ISSN 2042-2695

CENTRE *for* ECONOMIC PERFORMANCE

CEP Discussion Paper No 1155

July 2012

The German Transfer Problem, 1920-1933: A Sovereign Debt Perspective

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E·S·R·C ECONOMIC & SOCIAL RESEARCH COUNCIL

Abstract
The severity of the Great Depression in Germany has sometimes been blamed on reparations in simplistic fashion. Alternative interpretations relied on American capital exports, the demise of the Gold Standard, or on malfunctions of the domestic economy, such as excessive wage increases during the 1920s. This paper argues for a more subtle link between Germany's slump and these policies. I explain Germany's foreign borrowing rush before 1929 from transfer protection under the Dawes Plan, which gave commercial credits seniority over reparations. I argue that the Young Plan of 1929 implied a reversal of this seniority scheme, causing a sudden stop and reversal in the German balance of payments that lasted throughout the Great Depression. Invoking basic results of sovereign debt theory, the paper identifies a sequence of reparation regimes with varying degrees of relaxation of Germany's participation constraint in international credit markets. Transfer protection under the Dawes Plan created an incentive for Germany (and her commercial creditors) to drive out reparations. I conclude that the Young Plan could only have worked in the absence of an international recession, and that attempts to salvage it in 1931 were necessarily futile.

JEL Classifications: N14, N24
Keywords: Germany, Great Depression, sovereign debt, reparations

This paper was produced as part of the Centre's Macro Programme. The Centre for Economic Performance is financed by the Economic and Social Research Council.

Acknowledgements
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Published by
Centre for Economic Performance
London School of Economics and Political Science
Houghton Street
London WC2A 2AE

I. Introduction

To these days, the prevalent interpretation of Germany's reparation problem of the inter-war period is that given to it by John Maynard Keynes and his critics at the time. Keynes had been attending the Paris Peace Conference in 1919 as an economic advisor to the British prime minister and withdrew in protest against the envisaged reparation policies, publishing his criticism in a pamphlet entitled "The Economic Consequences of the Peace" (Keynes, 1920), which instantly propelled him to international fame. Keynes posited that the reparations bill exceeded Germany's capacity to pay and that, therefore, any attempt to force Germany into paying would result in economic depression, hunger, political chaos, and a return to militarism.

Keynes went on to argue that even under a reduced scheme where capacity to pay could not possibly be an issue, transfers abroad still would (Keynes, 1926; 1929). Again, his argument was part economics, part politics. Foreign demand for German exports might very well be inelastic, and the wage reduction needed for Germany to return a trade surplus might be extreme, making it politically infeasible.

Keynes' views of this problem defined the analytical framework for most subsequent studies of the issue. This framework was also accepted by many of his critics: even when they arrived at different conclusions, they agreed on how he had defined the topic. The same holds true for policy making. Although reparation policies for the most part and at times quite definitely did not follow his advice (given e.g. in Keynes, 1922), attempts were made at later stages to design them in such a way as to meet his demands at least partly.

This paper puts forward the hypothesis that both Keynes and many of his critics foxuised on the wrong aspects of the German reparation problem, and that their fallacies partly explain the failure of reparation policies towards Germany. Although Keynes' political predictions were impressively far-sighted, the economic problem lay elsewhere; capacity to pay and the transfer problem were hardly the dominant issue.

In what follows I will argue that the German reparation question was a problem, not so much of lacking of capacity to pay but rather of lacking willingness to pay. In doing so, I revisit an argument that was implicit already in contemporary academic criticism of Keynes by Ohlin (1929) and Rueff (1929), put forward again quite forcefully by Mantoux (1946), and echoed by historians critical of Germany's conduct ever since (among many, see Schuker, 1988, and Ferguson, 1998).

I reinterpret the German reparation problem in terms of distorted incentives, drawing on the results of sovereign debt theory. Sovereign debt theory in the wake of Eaton/Gersovitz/ Stiglitz (1986) assumes a world of incomplete markets in which debtors can only be partly forced into meeting their obligations. Then, the amount of transfers – including reparations – that can be exacted from the debtor country faces an upper bound; any payment contract that exceeds these limits is not incentive compatible. This seems to have been the case with the reparation arrangements for Germany after World War I, and this paper will discuss their incentive effects on German policy-making. It will be seen that these incentives varied over time in a systematic way, which created various balance-off-payments regimes. These turn out to be of central importance in shaping the constraints for German macroeconomic policy-making. Somewhat loosely I will refer to these changing macroeconomic policy regimes as "reparation regimes", as I identify the incentive effects of the various consecutive reparation arrangements to be at the root of these switching balance-of-payment regimes.

The core of this paper's argument is an incentive-based interpretation of Germany's transfer problems under the Dawes Plan of 1924 to 1929. I shall argue that transfer protection of commercial claims under the Dawes Plan induced moral hazard for both Germany and her commercial creditors, enabling Germany to borrow massively in international markets and systematically crowd out reparation debt by commercial debt. Both the transition to the much harsher Young Plan of 1939/30, as well as its ultimate failure and the German debt crisis unfolding since 1931, can be seen as a consequence of a crucial design flaw in the Dawes Plan – which was itself, it could be argued, the consequence of moral hazard.

This paper is organized as follows. Section II presents the sovereign-debt reasoning in an intuitive way and places it in contemporary perspective. Section III is the core of the paper. It examines the various different reparation regimes that dominated the German economy between 1920 and 1934, focusing on the incentive effects they created for German policy-making. Section IV concludes with some reflections on the possible consequences that Keynes' well-meaning critique of the reparation problem may have had for the evolution of the reparations question and its political consequences over time.

II. **Capacity vs. Willingness to Pay: the Setup**

Allied reparation policies after World War I pursued the double objective of demanding compensation for the war damages and of weakening Germany's economic potential. This made Germany's capacity to pay a seemingly obvious issue for academic analysis and critique, as it was precisely this capacity that Allied policies aimed to limit in the long run. However, indications exist that capacity to pay did not actually become the binding constraint, and that other restrictions hit before.

One such restriction was the limited enforceability of payments, a constraint emphasized by sovereign debt theory. The possible effects of trade sanctions, embargoes, and other measures of coercion that can be taken against an unwilling debtor country are often surprisingly limited. And when tightening such measures is feasible for the creditors, it may come at increasing marginal cost. Therefore, debtors may find it possible to retreat from trade with the creditor countries at a limited welfare loss, and the reservation utility conveyed by autarky (or by trade diversion to other trade partners) defines a participation constraint in the international credit market. In our case, this limit also marks the maximum of reparation payments to be expected from Germany. That reparation demands on Germany exceeded this limit suggests itself from both inspecting the orders of magnitude and carrying out a market test.

