9, 2012 (http://www.cnbc.com/id/46677484/).

certificates issued directly to farmers, clothiers, merchants, munitions-makers and soldiers in the field, or funding by in-kind provisions. Thus much was owed to middle and even lower-class Americans, and as the war-time years passed without any clear resolution to the conflict, many of them sold their claims to those who were wealthier or more liquid, those still able to accrue savings and invest excess cash. In Hamilton's view, these were voluntary exchanges for mutual benefit in a secondary market and did not relieve government of its pledge to repay the full face amount of what it owed to the bondholder.

The concept a debt "assumption" was incorporated in Hamilton's proposal to have the federal government "assume," or take over, the existing accumulated debts owed by the thirteen states, in addition to providing for its own debts. Recall that the federal government at the start owed $52 million ($12 million to foreign creditors plus $40 million to domestic creditors), while the states owed $25 million, largely to domestic creditors. Hamilton's assumption plan was accepted, as part of a political deal (on the ultimate location of the U.S. capital) with his opponents (Jefferson and Madison), such that the total U.S. public debt began as $77.2 million in 1790, not as $52 million (Table One). For Hamilton and other framers among the Federalists, a major purpose of the Constitution was to create a new layer of government with limited powers, to be sure, but powers above and beyond those of states, and as much as possible, states should be on a level playing field, or at least start that way. In addition, a consolidation of all debts at the Federal level would concentrate the attentions and unify the interests of creditors who, instead of analyzing and dealing with many borrowers of differing credit-worthiness, could focus on just one (the U.S.). Again, as was true of his position on debt discrimination, Hamilton prized justice, fairness, a level playing field, and plain simplicity in matters of public finance; as such he also wished to have public finances conform to both the letter and the spirit of the new Constitution.

Lastly, the concept and practice of a sinking fund was central to the success and integrity of Hamiltonian public finance – and to any public debt, especially if it is large relative to the economy, as was true for the U.S. in 1790. The "sinking fund" was not an original idea or contrivance of Hamilton's; by the 1790s it had become an established and accepted technique in public finance whereby a borrowing government sets aside funds as a budget item each year, which accumulate in a fund over time and eventually are used to repay the full principal of a loan or bond at maturity; such measures, when obeyed, give public creditors greater confidence that the government to which they lend is credibly committed being frugal and responsible about its debts, and exercising prudent foresight.

A practical advantage of sinking fund for a sovereign borrower, besides the potential of paying a lower interest rate on funds borrowed, is its use as a stabilization fund for the value of outstanding public bonds; if they fall in value on the open market (a bad outcome for creditors, as bondholders), the government can use some of the sinking fund to repurchase and retire bonds of depressed value, which saves money, lifts the prices of bonds generally, and (by the mechanics of bond math) lowers their yield.

Consistent with Hamilton's ethics-oriented philosophy of public finance – the crucial need for integrity and probity in credit affairs – he vigorously defended the use of sinking funds. Absent such techniques, he believed sovereign credit and credibility would be undermined. As he wrote in his *Defense of the Funding System* (January 1795), "the inviolable application of an adequate sinking fund is the only practicable security against an excessive accumulation of debt, and the essential basis of a permanent national credit."[24] In its first few decades the U.S. itself deployed sinking funds, but by the middle of the nineteenth century and on into the twentieth century, the concept and practice had faded away from most every nation's public finance systems, not because sovereigns improved their creditworthiness and no longer required sinking funds to boost their credibility, but because they could no longer afford the annual budget outlay; spending (indeed, deficit spending) increasingly took priority over debt service capacities. If, as he had written to Robert Morris in 1781, a national debt might be a "national blessing" instead of a curse, it could be so only if buttressed responsibly and solidly by a sinking fund. Here's how he made the point in his *Report on the Public Credit* (January 1790):

> Persuaded, as the Secretary is, that the proper funding of the present debt will render it a national blessing; yet he is so far from acceding to the position, in the latitude in which it is sometimes laid down, that "'public debts are public benefits," a position inviting to prodigality, and liable to dangerous abuse, that he ardently wishes to see it incorporated, as a fundamental maxim in the system of public credit of the United States, that the creation of debt should always be accompanied with the means of extinguishment. This he regards as the true secret for rendering public credit immortal. And he presumes that it is difficult to conceive a situation in which there may not be an adherence to the maxim. At least he feels an unfeigned solicitude that this may be attempted by the United States, and that they may commence their measures for the establishment of credit with the observance of it.[25]

[24] Hamilton, *Defense of the Funding System* (January 1795), in Harold C. Syrett, *The Papers of Alexander Hamilton*, Volume 18 (Columbia University Press, 1973). See also an excerpt in excerpt in Richard B. Morris, ed., *Alexander Hamilton and the Founding of the Nation* (New York: The Dial Press, 1957), pp. 320-325.

[25] Alexander Hamilton, *Report on the Public Credit* (January 1790), in *The Works of Alexander Hamilton* (Federal Edition, 1904), ed. by Henry Cabot Lodge, Volume 2, p. 283.

