Sustainability of High Public Debt:

What the Historical Record Shows

Albrecht Ritschl *

Summary

The paper looks into the debt histories of three European countries, Britain, France, and Germany, to study three questions. First, are there historical parallels to the accumulation of high debt in peacetime that has taken place in the past decades? The answer to this is mostly in the negative. National debt was high during long periods but usually related to wars or their financial aftermath. Second, how were large debts reduced, and that were the factors determining decision-making? Recent research has emphasized the role of social conflict in this context. We find that although this may play a role, the dominant effect may have come from international financial relations. Third, what are the macroeconomic effects of budget stabilization, and does it pay off for a country to repudiate or inflate away its debt? The short-run evidence is mixed, as the success of debt default has varied considerably. In the long run, however, stabilizing the budget pays off, as there seem to be no lasting adverse effects of fiscal austerity on a nation's growth performance.

(1996)

*) The author is Assistant Professor at Universitat Pompeu Fabra, Barcelona/Spain. He has worked on the macroeconomic history of the interwar period and more recently on German foreign debt problems and her postwar re-integration into the European economy.

Are there limits to public debt? If the classical doctrines of David Ricardo hold, governments which borrow only fool themselves: as taxpayers fully discount the future flow of taxes generated by additional borrowing, they will be indifferent between taxation and borrowing, so their reaction to either measure is the same. In this world of debt neutrality, there is no incentive for government to borrow or retire debt; the whole debt question is not an issue.

National debt becomes more interesting if the real world departs from Ricardo's simple truths. As existing tax schedules distort factor allocation, optimal taxation theory holds that variations in tax rates ought to be avoided in order to minimize additional tax burdens. This results in the idea of tax smoothing, which fits well with the doctrines of classical public finance (and with the now old-fashioned Keynesian doctrine of automatic stabilizers): large scale public borrowing is to be applied only under contingencies, such as wars or political ruptures and their economic aftermath.

In non-Ricardian worlds, sustaining high debt may face constraints, as may debt retirement and the various different ways of wiping out the debt. In Alesina/Drazen (1991), the distortionary character of taxation gives rise to distributional struggles over broadening the tax base, which may force democracies on unsustainable paths of debt growth. Stabilization is ultimately inevitable but delayed by a war of attrition among interest groups on whose constituency is going to bear the burden of increased taxation. An alternative interpretation focuses on the implicit social contract underlying public debt. In cases of major contingencies to the position of a nation, e.g. a lost war, defaulting on the debt may be more excusable than in others (Grossman/van Huyck, 1988). Bulow/Rogoff (1989) argue that default is an unlikely event and will be dominated by renegotiation between creditor and debtor, rescheduling debt to the amount that the debtor will credibly service. Which part of the debt becomes worthless if a debt overhang occurs depends on the seniority structure of debt and on contracts among creditors.

This paper looks into the debt record for the 19th and early 20th century of three major European countries, Britain, France, and Germany, to find evidence which could support one or another interpretation. Three questions will be asked to the material. First, are there historical parallels to the accumulation of debt in peacetime that has taken place in the past decades? Second, how were large debts retired, and what were the factors determining decision-making? Last, does debt retirement impair employment and growth, and does it pay off for a country to throw away its debt? The answer to the first question is largely in the negative. High debt originated with the major European wars and their financial aftermath; international considerations and finance appear to have dominated subsequent debt policies as well. The international character of debt also appears to be a major factor determining the macroeconomic impact of debt stabilization.

The following sections are organized countrywise. The next section examines the British case which is one of astounding fiscal discipline. Section 2 turns to France which exhibited similar soundness save for a brief but critical interlude in the 1920s. Section 3 contrasts this with the extreme oscillations displayed by the debt record of Germany. The final section turns to implications for present-day policies.

1. On Sound Finance: Britain

1.1. Debt and war finance

The British case provides the optimal starting point. Table 1 shows Britain's debt-to-GNP ratio for a span of 300 years.

(Table 1)

The mere fact that such a table can be constructed points to the extraordinary nature of the British case, which in turn is rooted in Britain's dominant role for world economic history. For long decades, the debt-to-GNP ratio was higher than unity, and it went up and down repeatedly. This is perhaps the prototype example of high debt sustainability. At first sight, therefore, Britain's debt history seems to convey good news to present-day finance ministers: high debt can be maintained for decades and centuries, whatever contingency comes along. Also, low speeds of debt retirement seem to have combined with a high degree of social and institutional stability. If, however, we look at the periods of relative rise and decline of debt, the British case looks drastically less attractive to both finance ministers and economists: the debt/income ratio increases only in times of major wars (i., e., the French Wars and, later, the World Wars) and consistently reduced in peacetime.

Observation of this regularity is apparently an old one, ascribed to British historian

Macaulay who wrote in the early 19th century (Feldman, 1993) and traced the pattern back into the 17th century. Macauly had observed that major wars were the only contingency under which large scale issue of public debt was accepted. He interpreted Britain's debt policies as an implicit social contract according to which war debt would never be defaulted on, as successful wars served to extend the empire and enhance prospects for income growth, thus rendering war debts self-amortizing. The usefulness of Britain's unique combination of successful wars and high taxes has been the subject matter of long debate. Adam Smith criticized empire-building as a waste of national capital. Ricardo developed his theory of debt neutrality as an attack against wasteful methods of war finance. His fiercest critique, McCulloch, went to the other extreme stating that the opportunities opened by wars turned the war debts into a highly productive investment (the debates is reprinted in Kaounides/Wood, 1992). Debate about the effects on the British economy continues to this day. For recent accounts see Bordo/White (1991) and Williamson (1991).

