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Regime change and debt default: the case of Russia, Austro-Hungary, and the Ottoman empire following World War One[☆]

Lyndon Moore*, Jakub Kaluzny

Department of Economics, Northwestern University, 2001 Sheridan Road, Evanston, IL 60208, USA

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Abstract

We consider the effect of the three largest regime changes following World War One on the foreign debt repayments of the succeeding regimes. The Bolsheviks repudiated the Tsarist debt, both external and internal in early 1918, and could not borrow internationally until the 1970s. The Austro-Hungarian successor states, with the exception of Romania, remained on good terms with lenders, and quickly gained access to foreign capital. However, the Ottoman successor states entered into protracted negotiations before accepting responsibility for a share of the debt, which meant they faced a lengthy delay before being able to re-enter the international capital market. We analyze these events using a game theoretical model of incomplete information, whereby capital markets can not directly observe a government's 'type.' We find that there were two main economic reasons why countries did not settle their debts after their regimes changed. Some countries, in particular Russia, did not value continued credit market access as highly as before, and second that international lenders will not trust a regime in default with a new loan.

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* Corresponding author. Fax: 1-847-491-7001.

E-mail addresses: moorel@northwestern.edu (L. Moore), j-kaluzny@northwestern.edu (J. Kaluzny).

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1. Introduction

The analysis of sovereign debt default is a subset of a vast literature on contracts between two agents. An important feature of sovereign debt is that governments cannot be forced into repaying their loans by any explicit legal mechanism, in contrast to the case of lending to private parties. Without such a mechanism the existence of loans to foreign governments appears to be a paradox. In this paper we look at the differing experiences of Russia, Austro-Hungary and the Ottoman Empire following World War One, to examine the effect of an incoming regime's actions on their credit market access, and to provide insight as to why those governments acted as they did. These three empires underwent severe regime changes in this period, and examining them will enable us to focus on the relationship between regime change and credit market access. We develop a theoretical model to try and guide our economic intuition in analyzing these events. The implications of our model are that countries which have defaulted on their debt must reach a settlement with creditors before being able to reaccess international credit markets. Creditors do not forgive debts, even after a long time has passed.

Section one develops a model to guide our analysis, from which we derive qualitative predictions. Sections two, three, and four are devoted to discussing the Russian, Austro-Hungarian, and Ottoman experiences, while section five concludes.

Our model can be considered a modified form of *Eaton and Gersovitz (1981)*, where a government cannot be directly forced (through an international bankruptcy court for example) into repaying accumulated debt. We have modified their model to represent more accurately the economic situation of the countries we are studying in the early 20th century. Eaton and Gersovitz develop a model where governments borrow to smooth consumption, but will default if it is in their best interest. If a government defaults it will be permanently excluded from capital markets.¹ Lenders are competitive, risk neutral, and know the value the government places on borrowing; and all loans are made for a single period. We modify their model so that governments are borrowing for investment/development purposes, and remove the stochastic income shocks.² In Eaton and Gersovitz's model permanent exclusion from credit markets is sufficient to allow positive lending in equilibrium, which is termed a reputational equilibrium. In their model once a country has defaulted on a loan, it is exogenously excluded from borrowing everywhere. While there were organizations, such as the Corporation of Foreign Bondholders, which acted to co-ordinate negotiations in the case of default, not all major lending countries were members of this,

¹ The permanent exclusion is an exogenous assumption of Eaton and Gersovitz.

² Russia and the Ottomans were definitely borrowing as part of a long-term development strategy. Austro-Hungary was primarily borrowing for development, although we believe it may have had a small income smoothing component. We have removed the stochastic income component for simplicity in solving for our equilibrium.

and there were no enforcement powers to stop a member lending to whomever they wished to. Thus, there is no compelling reason as to why a country should not 'defect' from the lenders' coalition and extend credit to a regime in default. Our model refines Eaton and Gersovitz's equilibrium to justify why it is in countries' own best interests not to lend to regimes in default; namely the belief that any new credit would also be defaulted upon.

While **Bulow and Rogoff (1989)** have shown that with the possibility of a country being able to purchase state-contingent insurance contracts, the equilibrium that exists in Eaton and Gersovitz's paper does not hold, as a country that receives any positive amount of debt will immediately default and purchase income insurance contracts, such insurance contracts were not available in the early 20th century, and still do not exist in practice. In our model as the borrowing is not used to smooth out consumption over time there is no need for a government to purchase any insurance contracts, which makes our model immune to the Bulow and Rogoff critique.

The lack of direct observability of a country's situation facilitates coordination between lenders. Eaton and Gersovitz assume that lenders are able to enforce a permanent embargo on all future external loans for a government in default. Yet, if the income shocks were directly observable, after the negative shock had passed, it could in principle be optimal for a new lender to break the embargo and grant a new loan to the defaulted government. This is not the case in our model. As will be discussed further in the next section all information on a country's situation is indirectly transmitted through the repayment or not of their foreign debt. As long as a government remains in default all lenders will infer that the country is still unreliable and will withhold credit. Only after the negative situation has finished has a government enough incentive to settle its obligations to foreign creditors which credibly signals its reliability. In this sense the modification in our model creates implicit collusion between the lenders which enforces the embargo.

The shocks in the Eaton and Gersovitz model are caused by fluctuations in production. Borrowing occurs in periods of low income and repayment takes place in periods of high income. Therefore, in their deterministic model default can never take place and in the stochastic model the default takes place only if consecutive periods of low income occur and the government is unable to meet their obligations from the earlier periods. In our model, in contrast, the shocks are not necessarily income driven. In one interpretation of our model, an increase in the probability a government will be removed from office (an increase in the discount factor the governments use) is sufficient to generate default on foreign debt. In this setting, we show that there exist equilibria in which governments default for as long as their discount factor remains low, even though they have sufficiently high income to repay their obligations.³

³ The implications of our model are not strictly limited to cases of debt default, but can be applied to other cases of regime reputation. The August 2003 decision of Libya to agree to pay \$2.7 billion to the victims of the Lockerbie air bombing can be seen as Libya sending a credible signal that it is now 'trustworthy.' Libya made the rational decision that renewed access to international markets, and the inflow of foreign capital to develop its oil industry was worth the cost of compensating the bombing victims. Foreign firms seeing the credible signal that Libya was 'trustworthy' can now invest in the Libyan oil industry without fear of confiscation of their assets by an 'untrustworthy' government.

Finally, there exists a literature that explains default and the behavior thereafter by introducing new effects into the framework. For example [Nogal \(2002\)](#) introduces non-monetary benefits to lending such as prestige, trade concessions, etc., while [Kremer and Jayachandran \(2003\)](#) focus on the fact that some foreign debts can be considered illegitimate and therefore after the change of a regime a country should not be responsible for repaying them on moral grounds. We consider it a strength of our model that it can predict equilibria with default and debt renegotiation without needing any extra effects.