The conventional interpretation has been that Hamilton displayed either indifference or unmitigated sanguinity toward public debt; yet on many occasions he issued dire warnings about an excess of public debt. These grim assessments – including potential for "national bankruptcy" – appear mainly in his reports on the public credit (especially in 1795, the year he left office, and after the U.S. debt had been made manageable), but also in lesser-cited sections of his *Report on Manufactures* (December 1791).[26] and in a 1792 report on the Indian war. In his *Report on Manufactures* Hamilton revisits and elaborates on his statement of a decade earlier, in his 1781 letter to Robert Morris, that "a national debt, if it is not excessive, will be to us a national blessing."[27] Now we learn more about what he means by "excessive." Hamilton explains that public debt can "swell" to unmanageable proportions, such that the private sector becomes dissolute and interest expense on the debt becomes so oppressive to the budget that it exceeds what the sovereign can afford; public debt become excessive in a government prone to "prodigality," that in borrowing too much it commits "dangerous abuse."

> . . . though a funded debt is not, in the first instance, an absolute increase of capital, or an augmentation of real wealth, yet, by serving as a new power in the operations of industry, it has, within certain bounds, a tendency to increase the real wealth of a community . . . There are respectable individuals who, from a just aversion to an accumulation of public debt, are unwilling to concede to it any kind of utility; who can discern no good to alleviate the ill with which they suppose it pregnant; who cannot be persuaded that it ought, in any sense, to be viewed as an increase of capital, lest it should be inferred that, the more debt the more capital, the greater the burdens the greater the blessings of the community. But it interests the public councils to estimate every object as it truly is; to appreciate how far the good, in any measure, is compensated by the ill, or the ill by the good: either of them is seldom unmixed. Neither will it follow that an accumulation of debt is desirable, because a certain degree of it operates as capital. There may be a plethora in the political as in the natural body; there may be a state of things in which any such artificial capital is unnecessary.
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> The debt, too, may be swelled to such a size as that the greatest part of it may cease to be useful as a capital, serving only to pamper the dissipation of idle and dissolute individuals; as that the sums required to pay the interest upon it may become oppressive, and beyond the means which a government can employ, consistently with its tranquility, to raise them; as that the resources of taxation to face the debt may have been strained too far to admit of extensions adequate to exigencies which regard the public safety. Where this critical point is, cannot be pronounced; but it is impossible to believe that there is not such a point. And as the vicissitudes of nations beget a perpetual tendency to the accumulation of debt, there ought to be in every government a perpetual, anxious, and unceasing effort to reduce that which at any time exists, as fast as shall be practicable, consistently with integrity and good faith.[28]

[26] Alexander Hamilton, *The Works of Alexander Hamilton* (Federal Edition, 1904), ed. by Henry Cabot Lodge, Volume 4. pp. 70-198.
[27] Alexander Hamilton, *The Works of Alexander Hamilton* (Federal Edition, 1904), ed. by Henry Cabot Lodge, Volume 3, p. 387.
[28] Alexander Hamilton, "Report on Manufactures" (December 1791), in *The Works of Alexander Hamilton* (Federal Edition, 1904), ed. by Henry Cabot Lodge, Volume 4, pp. 124-126.

In the *National Gazette* of September 11, 1792, Hamilton argues that “a too strong propensity in the government of nations to anticipate and mortgage the resources of posterity” is a policy of the “worst kind,” since it imposes “permanent [tax] burdens” on people, to the point of causing “lasting distress” and, ultimately, a “national bankruptcy.”

> Much declamation has been indulged against certain characters, who are charged with advocating the pernicious doctrine, that “public debts are public blessings,” and with being friends to a perpetuation of the public debt of the country. Among these characters, if the Secretary of the Treasury has not been named, he has been pretty plainly alluded to. It is proper to examine what foundation there is, then, for those charges. That officer, it is very certain, explicitly maintained, that the *funding* of the existing debt of the United States would render it a national blessing; and a man has only to travel through the United States with his eyes open, and to observe the invigoration of industry in every branch, to be convinced that the position is well founded. But, whether right or wrong, it is quite a different thing from maintaining, as a general proposition, that a public debt is a public blessing; particular and temporary circumstances might render that advantageous at one time, which at another might be hurtful. . . .
>
> Nothing can more interest the national credit and prosperity than a constant and systematic attention *to husband all the means previously possessed for extinguishing the present debt, and to avoid, as much as possible, the incurring any new* debt. Necessity alone, therefore, can justify the application of any of the public property, other than the annual revenues, to the current service, or to the temporary and casual exigencies of the country, or the contracting of an additional debt, by loans, to provide for those exigencies. Great emergencies might exist in which loans would be indispensable. Taxes are never welcome to a community. They seldom fail to excite uneasy sensations more or less extensive; hence a too strong propensity in the Government of nations to anticipate and mortgage the resources of posterity, rather than encounter the inconveniences of a present increase of taxes. But *this policy when not dictated by very peculiar circumstances*, *is of the worst kind*. It’s obvious tendency is, by enhancing the permanent burdens of the people to produce lasting distress, and its natural issue is in national bankruptcy.[29]

In elaborating on the potential problems caused by excessive public debt, in his *Second Report on the Public Credit*, issued the same month he left office (January 1795), Hamilton wrote of “the danger to every government from the progressive accumulation of debt,” that excess debt was “the natural disease of all governments,” and one “strong in proportion as the form of a state is popular” (i.e., democratic):