The stability of the resulting pattern is striking, as there is no default since the Glorious Revolution of 1688. Nor do we find evidence of more indirect methods such as postwar surprise inflations or capital levies, i.e. one-time confiscatory taxation of existing capital in order to retire public debt. The capital levy is actually of some attractiveness to the theorist, as it does not distort the allocation of resources when applied as a one-time surprise. Britain came closest to a reversal of her never-default policies after World War I when a proposal to impose a capital levy enjoyed some popularity (Eichengreen, 1990). But after lingering for some years, the debate about a capital levy lost momentum as recovery from the war went on.

1.2. Why did Britain not resort to default? The interwar experience

The answer to the question why Britain never defaulted on her debt is not an obvious one. The implicit contract postulated by Macaulay was based on the expectation that high post-war growth would always make debt sustainable, broadening the tax base through increased income and investment opportunities. This expectation did not work out after World War I, when the speed of recovery remained disappointing. As high interest rates combined with low rates of growth, the real cost of maintaining the debt had increased markedly.

(Table 2)

There was thus a strong incentive to embark on "unsound finance" by wiping out the national debt, just as there was an incentive - advertised by the young John Maynard Keynes - to break with fiscal orthodoxy and start demand management policies. Instead, as Table 2 shows, the influence of the orthodox "treasury view" on British interwar policy was so strong that public budgets continued to show surpluses even during the Great Depression.

In a political economy interpretation, Britain's debt sustaining policies may be ascribed to the predominance of conservative power: the British tax system was just broad enough to guarantee that debt would not grow at unsustainable rates. On the other hand, the internal power balance of British society never allowed for drastic measures to ensure quick stabilization of outstanding public debt (Alesina, 1988).

A rival explanation can be identified in the desire to maintain Britain's leading position in international financial markets. To do this, credibility had to be maintained that investments in Britain and the assets emitted there were safe. Indeed, Britain tied her hands by going back to the gold standard at the pre-war parity of 1925. To do this, deflation was adopted during two subsequent years preceding the return to gold, even though Britain had not yet fully recovered from the effects of the sharp recession of 1920. Thus, Britain employed the gold standard as a way of committing herself to honoring her outstanding debt at the full pre-war gold value (see Bordo/Kydland, 1995, on the credibility aspects of the gold standard). To defend this commitment, Britain continued to have deflation in all years between 1926 and 1933. The pre-war, "classical" gold standard had largely been a British standard, with gold being legal tender since 1717 and the only legal tender for large payments in 1774. This system had experienced its heyday when after 1871 Germany, France and later, the Austro-Hungarian Empire had joined, "not because gold was gold but rather because England was England", as a leading German writer at the time, Knapp (1904), had put it. This was the reputational capital which was at stake during the early 1920s. London's position relative to the Wall Street had weakened already, therefore the reputational argument was valued even more highly in Britain's financial community (see e.g. Eichengreen, 1992).

If good reputation was a reason for not defaulting, it seems contradictory that Britain was the first country to go off gold in 1931. The immediate cause for this policy reversal was the financial crisis in Central Europe in the same year (Section 3 below). But even after leaving the gold standard, Britain continued to maintain budget surpluses, combining these with tight money policies by the Bank of England. This may be explained by the desire to form a Sterling block among the countries which followed Britain in abandoning gold, including Sweden in late 1931.

There is a second possible objection to the reputational argument. In December 1932 Britain, followed by France, defaulted on her portion of inter-allied debt vis-à-vis the United States, and in the Ottawa conference that followed only weeks later, customs barriers around the Commonwealth were tightened considerably. Apparently this does not square at all with the idea of maintaining Britain's reputation as a trustworthy debtor. But the exception may help prove the point. Britain's default on inter-allied debt was all but the application of policy doctrines spelled out a decade earlier. In the Balfour note on German reparations of 1922, British foreign policy had established a link between reparation receipts from Germany and her own service on inter-allied debt. Britain's default on this debt came only after German reparations had been forgiven in the Lausanne conference of summer 1932. Today, there is little controversy that this connection had been implicitly accepted by the Americans whose only problem was that inter-allied debt could not be forgiven explicitly for domestic policy reasons (Schuker, 1988). Seen in this way, Britain's - and France's - repudiation on its U.S. war debt may be an example of an "excusable default" (Grossman and Van Huyck, 1988) which is not a violation of the implicit contract between creditor and debtor, as in this case, the true defaulter was Germany.

1.3 The aftermath of World War II

In the debt data of Table 1 above, the Second World War is reflected in a steep increase of Britain's debt-to-income ratio, followed by uninterrupted reduction which continues to this day. That this would be so was not clear from the beginning, as Britain's start into the postwar period was not a very good one. The late 1940s witness a severe balance of payments crisis and two subsequent devaluations which failed to produce the desired effects. Glancing at the extreme debt to GNP ratios at the time makes it apparent that lack of foreign exchange was largely a symptom of a debt overhang inherited from the war (Cairncross, 1992). It was mostly for this reason that Britain was the largest recipient of Marshall Aid during the 1949-52 period, a way of allocating resources that has struck observers as rather inefficient (Milward, 1984, Eichengreen/Uzan, 1992). However, taking into account that Britain faced a constraint in the international, i.e. U.S. capital market, Marshall Aid to Britain assumed almost the character of a rescue operation preventing an imminent debt moratorium. Again the question needs to be asked why Britain did not use methods of defaulting on her debt, all the more so as it seems like if during the 1950s, the predictions of all those had finally come true who had advocated a capital levy already in the 1920s: while other European states were now having their economic miracles, Britain kept busy servicing her national debt.