2. Model

There are many possible actions a government can take in negotiating to borrow and repay a loan, such as how much to borrow, in which market, in what currency to denominate the loan, the term to maturity, the interest rate, and what collateral (if any) to offer for the loan. Likewise, a government which has inherited the debts of a previous government has many options, including repaying the debts, defaulting on them, making partial payments, completely repudiating the loans or renegotiating for better terms (such as at a lower interest rate, an extension of the loan, or a write-down of the principal outstanding). The actions taken by the successor regimes to Tsarist Russia, Austro-Hungary, and the Ottomans were vastly different, which had consequences in terms of their access to international capital markets. The possibility to access international capital markets, *ceteris paribus*, cannot make a country worse off, and will usually be beneficial; however there are costs involved in maintaining such access. We develop a model which aims to clarify why governments acted as they did, and to shed some light on this historical episode. In particular our attention is focused on why the Soviets repudiated their debts, while many other countries did not.

We focus on the interaction between governments and lenders. Governments wish to borrow, but can not credibly commit to the actions of future regimes, who may default on any accumulated debts. Lenders are willing to accept the risk of being defaulted on, if they receive an interest rate above the risk-free rate, to compensate them for the probability of default. A feature of the model we develop is that positive lending in equilibrium is possible, even when the only deterrent to a regime that defaults will be exclusion from the international capital market.

Our model's qualitative predictions are (1) that once loans are defaulted upon, access to the international capital market can only be re-obtained after making a (sufficiently high) 'concession payment' on the defaulted loan,⁴ (2) even though it is not necessary for the borrowers to collude explicitly, in equilibrium the lenders will behave as if they are colluding to exclude the government which has defaulted (this

⁴ By this we are explicitly ruling out regaining access to capital markets by any form of 'cheap talk' such as verbal promises to repay any subsequent loans taken out. In practice concession payments normally involved the writing down of the loan amount outstanding, along with an extension of its duration, sometimes at a concessional interest rate. For simplicity we model concession payments as the fraction of the defaulted debt that an incoming regime offers to pay back to creditors.

refers both to old and potential new lenders) and (3) incoming regimes will immediately signal their ‘type’ by their actions.

We assume that there are two possible types of governments (or regimes) and that the type of the government can change with positive probability. While both types will, *ceteris paribus*, benefit from credit market access, the two types differ with respect to the value they attach to such access. Governments are either ‘high’ (denoted A) or ‘low’ (denoted B) types with respect to the value they place on credit market access. As discussed below, this can either be because the ‘high type’ has a higher per-period payoff from foreign borrowing or it has a higher (expected) regime duration. Governments only care about the state of the economy while they are in power, and do not care in what state they will leave the country to a succeeding regime.

Governments know their types (i.e., the value they attach to the ability to borrow capital). The regime transition probabilities are commonly known and follow a simple Markov process with a 2×2 transition matrix.⁵

$$M = \begin{bmatrix} m_{AA} & m_{AB} \\ m_{BA} & m_{BB} \end{bmatrix},$$

where we assume that $m_{AA} > m_{BB}$ so that the ‘high type’ government has a longer expected duration.

The lenders cannot distinguish *directly* between the two types of regimes (although they can *infer* the type from the actions taken by the respective governments).⁶

Governments repeatedly play the following game. During each stage the following events occur:

- (1) Governments request a loan b at an exogenous interest rate r , which lenders can either accept or reject.
- (2) If accepted, the loan b is invested, producing government output of $y(b + t)$ according to a production function $y(\cdot)$, where t is an exogenous amount of domestic revenues (say taxation). The value of the *incremental* output needs to exceed the amount of the loan plus interest, i.e., $y(b + t) - y(t) > b(1 + r)$, otherwise there would be no demand for loans.
- (3) Governments in default (whom we later show are excluded from capital markets) decide whether or not to offer a concession payment (to settle an outstanding debt), cb , to gain market access.
- (4) The government ‘type’ possibly changes.
- (5) The government decides how much of the current loan to repay, z .⁷
- (6) The remainder of the output, $y(b + t) - z$, is the regime’s stage payoff.

⁵ For example, a ‘high type’ government this period will also be ‘high type’ next period with probability m_{AA} ; while m_{AB} is the probability a ‘high type’ government changes to a ‘low type.’

⁶ While foreign creditors can observe a change of government, but it is not clear they can observe regime change. While the October Revolution was obviously a change of government, initially foreign creditors did not know the type of regime it was.

⁷ Although the amount of the loan repayment could be any positive amount, in equilibrium governments will either repay the loan in full, in which case $z = b(1 + r)$, or to default, in which case $z = 0$.

The total payoff (utility) of a regime is the discounted sum of its per stage payoffs $y(b + t) - z$. Our equilibrium holds as long as the *total* payoff from borrowing for the ‘high type’ regime is greater than that of the ‘low type’ regime. Possible reasons for such differences are, different alternatives to the outside credit markets, such as the cost and magnitude of domestic borrowing (so for example the per-period production could be $y(b + t)$, where t is domestic borrowing or taxation and t differs across regimes) or different production functions or efficiencies of the economy under different regimes.

Even when the per-period utilities of the two types of the regimes are the same, the total value of access to the external credit markets can differ between them if they have different probabilities of staying in power. That value will be lower for a government with a shorter life expectancy than for its longer-lived counterpart, because the less stable regime discounts its future payoffs with a higher discount factor.

The lenders’ decisions whether or not to lend could depend on a complete loan history, but for simplicity we analyze separating, stationary (Markov) equilibria where strategies are not functions of the whole history, but of a state variable, which in turn depends on history. There are two states, one in which a government is considered ‘trustworthy’ and the other when it is considered ‘in default.’ The state depends on the amount repaid *in the last period only*.⁸ Information about a regime’s type will be revealed immediately after they come to power, as ‘low types’ will default, while ‘high types’ will continue repaying the loans of the previous regime.

2.1. *Equilibrium of the model*

The per period value of having and maintaining credit market access by the two types are w_A and w_B —which can be thought of as $y(b + t) - b(1 + r)$ from above. The per period values of remaining in default are denoted x_A, x_B , these can be thought of as $y(t)$. The value of defaulting in the first period are denoted d_A, d_B , which can be interpreted as $y(b + t)$. In that period where a concession payment is made to gain credit market access, the government’s values are g_A, g_B , respectively, which corresponds to $y(t) - z$, where z should be thought of as the concession payment. The probability of the governments remaining in power for another period are p_A, p_B , while σ is the subjective probability belief assigned by the lenders to the event that the government is of the ‘high type,’ $\sigma = 0$ indicates the government is thought to be ‘in default’ (of the ‘low type’), while $\sigma = 1$ indicates the government is thought to be ‘trustworthy’ (of the ‘high’ type).⁹ δ is a regime’s time discount factor.