(a) **The size of the reparation debt**

The reparation bill presented to the Germans in 1921 added up to a grand total close to 300% of her GNP of 1913. Reparation demands came in three portions, denominated as A, B, and C bonds. The A bonds (ca. 12 bn gold marks) were designed to compensate for direct war damage. By the B bonds (ca. 38 bn gold marks), Germany should assume the so-called inter-allied war debt owed to the US by Britain and France. The largest portion (82 bn gold marks) was assigned to the so-called C bonds, a more hypothetical burden placed on Germany in order to please parliaments and the public in Western Europe and to have a safeguard against vigorous economic recovery of the former enemy. As it was communicated to the Germans through diplomatic channels that the C bonds were not likely to be ever paid (Feldman, 1995), we omit this last part from most of the discussions that follow. All these reparations were largely, though not entirely, due on top of the seizures of German foreign assets and of deliveries in kind. To evaluate the "burden" of these debts in terms of national product, it is instructive to compare German public debt in 1920 with and without reparations to its national product in 1913 (see Table 1).

Table I: Gold Value of Public Debt and Ratio to Peacetime GNP

Germany			Britain		France	
	bn Gold Marks	% of GNP of 1913	mill. Pound	% of GNP of 1913	Mill. Francs	% of GNP of 1913
GNP 1913	51					
I. Public debt 1913	32.8	63	711	33	33637	67
II. Public debt 1920	25.2	48	3160	144	66953	135
III. A + B bonds	50	99				
IV.(II.+A+B bonds)	75.2	147				
V. C bonds	82	152				
VI. Grand total (IV. + C bonds)	157.2	299				

Sources: Von Eheberg (1927), Bundesbank (1976), Mitchell (1990, 1992), Lévy-Leboyer (1986)

The first row in Table I shows that German public debt in 1913 amounted to 63% of national product, which is similar to the French figure for the same time but twice that of Britain[1]. By 1920, inflation in Germany had already reduced the value of the paper mark to about 10% of its pre-war value. This is why the burden of public debt in 1920 looks rather favorable in Germany when compared to Britain and France at the same time. To arrive at the total debt burden we need to add reparations to this. The A bonds alone (12bn) would constitute the "net indemnity"; in relation to 1913 GNP they amounted to slightly less than 20%. This would be quite similar to the French indemnity to Prussia of 1871, measured in relation to 1869 GNP. Adding only the net indemnity to the remaining burden of German public debt (48% of 1913 GNP, see Table 1, row II), we would arrive at 68% of the GNP of 1913.

This burden on German GNP would have remained well within the bounds of historical experience. If we calculate the ratio of French public debt of 1871 to French GDP of 1869 as 55-60%, imposing the reparations bill of 1871 produced a total burden of 75-80%, which is roughly comparable (see Ritschl, 1996). Had Germany only had to pay the net indemnity after 1920, the whole reparation question would have remained a footnote to European history.

However, to this basic bill added the B bonds backing the reimbursement of inter-allied war credit. These amounted to 38 bn gold marks. A and B bonds combined thus give us a reparation burden of 99% of 1913 GNP (see Table I, row III). Together with existing public debt, this would mean a debt burden of some 150% of 1913 GNP. This is clearly more than France's burden after 1871; however, it is not higher than the total burden borne by France and Britain in 1920 (see Table I, row II). Hence our first test fails to produce clear results: Germany's reparation burden (understood as A+B bonds) is clearly very high, it also exceeds the historical standard of 1871 by a lot, however the total burden on GNP if we include outstanding public debt is the same as in the victorious countries. And this seems only fair.

Figures like these may have been in the back of the minds of the reparation makers in 1920, and indeed, calculations like those above appear in what then used to be Germany's leading encyclopedia of economics (Von Eheberg, 1927). Seen by these standards, i.e. by the magnitude of the burden alone, it therefore does not seem clear why Germany could or would not pay: the

[1] Half of the German public debt of 1913 accrued to the states (the "Länder") and another third to the municipalities. See Bundesbank (1976, p. 313) for a breakdown.

budgetary burden implied by these debts is the same as in France or Britain. Only if we add the propaganda-oriented C bonds to the total in the table above do we arrive at outrageous figures. Then, the reparation total (A+B+C bonds) equals 132 bn gold marks or 2.5 times the GNP of 1913, and the total debt burden produced is equal to 300% of 1913 GNP. But nobody ever asked Germany to pay the C bonds, with the possible exception of some backbenchers in the parliaments of London and Paris - and the more important exception of the extreme right in Germany, who welcomed these numbers as a most efficient propaganda weapon. So why did Germany not pay?

(b) **A counterfactual market test**

To see if or how much Germany could be expected to pay, a simple market test for the viability of this reparation debt could have been performed. It would just have consisted in an attempt to float these bonds in international markets. Bulow/Rogoff (1989) have pointed out that as long as the expected debt service of a sovereign debtor country is below the participation constraint, outstanding bonds would fetch the full present value of their interest payments in the market, up to a point where a debt overhang would threaten. In a debt overhang, the market value of all marginal debt issued would suddenly fall to zero. Thus, failure of the market to accept reparation bonds would be an indication that the reparations bill requested by the Allies exceeded Germany's participation constraint as perceived by the market. That is to say, given the amount of the reparations demanded, markets would predict German default on that part of reparations which exceeded the participation constraint.[2]

Ominously, the idea of floating the reparation debt in international markets was given up soon (on the details, see e.g. Feldman, 1995), as it was perceived that markets would at best have absorbed the A bonds but not even the B bonds. This implies that, unless Germany's gains from trade would improve dramatically in the future, even the more modest parts of the reparation bill of 1921 (i.e. row III in the above table) created conditions of a debt overhang, irrespective of the German capacity to pay, loosely defined as the budgetary burden of the reparations bill.

Seen superficially, the results of this market test seem to present a paradox: Why is it that adding the A and B reparation bonds to the German debt leads to a debt overhang, while the same is not so clear in the cases of Britain and France? There are two answers to this. First, the largest part of Germany's debt (i.e., the A and B bonds) was foreign, while in the cases of Britain and France, the composition was less extreme. This implies that although Germany's budgetary problem implied by the debt burden was no more severe than in France and Britain at the time, the incentive to default was stronger in the German case[3]. Second, Germany's assets overseas including patents and brand names had been seized. Hence the threat of retaliation in case of default had diminished in terms of welfare loss to Germany. This further reduced Germany's incentives to honor her international obligations. Thus, Germany had little left to lose from defaulting. Therefore, the pure addition of reparations to the existing debt is misleading: with foreign debt, not just capacity but also willingness to pay is an issue, and although the budgetary burden of Germany's debt was not much higher than that of Britain and France, the disincen-

[2] A partial default at this level would make the reparation claimants indifferent between imposing sanctions or not. The Bulow/Rogoff (1989) setup would predict renegotiations rather than unilateral default, converging to an equilibrium in which sanctions are just narrowly avoided.

[3] As the Germans were also defaulting on their interior debt through hyperinflation, matters would not even have changed had the reparation debt been domestic.

tives for Germany to service her debt were rather stronger[4].

Indeed the Germans did not pay, or at least they did not pay as much as envisaged. Although gross payments of reparations were fairly substantial (estimates of German payments differ widely, with a median around 30 bn gold marks, see Bundesbank, 1976), Germany proved highly skillful in shifting the burden on others, paying reparations on credit, depleting the currency reserves of other countries through inflation, and similar measures of financial warfare. U.S. historian Schuker (1988) has coined the term "American reparations to Germany" to characterize the result of these policies.