> Government, being administered by men, is naturally, like individuals, subject to particular impulses, passions, prejudices, vices; of course to inconstancy of views and mutability of conduct. A kind of property, therefore, be more or less valuable, because more or less secure, in proportion as it is little or much exposed to the influence of that inconstancy or that mutability. . . . There is no sentiment which can better deserve the serious attention of the legislators of a country than the one expressed in a speech of the President, which indicates the danger to every government from the progressive accumulation of debt. A tendency to it is, perhaps, the natural disease of all governments; and it is not easy to conceive any thing more likely than this top lead to great and convulsive revolutions of

[29] Hamilton, essay in the *National Gazette*, September 11, 1792, in *The Works of Alexander Hamilton* (Federal Edition, 1904), ed. by Henry Cabot Lodge, Volume 3, pp. 40-43.

empire. On the one hand . . . new causes of expenditures . . proceed in increasing in rapid succession. On the other, there is a general propensity in those who administer the affairs of government, founded in the constitution of man, to shift off the burden from the present to a future day – a propensity which may be expected to be strong in proportion as the form of a state is popular.

To extinguish a debt which exists, and to avoid the contracting more, are ideas always favored by public feeling and opinion: but to pay taxes for the one or the other purpose, which are the only means of avoiding the evil, is always, more or less, unpopular. These contradictions are in human nature . . . Hence, it is no uncommon spectacle to see the same men clamoring for occasions of expense, when they happen to be in unison with the present humor of the community, where well or ill directed, declaiming against the public debt, or for the reduction of it as an abstract thesis; yet vehement against every plan of taxation which is proposed to discharge old debts, or to avoid new, by the defraying expenses of exigencies as they emerge . . .

True patriotism and genuine policy cannot . . . be better demonstrated by those of the United Sates, at the present juncture, than by improving efficaciously, the very favorable situation in which they now stand, for extinguishing, with reasonable celerity, the actual debt of the country, and for laying the foundation of a system which may shield posterity from the consequences of the usual improvidence and selfishness of its ancestors, and which, if possible, may give immortality to public credit. . . . If a nation can find embarrassment in creating the [tax] revenues required on this scale [for a sinking fund], it must arise from her having reached a stage when, from the neglect of the principle now inculcated, the mass of her debt has become so enormous as to strain her faculties in order to make a provision for it. . . .

Public and private credit are closely allied, if not inseparable. There is, perhaps, no example of the one being in a flushing, where the other as in a bad state., A shock to public credit would, therefore, not only take away the additional means which it has furnished, but by their derangements, disorder, distrusts, and false principles which it would engender and disseminate, would diminish the antecedent resources of private credit. . . .

It will be the truest policy of the United States to give all possible energy to public credit, by a strict adherence to its strictest maxims; and yet to avoid the ills of an excessive employment of it by true economy and system in the public expenditures; by steadily cultivating peace; and by using sincere, efficient, and persevering endeavors to diminish present debts, prevent the accumulation of new, and secure the discharge, within reasonable period, of such as it may be at any time a matter of necessity to contract.[30]

Hamilton's proposed "Bank of the United States" was to be a national bank, but not a central bank in the modern sense of a banker to government, or a bank that issues a monopoly fiat money, controls system reserves, and at root is beholden to the government that sponsors it and makes sure it underwrites (monetizes) and trades its own debt securities, the more so as more debt accumulates. For Hamilton the purpose of establishing a national bank was to asset the Treasury in collection and disbursing revenues (thus more easily servicing the nation debt) and to ensure that the national currency be gold-backed and that private banks issue their own currency by reference to the same uniform standard; above all, the national bank (what became the Bank of the United States, with a limited

[30] Hamilton, *Defense of the Funding System* (January 1795), in Harold C. Syrett, *The Papers of Alexander Hamilton*, Volume 18 (Columbia University Press, 1973). See also an excerpt in excerpt in Richard B. Morris, ed., *Alexander Hamilton and the Founding of the Nation* (New York: The Dial Press, 1957), pp. 320-325.

twenty-year charter lasting from 1791 to 1811) would not be co-opted into becoming the government's pet bank.

Even though government-sponsored central banks in 1790 were rare and still fairly new (the Bank of England was founded in 1694, largely to help fund Britain's war with France), Hamilton knew enough to realize that they could be highly dubious and threatening to a sound and prudent public finance; although he drew some lessons from the workings of the Bank of England, he also did not wish to see them mimicked in the U.S. "To attach full confidence to an institution of this nature," he wrote in his *Report on a National Bank* (December 1790), it is an "essential ingredient in its structure, that it shall be under a private not a public direction, under the guidance of individual interest, not of public policy." He feared that a national bank might become a central bank, like those that have existed for most of the past century, and be abused by profligate governments seeking gain access to undeserved liquidity and loans. As he wrote in his *Report on a National Bank* (December 1790), a national bank would have its advantages, but a main defect is the potential temptations it might posed to fiscally reckless government:

