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What we can learn from the early history of sovereign debt☆

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Abstract

Many people believe that the early development of sovereign debt depended on institutions, but there are two very different ways of presenting this narrative and two very different conclusions one might draw for sovereign debt today. According to the first, this was an impartial story involving executive constraints, shared governance, increased monitoring, and increased transparency — in other words things that sound unambiguously good. According to the second narrative this was a story of distributive politics. States had the best access to credit when institutions gave government creditors privileged access to decision making while restricting the influence of those who paid the taxes to reimburse debts. This was a situation where institutions fostered commitment, but at a cost, and sometimes they may not even have been welfare enhancing. In this paper I present evidence from seven centuries of European history, and I suggest that available data support the distributive politics interpretation. I then draw implications for how we think about the politics of sovereign debt today.

Keywords: Public debt; Political economy; Europe

1. Introduction

Many people believe that the credibility of sovereign debt depends not only on the reputational consequences of defaulting but also on institutions that might prevent default from occurring. But there are two very different views of how institutions might achieve this objective. According to the first "impartial" view what matters is having good institutions, and not much reference is made to the people who control the institutions and what their interests are. Following this vein of thinking, some political scientists have investigated whether there is a "democratic advantage" when it comes to establishing sovereign creditworthiness.[1] In a similar spirit, recent work in economic history has found that the establishment of limited government was associated with lower costs of borrowing for eighteenth and nineteenth century European states.[2] International economists have found that the general quality of a country's institutions is

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[1] For a recent contribution see Beaulieu et al. (2012).

[2] See in particular the important work by Mark Dincecco (2009, 2010, 2011) on this subject.

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0014-4983/

correlated with borrowing costs.[3] Finally, this impartial view of institutions has also informed recent policy debate.[4]

According to the second "distributive" view what matters is not just the presence of institutions but also the interests of the people who control them. Few scholars would dispute the idea that interests matter, but if they matter, then we need to think about how institutions may naturally advantage some social groups over others. European history is replete with such examples. Institutions sometimes privileged urban mercantile elites and in other cases large landowners. Institutions were often restricted to wealth holders, but in other instances allowed for more popular participation. In this paper I will suggest that the distributive view of institutions does a better job of explaining the early history of sovereign debt than does the impartial view. Therefore, if we want to understand the politics of sovereign debt in other places at other moments in time, then we need to think about the way in which institutions privilege the interests of creditors over those who repay debt.

Scholars studying the politics of public debt have emphasized that repayment creates both winners and losers, implying that the relative political weight of these two groups matters (Frieden, 1991). The idea that economic position maps into interests over debt has also been supported by recent survey evidence.[5] Scholars have also considered how political institutions have altered the balance between winners and losers when it comes to debt repayment. For the nineteenth century, some have suggested that a regime of restricted suffrage made it possible to sustain the classical gold standard together with full repayment of public debts.[6] In a similar manner, Mitchener and Weidenmier (2010) show that nineteenth century arrangements that allowed creditors to impose "supersanctions" on borrowers had a similar effect. For an earlier period of European history, others have suggested that institutions favoring a merchant oligarchy were the secret to gaining access to credit.[7]

Economists constructing formal models of sovereign debt have generally not paid much attention to the distinction between those who own debt and those who do not because they typically have in mind a setting where foreign agents hold the debt. Therefore, a representative agent model makes sense.[8] In the case of domestic debt, recent models have focused on the way in which the system of representation produces suboptimal distortions in debt policy (see Battaglini, 2011), but there has been less effort to think about distributive issues between debt owners and others. To see what such models might look like we can refer to closely related work in the area of capital taxation. Persson and Tabellini (1994) considered whether representative democratic institutions might prompt the election of a representative who owns more capital than the average member of society, precisely because of the commitment effect that might ensue. In more recent work Farhi et al. (2011) have considered a dynamic game where capital taxes are chosen by a democratic majority each period and individuals have differing wealth endowments. Distributive settings such as these should certainly also be applied to the case of sovereign debt as long as some citizens hold debt and others do not.

