

Philipp M Hildebrand: Albert Gallatin, one of the financial founding fathers – what can we learn from him today?

Speech by Mr Philipp M Hildebrand, Vice-Chairman of the Governing Board of the Swiss National Bank, at the Swiss-American Chamber of Commerce, Geneva, 10 September 2008.

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1. Introduction

As always, it is a great pleasure to be in Geneva. I want to thank the Swiss-American Chamber of Commerce for its kind invitation.

My remarks today are unusual in the sense that I will not structure them around monetary policy, the ongoing financial turmoil, or any other current monetary topic. Instead, I have the privilege to step aside temporarily from my day-to-day preoccupations and indulge in a little bit of history about a remarkable man whose origins are firmly rooted in Geneva's beautiful "vielle ville". Ladies and Gentlemen, it is an honor for me to pay homage to Albert Gallatin – the Geneva-born fourth – and to this day longest – serving United States Secretary of the Treasury.¹

Those of you who enjoy economic history will be familiar with the extraordinary accomplishments of Alexander Hamilton, the first Secretary of the Treasury, appointed by President George Washington in 1789. Hamilton built the foundation of the U.S. federal financial system in the late 18th century.² Albert Gallatin's efforts to solidify the Hamiltonian structure and to establish fiscal discipline in the early years of the United States are less well known.³ As you will see, they clearly merit attention.

The story of Albert Gallatin provides a wonderful example of how Swiss and American politics and economics have nourished each other for centuries through the exchange of ideas and people. Moreover, Albert Gallatin's legacy arguably provides some valuable lessons which remain relevant in the present time. Today, I would like to focus on a crucial part of Gallatin's legacy – his strong adherence to fiscal discipline. But first, let me take you on a brief tour of Gallatin's fascinating life story.

2. The life and achievements of Albert Gallatin

For the sake of clarity, allow me to divide Albert Gallatin's life into four distinct periods.

1761-1788: Youth

The first period covers Gallatin's life prior to becoming politically active in the United States. Gallatin was born into a wealthy merchant family in Calvinist Geneva in 1761. He became an

¹ Gallatin served 13 years – longer than any other serving Secretary of the Treasury before or since.

² Ron Chernov, *Alexander Hamilton* (The Penguin Press, New York NY, 2004), provides the most recent and complete Hamilton biography.

³ Alexander Balinky, *Albert Gallatin: Fiscal Theories and Policies* (Rudgers University Press, New Jersey NJ, 1958), provides a thorough analysis and critique of Albert Gallatin's fiscal and financial system against the background of the political and economic conditions which then prevailed, as well as his party affiliation during his time in office.

orphan when he was only nine. He was raised by his relative, Catherine Pictet.⁴ At the age of nineteen, Gallatin obtained a university degree in Latin and Greek. His classic education was not the only early influence on his future political convictions. He was deeply affected by the strict Calvinist attitudes to debt and savings that would have prevailed in Geneva at the time. Moreover, he was privy to and would have actively participated in the rich debates about politics and philosophy that took place in his social circles. These debates were inspired by the French Enlightenment and the influence and presence of the likes of Voltaire and Rousseau during those years.⁵ Nonetheless, by the time he completed his studies, Gallatin was disenchanted with his prospects in Geneva as either a civil servant, merchant or member of the officer corps. In 1780, without saying a word to his family, he decided to leave for the newly independent United States of America. As he put it, he wanted to “drink in a love for independence in the freest country of the universe”.⁶

Gallatin spent his first years in the US in New England, trying to earn a living. Eventually, he taught French at Harvard. With his early savings, he purchased some land in Fayette County, Pennsylvania and in 1784, he settled there.⁷

1788-1801: Politics

Once established in Pennsylvania, Gallatin became politically active at the local and later at the federal level. This marked the beginning of a second distinct period of Albert Gallatin's life. This period lasted from approximately 1788 to 1801, when the newly elected president, Thomas Jefferson, appointed Gallatin as his Secretary of the Treasury.⁸ These final few years of the 18th century were an extraordinary period in American history and politics. During the second half of the 1780s, the Constitution was written, adopted and eventually ratified; the first federal government under the Constitution was formed and George Washington, who had presided over the Constitutional Assembly, was elected first President of the United States – in 1789.