> The following are among the principal advantages of a Bank. First. The augmentation of the active or productive capital of a country. Gold and Silver . . . when deposited in Banks, to become the basis of a paper circulation . . . can acquire...an active and productive quality . . . . Secondly. Greater facility to the Government in obtaining pecuniary aids, especially in sudden emergencies . . . . Thirdly. The facilitating of the payment of taxes . . .Considerations of public advantage suggest a further wish, which is that the Bank could be established upon principles, that would cause the profits of it to redound to the immediate benefit of the State. This is contemplated by many, who speak of a National Bank, but the idea seems liable to insuperable objections. To attach full confidence to an institution of this nature, it appears to be an essential ingredient in its structure, that it shall be under a private not a public direction, under the guidance of individual interest, not of public policy, which would be supposed to be, and in certain emergencies under a feeble or too sanguine administration, would really be liable to being too much influenced by public necessity . . . It would indeed be little less than a miracle, should the credit of the Bank be at the disposal of the Government, if in a long series of time, there was not experienced a calamitous abuse of it.[31]

When Hamilton spoke of those who wished that a national bank "could be established upon principles that would cause the profits of it to redound to the immediate benefit of the State," he meant a bank that acted as unlimited central banks act today, when they generate what used to be called "seigniorage," but which today means the "monetization" of public debt, or, in the formal literature, "inflationary finance." A national (or central) bank buys government bonds directly for cash that it creates out of thin air

[31] Alexander Hamilton, *The Works of Alexander Hamilton* (Federal Edition, 1904), ed. by Henry Cabot Lodge, Volume 3, pp. 388-442.

(printing it or generating it electronically), presumably from a profligate sponsoring sovereign who cannot tap voluntary sources of funds in open credit markets. The process tends to debase the value of money, causing price inflation, such that government effectively finances itself by what is popularly labeled a hidden "inflation tax." Hamilton opposed all of this as unjust and imprudent public finance.

Hamilton's Bank of the United States (BUS) was approved by Congress, and by design it bore little resemblance to what has become of today's powerful Federal Reserve (established in 1913), despite frequent and loosely-drawn parallels to the contrary. The BUS was not a government bank, let alone a monopoly bank, and was not a precursor to the Federal Reserve, let alone to its role as chief funder of government debt and sole printer of irredeemable fiat paper money. The BUS was primarily a means of efficiently (and nationally) collecting tax payments and making cash payments on behalf of the government – that is, it acted as an administrative-oriented fiscal agent of the Treasury. The BUS had a limited charter of twenty years (1791-1811), and thus could be terminated for mischief. It was funded with $10 million in capital, 40% of which was paid-in gold and silver; fully 80% of its capital (and 80% of the voting shares) came from private investment, not public monies (although investor could also pay-in their capital share with public bonds). With its minority stake in the BUS (20%), the U.S. government could not easily abuse the BUS, either politically or financially. Most BUS assets were gold and silver, or short-term commercial loans, not government loans. The BUS did not issue fiat paper money, could not monetize public debt, and did not regulate or bail out private banks. Moreover, BUS debts could not exceed its capital, so it was not a highly-leveraged entity (unlike today's central banks). In retrospect, most historians believe Hamilton's BUS performed efficiently and admirably under its charter (1791-1811).

The final, and perhaps least-appreciated, element crucial to the success of Hamiltonian public finance was the fixing and defining of the U.S. dollar in terms of gold and silver, as required under Article I Section 8 of the U.S. Constitution (the Congressional power to "coin Money" and "regulate the Value thereof"). Hamilton did the arduous work of making this happen, of figuring out the necessary exchange ratios and monetary denominations, while also arguing for the deeper principles and morals integral to an objective, non-politicized money. He spelled it all out in his *Report on the Establishment* *of Mint* in January 1791,[32] and that guided Congress to enact the Coinage Act of 1792, which established the U.S. Mint. Hamilton knew the importance of a sound and stable currency in securing a reliable, trustworthy system constituted by the lending, borrowing, and exchanging of wealth:

> The general state of debtor and creditor; all the relations and consequences of price; the essential interests of trade and industry; the value of all property; the whole income, both of the state and of individuals, are liable to be sensibly influenced, beneficially or otherwise, by the judicious or injudicious regulation of this interesting object. . . . The immense disorder which actually reigns in so delicate and important a concern, and the still greater disorder which is every moment possible, call loudly for a reform. The dollar originally contemplated in the money transactions of this country, by successive diminutions of its weight and fineness, has sustained a depreciation of five per cent . . . The operation of this in depreciating the value of property, depending upon past contracts, and (as far as inattention to the alteration in the coin may be supposed to leave prices stationary) of all other property, is apparent. Nor can it require argument to prove that a nation ought not to suffer the value of the property of its citizens to fluctuate with the fluctuations of a foreign mint, and to change with the changes in the regulations of a foreign sovereign. . . . A general revolution in prices, though only nominally and in appearance, could not fail to distract the ideas of the community, and would be apt to breed discontents as well among all those who live on the income of their money as among the poorer classes of the people, to whom the necessaries of life would seem to have become dearer. In the confusion of such a state of things, ideas of value would not improbably adhere to the old coins . . . Among the evils attendant on such an operation are these: creditors, both of the public and of individuals, would lose a part of their property; public and private credit would receive a wound; the effective revenues of the government would be diminished. There is scarcely any point, in the economy of national affairs, of greater moment than the uniform preservation of the intrinsic value of the money unit. On this the security and steady value of property essentially depend.[33]