In this paper I demonstrate that the available evidence on the early history of European sovereign debt fits the distributive view of institutions. It also suggests that the effect of institutions was largest in early stages of financial market development where the reputational mechanisms for ensuring creditworthiness would have been expected to operate more imperfectly. I will first consider the beginnings of sovereign debt, focusing on the distinction between city-states and larger territorial states in Europe and the advantage that the former group had when it came to accessing credit. I will then suggest that the success of city-states in issuing long-term debt depended on the presence of political institutions that were biased in favor of state creditors. Following this, I will consider how, from the sixteenth century onwards, some larger states in Europe attempted to imitate their autonomous cities, though with varied degrees of success. Success depended on the extent to which political institutions insulated government creditors. While the Dutch Republic was the most successful state in this regard, it was ultimately Great Britain, with a system of parliamentary control, ministerial responsibility, and again institutions biased in favor of state creditors, that established a model that other large European states would eventually follow. As a final part of the inquiry, I will consider the diffusion of the British parliamentary model for government borrowing during the long nineteenth century (1789–1913). I will suggest that

[3] Gelos et al. (2011).

[4] As an example, Heinemann et al. (2014) suggest that appropriate fiscal rules can help make up for a country's lack of a "stability culture." On the effect of fiscal institutions see also Debrun (2011) and Iara and Wolff (2010). Irwin (2013) provides a fascinating discussion of the origins of fiscal transparency in Europe that shares a similar perspective.

[5] See in particular Tomz (2004) and Curtis et al. (2012).

[6] See Eichengreen (1996) and Obstfeld and Taylor (2003) on this point.

[7] See Stasavage (2011).

[8] See the review article by Aguiar and Amador (2014).

parliamentary control and ministerial responsibility may have only improved creditworthiness as long as a regime of limited suffrage was in place. In the concluding section of this paper, I will suggest implications for debt politics today.

2. How sovereign debt began

The early history of sovereign debt is often seen as a tale of woe in which impecunious monarchs like Edward III of England defaulted on Italian bankers like the Bardi and the Peruzzi. The conclusion that many monarchs were substantial credit risks is indeed correct. What this account ignores is that public debt, and in particular long-term public debt, first emerged in Europe's autonomous cities rather than with the monarchs who governed what are generally called "territorial" states.[9] From the beginning of the thirteenth century, a number of Northern European cities, especially in the Low Countries, began selling annuities as a means of raising funds. The structure of these annuities was convenient because they were not technically debts and therefore did not fall afoul of usury restrictions imposed by the church.[10] Initially, many cities sold life annuities for which payments stopped after the death of the purchaser. They subsequently shifted towards selling perpetual annuities for which payments only ceased if the city decided to repay them at original purchase price. In time it also became a practice that these annuities could be resold to third parties. Autonomous Italian cities also began to borrow long term during this era, although they tended to use a slightly different model. Wealth holders were obliged to purchase state securities that could then be resold and which traded on secondary markets.

What were Europe's monarchs doing while autonomous cities issued annuities? Prior to the sixteenth century, when monarchs borrowed directly, they did so exclusively by contracting short-term loans, albeit ones that were often rolled over from year to year. An older literature suggested that this was driven by a desire to not become too encumbered by long term obligations.[11] A more plausible explanation is that during this early period no one was actually willing to lend to monarchs long term. As a sign that they were a credit risk, when monarchs did borrow short term they invariably did so at very high rates of interest.[12] It is also the case that monarchs had the technology at their disposal to fund themselves by issuing annuities. From the early fourteenth century, the French monarchy made it a practice to provide *rentes* that guaranteed a perpetual income stream to select citizens. Yet it would be another two centuries before the monarchy would successfully sell these *rentes* to raise revenue. Experience elsewhere was similar. In Spain, the monarchy from an early date established a practice of issuing *juros* to certain citizens, but it was not until much later that these *juros* would be sold to raise revenue.

In the early centuries, it seems clear that the primary lenders to government in both city-states and territorial states were merchants who had acquired capital from investments in long distance trade. Given the risks associated with long distance trade, diversification by merchants into purchasing annuities could be a wise strategy. In contrast, it does not seem that landowners invested in government annuities at nearly the same rate as did their merchant counterparts. In the territorial states of Europe, this laid the ground for distributional conflict over debt between merchants. who placed a priority on repayment, and landowners, who placed less of a priority on this, particularly when they paid taxes to reimburse debt. In the city-states of Europe, the primary distributional cleavage was instead between merchants owning annuities and other classes of citizens who paid taxes to see that these annuities were serviced. This cleavage was accentuated by the fact that the tax burden in autonomous cities was heavily tilted towards indirect taxes with a regressive incidence instead of direct taxes on wealth holders.[13]

Systematic data can be brought to bear to show that autonomous cities were the first to begin borrowing long term, followed by territorial monarchies a few centuries later. Ideally we would like to know how much states were able to borrow, at what interest rates, how this debt was traded on secondary markets, and also how frequently they defaulted on their obligations. For medieval and early modern European states in the case of annuities we generally only have an estimate of the nominal interest rate on debt.