President Washington appointed Hamilton, whom he had relied on greatly during the War of Independence, as his Secretary of the Treasury. From 1789 to 1800, Hamilton built the foundation of what was to become the federal financial system of the United States.⁹ Hamilton's system rested on four pillars: The creation and extension of sources of federal tax revenues; the funding and management of the federal public debt; the increased use of the U.S. dollar as a medium of exchange through the establishment of the United States Mint

⁴ Albert Gallatin's father died when he was four, and his mother when he was nine. His mother sent him to be brought up by his aunt, Catherine Pictet, just after his father died, as she had to attend to the family's financial affairs. For more on Gallatin's Geneva background see, for example, William Emmanuel Rappard, *Albert Gallatin, citoyen de Genève, ministre des Etats-Unis* (Impr. Centrale, Genève, 1917) or John Austin Stevens, *Albert Gallatin, An American Statesman* (Univ. Press of the Pacific, Honolulu HI, 1883).

⁵ Voltaire arrived in Geneva in 1755, and moved to Ferney in 1758, where he stayed to his death in 1778. Gallatin's grandparents visited Voltaire in Ferney and Albert Gallatin was often taken there for visits. Rousseau was born in Geneva, left at a young age but returned there in 1754. He published *Du Contrat Social* (and other writings) in 1762, a year after Gallatin was born. He was subsequently forced to flee from Geneva, so there was no direct contact, but definitely an influence on the intellectual climate of the city.

⁶ Stevens, op.cit., p. 10, quotes Gallatin as having used this phrase to explain his departure.

⁷ In Pennsylvania, Gallatin also founded the colony “New Geneva”.

⁸ Contrary to what the party's name suggests, the Republican Party established by Jefferson in the late 18th century was in fact the forerunner of today's Democratic Party.

⁹ Hamilton only served as Treasury Secretary until 1795, after which Wolcott, a fellow Federalist, took over until 1801. But Wolcott is generally perceived as having continued and completed the policies of Hamilton until Dexter took over, for a few months only. Gallatin took office in May 1801.

and, finally, the creation of the first Bank of the United States.¹⁰ The Bank of the United States gave the federal government a tool to manage short-term credit and cash flow and to influence – and thereby help safeguard – the stability of the emerging financial system of the United States.¹¹ The Bank also significantly extended access to credit for private enterprise.

During these extraordinary years, Gallatin first served as a representative in the state legislature of Pennsylvania. He was involved in the adoption and ratification of the state constitution. After a brief period as a senator, Gallatin became a member of the House of Representatives in 1795, where he served until 1801.¹² As a congressman, he established himself as a leading figure in the emerging Republican Party led by Thomas Jefferson. Gallatin quickly gained the reputation of being the member of his party with the most profound understanding of public finance. In line with the state-based agricultural outlook of Jefferson and the Republican Party, he challenged Hamilton's federalist financial institutions and policies.¹³ Gallatin and Hamilton became enemies, both politically and personally. Part of the personal enmity was rooted in the Whiskey Rebellion of 1792, when Gallatin served as a member of the Pennsylvania Assembly. He is believed to have been the author of an aggressively formulated resolution opposing Hamilton's efforts, as Secretary of the Treasury, to collect a "whiskey tax". This resolution stated that tax collectors would be treated with the "contempt they deserve."¹⁴ Later, the enmity between Gallatin and Hamilton was further fueled when Gallatin actively supported Republican attempts to discredit Hamilton and force him to resign from the Treasury over wide-ranging charges of corruption and mismanagement.

As a member of Congress, Gallatin acquired a solid reputation as a fiscal conservative. He relentlessly demanded a high level of fiscal transparency and consistently challenged all decisions by the government to spend in excess of its current revenues.