The observation that lack of willingness rather than capacity to pay limited the amount of reparations has of course been made before, and not surprisingly, by the French. In an ardent criticism of Keynes, Etienne Mantoux (1946) pointed to the enormous resource transfers extorted by Nazi Germany from the occupied countries of continental Europe during World War II. He concluded that after World War I, it was basically lack of willingness to pay on the part of the Germans and lack of determination on the part of the Allies that prevented similarly successful policies.

The point of the present paper is that Mantoux was essentially right. The rather limited results of allied reparation policies were certainly due to the rather modest methods they applied; the methods applied by Germany in World War II were clearly beyond the imagination of Allied policy makers in charge after World War I. However, even Mantoux may only be partly right, as there exists a literature on the limited success and ultimate failure of Nazi exploitation policies during World War II - which again illustrates the basic principles of sovereign debt theory.

III. Reparations and Macroeconomic Policy Regimes

Reparation policies with respect to Germany were altered several times, each policy with its own effects on German incentives and the foreign credit constraint of the German economy. The turns and switches of reparation policies towards Germany had very pronounced effects on macroeconomic policy conditions. I will identify various consecutive "reparation regimes", each of which shaped the restrictions for German macroeconomic policy-making in a pronounced way, namely, by relaxing or tightening the foreign credit constraint of the German economy.

That this may have been so is not trivial. Why should altering reparation agreements have influenced the German economy in a pattern that changed systematically over time? Given that there was a debt overhang right from the beginning, we would not expect much variability in basic economic conditions in Germany during the inter-war period. Instead, the likely outcome should be a protracted foreign debt crisis, with German policies designed to deflate the economy in order to generate balance-of-payments surpluses. However, no such stability is observed; instead, we see wild oscillations in Germany's business cycle and balance-of-payments regimes. During the period between 1921 and 1923, dramatic instability prevails where hyperinflation and the reparation conflict coincide. Between 1924 and 1929, a most unlikely and bizarre interlude occurs: Germany recovers quite quickly from the inflation, attracts huge amounts of foreign capital and actually experiences its own version of the Roaring 'Twenties, and even reparations are being paid. In 1929, another drastic change occurs, this time for the worse. The German economy slides into depression very quickly, a prototypical sudden stop (see Calvo/Reinhart, 2000) in the current account and its reversal into surplus occurs, and austerity poli-

[4] It is noteworthy that at the same time, there were discussions in Britain and France about defaulting on the public debt through imposing a capital levy. In Britain, financial stability was considered to be too important to be given up, which is why such proposals ultimately failed, see Eichengreen (1990). In France, confiscatory taxation was partly put into practice (Hautcoeur/Sicsic, 1999).

cies are being proclaimed before the year is over. By early 1930 the country is on emergency rule, hoping more and more desperately for an end of reparations before fascism gets to power. Ironically, these hopes materialize in 1932, however at a time when political destabilization has proceeded very far already. With the arrival of the Nazis to power, another macroeconomic regimes switch occurs, and the country experiences recovery and credit expansion on an autarky basis.

Different as these phases are, they all have one thing in common, which is that the balance-of-payments constraint varies drastically across time. And this is paradoxical: given the reparations demands, Germany should have been in a debt crisis all along. Why did Germany have access to foreign credit in some periods but not in others, and why did she switch to autarky in 1933, not before, given that reparations were not being fully paid right from the beginning? Who would be willing to invest in a bankrupt enterprise?

a) **Inflation and Seignorage: the First Reparation Regime, 1921-1923**

We first turn to the possible connections between the incentive effects of the reparation bill and the beginnings of the German hyperinflation. Much of this issue is still under-researched, and our discussion necessarily remains speculative, although some hints can be found in recent historiography on the subject (see especially Feldman, 1995).

Conventional wisdom attributes the German hyperinflation to distributional conflict and delayed stabilization (Holtfrerich, 1986; Ferguson, 1996). The argument there is that conflict over the allocation of the tax burden to the different groups of society delayed the necessary broadening of the tax base, which left the state with the need to finance its deficits through the printing press. This interpretation of the German hyperinflation has also attracted the interest of theorists who have cast the argument in game-theoretic terms (Alesina/Drazen, 1991).

However, this interpretation is partly at odds with the facts. The adoption of the Weimar constitution of 1920 was a consensual attempt of organized capital and labor to stabilize the economy. As its most important element, it carried with it a shift of power from the federal states to central government. In a radical departure from the decentralized system that had prevailed in Imperial Germany (criticized for its insufficient tax base e.g. in Ferguson 1998), tax authority and collection were now concentrated in the hands of central government (see Pagenkopf, 1981). New tax schedules broadened the tax base and envisaged considerably higher tax rates than before. Hence, lack of a sufficiently strong tax system was not the initial problem. The reasons why the state later continued to resort to inflationary deficit finance must be sought elsewhere.

The explanation possibly lies in reparations. In March 1920, when the Weimar constitution was passed, the final reparation bill was still undetermined, to be issued only in January, 1921. The Germans expected reparations to be high but bearable, which was one of the main reasons why the radical reforms in the tax constitution went through. The German side still believed at the time that reparations would be worthwhile to paying off in an orderly manner. To this end, a strong tax system would be needed, just as in the case of France after 1871 when interest on public debt became the major expenditure item in the central government budget. The German anticipation was that reparations would be equivalent to those of 1871 plus some portion of the inter-allied war debt, hoping intensely for considerable debt forgiveness on the part of the United States. Adding up the figures, the expected burden would amount to some 20 bn gold marks, probably slightly more, and initially, the German side offered 10-15 bn (Feldman, 1995).

Given these expectations, it is not surprising that there was a grand coalition supporting the new constitution and fiscal stability. The early summer of 1920 witnessed a failed military coup, which was fended off by a general strike and lacking entrepreneurial support. Tax revenues began to increase, and by the summer, the central government budget approached equilibrium. Accordingly, money growth and inflation slowed down rapidly. The press began praising the finance minister and architect of the new tax constitution, Erzberger, for his ingenuity and success in bringing inflation to a halt. Not unexpectedly, unemployment began to rise, but trade unions were not lacking in their support for stabilization. None of this is the traditional scenario of insuperable distributional conflict or of delayed political stabilization emphasized by Alesina/Drazen's (1991). Instead, it looks promising by hindsight: stabilization of the public budget seemed off to a good start in 1920, as did the new political system created by the Weimar constitution as a whole. So what went wrong with the German inflation and why?

The tide turned when in the fall of 1920, the news leaked that the reparation bill would be drastically higher than what the Germans had expected, probably no less than 80 bn gold marks. What followed in Germany was something of a tax boycott. Taxpayers would withhold their statements to the last moment, and tax authorities were sluggish in enforcing payments which were generally held to serve only the interests of the Allies. The resulting slump in tax revenues was again compensated at the Reichsbank's discount window, and inflation resumed[5].

Inflation proved to be a formidable weapon against reparations creditors, at least in the short run. It helped insulate Germany from the international slump of 1920/21, improving her export position and fueling internal demand (Holtfrerich, 1986). It also exploited Germany's remaining foreign creditors, largely neutral countries, by depreciating the paper mark reserves they had accumulated during the stabilization period (Feldman, 1995). Above all, it paralyzed the financial system that would have been needed to organize an orderly transfer of reparation.