⁸ As all ‘low type’ governments will, in equilibrium, default (or refuse to settle their debts) and all ‘high type’ governments will repay loans promptly (or immediately make a large enough concession payment), there is no extra informational content in looking at a complete history of a government’s loan record.

⁹ We have solved for a fully separating equilibrium, as we consider the events for the regimes under consideration provide support for this interpretation. Thus we do not consider cases when σ is between 0 and 1, nor do we attempt to solve for a pooling equilibrium in which all regimes appear identical, although there is no theoretical reason why these have to be ruled out.

2.1.1. Lenders' beliefs

The government will be considered by the lenders to be 'in default' ($\sigma = 0$) either if it did not repay the loan in full last period or was 'in default' the previous period and did not make a concession payment of at least cb . If it repaid the loan in full or was 'in default,' but made a concession payment of at least cb last period it is considered 'trustworthy' ($\sigma = 1$). Given that, if a government ever decides to default, it will default on all its debt, since it does not gain anything by making a partial repayment of the loan.

2.1.2. Borrower's behavior

We now define the value functions for the 'high type' (A) government:¹⁰

$$A^R(1) = w_A + p_A \delta A(1),$$

$$A^D(1) = d_A + p_A \delta A(0),$$

$$A^R(0) = g_A + p_A \delta A(1),$$

$$A^D(0) = x_A + p_A \delta A(0),$$

and

$$A(\sigma) = \max \{A^R(\sigma), A^D(\sigma)\}, \text{ where } \sigma \in \{0, 1\}.$$

If a 'high type' government is believed to be 'trustworthy' ($\sigma = 1$), then if it defaults on its debts it obtains a current period payoff of d_A and the discounted continuation payoff of $p_A \delta A(0)$. Hence $A^D(1) = d_A + p_A \delta A(0)$. Other equations have similar interpretations.

In the separating equilibrium, governments of the 'high type' will always repay, or immediately settle any outstanding debt they have inherited from a previous regime. This condition requires that $A^R(1) > A^D(1)$ and $A^R(0) > A^D(0)$ which in turn implies that $A(1) = A^R(1)$ and $A(0) = A^R(0)$.

Therefore we can solve explicitly:

$$A^R(1) = A(1) = \frac{w_A}{1 - p_A \delta},$$

$$A^R(0) = A(0) = g_A + p_A \delta \frac{w_A}{1 - p_A \delta},$$

$$A^D(1) = d_A + p_A \delta g_A + (p_A \delta)^2 \frac{w_A}{1 - p_A \delta},$$

$$A^D(0) = x_A + p_A \delta g_A + (p_A \delta)^2 \frac{w_A}{1 - p_A \delta}.$$

Similarly, a 'low type' government, will immediately default on any outstanding debt and will remain in default by refusing to make sufficient concessions on any outstanding debt.¹¹ This means that $B^D(1) > B^R(1)$ and $B^D(0) > B^R(0)$ which implies that $B(1) = B^D(1)$ and $B(0) = B^D(0)$.

¹⁰ The superscript R refers to the value of repaying while superscript D refers to the value of default. The argument in brackets refers to the state variable σ .

¹¹ It should be noted that a 'low' type government could (and in the case of Russia in 1927) did offer to make a small concession payment. However, it will never offer a large enough concession payment to convince foreign lenders it is trustworthy, and can be safely lent to.

Table 1
Equilibrium government behavior

	‘High type’	‘Low type’
Considered ‘trustworthy’	Will repay loans	Will borrow and default
Considered ‘in default’	Will settle debts	Will not settle debts

Therefore:

$$\begin{aligned}
 B(0) &= B^D(0) = \frac{x_B}{1 - p_B \delta}, \\
 B(1) &= B^D(1) = d_B + p_B \delta \frac{x_B}{1 - p_B \delta}, \\
 B^R(0) &= g_B + p_B \delta d_B + (p_B \delta)^2 \frac{x_B}{1 - p_B \delta}, \\
 B^R(1) &= w_B + p_B \delta d_B + (p_B \delta)^2 \frac{x_B}{1 - p_B \delta}.
 \end{aligned}$$

For a separating equilibrium to exist four inequalities must hold.¹² Intuitively, two of the inequalities state that a ‘high type’ will find it optimal to make an immediate concession payment on a (previous regime’s) outstanding debt, while a ‘low type’ will find it optimal to default on its debt and never offer a high enough concession payment. The other two inequalities preclude a ‘high type’ from defaulting, and then immediately settling and a ‘low type’ from defaulting, immediately settling, and defaulting the next period.

The equilibrium behavior of the governments are summarized in Table 1.

2.1.3. Lenders’ behavior

As the equilibrium strategies of the two regime types differ, the lenders will use them to form beliefs about regimes’ types. Given the regimes’ strategies, upon observing a default, or failure to make a *sufficiently high* concession payment, lenders will infer that the regime is ‘low type.’ If they observe timely repayment, or receive a sufficient concession payment on defaulted debt, they will conclude that the regime is ‘high type.’ Thus, lenders’ beliefs are consistent with the regimes’ strategies.

Creditors never want to lend any money to a government ‘in default,’ since (given a ‘low type’s’ strategy) they will never be fully repaid on that loan. This implies a government ‘in default’ will not have any loans offered to it, even by potential new lenders, as the new lenders will correctly infer that any loans they extend will be immediately defaulted upon. Thus, even with competitive lending, lenders will appear to be acting in concert to exclude a regime in default from credit market access.

To determine the present value of a loan made to a ‘high type’ government, the amount lent, b , will be repaid with interest rb next period with probability m_{AA} , while

¹² Derivation of the inequalities, while straightforward, are long and cumbersome. They are available from the authors upon request.

with probability m_{AB} no repayment will be received at that time. However, in equilibrium, once the government reverts to a ‘high type’ a concession payment, cb , will be made. In the period of the regime default there is no concession payment, however the period after a default there will be a concession payment of cb made with probability $m_{AB}m_{BA}$, the second period a concession payment will be made with probability $m_{AB}m_{BB}m_{BA}$, the third period with probability $m_{AB}m_{BB}^2m_{BA}$, etc.

The zero profit condition for lenders is:

$$b(1 + \rho) \cong m_{AA}b(1 + r) + \frac{m_{AB}m_{BA}}{(1 + \rho)}cb + \frac{m_{AB}m_{BB}m_{BA}}{(1 + \rho)^2}cb + \frac{m_{AB}m_{BB}^2m_{BA}}{(1 + \rho)^3}cb + \dots,$$

where ρ is the risk-free interest rate.