1801-1814: The Treasury

Thomas Jefferson had already relied on Gallatin's financial advice during his time in opposition. After becoming President, he chose Gallatin as his Secretary of the Treasury.¹⁵ Thus began a third distinct period in Gallatin's life. Remarkably, instead of dismantling Hamilton's financial system, Gallatin opted to preserve the most important parts of it. In some cases, he even strengthened Hamilton's system. Most notably, he made extensive use of the Bank of the United States to conduct the government's day-to-day fiscal operations. Gallatin also kept Hamilton's system for keeping the public debt more or less intact. Other parts of Hamilton's financial system were modified to serve Republican causes. Gallatin's early

¹⁰ See, for example, Chernov's description of Hamilton's achievements while Secretary of the Treasury (Chernov, op.cit., ch. 17-20).

¹¹ Using the Bank of the United States for the maintenance of financial stability was done both through lending-of-last-resort type operations and through the restriction and extension of credit in response to market conditions. Robert E Wright and David J. Cowen, *Financial Founding Fathers: The Men Who Made America Rich* (Univ. of Chicago Press, Chicago IL, 2006), ch. 1, provide a thorough exposition of Hamilton's ideology, achievements, and financial system, as well as his skilled use of the Bank of the United States for the purposes of maintaining financial stability.

¹² At the end of 1793, Gallatin won the election to the United States Senate, but was removed shortly thereafter from the Senate on the grounds that he did not have the minimum nine years of United States citizenship.

¹³ Alexander Balinky, *Albert Gallatin: Fiscal Theories and Policies* (Rudgers Univ. Press, New Jersey NJ, 1958) gives a very thorough introduction to the fiscal ideology of the Republican Party and how Gallatin's fiscal theories and policies were shaped by this. Wright and Cowen, op.cit., p. 103, point out how Gallatin had more of a problem with the Federalist domination of Hamilton's bank than with the bank itself.

¹⁴ Quoted in Chernov, op.cit., p. 469.

¹⁵ Jefferson was elected president in 1800, but did not appoint Gallatin until 1801 – even though it had been his intention from the start. See for example Wright and Cowen, op.cit., p. 93, for details.

priorities included a change in Hamilton's tax structure in order to better reflect the Republican Party's ideology and its constituencies. He also focused on the need to increase transparency in fiscal policy. He progressed rapidly on both fronts. Internal taxes were soon abolished. The federal government came to rely almost exclusively on import tariffs, which Gallatin saw as luxury taxes that did not burden his farming constituency.¹⁶ Gallatin also convinced Congress to pass the law of 1801, which required an annual report by the Secretary of the Treasury to the President. He submitted the first of these reports later that year. Moreover, the minting of dollars was somewhat scaled back under Gallatin. To compensate, he allowed foreign coins to circulate along with the dollar. These measures were not taken because Gallatin was opposed to the Mint. Rather, the Mint proved to be very costly for the federal purse. Therefore, Gallatin saw the reduction of its operations as a way for the government to save money, in line with his primary objective of fiscal consolidation.¹⁷ For Gallatin, a reduction of the United States' federal debt burden "was the end toward which all other fiscal policy was designed."¹⁸ He argued forcefully that the federal government should spend tax revenues on new public services, goods or investment only when tax revenues were freed from having to service a large public debt stock.¹⁹

Gallatin's cautious management and reduction of the public debt during his first years in office was crucial. It gave the United States Treasury the necessary credibility to access financial markets and therefore finance extraordinary expenses. The most prominent example, of course, is Gallatin's arrangement to finance the Louisiana Purchase in 1803. He quickly managed to raise the necessary amount – nearly USD 15 million – through a bond issue arranged by the British merchant bank Barings.²⁰

With hindsight, some scholars have questioned whether public debt reduction should be the main fiscal policy objective of an emerging country with high growth potential.²¹ But, given Gallatin's debt reduction objective, his efforts were extraordinarily successful. By 1808, Gallatin had managed to reduce the federal debt-to-GDP ratio by an estimated 50 percent or so, including the additional debt from the Louisiana Purchase.²² This was a remarkable effort

¹⁶ Balinky, op.cit., provides a detailed description of the tax structure of the early United States and its changes under Gallatin.