As before, a possible answer is to be found in Britain's international financial commitments and the largely international character of her debt, even if denominated in domestic currency. Britain had initiated the Bretton Woods system under the Keynes Plan which had included an international central bank as lender of last resort. The system of special drawing rights created under the system was actually little else than an institutionalized form of the central bank cooperation that had existed before the First World War. From a British perspective, joining this club entailed the same prospects as during the early 1920s, i.e. to preserve London's position in international financial markets. Moreover, as Britain was close to a debt overhang in the 1950s, this served to regain some international credibility as a debtor and avoid a break-up of international financial links through a debt moratorium or major debt rescheduling, which at the time was perceived as a real threat (Cairncross, 1992).

1.3 The striking record of stability

To explain Britain's debt record from distributional struggle alone, it would have to be argued that one side always lost out, paying the bill for the other, and that there were simply no big enough shocks to ever disturb this balance. The same evidence can also be read the other way round: the neat balance within of Britain's society made her tax base broad enough to render her social contracts credible and avoid the turmoil that oppressive taxation entails. The British tax system evolved to produce a unique balance of fiscal power between the crown and the nobility. This process begins with the Magna Charta and first culminates in the petition of rights of 1627, which asked the king not to impose new taxes or issue funded debt without an act of Parliament. The king defaulted on this soon after, and the 17th century witnesses struggles between crown and parliament over this issue. This ended in 1688 with parliamentary victory, England's last debt default, and the imposition of a tax system which in the 19th century was celebrated for its high degree of social fairness. The absence of further revolutions and debt defaults may thus have been the result of properly balanced social consensus, not of the lack thereof.

This point is possibly reinforced by accounting for the fact that Britain's majority vote system tends to give the incumbent ample scope for imposing distortionary taxation on the electorate of the respective opposition party. This opportunity was not exploited, be it by the Labour government of the early 1920s or by the Attlee administration of the late 1940s. This points to an underlying consensus in society which is hard to capture by class-oriented fiscal sociology alone.

2. France

The French revolution was, among other things, a tax revolt and debt default. France's tax system under the ancien régime had had a reputation for exempting the ruling classes from taxation in a scandalous way. Most of the tax yield had come from indirect taxes with all the regressive effects implied by such a scheme. Public debt in France typically took the form of personal rents, two thirds of which were defaulted on in 1797. Since 1789, France was formally committed to taxing her citizens according to the principles of equality, evenness and capacity to pay. A more elaborate system of direct taxation and some, however less burdening indirect taxation were introduced under Napoleon I.

2.1 Indemnity to Prussia, 1871

Napoleon's Great War had not left France in bankruptcy, due partly to a rather generous indemnity placed on her at the Vienna Congress of 1815. Political instability and a series of colonial wars led to an, albeit moderate, increase in the debt/income ratio during subsequent decades (Table 3). By the time of the Franco-Prussian war of 1870-1, French public debt amounted to some 55% of France's domestic product of 1869. After that war, Germans obtained an indemnity of 5 bn Francs, equivalent to 20% of France's GDP of 1869, which France paid smoothly by placing a loan in international financial markets. The indemnity increased national debt by roughly one third, such that the ratio of debts-plus-reparations pre-war GDP stood at 75%, or 80% of the slightly lower GDP of 1871. During the 1880s, debt service (of which the indemnity loan consumed a third) accounted for roughly 50% of central government expenditure. This is a remarkably high figure, but it did not prevent France from keeping a conservative, low budget fiscal policy with moderate tax rates - much to the admiration, by the way, of their German rivals (v. Eheberg, 1927). Around the turn of the century, the situation was still much the same, mostly due to a creeping deflation that had increased the real value of the debt (Table 3). By 1913, the debt-to-GDP ratio had declined to about two thirds. Again, the same strive for reliability can be observed that also characterized British debt policies. The main motivation for France's policies was to keep the Paris capital market open and ensure debt service without moratorium. The only act of retaliation was that for a certain period, German loans were kept off the Paris bourse.

2.2 Versailles and the struggle for German reparations

France emerged from World War I overburdened by debt. To cope with the danger for stability, government imposed a mild form of capital levy, designed as a tax on supernormal war profits. This tax was apparently accepted by French business, as it produced sizeable revenue during the period of 1919-21 (Hautcoeur/Grottard, 1995). This tax was transitory in nature, and the gap it left would hopefully be filled by german reparations. Due to the optimism in the French public that "le boche paiera tout", fiscal restraint was difficult to advertize in Parliament. At the time, France ran two public budgets, the extraordinary being reserved for expenses to be covered through German reparations. As German payments did not come forth at the envisaged rates, the gap was bridged at the discount window of the central bank. In an attempt to secure German payments by force, France occupied Germany's Ruhr district in early 1923. Success was only partial, as the new reparation settlement agreed on in 1924 did not foresee very sizeable payments for the coming three years (Sauvy, 1986). Attempts to impose higher taxes were long rejected by parliament and a modified tax bill only approved in early 1924 under the impression of the Dawes negotiations. The Poincaré administration was defeated in the elections that followed in the same year, and various leftist administrations of 1924-1926 remained paralyzed by infighting over a new, more confiscatory capital levy. As a consequence, political chaos with frequent cabinet crises prevailed, and inflation continued at accelerating rates (Table 3).