An important factor determining the value of the right-hand side is the (endogenously determined) concession level c . A higher concession payment makes it less valuable for a ‘high type’ to default, since the (future) cost of regaining credit market access is higher. However, if the concession level is too high, then even a ‘high type’ will not find it optimal to make a concession, if it were to inherit a previous regime’s defaulted debt.

If the concession payment is too low, the ‘low type’ will find it optimal to pretend to be a ‘high type’ by alternatively making a concession and defaulting in the next period. There is a range of concession levels that will support a separating equilibrium,¹³ and each admissible concession level c will support a different equilibrium.¹⁴

To summarize, the cause of debt default is the unexpected shift in the regime type. If the regime with a low value of access to the capital market has received a sufficiently large amount of debt, then that regime will find it profitable to default, because the cost of the default (foreclosed access to the foreign capital markets) will be lower than the gain (value of the defaulted debt that now will not be repaid).

The model is too general to allow any quantitative predictions (such as specific values of parameters of the model). While, in principle, this is possible, it would also require many more additions to the model, such as specific functional forms of $y(\cdot)$, values of the exogenous parameters, etc. As the historical evidence provides supports for a separating equilibrium hypothesis, we will take it as given, that the parameters for Russia, Austro-Hungary, and the Ottoman Empire were in the ranges which admit a separating equilibrium. Formally testing this could be a topic for future research.

3. Russia

3.1. Pre-1918

Russia turned to international capital markets for funds beginning in the early 18th century, although large-scale borrowing really commenced in the 1840s. Russia

¹³ The proof is available from the authors. It may be noted that the concession level, c , is defined in terms of the nominal, not real, debt incurred. Allowance for the time value of money has been accounted for by discounting the (future) concession payment by the nominal interest rate, ρ .

¹⁴ We could assume (in the spirit of the intuitive criterion by Cho and Krepes (1987)) that the ‘high type’ governments will make the least possible concession sufficient to convince the lender of being a stable type.

began borrowing for railway construction in 1858, and invested heavily in this until the First World War, accounting for more than one-third of national borrowing over the period. The ‘high type’ Tsarist regime benefited significantly from being able to borrow and invest in infrastructure in their attempt to catch up to Western Europe. Initially, both private and government railroads were built, although both proved unprofitable. In the 1880s and 1890s the government purchased many of the indebted private networks. By 1914, the state debt of Russia had grown to approximately £930 million, or 50% of national income (Feis, 1930, p. 210).¹⁵

The military and political alliance between Russia and France which developed in the late 19th century was underscored by heavy French investment in Russian government loans on the Paris Bourse after 1887. The French government actively encouraged lending to Russia by the French populace, and at the commencement of hostilities in 1914, French investors held around four-fifths of Russian government debt held abroad (Feis, 1930, p. 211), with Dutch and British investors next most important.

The French argued the Russian loans were reliable (they were believed to be ‘trust-worthy’), as they had never previously defaulted, while the British argued that coupon payments were made by obtaining new loans. Moreover, since 1887, when Bismarck banned German participation in Russian government debt issues, French investors had been encouraged by successive French ministers to take them up. The motive was mainly political; this action was a cornerstone of the French-Russian alliance.¹⁶

Financing during the war overstretched the capability of Russia, and the government was forced to turn to her allies for further loans (see Table 2). Russia’s position at the end of the war was more constrained than other countries, in that a significant portion of war debt was external, which precluded it from taking the (less politically drastic) measure of printing money to eliminate the debt.

3.2. Post-1918 events in Russia and the repudiation of the debt

On the 3rd of February 1918, all state loans, internal and foreign were annulled by the new Bolshevik government, a total amount of £3385 million. The decree for the abolition of the National Debt contained 10 points, of which three directly pertain to their debt repudiation.

- (1) All State loans concluded by the Government of the Russian landlords and Russian bourgeoisie, enumerated in a special list, are hereby repudiated as from December 14, 1917. The December coupons of these loans are not paid.
- (2) All foreign loans, without exception, are absolutely repudiated.

¹⁵ Moody’s (1922 issue) gives a slightly lower figure of £920 million (Moody, various issues). Although most foreign investment was in the form of government loans, there was also a stock of approximately £224 million worth of direct investment by 1914.

¹⁶ ‘Since the Alliance was the foundation on which French diplomatic effort was built, this demand (for credit) had to be met-favor was given for favor.’ (Feis, 1930, p. 52).

Table 2

Russian government debt—1918 (millions of £)

Prewar state debt	930
Internal war loans (long term)	1345
Internal war loans (short term)	300
External war loans	810
Total debt	3385

Source: Moody's Governments and Municipals (1922). (Moody, various issues).

- (3) Short-term liabilities and Treasury bonds remain in force. Interest on them is not paid, but the bonds themselves have a currency value along with credit notes.

At the time of the Russian debt repudiation the Bolshevik leaders, in particular Lenin, were unsure as to how long the revolution would last (they were a 'low type' government due to their short, in expectation, regime duration). Lenin was seriously concerned with the food situation in Petrograd: 'Take the most decisive and revolutionary measures and send grain, grain and again grain!! Otherwise Petrograd will starve to death ... For God's sake!' (*Lenin: Life and Works, January 28, 1918, (Weber and Weber, 1980)*). While the internal struggle for power against the other socialist parties, and the issue of food scarcity presented immediate problems for the Bolsheviks, the larger problem was the outcome of the war. 'In Lenin's judgement, unless Russia promptly signed an armistice with Germany, his chances of keeping power were close to nil' (*The Russian Revolution (Pipes, 1991, p. 567)*). The Russian army had practically disbanded after the October Revolution, and notwithstanding the treaty of Brest-Litovsk,¹⁷ the German armies continued to advance into Russia, capturing the Ukraine and coming within 100 miles of Petrograd. If the Central Powers had won the war, it was quite likely they would have deposed the Bolsheviks, and installed a government more friendly towards Germany. As the Bolsheviks had a low expected regime duration, the benefit of repudiating their debts relative to the cost of exclusion from capital markets in the future (when they may not have still been in power) was high.¹⁸ Even if Russia's leaders did not initially realize the consequences of repudiating the debt; foreclosure of all foreign capital markets; they came to understand this after time. There was always the possibility to negotiate and make a concession payment, to convince lenders they were a 'high type' government and worthy of finance.¹⁹ During the 1920s as the Soviet govern-

¹⁷ The Soviet Government acknowledged the obligation to honor its repudiated debts with regards to the Central Powers. Likewise, property of citizens of the Central Powers was exempt from being nationalized, and most favored nation status with regards to trade was established. (*The Russian Revolution (Pipes, 1991, p. 596)*).