¹⁷ See Balinky op.cit., pp. 101-103, for an account of the United States Mint under Gallatin.

¹⁸ Quoted from Balinky, op.cit., p. 39.

¹⁹ This is not to suggest that Gallatin was opposed to government-sponsored infrastructure projects. Indeed, in 1808, he presented the Gallatin Report on Roads and Canals. As he put it at the time, the vision of roads and canals to link up the young nation "could not be left to individual exertion."

²⁰ The federal debt stood at approximately USD 83 million when Gallatin took office in 1801. By 1808, Gallatin had succeeded in reducing it to USD 57 million, including the extra USD 15 million added by the Louisiana Purchase. United States nominal GDP has been estimated at approximately USD 520 million in 1800 (see Susan B. Carter, Scott S. Gartner, Michael R. Haines, Alan L. Olmstead, Richard Sutch, and Gavin Wright (eds.), *Historical Statistics of the United States, Volume Three: Economic Structure and Performance*. Cambridge University Press, New York NY, 2006). Hence, almost doubling the size of the United States through the purchase of the Louisiana territory from Napoleon in 1803 cost approximately 3% of the GDP of the existing territory.

²¹ Balinky, op.cit., for example, comes out strongly against Gallatin's debt reduction strategy, arguing that it was a narrow-minded and short-sighted fiscal policy for a country in need of economic development.

²² More precisely, the United States debt-to-GDP ratio was reduced by an estimated 56 percent between 1801 and 1808. This estimate is based on nominal GDP estimates for the US in the early 1800s provided in Carter et. al, op.cit., who provide nominal GDP figures for 1800 and 1810 (but not for the intervening years). These have been used here as proxies for 1801 and 1808. The possible error caused by this approximation is mitigated by the fact that growth in 1809-10 is likely to have slowed considerably due to the increasing prospects of war with Britain. Data on federal debt are obtained from the United States Treasury Department, Public Debt Historical Archives (http://www.treasurydirect.gov/govt/reports/pd/histdebt/histdebt_histo1.htm). These data closely match those reported by Gallatin himself in *State of the Finances, 1801-1802* (American State Papers, Finance, 1832, Vol 1, pp. 701-705; <http://memory.loc.gov/ammem/amlaw/lwspink.html>).

and cannot be attributed solely to the fact that Gallatin's service at the Treasury coincided with a prosperous and peaceful period.

To put Gallatin's debt reduction efforts into perspective, it is worth comparing them to more recent developments in OECD public-debt-to-GDP ratios. For instance, growth in OECD economies was also relatively robust between 1994 and 2000.²³ But only one OECD country – Ireland – saw a similar reduction in its debt-to-GDP ratio during that period. Arguably, in the case of Ireland, debt reduction was easier. During the second half of the 1990s, Ireland enjoyed roughly three times the economic growth the United States is estimated to have experienced in the early 1800s. Ireland essentially grew out of its debt, while Gallatin had to save his way out of the debt burden of the United States.²⁴

Unfortunately for Gallatin, history took a turn for the worse in 1808. A second war of independence with Britain was looming. A trade embargo with Britain was imposed and led to a steady drop in import tax revenues over the coming years. At the same time, Gallatin needed additional revenues for war preparations. This left him with next to nothing to sustain his debt reduction strategy. By 1809, the first deficit emerged since Gallatin had taken office. In addition, and against Gallatin's advice, Congress opted not to renew the charter of the Bank of the United States in 1811, just one year before war broke out. Congress thereby removed the main tool for arranging war financing that Gallatin would have relied on. Foreseeing financial disaster and unable to prevent it in his capacity as Secretary of the Treasury, Gallatin resigned from the Treasury in 1814.