(Table 3)

Stabilization came about almost overnight when Poincaré won the elections of 1926, which makes the French case particularly interesting. There are mainly three rivaling explanations. The first rests on reputational reasons. According to it, the reform announcements of Poincaré were credible enough to prevent markets from further speculation against the Franc. Therefore, the argument goes, stabilization was successful even before it was implemented. The second argument is again oriented towards conflicts within society (Alesina, 1988). According to it, only with the success of Poincaré in the elections was the post-war reconstruction of bourgeois society really achieved (this argument goes back to Maier, 1975). The new conservative administration was therefore able to impose distortionary taxation that hit the constituency of the defeated opposition disproportionately. Then, asking for the reason why Poincaré could successfully implement stabilization only now, the argument would point to the weakening of the political left in the preceding power struggle, which has been interpreted as a war of attrition (Alesina and Drazen, 1991).

A third interpretation has focused on the external balance of the French economy (see e.g. Kindleberger, 1973). According to it, the Poincaré stabilization was successful because of undervaluation of the Franc. This, the argument goes, provoked autonomous capital inflows as well as an export surge. Sicsic (1993) has argued that evidence of undervaluation is hard to detect. This fits with an argument of Eichengreen and Wyplosz (1988) who showed that the export boom implied by the undervaluation argument did not materialize. Rather, it was domestic investment which surged, peaking at 20% of GNP as late as 1930. Eichengreen and Wyplosz place emphasis on fiscal stabilization, arguing that the investment boom is explained by the crowding-in effects of public debt reduction in the wake of Poincaré's stabilization. Thus, one would have identify sources of higher revenue after 1926 that are compatible with crowding-in effects. One such explanation would again be distortionary taxation, shifting the burden of stabilization to the working classes. To examine the plausibility of this hypothesis, the two last columns of Table 3 above look at the shares of private consumption and investment in national product. If anything, both shares are higher after

1926 than before, a combination that we should not observe had workers paid the bill[1].

2.3 Poincaré's stabilization and the flow of German reparations

A surprising solution to this riddle suggests itself from evidence presented by Prati (1991) who argues that the budget itself actually did not present a stabilization problem. Rather, as Prati argues, government was unable to roll over existing debt. Then the conclusion is straightforward that government faced a confidence crisis associated with its expected future tax policies but not the kind of stabilization problem emerging from too low a tax base to render high debt sustainable. If the evidence presented by Prati is right, the Poincaré stabilization of 1926 would have been feasible even without altering the tax schedule. This in turn would suggest that, counter to his own interpretation, a major redistribution of domestic incomes was not the salient feature of the Poincaré stabilization, which in turn fits well with the evidence in Table 3.

This brings us back to international aspects of the stabilization of 1926, i.e., capital inflows. As these may not plausibly have been the consequence of undervaluation, there must be other reasons. Part of these inflows must have been repatriated flight capital. But there were also more fundamental reasons for capital movements than this one-time effect. One of them could, again, be German reparations that came into France from 1926/7 on when the Dawes Plan started to generate sizeable proceeds. Reparation payments under this plan were supported by recycling credits to Germany from the U.S. As France's entitlement to reparations was more than 50% of the total, France therefore indirectly benefited from American stabilization loans. Thus, Poincaré's stabilization now had the basis it had missed in 1922. Obtaining a full quantitative account of the relative importance of these effects is a task for future research. But the fact that reparations, backed by U.S. credits, provided a guaranteed source of foreign exchange revenue for France contributed to the credibility of the stabilization and alleviated pressure on the budget. Reparation receipts may therefore be an under-

---

[1]An old-time Keynesian interpretation would predict income contraction with rising C/Y or vice versa, depending on whether or not the expansionary crowding-in effect on investment dominates the restrictive effect of higher taxes on consumption. In a more neoclassical context, the observed combination would plausibly only occur if workers anticipated higher after-tax permanent incomes from the new tax schedule, which would not square well with the basic idea underlying the social conflict story

researched reason why the Poincaré stabilization was successful in 1926 and not in 1922.

France entered into the Great Depression only with a delay. This, again, fits well with the evidence on reparations, as Germany kept fully current on her reparation annuities until the Hoover moratorium of mid-1931. On the international scene, reparations were no longer recycled through U.S. credit since 1929. Therefore, it is of little surprise that France as the main recipient fared better than her neighbors as long as reparations came forth and kept the capital market free from further government borrowing. In 1931/2, the reparations and credit machinery installed in 1924 was finally dismantled. Receipts from Germany dried up, and protectionism made its way. France now entered into a depression from which her economy had not yet fully recovered by the time of the German occupation in 1940. France's debt record of the interwar period was thus closely related to the German reparations question. Stabilization became more and more feasible as German reparations increased, and France experienced a capital-import driven boom as long as reparations came forth.

3. On debt default: Germany

If Britain was the polar case of fiscal soundness, Germany presents the other polar case. German public finance was traditionally characterized by federalism and the agony of central power. The Second Empire founded in 1871 again lacked a sufficient tax base and depended on transfers from the states, which had to be renegotiated every year. As a consequence, the debt/GNP ratio rose steadily before World War I (Table 4).

(Table 4)

3.1. The Great Inflation, 1918-23

Debt finance had been applied excessively during the war, and had mostly been monetized by the Reichsbank. Therefore, inflation followed when in the wake of the revolution of late 1918, price controls broke down. By 1920, inflation had reduced the

---

of stabilization.

debt/income ratio to les than 100% (Table 4). To stabilize the budget and provide central government with more revenue, the constitution of the Weimar Republic, adopted in 1920, introduced fiscal centralism. Moreover, it provided for a capital levy in order to reduce outstanding debt further. Indeed inflation stopped, tax revenues increased, and foreign central banks, including that of Sweden, began to buy large Mark amounts speculatively. However, after some months inflation recurred and even accelerated, and political chaos developed.