¹⁸ Fitzpatrick talked about: 'the Bolshevik leaders' deep belief in the early years that Russia's Revolution could not survive long without the support of workers' revolutions in the more advanced capitalist countries of Europe' (*The Russian Revolution (Fitzpatrick, 1994, p. 69)*). Pipes mentions, 'In the first months of Bolshevik rule, ... and uncertain of how long his (Lenin's) regime would survive ...' (*The Russian Revolution (Pipes, 1991, p. 533)*).

¹⁹ 'coupons will eventually have a value, inasmuch as even a Bolshevik Government will find itself constrained to attract foreign capital by proposing a settlement of the Russian debt ... it has already indicated that it might be prepared to discuss a settlement of the Russian debt' (*The Economist, January 17, 1920*).

Table 3
Russian ‘extractive’ power

	1903–1913 (current prices, %)	1925–1934 (current prices, %)
Consumption/GDP	81.2	72.5
Tax revenues plus internal loans/GDP	17.2	33.4

Sources: Sokolnikov and Associates (1931), Clark (1939), Clarke (1972), and Gregory (1982).

ment became more certain of its own longevity, they found that their increased power to raise taxes and to forcibly issue loans, decreased the value of regaining credit market access (since the possibility of raising funds domestically had become cheaper). The data on this are sketchy at best, and it is not certain what the relevant indicators of this increased ‘extractive power’ are. We present two, private consumption to GDP, and the sum of tax revenues plus internal loans to GDP (see Table 3).

While there is likely to be some endogeneity, in that the Soviets turned to domestic financing sources, because they were excluded from international borrowing, we think it clear that the Soviets, after the initial rise to power, were better able to extract domestic resources than the Tsarist regime, in other words they remained a ‘low type’ government.

The value of claims on Russian debt fell throughout the 1920s as prospects for a swift settlement receded (see Fig. 1).

Three conferences were held in 1922 between Russian representatives and those of the western powers. The position of the western governments was that:

- That the Russian government can obtain directly from the European governments neither loans nor credits.

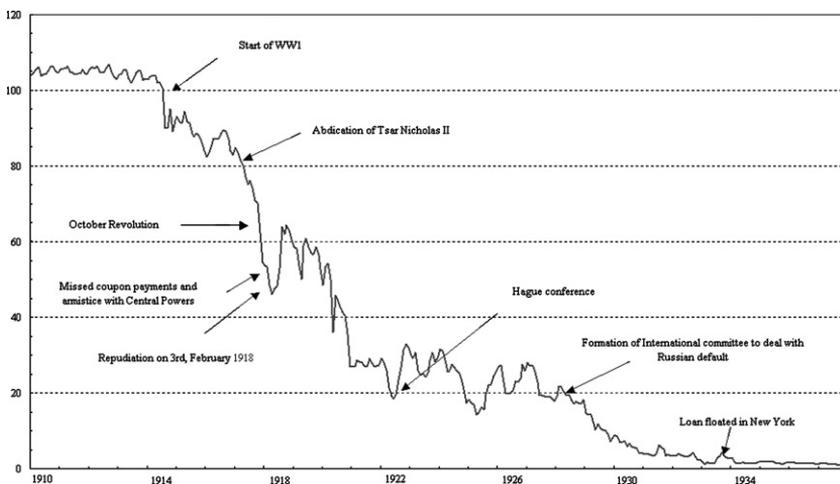


Fig. 1. Russian Government Bond Price (1906, 5% issue).

- That Europe can cooperate in the restoration of Russia only by the means of private capital.
- That the guarantees which governments can give to capital can not change the laws according to which private capital operates nor can they be substituted for these laws.
- That it lies with Russia to create, by means of an agreement . . . the atmosphere necessary for transplanting again the exotic plant of capital upon Russian ground so that it may cooperate with its fruits into the restoration of that country. (Hague Conference report on credits, 1922).

The Russian response was to emphasise the cost to the western powers of a break in trade with Russia, and to relegate discussion of debts to a later time period. It also noted that France and the United States, who were both represented at the conference, had repudiated their debts during their respective revolutions.²⁰ It claimed that as its international war loans were used for the purpose of combating the Central Powers, and that since it withdrew from the war before the spoils of victory were realized, it should not have to bear the cost of repaying the war debt.²¹

In 1927 the Soviet government attempted to reach a settlement with French bondholders, offering to repay 15% of the value of the bonds in return for renewed access to loans, but the move was rejected by France, as it was too low a concession payment to signal that the Soviet government was of the ‘high type.’

In October 1928 an International Committee was formed to deal with questions pertaining to the Tsarist debt. Representatives of the major European bondholders’ associations comprised this committee, and they agreed not to conclude any separate agreements with Russia.²²

3.3. *Capital market access after WWI*

Soviet access to credit markets, of any kind, was a difficult and laborious process in the years immediately following World War One. The first loan was undertaken in May 1922, being an internal loan ‘in kind’ of 10 million puds of rye, and had such little demand that the government had to force people to purchase the bonds. A sec-

²⁰ The Russian claim was not strictly true. The USA had borrowed approximately \$10 million during the War of Independence. Two thirds of the debt was French, one-third Dutch and a small amount came from Spain. Repayment of the debt lapsed in 1787, with the French debt being converted in 1791 into longer-term debt at a higher interest rate. Once the new Congress set up an effective tax system following the end of hostilities debt payments resumed, Myers (1970). After the French Revolution, all church and crown property was nationalized by decree on November 2, 1789, and was sold off to repay part of the short and long-term debt. Rather than raise taxes or default on its debt, the revolutionary leaders printed assignats which fueled inflation. As part of the stabilization of the currency in 1797, two-thirds of the debt was written off, and interest payments resumed in 1800, Hoffman et al. (2000). As noted by Bordo and Eugene (1990) “by bringing the budget into balance, paying interest, and retiring the long-term debt, Napoleon was able to . . . engage in some very limited borrowing.”

²¹ Here, the Russians were trying to regain credit market access through ‘cheap talk.’ Our model implies lenders only respond to actions, not talk, thus the Russian attempt was unsuccessful.

²² In effect the bondholders were formally representing what their own optimal actions were.

ond internal 100 million pud loan was issued in March 1923, and a sugar loan in November. The first internal loan denominated in roubles was issued in October 1922, and again it proved an unpopular loan to issue.

The only external loan successfully issued by the Soviets was in October 1933, just before the US officially recognized the Soviet government on the 17th of November 1933. The ‘10 Year 7% of 1933’ was a loan of £300 million, of which £1.5 million was issued through the Chase National Bank of New York, the remainder being issued internally (see Fig. 2).