1814-1849: Diplomacy

This brings me to the fourth distinct period of Gallatin's life, covering his post-treasury years. In 1814, Gallatin went to Russia to represent the United States and help settle hostilities at the peace conference with England and France. The conference ended successfully the same year with the signing of the Treaty of Ghent. Much of this success has been credited to Gallatin.²⁵ Before returning home, Gallatin made his first visit to Geneva since he had left his birthplace 35 years earlier. Geneva received him with great honors. According to his son, who accompanied him at the time, the visit was very emotional. Gallatin remained deeply attached to his native city throughout his life.²⁶

Albert Gallatin never returned to Treasury. But he stayed involved in U.S. diplomatic, political and financial matters. Until his death in 1849, he served as a diplomat in Paris, and later in London. He also directed the Bank of New York, and indulged in economic, financial and ethnographic research. He was laid to rest in the Trinity Church cemetery on Wall Street. Years earlier, Trinity Church had already become the final resting place of Alexander Hamilton. If you visit Trinity Church, you will find that the two are buried at opposite ends of the cemetery, perhaps fittingly so in light of their difficult personal and political relationship.

²³ Real growth averaged 3.1 percent in OECD countries between 1994 and 2000, as compared to an average growth rate of 2.8 for the period 1980 to 2006. During the more recent seven-year period between 2000 and 2006, growth has averaged 2.5 percent, and no OECD country has reduced its debt-to-GDP ratio by more than Gallatin's record.

²⁴ Ireland experienced an average real growth rate of nine percent during the years in question. This compares to an estimated average growth rate for the United States between 1801 and 1808 of just over three percent. Source: Author's own calculations based on data provided in Carter et. al, op.cit., and the IMF *World Economic Outlook*.

²⁵ See, for example, Rappard, op.cit.

²⁶ Rappard, op.cit. recounts Gallatin's post-treasury diplomatic career as well as his travels in Europe and time spent in Geneva.

3. The legacy

Let me now briefly turn to the legacy of Albert Gallatin's extraordinary life. It seems to me that there are two major achievements to point to. First, there is Gallatin's singular success in his pursuit of debt reduction. Gallatin took advantage of prosperous and relatively peaceful times to reduce the public debt of the emerging United States. The second key legacy of Albert Gallatin's efforts is the way in which he reinforced the financial institutions set up by Alexander Hamilton and made skilful use of them.

Hamilton's financial system consisted of newly established institutions, which encountered fierce political opposition. They lacked the robustness that only the test of time can provide. Gallatin spent the next 13 years successfully using Hamilton's system to ensure fiscal prudence and continuous sound financial management. Without this, it might not have survived its infancy. This is particularly true of the Bank of the United States. It is possible to argue that Gallatin's strong support for Hamilton's bank furthered the process of setting up its successor, the Second Bank of the United States, in 1817. Two recent authors have gone further. They refer to Gallatin as the "Savior" of Hamilton's financial system.²⁷

This second legacy is remarkable, given the long-standing animosity between Alexander Hamilton and Albert Gallatin. How are we to explain Gallatin's transformation from a prominent critic of the Hamiltonian system to its guardian and perhaps savior? One possible answer, of course, is that when Thomas Jefferson became President in 1801, he quickly realized that the economic consequences of dismantling Hamilton's financial structure would be dramatic for his presidency, his party and the country. Moreover, there is evidence that Jefferson may have indirectly given a commitment to the Federalists to preserve at least part of the Hamiltonian financial system in order to break the political deadlock during the Presidential election. What is perhaps most remarkable, however, is that Gallatin seems to have come to appreciate the genius of Hamilton's system and advised Jefferson accordingly. In an attempt to firmly discredit Hamilton, Jefferson – shortly after becoming President – asked Gallatin to examine the archives and uncover the "blunders and frauds of Hamilton". After searching "with a very good appetite", Gallatin went back to Jefferson with the following remarkable assessment: "I have found the most perfect system ever formed. Any change that should be made in it would injure it. Hamilton made no blunders, committed no frauds. He did nothing wrong." Indeed Gallatin went on to say that Hamilton had done such an outstanding job as the first Secretary of the Treasury that he had turned the post into a sinecure for all future occupants. As for the Bank of the United States, Gallatin proclaimed that "it had been wisely and skillfully managed".²⁸

4. What can we learn from Gallatin's financial achievements today?

What lessons can we draw today from Gallatin's economic policies? Let me limit my observations to the value of fiscal prudence and sustainability. Arguably, the most important lesson of Gallatin's achievements is that public debt reduction requires unwavering political commitment to fiscal discipline. This lesson is certainly relevant in the context of today's fiscal challenges.