Hamilton had no good reason, whether in drawing on theory or on history, to question the validity or efficiency of a specie-based currency, as it had proved to be the most stable and objective monetary standard for centuries, and, importantly, since 1714 in Britain, when the government officially adopted the sterling-gold standard for the pound. For Hamilton that was a critical feature of Britain's subsequent economic development. In the newly-established U.S., the first Treasury Secretary sought to ensure the generation of fresh and reliable supplies of trustworthy gold and (mostly) silver coins by the U.S. Mint; he argued that this would help establish a solid and honorable foundation for an essentially private money and banking system, where private banks would issue specie-convertible promissory notes (currency) and checks, while the Bank of the United States would foster their circulation and reflux, to ensure private banks indeed could redeemed them.

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[32] Alexander Hamilton, *The Works of Alexander Hamilton* (Federal Edition, 1904), ed. by Henry Cabot Lodge, Volume 4, pp. 3-57.

[33] In Henry Cabot, *The Works of Alexander Hamilton*, Volume 4, pp. 4-5, 29-30.

Unlike today, the U.S. government under the Hamiltonian system of public finance did not sponsor a privileged central bank with a monopoly on the issuance of fiat paper money that devoted most of its money-issuance, bank reserve-creation and balance sheet capacity to underwriting (monetization) and trading (open-market operations) government debt. Whereas fiat paper money is now the norm among sovereigns nations globally, with 1971 marking the last year that the world's major currencies were tied in any way to gold (under the Bretton Woods gold-exchange standard of 1944-1971), Hamilton opposed fiat paper money; he viewed it as the common but reckless refuge of lawless democracies that were prone to permitting and encouraging excessive government deficit spending and prodigality in public finance. According to one biographer,

> Hamilton had conceived a deep distrust of money bearing the imprimatur of the government. For it seemed inherent in the nature of all governments that whenever they were hard pressed financially they resorted to devaluation, repudiation and inflation until they utterly destroyed all confidences in their promises. Of all forms of government, Hamilton thought that wisdom and uprightness in financial matters were found least in those of a popular cast. Always prone to pursue the course of least resistance, [democratic] governments preferred to print paper money and to "anticipate and mortgage the resources of posterity, rather than encounter the inconvenience of an increment of taxes." So apprehensive was he that this propensity would gain the upper hand that he wished to keep in abeyance the power of the federal government to issue paper money. The states were prohibited from making paper money legal tender and, Hamilton remarked," the spirit of the prohibition ought not to be disregarded by the government of the United Sates . . . The wisdom of the government will be shown in never trusting itself with the use of so seducing and dangerous an expedient."[34]

Only later, during the Civil War, did the U.S. resort to issuing irredeemable paper money (the notorious "greenbacks"), and in 1862 Congress moved further from the founders' original intent and took the extra-legal step of declaring the greenback legal tender. The Constitution had granted Congress no such power, had restricted it to a power to "coin money" (while also prohibiting states from making anything but gold or silver a legal tender). Although the legal tender laws were ruled unconstitutional by Supreme Court soon after the war's end (*Hepburn vs. Griswold*, 1870), and even though the U.S. officially resumed the gold-coin standard in 1879 (upon which it would stay until 1933), subsequent Supreme Court decisions over-turned the first ruling against federal paper money and sanctified the legal tender laws, permitting the U.S. government to declare, as it has since 1933, that its fiat paper money (issued jointly by U.S. Treasury and Federal Reserve) is the sole monopoly money of the land, and that all other monies are thereby a fraud or a counterfeit. Even private gold ownership for non-monetary purposes was criminalized between 1933 and 1975 (but thereafter decriminalized).

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[34] John C. Miller, *Alexander Hamilton: Portrait in Paradox* (New York: HarperCollins Publishers, 1959), p. 259.

IV. Applicability of Hamiltonian Principles to Contemporary American Public Finance

To some extent throughout this paper I have hinted already that Hamiltonian principles are applicable to contemporary dilemmas in American public finance; yet I have also suggested that the principles and policies that have been adopted in recent decades, amid the latest financial crises, are nearly the opposite of those promulgated by Hamilton and adopted by the U.S. in the 1790s. As such, I also contend that recent policies will more likely aggravate than resolve our public finance dilemmas.

Hamilton and most of the other Founding Fathers believed strongly in the principles of liberty, individual rights (including private property rights), and sanctity of contract; they believed, as well, along with John Locke, that government's sole purpose should be the protection and security of life, liberty, and property from those who would invade them by the initiation force or fraud. What I term "Hamiltonian principles of public finance" build consistently upon these moral-political foundations.

For the Hamiltonian, a just government, in carrying out its limited purpose of protecting rights and securing property, also must be limited to functions necessary and proper to its basic purpose. Thus in public finance it must spend wisely, frugally, and prudently; as a rule it should tax lightly, live within its means, and balance its budget. If such a government should need to borrow during emergencies such as wars, it still must do so prudently, never excessively, and regardless of its ultimate debt burden, it must not violate rights or abrogate contracts, even of those held by creditors. In the field of money, the just and efficient government must uphold objective, market-based media and monetary standards, such as the gold standard; it must not abuse the money and credit system by resorting to confiscatory or fiat-type measures for its own fiscal privileges and advantages, at the expense of innocent money-holders.