Sovereign debt theory would predict that outright default be threatened with sanctions and that partial transfer is the most likely outcome of a debt overhang. During 1922, sanctions were indeed imposed, reacting to sluggish deliveries and the German refusal to pay more than a minimum. Towards the end of the year, the reparation creditors declared Germany to be in default. In early 1923, France and Belgium occupied the Ruhr district in order to secure a guaranteed flow of transfers and increase pressure on the German government.

The mixed results of the Ruhr occupation illustrate the limits to sanctions against a sovereign debtor quite nicely. On the one hand, social cost to the German side did increase sharply. The German government had called for passive resistance in the occupied areas and promised bailouts to the industries concerned. As a consequence, inflation got out of control and finally started to burn out, generating less and less seignorage to the government in spite of ever-increasing inflation rates. Unemployment increased markedly, and social upheaval followed, culminating in communist insurrections in various regions of Germany and Hitler's failed beerhall putsch in Munich.

On the other hand, the Ruhr occupation was costly also to the Allies, while the financial proceeds from the occupation to the allies were unimpressive. Given that sanctions produced high costs to both sides, there should be room for renewed negotiation. This is indeed what happened in the end: after troublesome negotiation, a transfer schedule was agreed on that procured some payment, albeit much less than the required amount. The peculiar conditions of this payment schedule helped to stabilize the German economy (and probably also that of France) for the rest of the 1920s. However, this program was full of paradoxical elements, which we will need to study in some detail.

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[5] Within months, the political atmosphere in Germany became extremely poisoned. Erzberger came under attack for having connived with the Allies in designing the tax laws. Things were not made better by the fact that Erzberger had been on the German delegation that signed the armistice in 1918. After a wild press campaign, he was forced to resign under humiliating conditions and got assassinated only months later, as was Germany's foreign minister, Rathenau, in 1922.

b) **Reparations on Credit: the Second Reparation Regime, 1924-1929**

Given the history of the problem up until 1923, the interlude of 1924 to 1929 is puzzling. What we should expect to have emerged from the Ruhr occupation of 1923 is a political compromise which led to stabilization in Germany and some, albeit substantially reduced, reparation payments. Ex ante, the most likely and plausible solution would be to force Germany to pay more or less the amount which would just be small enough not to create an incentive for her to default[6]. Under such a solution, it would seem very unlikely that Germany could attract much foreign credit. But this is not what happened. After 1924, large amounts of capital flowed into Germany and generated an artificial consumption boom. Capital inflows were so big that reparations were being paid entirely on credit and there was still a sizeable current account deficit. How could that be? Why could a country as bankrupt as Germany attract so much foreign credit?

The Dawes Plan for Germany's stabilization was of American design. It provided for a German return to the gold standard, a stabilization loan, a payment schedule for reparations, and an ingenious clause that protected Germany's currency reserves from reparation transfers. As such, the Dawes Plan also met with the demands of Keynes (1922) who had argued that a future reparation settlement, if it was to work, should not exceed Germany's capacity to pay and should do everything in order to protect Germany's currency from payments crises. Indeed, the Dawes Plan made sure that transfers would not be made under any circumstances, and that international investment in Germany would be favored in order to make sure that Germany's capacity to pay would expand rather than contract.

If the Dawes Plan was designed to avert the transfer crisis predicted by Keynes, it achieved its goal with remarkable success. Germany did pay, albeit not out of her own resources. The outflow of reparation transfers was matched by a compensating inflow of capital. In other words, reparations were recycled completely, so that no payments crisis could arise.

At this point we need to pause for a moment and look at the standard economic explanation of this phenomenon. Scholars during the 1940s (notably, Metzler, 1942) developed the so-called Keynesian theory of the transfer problem to model just such a situation, in which outflows of resources from a country are compensated by capital inflows. According to this standard model, the transfer (here, the reparation payment) causes domestic interest rates to rise, which in turn sets off counteracting capital imports. The size and direction of the net resource transfers are not determined a priori and depend on elasticities.

Superficially, the Keynesian transfer problem looks like a ready interpretation of the Dawes Plan period, as counteracting capital flows indeed led to net resource transfers to Germany from abroad. But still, there remains a puzzle: how could it be that any credit from abroad was forthcoming, given that Germany was hopelessly over-indebted in reparations?

To answer this question, we need to look into the incentive aspects of the stock/flow problem of Germany's balance of payments, which a Keynesian circular-flow theory cannot incorporate. In fact, the Dawes Plan did create strong incentives for international capital markets to provide new credit to Germany. This was part of a political strategy on the part of the US to make the European economies viable and reduce political tension (Link, 1970; Schuker, 1976). However,

6 By defaulting on such a scheme, Germany would have risked repeating the uncomfortable experience of the Ruhr disaster or other, equally uncomfortable sanctions. However, imposing sanctions on Germany was costly for the Allies as well, which gave Germany some bargaining power over the size of the reparation transfer.

it created these incentives at a high price, postponing hour of reckoning and making a final settlement more difficult than before.

Whether or not creditors make additional funds available to a debtor depends on the ranking that the new credit will enjoy. If new credit has only junior rank (which is the normal condition of business practice), it will be the first to be defaulted on if the debtor suspends or restricts payments. Hence, under normal conditions any additional creditor to Germany would have evaluated the risk, observing that according to the Peace Treaty of 1919, all reparation demands were senior to commercial claims - and this would have made it very hard for Germany to obtain credit.

However, the Dawes Plan provided a seemingly ingenious escape from this. Under the so-called transfer protection clause, transfers of commercial claims on Germany were protected from reparations. Hence, the Reichsbank, Germany's central bank, would have to make foreign exchange available for reparation transfers only after all commercial claims had been satisfied. In effect, this reversed the ranking scale, such that in the event of a foreign exchange shortage, commercial claims would drive out reparations at the margin.

This makes it comprehensible why capital flowed into Germany in spite of reparations. Under the Dawes Plan, new commercial debt was in fact senior to reparations. Hence, lending to Germany was relatively safe again, and German credit needs were large. But where did the incentives for the German side to borrow come from? Was it not a bit hazardous to borrow if there were all these outstanding reparation obligations? And how about the risk to the lenders? We consider both risks in turn.

I have argued elsewhere (Ritschl, 2002) that there was indeed an incentive for Germany to borrow, actually quite a perverted one. If reparation demands are sufficiently high but junior in rank, the debtor will have an incentive to over-borrow. It will try to issue as much senior debt as possible in order to drive out reparations. The logic behind this is simple: suppose you know that tomorrow, your creditors will come and take everything away from you except for a legal minimum that they have to leave to you. Now, if someone offers you additional credit today, will you accept the money or not? Both common sense and sovereign debt theory tell us that you will: it increases your consumption today without lowering your utility tomorrow. You are over-indebted already, and the marginal damage done to your wealth of tomorrow by the credit you accepted today is zero.