I compiled nominal interest rates on long term debt for a sample of thirty one European polities between 1250 and 1750, including the most prominent European territorial

[9] The distinction was that autonomous cities generally did not claim any formal control of the countryside surrounding them whereas territorial states did. The exception was in the case of a number of Italian city-states that did establish formal control of the countryside surrounding them.

[10] See Munro (2003) for a detailed discussion of this process.

[11] An interpretation suggested in Fryde and Fryde (1963).

[12] Fryde (1955) suggests that the effective interest rate on loans by the Bardi family to Edward III of England between 1328 and 1332 was 26%. This figure is based on a sum of 11,000 lb sterling in "gifts" conceded to the Bardi on a total debt of 42,000 lb.

[13] In support of this assertion, see the evidence in Blockmans (1987) on the low countries.

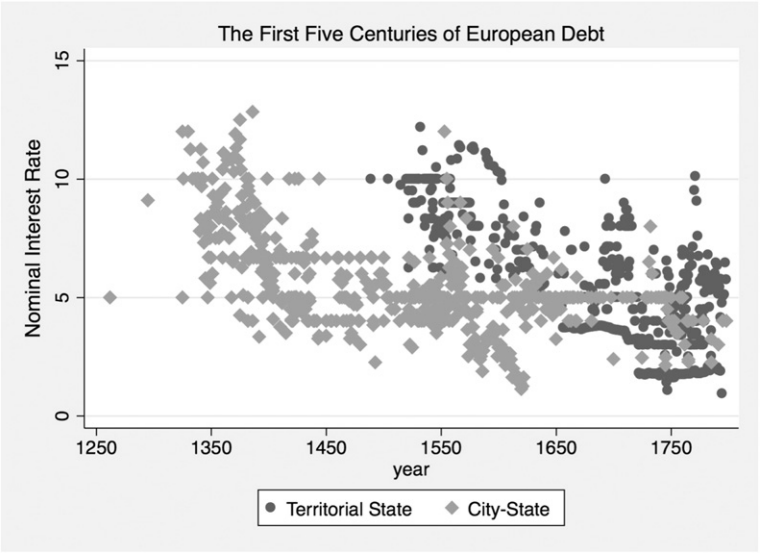

Fig. 1. The figure shows nominal interest rates on long term debt issued by European states. Included in the figure are returns on life annuities, perpetual annuities, as well as other long term forms of borrowing (chiefly loans contracted by Italian city-states).
Source: Stasavage (2011).

monarchies as well as a number of autonomous cities.[14] Since most of the debt obligations were perpetual annuities, I calculate the "interest rate" as the annual income from this annuity divided by the sale price. The results can be seen in Fig. 1 with territorial monarchies and city-states separated. Three things are immediately apparent from this picture. The first is that autonomous cities began borrowing well before territorial monarchies. The second is that even when territorial monarchies did begin to borrow, autonomous cities borrowed at substantially lower rates. The third observation is that interest rates for both autonomous cities and territorial states trended downwards over time.

What factors can explain this variation in interest rates? A first way to approach this problem is to compare returns on government annuities with those on an analogous instrument in the private market — rental returns on land. Land rent contracts existed at this time whereby an individual would pay a sum annually in exchange for use of land to which someone else held title. The possibility for the owner to repossess the land served as security in the event of non-payment. Data from Clark (1988) on returns on land rents from five different European regions suggest that there was a secular decline in land rent returns across the five centuries from 1250 to 1750. By implication the downward trend in interest rates on public debt was probably part of this broader economic trend, instead of reflecting some change in the creditworthiness of sovereigns over time. To support this conclusion, in earlier work I showed econometric evidence that a change in land return returns was associated with a one-for-one change in nominal interest rates on sovereign debt (Stasavage, 2011). In that same study I also show that the city-state advantage over territorial states was relatively constant over time. The average city-state could be expected to issue debt with a nominal return about two percentage points lower than the average territorial state. While a glance at Fig. 1 suggests that city-states may have gradually lost their advantage over time, further analysis suggests that they were able to retain this advantage into the eighteenth century.