Needless to say, this is not the form of government that any longer governs the modern world; yet this need not mean that Hamiltonian principles cannot guide us, nor permit us to better comprehend the roots of the now-chronic public finance failings of over-extended welfare states. Indeed, one might conclude that, upon grasping the true principles of Hamiltonian public finance, contemporary financial failings are due to a decades-long *rejection* of such principles, and not, by any means, to their *adoption*.

Hamilton was perhaps America's first "public choice" political economist, a realist statesmen who recognized that public officials were not utopian angels devoted selflessly to the "public interest" or pledged eternally to fiscal and monetary rectitude. The public choice tradition began as a specialty in the principles and practices of public finance, yet conceived them not in ideal terms but rather on the grounds of actual motives and practical affairs, with politicians and their administrative handmaidens, the policymakers, presumed to be more selfish than public-spirited. In a democratized populace enjoying a wide franchise, the electoral edge resides with those political actors most willing and able to perpetually expand the welfare state, no matter how under-funded it must be, and thus with those who resort to money illusion and fiscal illusion, to conceal its true costs, and to shift them increasingly and disproportionately to a narrowing minority of citizens and foreigners alike – the rich and the creditors.

In recent decades, public choice scholars have explained how majority-rule political systems (primarily democracies), can lead to limitless rent-seeking, reckless rates of government spending, confiscatory levels of taxation, and an excessively burdensome accumulation of public debt; in essence, current generations are motivated to use (exploit) future generations as a fiscal commons (Buchanan 1960, 1967, 1977, 2000). Hamiltonian public finance anticipates and shares this perspective. Thus we might best conclude by recalling, especially in the context of today's fast-accumulating U.S. public debt, Hamilton's observation that "there is a general propensity in those who administer the affairs of government, founded in the constitution of man, to shift off the burden from the present to a future day – a propensity which may be expected to be strong in proportion as the form of a state is popular."[35]

Perhaps democracy must forever be in deficit; if so, and if, as seems likely, no one any longer questions the unmitigated march of the majority, then fiscal chaos may once again engulf America (and the globe). If that happens, the world may very well suffer from the absence of leaders like Hamilton.

[35] Hamilton, *Defense of the Funding System* (January 1795), in Harold C. Syrett, *The Papers of Alexander Hamilton*, Volume 18 (Columbia University Press, 1973). See also an excerpt in excerpt in Richard B. Morris, ed., *Alexander Hamilton and the Founding of the Nation* (New York: The Dial Press, 1957), pp. 320-325.

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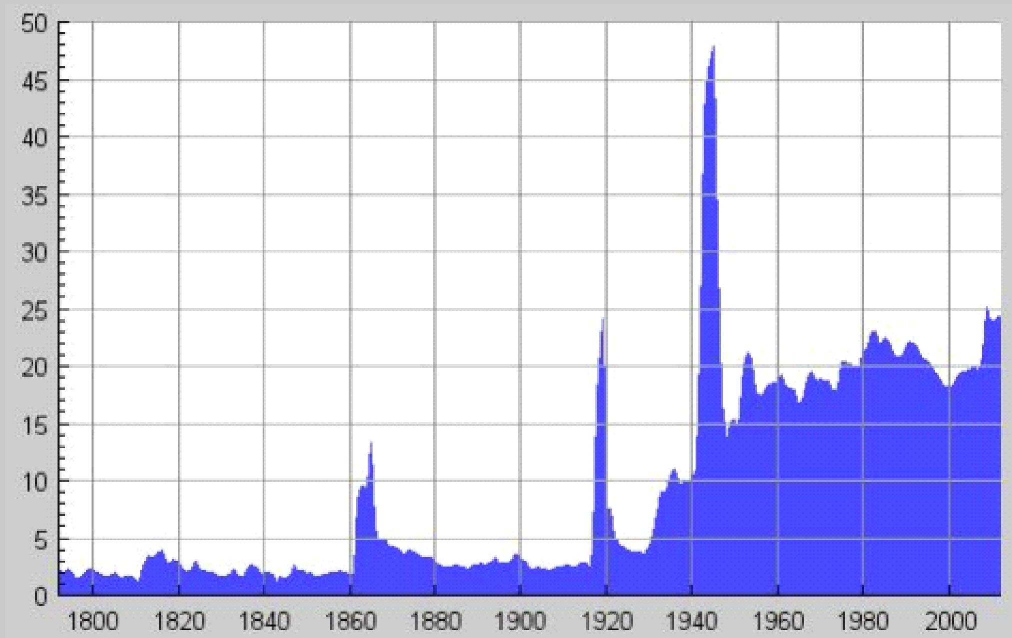
Figures and Tables (pp. 33-35)