Both Britain and the US gave financial assistance to Russia during the Second World War. Britain lent £44.6 million, and the US £2560 million worth of equipment under the Lend-Lease Act.

However, a leopard does not change its spots (until it signals it is of the ‘high type’ by making a concession payment). On the 31st of July 1947 the Soviet Union defaulted on half of its payment to Britain, due for wartime lending. By December of 1947 Russia had managed to renegotiate this loan to be extended by 7 years, with the interest rate payable on it reduced from 4% to a nominal $\frac{1}{2}$ %. In March 1947 the US commenced negotiations with Russia for the repayment of amounts owing under Lend-Lease. In May 1951 Russia refused to return 672 ships, and offered to repay only £55 million over 55 years. Russia made only two repayments of Lend-Lease amounts, £1.8 million in 1954 and £1.7 million in 1955. An agreement to vastly reduce the principal amount owing on Lend-Lease in 1972, was not sufficient to entice more payments from the Soviet government.

In 1986 Russia successfully settled their claims with British bondholders, making a concession payment of £82 million ($c \approx 63\%$). In 1996 Russia announced it would bear responsibility for its Tsarist-era debt, and in 1997 the government agreed to commence payments to France. The amount agreed upon was 3 billions francs (£272 million or $c \approx 42\%$). Repayment commenced that year, and was finally com-

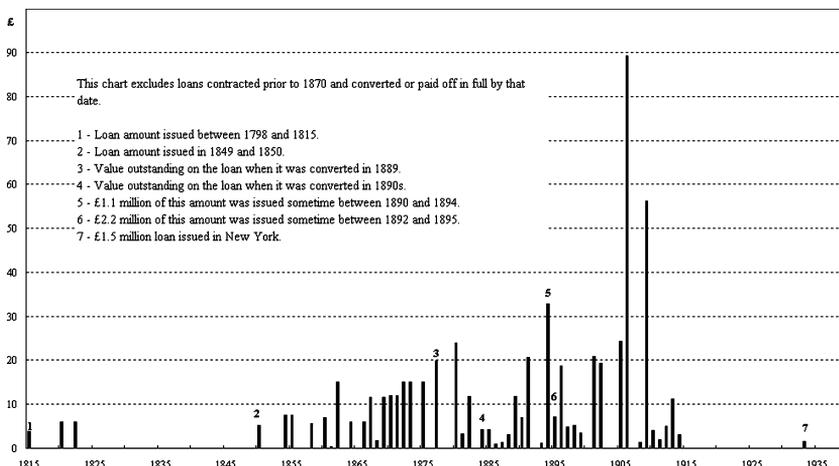


Fig. 2. Russian Government External Loans (£, millions).

pleted in November 2000. Upon this signal that the Russian government had reverted to a 'high type' regime, the French Treasury then allowed French investors to purchase Russian state bonds for the first time since 1918. Investors in France purchased about 10% of the ten-year, \$2 billion eurobond issue Russia floated in June 1997.

4. Austro-Hungarian empire

4.1. Pre-1918

The Austro-Hungarian Empire consolidated their external debt in two 1868 issues, and between then and the start of the First World War, borrowed regularly in the international market to develop their lagging economy. Although no data exist, contemporary observers believed that a substantial amount (perhaps around one half) of the Austrian government loans, which were mostly issued in Vienna, were destined for foreign holders. Hungary floated most of its government loans in international markets. This need, and ability to gain, foreign capital indicates that the Austro-Hungarian regime was of a 'high type.'

The empire halted interest payments in 1914 to the Allied powers, while keeping up payments on securities held in Germany. During the war, the Austro-Hungarian Bank increased the circulation of bank notes by around tenfold, and each half of the Habsburg Empire issued 8 internal loans.

4.2. Post-1918 events and settlement of the Habsburg debt

Hungary was quick to admit to a share of the Habsburg debt, and in November 1918 the Hungarian Finance Minister declared, 'The government is firmly resolved to meet its obligations.' The new nation of Czechoslovakia had, by December 1918 announced its willingness to assume a fair share of the debt. The Czechs allowed all of their citizens to roll over Austro-Hungarian war debt into Czech bonds in 1920. Indeed there was a general expectation that the successor states would quickly admit responsibility and begin resumption of debt repayments.

The republic of Austria agreed to act as trustee for the entire Habsburg loans, without admitting responsibility for them. Indeed with the new country of Austria needing to import a large share of its food needs, and being desperately short of coal, the value of foreign capital was very high. Good relations with the major Western powers was made more important, as the successor states did not start on good commercial terms,²³ and needed the ability to borrow in international markets. The new

²³ 'Unfortunately the different new National States have so shut themselves off from one another, not only by protective tariffs but also by restrictions on passenger and freight traffic, that it is almost impossible for the citizens of different States to travel from one State to another, or to resume commercial relations' (*The Economist*, February 14, 1920).

countries of Austria and Hungary were 'high type' regimes; the wartime hardships meant that foreign capital was vital to their post-war recovery.

In 1920 the Austrian foreign debt was approximately £345 million, while Hungary's was estimated at £222 million.²⁴ An initial draft of the peace treaty with Austria was that it would remain liable for the entire war loans of the empire. The Treaty of St. Germain with Austria was signed in September 1919, whereby bonded debt (i.e., that debt loaned for a particular purpose, and having some physical collateral) was distributed to each successor state according to their share of railways and other state property acquired from Austro-Hungary. Austria would be held responsible for 50% of the war debt.

In June 1923 a final division (the Innsbruck agreement), of the pre-war Austro-Hungarian debt was made, by agreement amongst the successor states, with the exception of Romania, which refused to sign. This assigned responsibility for the debt, established a commission in Paris to oversee collection and distribution of debt payments. Interest payments would be made at the concessional rates of 27% for payments due to be made in foreign currencies, and 32% for payments in gold crowns.

November 1925 saw the signing of the Prague agreement, which confirmed the Innsbruck agreement and effected the first payments (including interest in arrears) in January 1926. Romania still refused to sign, but payment went ahead to the commission, so that bondholders received partial payment, proportionally less, due to missing payments from Romania.

Romania negotiated with her creditors bilaterally, signing partial agreements with Belgium in 1923 and 1925, France in 1924 and 1928, with Switzerland, England, and Italy in 1925, and the USA in 1926. These were agreements on a fraction of the debt outstanding, and were not really general agreements, so that Romania had not credibly signalled its government was of a 'high type' and thus foreign capital market access was withheld. The poor harvests in 1927 and 1928, increased the value of being able to borrow enough so that it became a 'high type' government, and induced the Romanian government to commence loan negotiations with France.²⁵ These were under the auspices of the Bank of France, which insisted that Romania come to a settlement not only with French bondholders, but also with the Swiss, Italians, Belgians, English and Germans.²⁶ Following the successful completion of these negotiations, a loan of £38 million was placed in 1929.