German policy makers at the time understood this incentive perfectly well. As an internal foreign ministry memorandum had it: "The more foreign credit we take in, the less we will have to pay out in reparations". Political historians agree that German foreign policy under Stresemann consisted in taking foreign creditors hostages to the reparation problem (Link, 1970, McNeil, 1986, Schuker, 1988). If New York bankers had sufficiently many investments in Germany, they would become a powerful ally in Germany's struggle against future reparations.

Consequently, Germany engineered a foreign credit rush. German policy makers were fully aware that this went counter to the spirit of the Dawes Plan. To ensure the necessary inflow of capital, tax privileges were given to foreign credits, and attempts of the Reichsbank to limit foreign borrowing of the Laender and the municipalities were systematically jeopardized. Table II provides data on the German balance of payments between 1925 and 1933.

Table II: The German Balance of Payments, 1925-1933

	Primary TB	Interest	Trade Balance	Reparations	Current Account	of which: Reparations plus Interest
1925	-2.93	-6	-2.936	-1057	-3.045	-1.063
1926	0.335	-173	0.162	-1191	-0.039	-1.364
1927	-3.194	-345	-3.539	-1584	-4.244	-1.929
1928	-1.411	-563	-1.974	-1990	-3.192	-2.553
1929	1.663	-800	0.863	-2337	-2.469	-3.137
1930	1.851	-1000	0.851	-1706	-0.610	-2.706
1931	3.585	-1200	2.385	-988	1.040	-2.188
1932	1.952	-900	1.052	-160	0.257	-1.060
1933	1.513	-847	0.666	-	0.132	-0.847

Source: Statistisches Jahrbuch fuer das Deutsche Reich, various issues

As can be seen, reparations and interest payments on foreign debt piled up rapidly during the second half of the decade, and the current account continued to be in deficit through 1930, indicating that Germany built up a foreign debt pyramid.

Most of the money was put to unproductive use in the public sector. The projects financed with these funds ranged from public housing to sport stadiums, municipal infrastructure, subway construction, the beginning electrification of railway lines, etc. The mayor of the city of Cologne, Konrad Adenauer (to become West Germany's chancellor after the war), even built Germany's first *autobahn*, a divided highway from Cologne to the college town of Bonn, situated up the Rhine river and close to his weekend home. The annual reports of the reparation agent are full of complaints about the unproductive use that was made of these loans in Germany at the time (Reparations Agent, 1927, 1929; James 1986).

The most important use of these funds, however, was payment of reparations on credit. Germany ran what is commonly called a Ponzi scheme, financing reparations and debt service with by issuing even more debt. As most of this credit came from the US, a huge credit recycling machinery was put into operation, based on American credit that helped Germany to pay her reparations, which in turn helped the European Allies to meet their US obligations.

But why did anyone outside of Germany have an interest in this scheme? Was it just a folly of the Allies to allow this, driven by Keynes' (1922) emphasis on restoring the capacity to pay, as Mantoux (1946) would have maintained? Or was it just that the Germans outsmarted their Western counterparts, as Schuker (1988) has claimed? There is a number of possible explanations why the Dawes plan was adopted. First, it could be claimed that it was simply in the interest of the international, especially the US banking, community to re-open the German credit market. Clearly, if Germany's incentives to repay such credits in the future were blocked by the reparation charges, it was in the interest of financial markets to get rid reparations one way or the other. As this could not be done officially without revising the Treaty of Versailles, a clause like the transfer protection mechanism, which was not easily understandable to the public, was highly desirable. In fact, Mr. Dawes himself was a banker, so it could be argued that there was moral hazard in designing the Dawes Plan (see Link, 1970, Schuker, 1988, and McNeil, 1986, for hints in this direction). We cannot discard this view entirely. However, it would presuppose that politicians and their advisers were indeed not smart enough to understand that the financial experts acting on their behalf were not acting in their interest.

A second view would be that not even the experts understood what they were doing. This means, they skillfully opened the locks for almost unlimited inflows of international credit, however without being aware of the consequences of their actions. Unlikely as this is in itself, it does not square well with the fact that other European countries at the same time, notably Austria, were subjected to rigorous international control of their access to foreign credit in order to avoid over-indebtedness (on the Austrian case, see Schubert, 1991). Thus, lack of knowledge of how to control a debtor country's behavior cannot plausibly have been the reason.

Probably the most plausible explanation is that even for Allied policies, the Dawes Plan may have indeed been incentive compatible. Its reparation payments scheme included only the net indemnity (i.e., the aformentioned A bonds) but not the inter-allied war debts (the B bonds). The undetermined fate of the latter constituted the big chance of success of the plan, but also its major risk. Politicians and experts hoped at the time that it would possible to convince Congress to forgive parts or all of these debts within a couple of years (see Link, 1970). Only a small fraction of these debts was being served during the 1920s. Thus, it seemed advisable to devise a provisional scheme through which Germany paid net reparations to the Europeans. If this net indemnity was paid on credit, this would constitute no problem. Should it, however, turn out impossible for the US to cancel the inter-allied debts, a new reparation arrangement without transfer protection could still be sought. Thus, the Dawes Plan seemed to have a major advantage for American-policy making: It bought time while fostering the economic reconstruction of Europe through US credit (see on this McNeill, 1986).

c) **Transfers with a Problem: The Third Reparation Regime, 1929-1932**

In 1928 presidential elections in the US approached, and as Congress continued to oppose any debt forgiveness with regard to Europe, it became clear that contrary to initial hopes, inter-allied debts would not disappear. France and the US signed the Bérenger/Mellon accord, an agreement on the full resumption of repayments from 1929/30 on. New York bankers became nervous about lending more to Germany and started to talk down Germany's credit rating. So did central bankers who watched the German credit pyramid with growing concern. At the central bankers' conference in Long Island in 1927, Benjamin Strong, governor of the Federal Reserve Bank of New York, had predicted that within one or two years' time the credit recycling machinery by which US credit financed Germany's reparation payments would come apart, and the worst depression in history would set in, the only question being whether it would break out in Germany or in the US (Link, 1970).

If inter-allies debt was not canceled, the main premise of the Dawes Plan was invalidated. Credit markets had finally been able to absorb the equivalent of the A bonds of the initial reparations bill, and as described above, the Dawes Plan had been built on the hope that after a number of years, the B bonds (or inter-Allied war debts) would be forgiven. This expectation was now disappointed. Clearly, international credit markets would not absorb the B bonds: the inter-Allied war debt was evidently too large to be "commercialized" without running into serious country risk. The problem of 1920 was back. Again, Germany was not creditworthy any more. Reparations as well as the foreign debt accumulated during the Dawes Plan would now have to be serviced out of trade surpluses. This was exactly what Benjamin Strong had predicted: the credit machinery for recycling German reparations would break down soon, as would the credit pyramid built up since 1924.

The Young Plan of 1929 essentially established two new things. First, transfer protection was abolished. Second, the reparation annuities were set such as to pay off the inter-allied credits plus some other, yet minor elements in a period of 59 years. If we state its reparation annuities in present value, the Young Plan was actually a better deal for Germany than the present value of the Dawes Plan annuity of 1929. It also included additional elements of debt forgiveness, skillfully concealed from the eyes of the Western European and American press. However, the terms of payment were much stricter, as suspending transfers was possible only for two consecutive years at the maximum and only for a portion of the annuity. This ensured that continuing to pay reparations on credit would be almost impossible in the future: reparations would be an additional block of debt ranging ahead of commercial debt, and both elements together amounted to a good 70% of 1929 GNP.