Figure 1

U.S. Federal Government Spending as a Percent of GDP

1792-2012

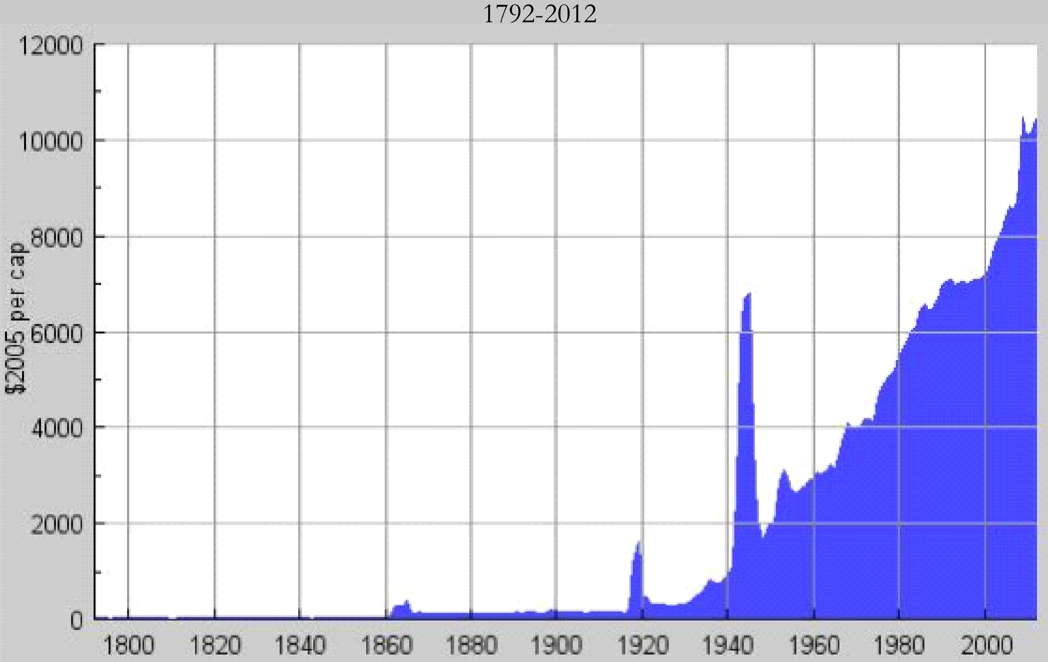


Source: U.S. Bureau of Economic Analysis

Figure 2

U.S. Federal Government Spending Per Capita (Real $2005)