As I said above, ideally we would be able to know not only how costly it was for states to borrow but also how much they borrowed. A first reason this is relevant is that less creditworthy states might be rationed out of the market. A second reason is that unless the supply curve for capital was completely flat, then the more a state borrowed, the higher the interest rates it would pay on its debt. Data on aggregate debt stocks for medieval

[14] These data were collected for Stasavage (2011) expanding the data set originally collected by Epstein (2000). The polities included are Arras, Austria, Barcelona, Basel, Bologna, Bremen, Bruges, Castile, Cologne, Denmark, Dordrecht, Douai, England, Florence, France, Geneva, Genoa, Ghent, Hamburg, Holland, Mainz, Milan, Naples, Nuremberg, The Papal States, Piedmont, Siena, Tuscany, Venice, Wurttemberg, and Zurich.

and early modern European states are much harder to come by than are data on costs of borrowing. One can draw inferences about costs of borrowing from a small sample of loan contracts, but data on debt stocks require having data on all loan contracts. Drawing on a range of secondary sources, I have been able to put together estimates of total debt stocks for fifteen of the thirty-one states in Fig. 1. For each state, I considered the maximum level of debt to annual revenues reached, and I then examined whether there was a statistically significant difference between city-states and territorial states in this regard. There was, in fact, no difference. What was different though was that city-states were able to borrow large quantities relative to revenue at a much earlier date than were territorial states.

All the above evidence suggests that city-states were, on average, more creditworthy than territorial states, and they retained this advantage for a long time. The next question to ask is why this was the case and what this has to say about the impartial and the distributive views of institutions. Before we do this though we ought to first consider some relatively straightforward economic explanations for the city-state advantage.

A first possibility is that city-states were able to borrow at lower rates of interest because, as hubs of commercial activity, they had more stable sources of revenue. In fact, this was not the case. Available evidence from ten of the states in Fig. 1 suggests that revenues in city states were, on average, no more volatile than those in territorial states (Stasavage, 2011). A key reason for this was that city-state revenues were sometimes dependent on a single source of trade, as was the case with Bruges and wool exports from England.

A second possibility is that city-states were able to borrow because they were able to adopt techniques first used in private financial markets within their jurisdiction. This is a plausible assertion for short-term but not long-term borrowing. Long term borrowing, based on the issuance of perpetual annuities, was not an innovation linked to trade. It was an innovation linked to much earlier developments in the market for land, and both city-states and territorial states had access to this technology.

A third possibility is that it was simply the presence of liquid capital and abundant commercial activity that gave city-states an advantage when it came to long-term borrowing. A priori this seems like a very convincing explanation. As soon as one thinks a bit more about it though, there is an obvious problem; territorial states also often had large cities that were vibrant commercial centers. In Section 4 I will show that territorial states used precisely this strategy (working through their cities) to borrow long term. However, they did not begin to do this until the sixteenth century, some three hundred years after autonomous cities began borrowing, and when territorial states did use this strategy they were often less successful with it. Before continuing with this part of the story, however, in the following section I will describe how political institutions created the city-state advantage.

3. Political institutions and the city-state advantage

The city-state advantage was reinforced by representative political institutions that gave citizens the prerogative to directly manage debt, spending, and taxation. I have argued in other work (Stasavage, 2011) that there were two critical features of this system. The first was that the compact geography of city-states made it easier to hold regular assembly meetings than was the case in larger territorial states. The second feature, which I will explore more extensively here, is that city-state political institutions were most often biased in favor of state creditors.

Unlike representation today, representation in European city-states and territorial states generally took a corporate form. By this we mean that members of distinct social groups were allotted a specific number of seats within an assembly. Given this institutional setting, we can establish to what extent institutions favored the mercantile groups that were most likely to lend to government. Drawing on a wide range of sources, I collected data on this question for each of the thirty-one states for which I have data on costs of borrowing. As one might expect, in the data, there is a very substantial difference in average levels of merchant representation between city-states and territorial states. However, there were also a number of other features that differed between city-states and territorial states. A more robust strategy to see whether merchant representation really mattered is to investigate variation within the group of city-states.