Attempts have been made to explain Germany's failed stabilization from the fragility of the social compact of Weimar (Borchardt, 1991, Holtfrerich, 1986, Feldman, 1993). According to this, inflation was the only feasible consensus among capital and labor. But already the Weimar constitution itself with all its fiscal provisions had been the product of this compromise, and neither fiscal centralism nor the need for a broad enough tax base had been very controversial. Nevertheless, stabilization worked only for a few months, and inflation recurred afterwards.

These developments are analogous to those in France at the same time, and there is a common cause. After controversial negotiation in late 1920, the reparations bill was presented in early 1921. Under the impact of Keynes' (1919) polemic against the treaty of Versailles, the German public expected that reparations would be high but bearable with the usual austerity measures known from history. Keynes had argued for a feasible maximum of 40 bn gold marks (GM), or some 80% of her 1913 national income. The Germans tended to offer half this figure plus reimbursement of inter-allied debt, which together amounted to 65 bn GM.

Public support for austerity measures ended abruptly when in late 1920, news spread that under no circumstances, reparations would be less than 80 bn GM (Feldman, 1993). The bill presented in early 1921 accrued to 132 bn GM, or 250 % of 1913 GNP. The reaction of the public was a true tax boycott. Weak measures to enhance tax law enforcement were sabotaged by tax collection offices nationwide, and a press campaign started which accused Erzberger of collaboration with the Allies and the Weimar constitution of being an Allied racket to exploit Germany. The hysteria did not ebb away until after the end of hyperinflation three years later. Erzberger was forced to resign under humiliating circumstances and was assassinated soon after, as was Germany's foreign secretary, Rathenau.

At the root of the German stabilization crisis lay a debt enforcement problem. Many

German observers at the time anticipated that reparations exceeded the sum of what could be extorted by sanctions, embargoes, and even military occupation. Moreover, such sanctions would be applicable only to the extent that business communities abroad would be willing to support the political cause of their governments. British sanctions against Germany in 1921 proved the case, as they did as much damage to the domestic reputation of Lloyd George as to Germany. The showdown came in early 1922 with the French occupation of the Ruhr. The French felt frustrated with the cost of sustaining occupation in the light of the unimpressive yield, and Poincaré lost the elections of early 1924. On the other hand, the Germans had not been able to sustain their policies of passive resistance, and inflation as a means to finance the budget began to burn out, requiring ever-increasing rates to produce the same amount of seignorage. Delayed post-war stabilization in Germany was thus primarily the result of an economic war of attrition against her reparation creditors, less so of domestic social conflict. The main theme of the inflation period was not how to sustain debt and attribute its burden among taxpayers but rather how to default on external debt in a situation of political fanatism where taxpayers would shoot every finance minister proposing a balanced budget.

3.2. Credit Rush, 1924-29

After the stabilization of the mark in 1923/24, public budgets produced surpluses when the tax rates designed in 1920 were applied to a stable currency (Sargent, 1982, Dornbusch, 1987). Yet stability was transitory. In 1926, tax rates were cut and spending programs launched. The resulting deficits were covered up through manipulated budgeting procedures. In the same year, part of the pre-war debt was revalued, increasing the interest burden to sizeable amounts. In 1927, a medium-size loan was placed in the market successfully. In early 1929, however, a second attempt to consolidate the floating short-term debt in a loan failed in spite of remarkable tax privileges associated with it. The Reichsbank had to avert a speculative attack in March, 1929. After prolonged infighting between its president, Schacht, and the government over measures to tighten the budget both he and the cabinet resigned in early 1930, giving way to an emergency cabinet under Brüning that adopted drastic austerity policies (James, 1985).

The failure of stabilization has been attributed to wage pressure and distributional conflict (Borchardt, 1991), whereas critics have advocated a demand-oriented explanation instead (Holtfrerich, 1984). Comparing Germany with Britain, Broadberry/Ritschl (1995) find that unit labor cost shows similar tendencies in both countries, whereas the growth of GDP in Germany is markedly higher. One reason for this is a large deficit in Germany´s balance of payments at the time. Stabilization in 1924 had been backed by the Dawes Plan which rescheduled reparation debt and fixed slow growth of reparation annuities until 1929. Transfer of reparations would be subject to protection of the central bank's reserves. This implied that in the event of foreign exchange shortage, commercial claims would be served first to avoid a run on the bank. This undermined the first charge character of reparations and opened new scope for avoiding payment altogether. The more the Germans would take in as credit, the less reparations would have to be paid in the end. The government thus had no incentive to stem the inflow of foreign lending, whereas creditors were protected as long as transfer protection prevailed. This resulted in a huge inflow of foreign credit during 1927/28, which far outweighed reparation payments during the same period. Reparation creditors became increasingly concerned with this policy gamble and pressed for abandoning transfer protection. Public warnings against further credits to Germany in 1928 dried up the capital inflow, as investors realized that reparations might receive full seniority again (Balderston, 1993).

Abandoning transfer protection was the basis of the Young Plan negotiations of 1929. Reparations were now explicitly recognized as a first claim, and they were set high enough to almost equal the - less binding - Dawes annuities for 1929, thus crowding out further international credit. The immediate consequence of the announcement of this proposal was a run on the Reichsbank in March, 1929. Even before the Wall Street crashed in October 1929, Germany was thus stuck in a foreign credit crisis, being forced to adopt strictly deflationary policies. As political parties were afraid of presenting the necessary austerity measures to their electorate, a minority cabinet was formed in early 1930, relying on emergency decrees.