Gallatin faced an unexpected fiscal time bomb in the form of a war with Great Britain. The developed world now faces a predictable and rapidly ticking fiscal time bomb in the form of aging populations. The demographic strains on government budgets in the developed world are already visible. Pressures will almost certainly intensify in coming years. The implication is that in the not-too-distant future, spending on public goods and services will have to contract. Alternatively, taxes could be raised in an attempt to maintain the level of public

²⁷ Wright and Cowen, *op.cit.*

²⁸ For all these references, see Chernov, *op.cit.*, p. 647.

goods and services we currently enjoy. Given these longer-term fiscal strains, we should be building up a fiscal cushion rather than becoming more indebted.

Allow me to review very briefly some trends in budget deficits and debt levels in the developed world. Historically, government budget deficits have been typically used to finance wars. War time deficits have then been compensated by surpluses in times of peace. This cycle of deficit finance and subsequent debt reduction is illustrated in fig 1. It shows historical deficits for G7 countries excluding Germany.²⁹ Every major period of deficits prior to 1950 has coincided with a time of war. After the Second World War, deficits essentially returned to normal. As you can see, after 1970 there was a significant change – all 6 countries represented in the graph started running sustained budget deficits, and this in times of relative peace.³⁰ Now take a look at graph 2. It shows public debt for the OECD, as a percentage of GDP, since 1970. Since the mid-1970s, the accumulation of fiscal deficits has led to a near doubling of public debt, as a percentage of GDP, in the OECD area.³¹ While public debt can be desirable for many reasons, it is very difficult to argue that the appropriate debt-to-GDP ratios should be this high. Admittedly, the average OECD debt-to-GDP ratio has fallen somewhat since the late 1990s. The Maastricht convergence criteria for EMU countries and robust growth have clearly contributed to this trend. However, fiscal positions in the United States and in Europe have deteriorated again more recently.³² For a long time, Switzerland stood out as an exception in the pattern of deteriorating OECD debt-to-GDP ratios. But with the economic slowdown of the early 1990s, Switzerland's public debt increased rapidly, and exceeded 50% of GDP in 2003. Fortunately, it has since been brought back down. It stood at roughly 44% last year.

How would Albert Gallatin view such unprecedented increases in public debt-to-GDP ratios? Presumably, he would be dismayed. Moreover, I suspect he would conclude that the political commitment to fiscal discipline should have been much more pronounced during the last few years when the global economy enjoyed broadly robust growth. As the world is entering what looks like a protracted period of lower growth, it will be extremely difficult to keep public debt-to-GDP ratios constant, let alone reduce them.

5. Conclusion

After this very brief fiscal detour let me conclude by returning to Albert Gallatin. Anyone who loves the city of Geneva has many reasons to be proud of the achievements of Albert Gallatin. To my knowledge, he is the only son or daughter of Geneva who is honored in the form of a prominent statue in Washington D.C. He stands at the entrance of the Treasury building, and only a few steps away from the White House. On the statue, he is described simply as a "Genius of Finance". As Secretary of the United States Treasury, he made a crucial contribution to the stability and development of the nascent United States financial system. Above all, he was deeply committed to reducing the size of the federal public debt during his first seven years in office. Only when tax revenues declined, as the threat of war loomed, did he allow debt reduction to be relegated to a secondary objective.

²⁹ See Paul R. Masson and Michael L. Mussa, Long-term Tendencies in Budget Deficits and Debt IMF Working Paper No. 95/128, 1995.