1792-2012

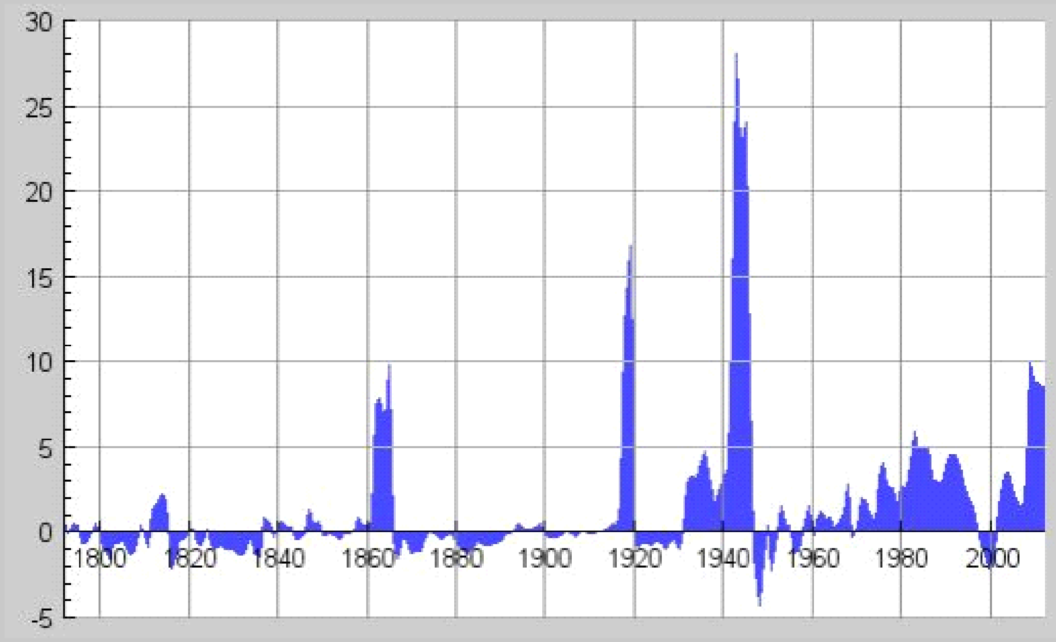


Source: U.S. Bureau of Economic Analysis

Figure 3

U.S. Federal Government Deficit as a Percent of GDP

1792-2012

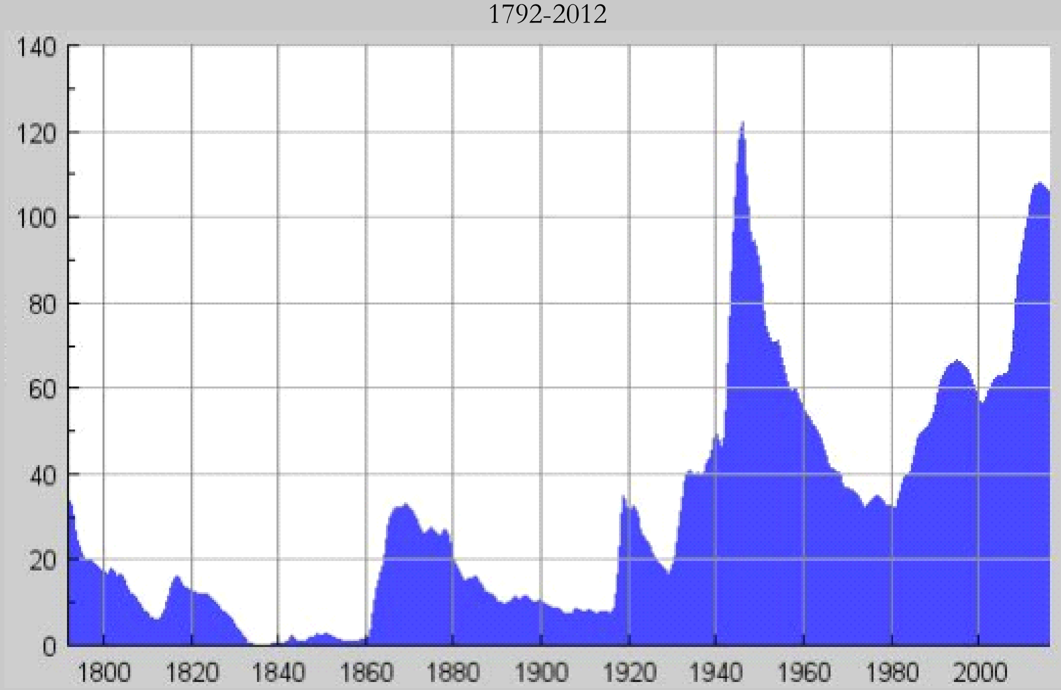


Source: U.S. Bureau of Economic Analysis

Figure 4

U.S. Federal Government Debt as a Percent of GDP

1792-2012



Source: U.S. Bureau of Economic Analysis

Table One

U.S. Public Finances: 1780-1799 versus 2002-2011

A. 1790-1799 ($ in millions)

Year	Revenues	Outlays (All)	Surplus/ (Deficit)	Interest Expense	Int. Exp./ Revenues	% of Outlays Borrowed	National Debt	Revenues/ National Debt	GDP (Nominal)	National Debt/GDP
1790	$1.64	$1.92	-$0.28	$3.72	227%	15%	$77.23	2%	$187	41%
1791	$2.65	$2.35	$0.30	$3.46	131%	NA	$78.79	3%	$204	39%
1792	$3.68	$5.08	-$1.41	$3.20	87%	28%	$80.36	5%	$223	36%
1793	$4.65	$4.48	$0.17	$2.77	60%	NA	$78.43	6%	$249	31%
1794	$5.43	$6.99	-$1.56	$3.49	64%	22%	$80.75	7%	$312	26%
1795	$6.12	$7.54	-$1.43	$3.19	52%	19%	$83.76	7%	$380	22%
1796	$8.38	$5.73	$2.65	$3.20	38%	NA	$82.06	10%	$413	20%
1797	$8.69	$6.13	$2.56	$3.30	38%	NA	$79.23	11%	$405	20%
1798	$7.90	$7.68	$0.22	$3.05	39%	NA	$78.41	10%	$409	19%
1799	$7.55	$9.67	-$2.12	$3.19	42%	22%	$82.98	9%	$437	19%
	Changes, 1790-1799:									
	360%	403%		-14%			7%		134%	-54%

Source: *Historical Statistics of the United States, Colonial Times to 1970 (U.S. Dept of Commerce)*

B. 2002-2011 ($ in billions)

Year	Revenues	Outlays (All)	Surplus/ (Deficit)	Interest Expense	Int. Exp./ Revenues	% of Outlays Borrowed	National Debt	Revenues/ National Debt	GDP (Nominal)	Debt/GDP
2002	$1,814	$2,045	-$231	$333	18%	11%	$6,406	28%	$10,642	60%
2003	$1,796	$2,192	-$397	$318	18%	18%	$6,998	26%	$11,142	63%
2004	$1,926	$2,325	-$398	$322	17%	17%	$7,596	25%	$11,853	64%
2005	$2,196	$2,518	-$322	$352	16%	13%	$8,170	27%	$12,623	65%
2006	$2,450	$2,659	-$209	$406	17%	8%	$8,680	28%	$13,377	65%
2007	$2,600	$2,788	-$188	$430	17%	7%	$9,229	28%	$14,029	66%
2008	$2,465	$3,145	-$680	$451	18%	22%	$10,700	23%	$14,292	75%
2009	$2,045	$3,516	-$1,471	$383	19%	42%	$12,311	17%	$13,939	88%
2010	$2,206	$3,483	-$1,277	$414	19%	37%	$14,025	16%	$14,527	97%
2011	$2,349	$3,631	-$1,281	$414	18%	35%	$15,180	15%	$15,321	99%
	Changes, 2002-2011:									
	29%	78%		24%			137%		44%	65%

Source: White House Office of Management & Budget and U.S. Treasury Department