²⁴ From Moody's Manual of Investments 1920–1924 and Kimber's Record of Government Debts and other Foreign Securities 1920 (Kimber, various issues). The Austrian Finance Ministry had estimated the 1914 Austro-Hungarian debt as £542 (*The Economist*, January 26, 1918).

²⁵ While we believe most of the desire to borrow by Russia, Austro-Hungary, and Turkey was for investment purposes, this situation for Romania appears to be a case of demand for consumption-smoothing purposes.

²⁶ British agreement was achieved on the 4th of July 1928, with German agreement on the 10th of November 1928.

4.3. Capital market access after WWI

Czechoslovakia had the fortune to inherit the bulk of the industrial area of the Habsburg Empire. As it had strong repayment prospects, and accepted responsibility for its share of the debts it soon found itself welcome in foreign credit markets. It issued one small domestic loan (issued in foreign currency units) in 1918, borrowed £12 million from a French syndicate in 1919, and followed this up by successfully floating an external loan, for £10 million in 1922. The good prospects for investment projects in Czechoslovakia, meant that the benefit of foreign capital was large, a ‘high type’ government in other words.

Yugoslavia also quickly attracted foreign finance in the post-war period. It received two moderate US loans for the purchase of food, as well as advances by the British and French governments for the repayment of debt. It succeeded in raising external funds through an 8% issue in New York in 1922.

Austria had succeeded in borrowing directly from Germany, Switzerland, the Netherlands and Norway by 1920. France, Britain, Italy, and Czechoslovakia consented to be guarantors for a League of Nations loan to Austria in late 1922, which was successfully issued in June 1923, of an amount of £29 million, being taken up principally in London and New York (see Fig. 3).

Hungary issued a small loan of £1.7 million in 1922 on the Paris market, and a £10.1 million League of Nations loan in July 1924 (see Fig. 4).

5. The Ottoman empire

5.1. Pre-1918

The first foreign loan undertaken by the Ottoman government was in 1854, soon after the outbreak of the Crimean War. Over the next 20 years the ‘high type’ Otto-

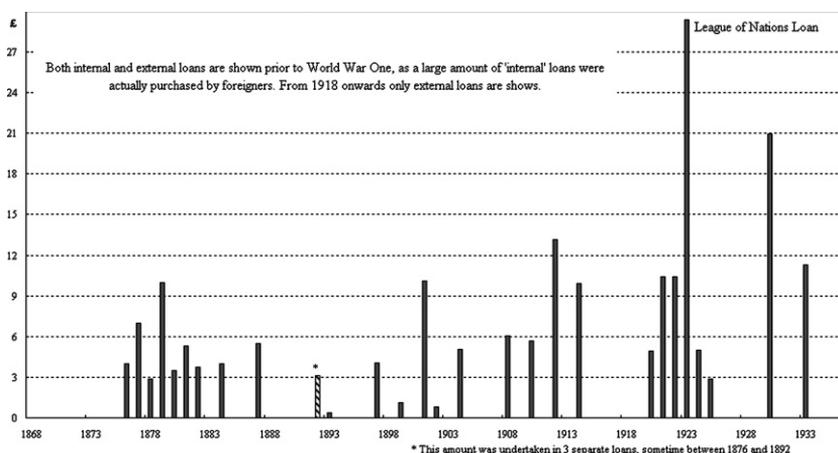


Fig. 3. Austrian Government External Loans (£, millions).

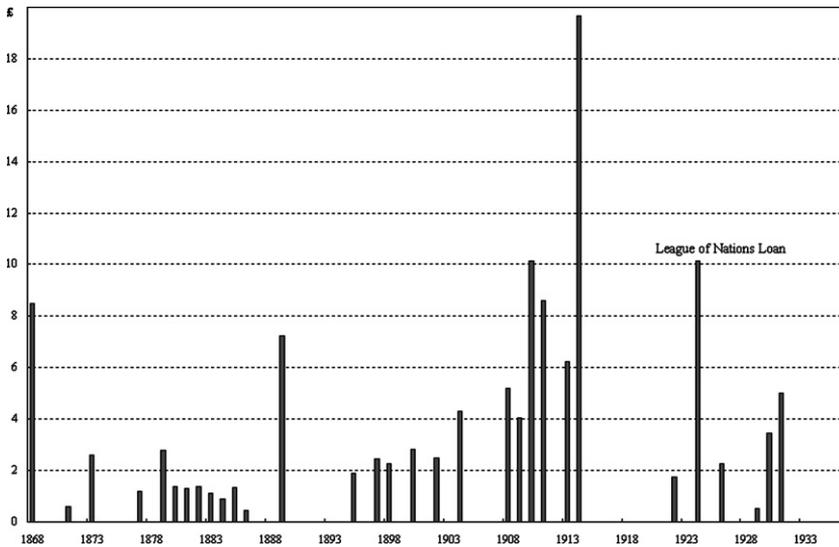


Fig. 4. Hungarian Government External Loans (£, millions).

mans borrowed heavily,²⁷ and by 1875 had external debts of £220 million with debt servicing taking up half of the budget. On the 6th of October 1875 the Ottoman government announced its bankruptcy, and by 1876 had halted all repayments.

The next five years saw the Ottomans negotiate with foreign creditors to restore their credit worthiness. Over this period only one small foreign loan of £2.6 million could be arranged, and it was not until December 1881 that a final settlement could be accommodated, in the form of the Decree of Muharram. On the 31st of October 1884, existing loans were consolidated into four series. As part of the restructuring, around 45% of the debt was forgiven. After making this concession payment to their creditors, the Ottoman government had clearly signalled that it was again of a 'high type' and was able to borrow £134 million in 26 separate loans between 1886 and 1914.

The government suspended repayment on their bonds listed on the London Exchange on the 14th of September 1914, but kept up payments on loans taken out in Germany. It was only in 1918 after borrowing externally and printing money, that they issued a small internal loan.

5.2. Post-1918 events in Turkey and the settlement of the debt

After the Turkish military victory over Greece in 1922, the government was quick to assert its financial independence from western powers.²⁸ Turkey temporarily

²⁷ Foreign borrowing was vital to modernize the Ottoman military and economy.

²⁸ 'We are opposed to restrictions inimical to our development in political, judicial, financial and other matters. The conditions of settlement of our proved debts shall likewise not be contrary to these principles.' (Article 6 of the Turkish National Pact, 1920).

resumed payment on some of its outstanding loans in May 1921, but repayments soon lapsed, and most loans had been defaulted on again by 1923.