To analyze German policy making at the time, it is once again necessary to disentangle domestic and international factors. A less expansionary fiscal stance in 1926 would probably have helped maintain the balance of payments in equilibrium, thus following the British model at the same time. The policies adopted instead were not doubt directed toward spending more and taxing less. However, the constraints of these policies were exceptional, as accumulating foreign debt implied reducing reparations by the same amount. The transfer burden in the end would be the same, however the beginning of the stabilization could be postponed as long as fresh money was coming forth in the international credit market. Once again, the source of instability lay in a protracted distributional struggle between Germany and her reparation creditors, the outcomes of which were exogenous to domestic distributional conflict.

3.3. The Brüning deflation, 1930-1932

Due to its grave political consequences, the deflation of 1930-1932 is probably the most controversial period of German economic history (see v. Kruedener, 1990, for recent debates). The Brüning administration is commonly accused of having deflated the economy and balanced the budget on purpose, out of misconceived classical business cycle doctrines, out of the desire to dismantle Weimar's welfare state, and out of a sinister desire to get rid of reparations. Evidence on the German budget hardly confirms this. Data shown in Table 4 above indicate that since the failed loan project of 1929, Germany was caught in a funding crisis. As can be seen, funding difficulties aggravated severely after 1930 when no long-term credit was available any more. The last long-term loans taken in by Germany in 1930 partly belonged to the Young Plan arrangement and had only been granted under the proviso that further budget cuts be made - apart from the political concessions demanded and obtained by France in exchange for her green light. Germany found herself cut off from the market for long-term loans to the public budget during the whole depression period (Borchardt, 1991). From then on, borrowing could only be placed in the social security system and with public banks. Credit from the market was only given for self-liquidating purposes, e.g. end-of-the-year advances.

Pressure on the balance of payments and the public budget increased in mid-1931 until U.S. President Hoover negotiated a moratorium on German short-term debt and reparation payments. This prevented Germany from going into outright default which would have triggered off the sanction mechanisms of the Young Plan and an experience similar to the occupation of the Ruhr in 1923. Reparations were finally forgiven in mid-1932, when Brüning had already been replaced by a figure which was more inclined to meet the demands of the extreme political right.

Thus, Germany's credit rush of the late 1920s combined with the bad record of the hyperinflation and the first-charge principle of reparations in the Young Plan of 1929 to create a binding credit constraint for Germany precisely during the Great Depression. In order not to default and thus trigger off a crisis as in 1923, Germany had to deflate relative to her neighbors in order to procure the necessary foreign exchange surpluses. Reversing this policy became only possible after reparations had been lifted, restoring Germany's credit position for a short time.

The record of Germany's deflationary policy during the Depression is therefore not well suited to make a case against stabilizing the budget per se, nor is it easy to explain from a distributional perspective. Domestic instability was to a large part induced by the external constraints placed on the German economy. Social conflict had been alleviated when under the Dawes Plan, resolving the reparation problem was postponed through American credit. It reappeared in exacerbated form when the Young Plan enforced reparations again. As before, the main focus of conflict within society was on whether to meet Germany's international obligations or rather opt for extreme alternatives. The latter was what the extreme right proposed and what paved its way for success.

3.4. The German default

The debt record of Nazi Germany is well known. As the Young Plan had been abandoned before the Nazis got to power, the threat of military sanctions had disappeared. Less inclined than its predecessors to restore international creditworthiness, Nazi Germany was in partial default from 1933 on. Transfers were brought to a halt in 1936 when the system of foreign exchange control was sufficiently elaborate. Internal credit expansion partly took the form of clandestine borrowing through tarnished bills of exchange, a debt instrument that had been created under the late Brüning administration for the X-day when reparations would fall. Owing to the relaxed foreign exchange constraint, the debt/GDP ratio remained rather conservative during the process of recovery up to 1938, when it began to skyrocket. In the same year, the covert borrowing operations of the Reichsbank ended and authority for armament finance was transfered, not to the Finance Ministry but to the War Department. By the end of 1944, the debt/income ratio was in the neighborhood of two, largely due to the policy of exploiting occupied Europe to the extreme.

After 1945, U.S. occupation policies were geared towards sheltering West Germany from the creditors of the former *Reich*. Internal debt was wiped out in the currency reform of 1948. To keep external demands on Germany down, all recipient countries of Marshall Aid had to waive first charge over all claims on Germany to Marshall Plan credits, which were then blocked until 1953. In the same year, the London conference on German debt reached an agreement by which West Germany would honor the commercial debts defaulted on by the Nazis, while settlement of all other debts was deferred to a conference to be held after German unification.

This has a surprising implication. The German debt/GNP ratio has been trivial during the post-war decades not so much because of the virtue of conservative fiscal conduct but rather because of past misdemeanor: there is not a single episode in German debt history since the 1830s in which the ratio of debt to income was reduced by methods other than default. Although this is closely related to the World Wars, the philosophical question remains if there is not a deeper explanation for these vices - which, after all, would vindicate public choice interpretations of national debt policies against the skepticism put forward in the present paper.