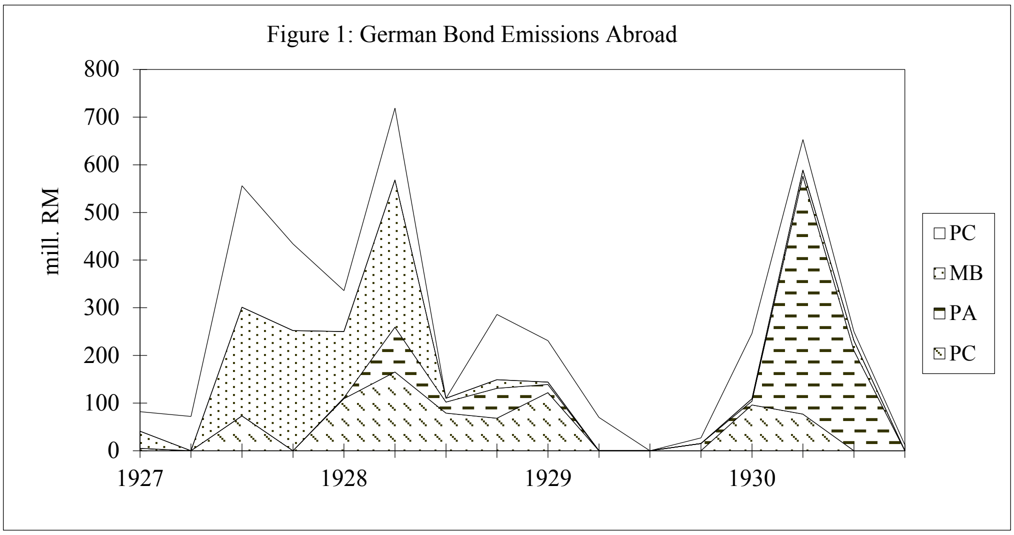
With these provisions fixed in early 1929, Germany was on the brink of a foreign debt crisis even before the Great Depression began. The immediate consequences were a run on the reserves of the Reichsbank (in March 1929) the failed flotation of a major central government loan (in May 1929), emergency measures to tighten the budget during the second half of the year, and last, after long public controversy, the resignations of the finance minister and his budget director (in December 1929), of Schacht as the president of the Reichsbank (in February 1930), and of the left-wing chancellor, Mueller (in March 1930). A minority cabinet under emergency rule was formed with Bruening as the chancellor, and Germany completed the transition to austerity policies with parliamentary democracy being half-suspended[7].

But why did Germany ever accept the Young Plan if its conditions were so adverse for the German economy? Naively, we could ask ourselves if it could not have been feasible to default right now. One reason why Germany did not renege on her debt is that under the conditions set by the Young Plan, default would hit commercial credits first. This could not be in Germany's interest as long as there was a hope of returning to an integrated world market. What the Germans would have liked to renege on was reparations, not their access to international credits. However, declaring unilateral default on reparations was not viable either, as this would expose Germany to the type of sanctions experienced in 1923. Only during 1930 had the French cleared the last strips of occupied territory in Germany. Clearly, under such conditions, creditworthiness in commercial credit markets would be lost as well. Hence, partial default on reparations was impossible, and it seemed better to wait.

In fact, the hostage doctrine of reparations and commercial debt held by the German foreign office offered hopes that the seniority scheme of the Young Plan would not be robust: if it came to a test, Allied governments might not want to put their markets at risk just in order to receive more reparations (McNeill, 1986). If a serious payment crisis threatened, seniority might be reversed again, and it would be possible to default on reparations without losing the creditworthiness in international markets. All this implies that the Young Plan had a credibility problem once a payment crisis erupted.

Foreign lending to Germany did not cease immediately when the Young plan was implemented. A major loan granted in connection with the Young Plan made the transition easier and postponed the onset of a foreign debt crisis by another year. Otherwise, German bond issues abroad almost came to a standstill (Figure 1).

[7] Article 48 of the Weimar constitution of 1920 gave the president of the republic the right to rule by emergency decrees which could substitute parliamentary law but could be overridden by the parliament. Politically, the transition to emergency rule depended on the willingness of the moderate left, the SPD, to tolerate Bruening's cabinet by helping him to suspend the sessions of parliament. This way, responsibility for the austerity policies would not directly fall on the SPD, which was afraid of losing voters to the communists.



Key: PC = Private Companies, MB = Mortgage Bonds, PA = Public Administration, PE = Public Enterprises
Source: Balderston (1993), Statistisches Jahrbuch fuer das Deutsche Reich, various issues

Figure 1 shows Germany's gross bond issues abroad. As can be seen, there is a major revival in 1930, which is however almost entirely due to the Young loan (included in "Public Administration" and "Public Enterprises"). Faced with the foreign credit constrained, the German reaction was fiscal austerity and deflation. In the summer of 1930, the new administration tried to pass the new deflationary budget by presidential emergency decree in order to avoid defeat in parliament. Upon French diplomatic pressure, this plan was given up and the bill was presented to the *Reichstag*, where it failed. As a consequence, new elections were called for September, which ended with a further weakening of the political center and a dramatic rise in the votes for the Nazi party[8].

This episode shows how strongly Germany had become dependent on foreign diplomatic influence through the Young Plan. In the summer of 1930, the last portion of the Young loan had yet to be floated, and France used this fact as a political weapon to make sure that the commitment to austerity policy was shared by all major political forces in Germany - with doubtful success, as we have seen. The fact that the Young loan could be used to exert political pressure also reveals that Germany's access to foreign credit had indeed been exhausted.

To bring down the Young Plan without losing future access to credit market, Germany could not act unilaterally but had to wait until the crisis had become bad enough to push her on the verge of default. Only then, the conflict of interests among the different groups of creditors could become an open one, and hopes would exist that reparations would fall before commercial debt service had to be suspended. This is largely the scenario of the year of 1931. Threatened by the Austrian banking crisis (which turned into a German banking crisis soon), in June the German side issued a memorandum asking for a change in reparation policies if default on commercial debt should be avoided (see e.g. James, 1986). Given that Germany had deflated her economy sharply, the threat looked credible, and the Bruening government was indeed under heavy pressure from the right to declare outright default.

The solution that was found was not a unilateral default - which would have entailed sanctions and all the cost associated with it - but a negotiated double solution. First, the Hoover moratorium on political payments suspended reparations and inter-allied credits for one year. Second, a standstill agreement on short-term debt helped prevent the imminent foreign debt cri-

[8] This episode is documented in the diaries of the German finance ministry's budget director at the time, Schaeffer (Institut fuer Zeitgeschichte Munich/Germany, folder IFZ Da 03.03).

sis. As a result, Germany remained current on her commercial obligations but was relieved from her reparation payments. This, however, was not yet the full solution that the Germans had hoped for, as reparations had been suspended only temporarily. Although this helped to avoid default on the commercial debt, it did nothing to restore German creditworthiness, as the reparation debt itself was not forgiven yet. The third reparation regime was suspended but not yet over.

d) Digression: Was Bruening's Deflation Policy Necessary?