The Allies freed Turkey from all wartime debts to Germany and Austro-Hungary. A 1920 treaty had made Turkey responsible for all the Ottoman debt, although agreeing that Ottoman successor states should make periodic payments. The Ankara government argued at the Treaty of Lausanne in 1923 that it was just another successor state; but this issue was not addressed at the conference. What was decided on was a splitting up of the debt, and arrangements as to its repayment.

The debt was divided on the basis of government revenues of the successor states, at an average of 1910–1911 and 1911–1912 revenues. This division was disputed by all states, and revised by an arbiter. By this time Turkey wanted to appear serious about meeting its obligations.²⁹ It was following the same (equally futile) route as the Russians, trying to convince lenders they were of a ‘high type’ by force of words alone. As our model suggests, the lenders refused to loan any more capital to them until they had backed up their words with actions.

The successor states argued that they should be allowed to repay in paper currency, but European bondholders refused to be repaid in Turkish paper, insisting on gold or foreign currency. Negotiations proceeded for three years, until final agreement was reached on the 13th of June 1928, and a repayment schedule was agreed on for Turkey. The agreement gave the Turkish government the right to suspend some repayments for 2 years, and pledged as collateral customs duties and consumption taxes from three districts. Two repayments were made in 1929, before Turkey exercised the right to suspend some of the repayments. In February 1930 the Turkish government demanded a renegotiation of the 1928 agreement, and in November of the same year made only a third of the required repayments.

On the 19th of June 1931, the Association of Bondholders refused to reduce the principal of the outstanding debt. However, on the 14th of December 1932 an in principle agreement had been reached, whereby Turkey would resume interest payments on its share of the outstanding Ottoman debt. The new agreement was signed in April 1933, which involved all Ottoman debt being converted into one consolidated loan, of £38.4 million, which would be paid at the rate of $7\frac{1}{2}\%$. Given the going exchange rates, and the level of the outstanding Turkish debt in 1933, £96.6 million, this was the equivalent of forgiving 60% of the debt.

5.3. *Capital market access after WWI*

Given the continuing hostilities between Turkey and Western nations in the early 1920s, it is not surprising that international capital market access was slow in returning to Turkey. The intermittent debt repayments throughout the 1920s, and the constant wrangling over a repayment plan meant that except for one debt restructuring loan in 1928, not a single foreign loan was successfully obtained by Turkey in that decade.

²⁹ The Secretary of Finance said that interest payments in arrears after WWI were, ‘to be resumed in the near future, this debt representing an obligation which cannot remain neglected.’ He said that for loans, ‘it is an affair of honour to repay them.’

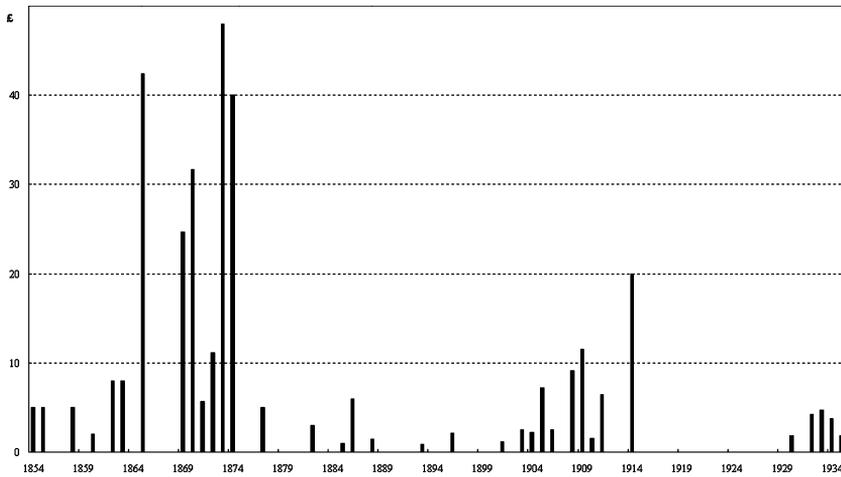


Fig. 5. Turkish Government External Loans (£, millions).

In February 1930, the Banca Commerciale Italiana extended a £1 million loan to stabilize the stock market. On June 16th, 1930, a £2 million loan at $6\frac{1}{2}\%$ was agreed on, as part of a commercial contract with an American firm. Several other sizeable loans followed these,³⁰ once the Ottoman debt repayment had been finalized, and a clear signal had been sent that Turkey was again a ‘high type’ government (see Fig. 5).

6. Discussion of results

In the early 1920s the Soviet government was considered to be a temporary one. It was commonly believed that the wars that Russia was involved in at the time would lead to another change of the government: a more stable one and also more open to the West. Hence the value of accessing the international capital market was low for the Soviets, and as a ‘low type’ government they were better off not making a large concession payment to regain capital market access.

From 1918 until the 1970s, Russia was excluded from capital markets almost totally for commercial purposes, with the small New York loan of 1933 the only exception. Although Russia received immense financial assistance during World War II, this was not on commercial terms.

The contrast with Austria and Hungary is acute. Both those countries, and others arising from the remains of the Hapsburg Monarchy, highly valued the ability to borrow internationally, thus they quickly accepted their liability for debts and resumed service on it to regain access to international financial markets. The only country which acted differently in central Europe was Romania, which refused to

³⁰ There were several loans for railways and public utilities and on the 8th of January 1940, a loan of £43.5 million was arranged by Britain and France.

recognise its share of the debt, and even repudiated some of its own loans. Hence, during the middle of the 1920s it was excluded from capital markets, only regaining access when it had concluded an agreement with its creditors.

The Ottoman Empire found itself in the same position as Romania, after it defaulted on its obligations in 1876. It could arrange only a tiny external loan, before it had reached an agreement with its creditors. The agreement it signed, for far-reaching European control over its economy and finances, was a large concession, necessary to regain capital market access. After World War One had finished Turkey only regained access to international capital markets after it had started making regular payments on its outstanding debt in the early 1930s, thereby credibly signalling it was a ‘high type’ government that could be lent to.

7. Data sources

Sources for data on loans (bonds) to Russia, Austria, Hungary, and Turkey come from *The Economist* (*L’Economiste Français*, various issues), *Kimber’s Record of Government Debts and other Foreign Securities* (Kimber, various issues), *Moody’s Manual of Investments: Governments and Municipals* (Moody, various issues) and the Annual Reports of the Council of the Corporation of Foreign Bondholders (*Corporation of Foreign Bondholders*, various issues).

Source for price of the Russian 5% loan of 1906 on the Paris Bourse is *L’Economiste Français* (*L’Economiste Français*, various issues).

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