³⁰ In spite of the cold war, proxy wars and several wars of independence of colonies, the period after the Second World War remains one of relative peace in the developed world, compared with any other period in history.

³¹ Most of the sub-periods during which debt grew fastest have coincided with periods of economic slowdown. But what is remarkable is that we have not generally seen a reduction in debt levels in good times that would match the increases in debt in downturns.

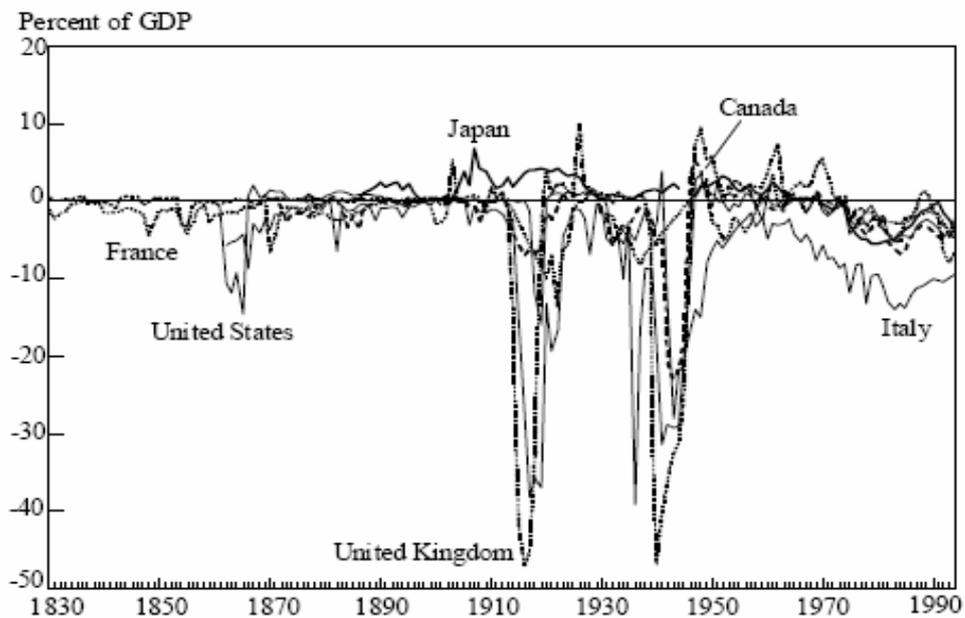
³² What the graph hides is the fact that most of the increase in the average OECD public debt-to-GDP ratio in the late 1990s has been driven by the steep debt increases of Japan in the 1990s. Taking out Japan from the sample shows a slight drop in the average debt ratio during this period.

Gallatin's debt reduction efforts look even more remarkable when viewed through the prism of current fiscal developments throughout the developed world. If Albert Gallatin had been in charge of OECD public finances during the decade prior to the onset of the current financial turmoil, we might be in a more comfortable fiscal situation today. As it stands, our longer-term fiscal challenges are formidable and will demand courageous political and fiscal leadership. Albert Gallatin's adopted home country is no exception. Regardless of who moves into the White House in January 2009, the new President's longer-term fiscal policy options will be constrained by the legacy of the past.

To close, let me thank the Swiss-American Chamber of Commerce for providing me with the opportunity to honor this extraordinary Genevan-American. Albert Gallatin would find much to enjoy in present day Geneva. He would be particularly pleased to discover an international city with excellent Swiss-American relations. Thank you for your attention.

Fig 1.³³

G-7 Countries Excluding Germany: Central Government Fiscal Position, 1830-1994



Sources: U.S. Department of Commerce (1975), Mitchell (1980), Mitchell (1983), Japan Statistical Association (1987), and IMF, *World Economic Outlook* database. Fiscal position was calculated as revenue minus expenditure.

³³ Graph borrowed from Masson and Mussa, op.cit.

Gross debt as a percentage of GDP, OECD, 1970-2007.
Source: IMF