4. What the Historical Record Shows: Conclusions and Implications

Recent theorizing about sustainability and the retirement of public debt has focused on the political economy of stabilizing in a world of distortionary taxes. This paper examines the historical record of policies toward high debt to identify the forces that drove accumulation and retirement of public debt in the long run. Our findings lend only limited support to the idea that distributional conflict determines the extent and timing of debt stabilization. Studying the cases of Britain, France and Germany with special reference to the interwar period, I find the international conflicts among these nations to be of overwhelming importance for explaining their debt policies. This leaves only a partial role for social conflict, which appears endogenous to the events on the international scene. Britain displays a regular, war-related pattern of debt accumulation and retirement. The debt histories of France and Germany are linked together through reparations after the war of 1871 and the First World War. Success of debt stabilizations varied much, as did their macroeconomic consequences.

The implications of these results for present-day politics are twofold. First, as European debt policies of the past were largely induced by major wars, there is little historical experience with long-term accumulation of national debt in peacetime. This is probably discomforting, as it indicates that the debt record of the last few decades may be the result of a regime change whose nature is not yet fully understood.

There is, however, a second conclusion which is more optimistic: much of the debt history of Europe before and between the World Wars is centered around reparations and their recycling through international credit. This may have exacerbated their macroeconomic consequences. Thus, the adverse experience with deflationary policy that has formed the backbone of Keynesian doctrine may well have been the consequence, not of fiscal restraint per se but rather of the credit and balance of payments constraints imposed by the interaction between reparations and international lending. Therefore, our traditional views of deflation may be biased, and stabilization less difficult to attain than the historical record shows.

References

Alesina, A. (1988), "The End of Large Public Debts", in: F. Giavazzi and L. Spaventa, *High Public Debt: The Italian Experience*, Cambridge: Cambridge University Press.

--- and A. Drazen (1991), "Why Are Stabilizations Delayed?", *American Economic Review* 81, 1170-88.

Balderston, T. (1993), *The Origins and Course of the German Economic Crisis, 1923-1932*, Berlin: Haude & Spener.

Bertola, G., and A. Drazen (1993) "Trigger Points and Budget Cuts: Explaining the Effects of Fiscal Austerity" *American Economic Review* 83, 1170-88.

Borchardt, K. (1991), *Perspectives on Modern German Economic History and Policy*, Cambridge: Cambridge University Press.

Bordo, M. and F. Kydland (1995), "The Gold Standard as a Rule", *Explorations in Economic History* 32, 423-64.

--- and E. White (1991), "A Tale of Two Currencies: British and French Finance During the Napoleonic Wars", *Journal of Economic History* 51, 303-16.

Broadberry, S.N., and A. Ritschl (1995) "Real Wages, Productivity, and Unemployment in Britain and Germany During the 1920s", *Explorations in Economic History* 32, 327-49.

Bundesbank (1988) *40 Jahre Deutsche Mark. Monetaere Statistiken 1948-1987*. Frankfurt/M.: Knapp.

--- (1976) *Deutsches Geld- und Bankwesen in Zahlen 1876-1975*. Frankfurt/M.: Knapp.

Cairncross, A. (1992) *The British Economy After 1945*, Oxford: Clarendon.

Dornbusch, R. (1987) "Lessons from the German Inflation Experience of the 1920s", in: R. Dornbusch/S. Fischer (eds.) *Macroeconomics and Finance. Essays in Honor of Franco Modigliani*, Cambridge: MIT Press.

Eheberg, Th.K. v. (1927) "Finanzen", in: *Handwoerterbuch der Staatswissenschaften 4. Auflage*, Vol. IV, Jena: Fischer.

Eichengreen, B. (1992) *Golden Fetters. The Gold Standard and the Great Depression 1919-1939*, Oxford: Oxford University Press.

--- (1990) "The Capital Levy in Theory and Practice", in: R. Dornbusch and M. Draghi (eds.), *Public Debt Management: Theory and History*, Cambridge: Cambridge University Press.

--- and M. Uzan (1992) "The Marshall Plan: Economic Effects and Implications for Eastern Europe", *Economic Policy* 14, 14-75.

--- and C. Wyplosz (1988) "The Economic Consequences of the Franc Poincaré", in: E. Helpman et al. (eds.), *Economic Effects of Government Expenditure*, Cambridge/MA: Macmillan.

Feldman, G. (1993) *The Great Disorder. Politics, Economics, and Society in the German Inflation, 1914-1924*, Oxford: Oxford University Press.

Giavazzi, F. and M. Pagano (1995) "Non-Keynesian Effects of Sharp Fiscal Policy Changes: More International Evidence", in this volume.

--- / --- (1990) "Can Severe Fiscal Contractions be Expansionary? Tales of Two Small European Countries", *NBER Macroeconomics Annual*, 75-116.

Grossman, H. and J. Van Huyck (1988) "Sovereign Debt as a Contingent Claim: Excusable Default, Repudiation, and Reputation", *American Economic Review* 78, 1088-97.

Hautcoeur, P.C., and S. Grottard (1995), *The Effects of Taxation of Profits in an Inflationary World: the Case of France, 1914-1920*, mimeo, CNRS-EHESS-ENS, Paris.

Hoffmann, W. et al. (1965) *Das Wachstum der deutschen Wirtschaft seit der Mitte des 19. Jahrhunderts*, Heidelberg: Springer.

Holtfrerich, C.-L., (1986) *The German Inflation, 1924-1933*, New York: De Gruyter.

James, H. (1985) *The Reichsbank and Public Finance in Germany: 1924-1933*, Frankfurt/M: Knapp.

Kaounides, L.C., and G.E. Wood (eds.) (1992), *Debts and Deficits* Vol. 1, Hants: Elgar (=International Library of Macroeconomic and Financial History 9).