At this point we want to pause for a moment and consider the economic history, not of what actually happened next but rather of what could have happened next. We want to gain further insight into the question of whether Germany's slide into Nazi rule was unavoidable. To do this, we consider a counterfactual. That means, we try to construct the necessary conditions under which an alternative course of events would have been possible. We can then discuss whether these necessary conditions could easily have produced themselves.

First, we want to study a scenario in which Germany could have successfully recovered from the depression without debt default, autarky, and Nazism. To put it differently, we want to know under what conditions the austerity policies of Bruening could have been more successful. A key issue here is that the next parliamentary elections were due only in 1934. However, Bruening's cabinet fell already in May 1932, more than two years before its term was exhausted. This had largely political reasons, as the president of the republic, Hindenburg, sought to wield a new power coalition between the traditional elites and Nazism[9]. The tactics of the emergency cabinet under Bruening consisted in riding out the depression, getting rid of reparations, and restoring Germany's external creditworthiness to reap the fruits of recovery in the next elections. Reparations were indeed forgiven in the summer of 1932, so this strategy could have been successful. Germany reached the spring of 1932 with a ramshackle economy but without having defaulted on her commercial debt. Looking into the prices of German bonds in New York, Doemeland-Narvaez (1998) finds that from 1930 up to the autumn of 1932, no significant structural breaks in risk premia occurred. This would indicate that Germany's policies towards her commercial debt remained credible throughout the period of the Hoover moratorium. For our counterfactual history of the Bruening deflation and what might have been, this is actually good news, for it means that Bruening's policies of financial convervatism indeed achieved their main goal.

A second counterfactual we want to study is the question whether the Bruening deflation could have been avoided altogether had German policies during the Dawes Plan period been different. Had Germany taken in less credit after 1924, would a less restrictive policy have been possible during the slump? Suppose that without the credit rush of the 1920s, Germany would not have been cut off from foreign credit during the depression after 1929. In Ritschl (1998) I study this in a Keynesian framework in which the balance of payments constraint would have been tighter in the 1920s and looser in the 1930s. A simulation result for plausible parameter values and the assumption full reparation transfer out of primary trade balance surpluses in the 1920s is presented in Figure 2.

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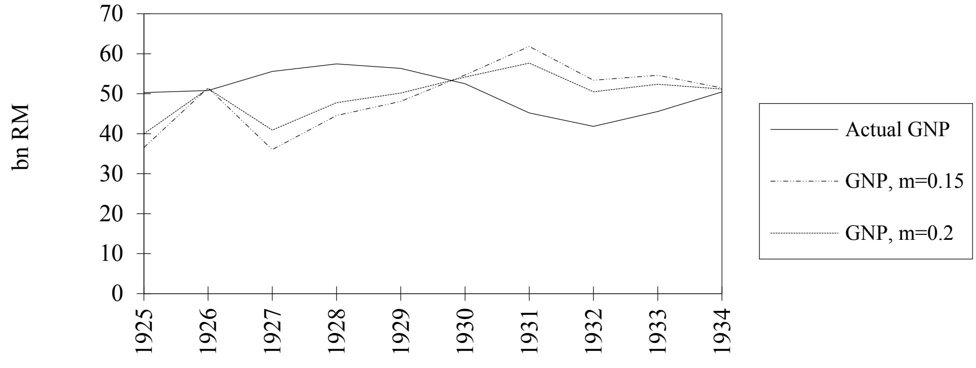
[9] Bruening had resisted these demands since 1931 and instead engineered the re-election of Hindenburg in March, 1932, with the political support from the left. This alienated Hindenburg and his advisors, who hoped to create an authoritarian state with a mass basis supporting the traditional power elites from the nobility and the military.

Figure 2
Actual and Simulated GNP
with Full Reparation Transfers



Key: GNP Actual GNP series
m=0.15 GNP simulation with marginal ratio of imports to income equal to 0.15
m=0.20 GNP simulation with marginal ratio of imports to income equal to 0.20
Source: Ritschl (1998)

The simulation shown above assumes an income-dependent Keynesian import function (a slightly awkward concept from a modern viewpoint). If reparations had been fully transferred in the 1920s, in each year a primary trade balance surplus of the same amount would have had to be produced. Under Keynesian assumptions, this would *ceteris paribus* have depressed national income in the 1920s. On the other hand, a policy of full reparation transfers would have avoided accumulating foreign debt, which would have diminished the burden on the trade balance after 1929 when the Young Plan effectively banned foreign credits. As the figure shows, the effect of this simulation is to shift the depression backward in time. The most drastic adjustment would have occurred in the mid-1920s, not in the 1930s. Germany would almost have followed the British path, with unimpressive performance during the 1920s and a rather mild depression in the early 1930s. This confirms the hypothesis of Borchardt (1979) who claimed that in Germany, overly expansionary macroeconomic policies in the 1920s were a cause of the rather stern conditions prevailing in the depression.

The reasoning presented here suggests that with the Young Plan in place, there was little else to do for German policies than to wait until the scheme had proved to be unsuccessful. The sharp austerity policies pursued during the crisis were the price that Germany paid for the game it had played during the Dawes Plan, when it had attempted to drive out reparations through foreign credit. This strategy ultimately paid off, however at the high social cost of aggravating the depression for Germany.

We have seen above that had Bruening's cabinet survived the summer of 1932, his austerity policies might have been successful, as the fruits of abandoning reparations would have ripened in a climate of slowly returning confidence. Instead, two consecutive elections in July and November, 1932, established a joint majority of the Nazis and the communists in parliament, shaking the credibility of Germany's international commitments and finally dashing the hopes of her international creditors.

In sum, during the Great Depression we find Germany caught in a condition of a mounting foreign debt crisis. The extreme deflationary policies of the Bruening cabinet between 1930 and 1932 were probably not an application of misguided doctrines, nor were they the sinister attempt to run down the economy in order to get rid of reparations. Instead, we see the deflation adopted by Germany from 1929 on as the rather passive austerity reaction to the foreign credit constraint imposed by the Young Plan. As long as German policy-makers had a desire to re-integrate Germany into the world economy, it made sense to fulfill the Young Plan, hoping to get rid of reparations while not having to default on the commercial debt.