Keynes, J.M. (1919) *The Economic Consequences of the Peace*, London: Macmillan.

Kindleberger, C. (1973) *The World in Depression*, 1929-1939, Berkeley: University of California Press.

Knapp. G. (1904) *Staatliche Theorie des Geldes*, Munich: Duncker & Humblot.

Maier, C. (1975) *Recasting Bourgeois Europe: Stabilization in France, Germany and Italy in the Decade after World War I*, Princeton: Princeton University Press.

Mitchell, B. (1992) *European Historical Statistics*, New York: Stockton.

--- (1990) *British Historical Statistics*, Cambridge: Cambridge University Press.

Prati, A. (1991) "Poincaré's Stabilization: Stopping a Run on Government Debt", *Journal of Monetary Economics* 27, 231-39.

Sargent, T. (1982) "The End of Four Big Inflations", in: R.E. Hall (ed.) *Inflation*, Chicago: Chicago University Press/NBER.

Sauvy, A. (1984) *Histoire économique de la France entre les deux guerres*, Paris: PUF.

Schuker, S. (1988) *American Reparations to Germany, 1924-1933*, Princeton: Princeton University Press.

Sicsic, P. (1993) "Was the Franc Poincaré Undervalued?", *Journal of Economic History*

Von Kruedener, J. (1990) (ed.), *Economic Crisis and Political Collapse : The Weimar Republic, 1924-1933*, Oxford: Berg.

Williamson, J. (1991) *Inequality, Poverty, and History*, Oxford: Basil Blackwell.

Table 1: Britain's Debt / National Income Ratio, 1691-1990

Year	Percentage	Year	Percentage
1688/91	6	1901	43
1759	137	1911	39
1801	197	1921	179
1811	202	1931	207
1821	288	1938	171
1831	231	1941	154
1841	175	1945	261
1851	150	1950	240
1861	123	1960	133
1871	86	1970	82
1881	73	1980	52
1891	53	1990	35

Source: Mitchell (1990). 1980 and 1990: Central Statistical Office (1992)

Table 2: Britain's debt/GNP ratio, 1919-1939

Year	Perc. debt/GNP	Budget surplus	Real Interest	Inflation
1919	137	- 326	- 1.0	5.6
1920	151/155	+ 238	- 10.8	16.0
1921	179	+ 55	14.0	- 9.2
1922	208	+ 102	23.2	- 18.8
1923	221	+ 88	9.7	- 5.4
1924	210	+ 48	5.3	0.9
1925	194	+ 36	4.4	0.0
1926	204	+ 24	6.5	- 1.9
1927	192	+ 69	7.5	- 2.9
1928	191	+ 75	5.5	- 1.0
1929	185	+ 33	5.6	- 1.0
1930	187	+ 44	9.5	- 4.0
1931	207	+ 32	10.6	- 6.2
1932	215	- 6	5.9	- 2.2
1933	215	+ 39	6.8	- 3.4
1934	205	+ 20	1.9	1.2
1935	194	+ 16	1.7	1.2
1936	183	+ 8	- 0.6	3.5
1937	174	+ 40	- 1.1	4.4
1938	171	0	2.2	1.1
1939	169/148*			

* Excluding inter-allied war debt from World War I.

Sources: Mitchell (1990), Alesina (1988)

Table 3: France's debt/GDP ratio

Year	Percentage Debt/GDP	WPI Inflation	CPI Inflation	C/Y	I/Y	Repar./Y
1815	20					
1850	32	-1.3*				
1869	55	0.8*	0.8*			
1875	81	-0.1*	0.5*			
1890	101	-1.7*	0.0*			
1913	67	0.7*	0.3*			
1920	141	25.7	20.4			
1921	208	-31.3	-13.1			
1922	188	- 5.3	- 3.8	53.3	13.9	
1923	175	27.8	11.8	60.6	14.0	
1924	156	15.9	14.0	59.9	16.7	
1925	139	12.5	6.2	64.8	15.2	
1926	111	27.8	30.4	64.5	17.4	
1927	115	-12.2	4.4	67.0	14.3	
1928	104	0.9	0.0	64.3	18.0	
1929	97	-2.0	6.4	65.8	18.3	
1930	102	-13.0	1.0	60.8	20.9	
1931	115	-14.9	- 4.0	62.9	19.3	
1938	101	4.8	2.5			

Legend: * Annualized average inflation in preceding interval
C/Y: Percentage share of private consumption in GDP
I/Y: Percentage of investment in GDP

Sources: Mitchell (1992), Sauvy (1986), Alesina (1988)

Table 4: Germany's debt/GDP ratio

Year	Percentage	Central Gov't Budget Decifit (-)	of which: funded
1869	*10/100/33* *)		
1880	37		
1890	50		
1900	51		
1913	63		
1920	*72***)		
1928	32.5	1237.1	100.5
1929	40.6	675.5	364.0
1930	47.4	1071.3	487.1
1931	53.5	600.6	-
1932	55.2	563.2	-
1933	52.4	2942.1	92.1
1937	59.9	6155.8	3959.9
1938	67.0	10321.8	7534.3
1944	217.0		
1950	19.7		
1960	17.4		
1970	18.6		
1980	31.6		
1990	38.7		
1993	47.8		

*) Estimates for Prussia/Bavaria/Saxony, respectively.
**) In current papermark value, excluding reparations

Source: v. Eheberg (1927), Hoffmann (1965), Bundesbank (1976, 1988), Statistisches Bundesamt (1994)