The alternative to the austerity policies which this implied would have consisted in outright default. This is what both the extreme right and the communist party advocated. Hitler campaigned, not with a program against unemployment which he actually did not really have, but rather with the argument that the Young Plan and the Treaty of Versailles would have to go before Germany could recover. However, default made Germany vulnerable, first, against trade disruptions, and second, against the vague but potentially far-reaching sanction clauses of the treaty and the Young Plan. Defaulting thus implied a necessary condition for its implementation, namely, trade diversion and autarky policy. These two elements, autarky and debt default, are indeed at the heart of all plans to reflate the German economy that circulated in intellectual circles and party offices during the year of 1932.

e) **Default after Default: Reparations and the Transition to Nazi Autarky Policy**

The debt arrangements of 1931 had pursued the objective of maintaining and later restoring Germany's access to international credit markets. To this end, the short-term debt was frozen (while still being fully honored), while the long-term debt remained entirely unaffected. Thus, Germany was still fully current on her interest obligations; the crisis was handled as a transitory contingency, not as a fundamental change in German debt policies. Such an arrangement made sense if all parties anticipated a future return to a world of free capital mobility the gold standard. Thus, Germany formally stayed with the gold standard, suspending its short-term convertibility but retaining her long-term commitments. This implied that in the long run, full return to the gold standard without debt default was possible.

How come this incentive changed over time? The slide into Nazi autarky policies provides us with a surprising twist on this. From 1933 on, German foreign debt policies changed their objective and gradually resumed service on short-term credits, while systematically reducing debt service on long-term loans. This amounted to a reversal of priorities. Long-term debts were now discriminated against, while during the slump, the stability of long term credit had been favored at the expense of short-term debts.

There are two main reasons for this. First, autarky was clearly politically welcome to the new rulers of Germany. But second, the opportunity cost of autarky had fallen drastically. The disintegration of the gold standard and of free trade in general sharply reduced the incentive for Germany to keep current on her long-term obligations. Even the new Roosevelt administration in the US accepted the German logic: in order for Germany to repay her debt, she would have to be allowed to run export surpluses vis-à-vis the US. But this the Americans preferred to avoid, and debt default was considered to be the lesser evil. Given all this, the risks from defaulting were now much lower than before (Schuker, 1988).

In contrast, not defaulting on short-term trade credit made even more sense now than before. Germany had channeled much of her European trade into bilateral trade agreements but still needed credit facilities for her overseas trade. By resuming debt service on existing trade credit, Germany managed to regain some degree of creditworthiness in London, benefiting from a general mood in British politics that has been described as "economic appeasement" (Wendt, 1971; James, 1986).

Thus, we observe the logic of sovereign debt in operation once again. Germany could successfully switch to autarky and default on long term debt after 1933, not just because of the political determination of the Nazis – for the moment, the economic policy of Nazi Germany was in the hands of previous career bureaucrats, like Schacht, not of Nazi party leaders - but rather because the conditions for default were favorable. First, reparations were gone, and there was a general mood of guilty conscience for the effects they had produced. This is precisely the lenient attitude towards Germany that was later criticized by Mantoux (1946) so sharply. Second, the incentive for Germany to honor her debt had lowered drastically in a changed international environment. We have some reason to doubt that a right-wing, non-Nazi government would have conducted very different foreign trade and payments policies in the early and mid 1930s. Third, we note that the German debt default after 1933 was not a unilateral, once-and-for-all suspension of payments. Instead, what we see is a constant process of renegotiation of debt service between Germany and her foreign creditors, were transfer quotas changed over time and where creditors were initially actually quite successful in pushing Germany into paying more (see Corni, 1990). Hence it was relative bargaining power in the regime of a debt overhang that determined the transfer rates, just as sovereign debt theory would predict. What was deeply regrettable about these conditions is that in a regime of continuing free trade and payments, Germany's chances of successful default would probably have been far lower than they were. In passing we also note that the reduction of German debt transfers to the Western countries was accompanied by a selective retreat of Germany from trade with the Anglo-Saxon countries, which actually explains much of the diversion of German trade in the mid-1930s (Ritschl, 2001).

IV. Conclusions and Implications: A Self-Inflicted Transfer Problem

This paper has dealt with the origins and the nature of Germany's transfer problem between 1920 and 1933. It has attempted to provide an incentive-based reinterpretation of the facts. I argued that Germany's "capacity to pay", which is at the heart of the Keynesian view, was not the binding constraint. Instead, the true restriction to German reparation payments lay in the limits of enforcement. I used the Ruhr occupation and the hyperinflation of 1923 to argue how either side learned about enforcement and its limits. But this is only one part of the story. According to the logic of limited credit enforcement, after 1924 an arrangement should have been found that would have solved the reparation problem to some extent without creating excessive financial and political instability. Such an arrangement would have almost certainly kept Germany poor and France disappointed. But this is not what happened. Instead, after 1924 we observe an extremely volatile German business cycle, with a large upswing first and a deep depression after. The central argument of this paper is that this was a foreign credit cycle caused by the incentive effects of the Dawes Plan. Under the influence of Keynes (1920, 1922) and his criticism of the Peace Treaty of 1919, all kinds of well-intended but highly dangerous safeguards had been built into the Dawes Plan. These allowed Germany to fool her reparation creditors in a flagrant case of moral hazard. The plan's provisions permitted a bankrupt debtor country to issue senior debt in international markets, which it did of course do in very high amounts. Once the resulting credit pyramid collapsed, Germany was burdened with the double load of reparations plus debt service, and it was only a matter of time until one of the two would have to go. This helps to explain why the Young Plan of 1929/30 was not sustainable and collapsed in the banking crisis of mid-1931.

According to this interpretation, the Dawes Plan allowed Germany to default on her reparations twice. The first default was the outcome of her policies of driving out reparations by issuing senior debt during the 1920s. This way, Germany was able to stage a conflict between reparation creditors and commercial creditors, which the latter won in the Hoover moratorium of 1931 and the final abolition of reparations at the conference of Lausanne of 1932. The second default consisted in not even paying her commercial creditors, a move which was made rational by the breakdown of the gold standard and the system of free trade at the end of the depression. During the mid-1930s, Germany staged precisely the kind of autarky policies that had been proposed from 1931 on in order to make debt default feasible, and international protectionism may even have rendered this policy rewarding.

Let us conclude with some further remarks on Keynes and his criticism by Mantoux. Mantoux was probably right that the peace of 1919 was not Carthaginian. Had it been, there would have been no incentive problem for Germany, at least none that would not have been solved with rude force by the Allies. The problem of the peace treaty was its lacking enforceability. France, the country which did most to shape the punitive clauses of the treaty, had the least means to enforce them. On the other hand, the one victorious country which could have enforced the treaty showed no interest. One could even argue that the whole reparation scheme was merely the substitute for US policies towards providing protection of Europe against Germany.

Viewed in this way, it was probably Keynes who was right. Keynes saw correctly that the peace arrangement included clauses that made no economic sense, and that these were just substitutes for a power-political solution to the problem. However, the propaganda made by Keynes against the Treaty turned out to be fatal in its consequences, as it opened the gates for a reparation policy that postponed the hour of reckoning into the future, making its consequences probably much more sever than they would have been in the 1920s.

This essay has also argued that without the Dawes Plan of 1924, the German slump of 1929-32 would have occurred already in the 1920s, probably in milder fashion. Our conclusions from this will necessarily have to remain speculative. However, with memories from the Ruhr occupation still fresh on either side, it seems less than likely that anything like the rise of Nazism to power could have occurred in the 1920s, or would indeed have been tolerated by the Allies. Germany's trajectory would have been less volatile but also less violent, had not a well-meaning doctrine been applied to reparations that alleviated the problem for some time, only to create a self-made transfer problem later.

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