Distributional conflict existed within city-states between wealthy merchants who purchased public annuities and the rest of the population who paid the indirect taxes that serviced these annuities. From the beginning of the fourteenth century, and extending for the next hundred and fifty years, a number of autonomous cities witnessed revolts by popular groups contesting merchant dominance. A number of reasons have been suggested for this phenomenon including the development of craft guilds who sought a greater role in city affairs or the period of economic crisis that occurred soon after the beginning of the fourteenth century. It's clear, however, that conflict over fiscal issues was also a key element in these revolts. When a popular revolt brought Simone Boccanegra (now

known for the Verdi opera) to power in 1339 in Genoa, one of the first acts of the new regime was to burn the official list of state creditors. Revolts of this sort were not specific to Italy. In Cologne major revolts occurred in 1371 and 1396, and issues of debt and taxation were a prominent factor fueling unrest. In 1402 those leading a revolt in the city of Basel thought that they too should erase any paper trace of debts owed by the city. One leader of the revolt suggested the following idea.

One should go from house to house, namely into the houses of those that receive payments and interest from the annuities and break their letters and seals, that is how one should pay.[15]

In many cases revolts within autonomous cities were nothing more than that, temporary disturbances after which a merchant oligarchy reasserted control. In other instances, however, the groups leading revolts demanded that political institutions governing the city be changed so as to increase membership of non-merchant groups on governing councils. We can further investigate the effect of these institutional changes systematically using data on costs of borrowing and on merchant representation from Stasavage (2011) using a difference in differences setting as specified in Eqs. (1) and (2).

$$\ln\ r_{it}^{S} = \alpha + \beta_1 M_{it} + \gamma \mathbf{X_{it}} + \eta_i + \theta_t + \varepsilon_{it}. \quad (1)$$

$$\ln\ r_{it}^{S} - \ln r_{it}^{L} = \alpha + \beta_1 M_{it} + \gamma \mathbf{X_{it}} + \eta_i + \theta_t + \varepsilon_{it}. \quad (2)$$

In Eq. (1) the natural log of the nominal interest rate on government debt is modeled as a function of a dummy variable M which takes a value of 1 when more than fifty percent of the seats on a city's governing council are reserved for merchants. In Eq. (2) the dependent variable is the difference between the log interest rate on government debt and the natural log of the return on land rents, the most similar debt instrument in the private market to government issued annuities.[16] Each specification includes city fixed effects and period fixed effects. Finally, there are two control variables. The first control is a dummy variable for interest rates calculated on the basis of the life annuities that some city-states issued earlier in the period. Since life annuity payments ceased on the death of the owner, returns on them needed to be higher to attract buyers when compared with perpetual annuities. The second control is the estimated urbanization rate in the broader region within which a city was located.[17] For reasons independent of creditworthiness we would expect interest rates to be lower in more economically developed areas with a larger stock of capital, and the rate of urbanization at this time was certainly very highly correlated with the capital stock.

Table 1
Merchant dominance and costs of borrowing in city-states. OLS estimates of borrowing costs with standard errors (in parentheses) clustered by city. p values are in brackets. Half-century time periods from 1250 to 1750. N = 73. Rate is the log nominal interest rate on long-term public debt. Spread is the difference between rate and the log of the return on land rents. Merchant 50% takes a value of 1 when more than half of the seats on a cities governing council are reserved for merchants. A dummy variable is included for rates based on life annuities. Urbanization measures the fraction of the population in a region living in cities.

	(1)	(2)	(3)	(4)
	Rate	Rate	Spread	Spread
Merchant > 50%	−1.01	−0.82	−1.03	−1.45
	(0.34)	(0.16)	(0.35)	(0.18)
	[0.01]	[0.00]	[0.01]	[0.00]
Life annuities	0.52	0.61	0.40	0.62
	(0.18)	(0.22)	(0.22)	(0.22)
	[0.01]	[0.01]	[0.09]	[0.01]
Urbanization	−1.04	−0.61	−1.46	−0.45
	(0.54)	(0.77)	(0.67)	(0.82)
	[0.07]	[0.44]	[0.04]	[0.59]
City fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
City time trends	No	Yes	No	Yes

In the first column of Table 1 we see that the merchant variable has a negative and statistically coefficient, implying that when institutions gave a dominant position to merchants, then a city was able to borrow at substantially lower interest rates. The estimated magnitude of this merchant "effect" is also very large, equivalent to a 4.7 percentage point difference in the interest rate when considering other variables at their mean values. When city time trends are added to the specification in column 2 we see that the coefficient on the merchant variable is smaller, but it is more precisely estimated. The third and fourth columns of Table 1 report estimates of Eq. (2) where the dependent variable is the spread between interest rates on government debt and on land rents. Here we see a very similar story. The coefficient on merchant is negative, statistically significant and large in magnitude, including when country time trends are added to the specification.

The results in Table 1 are consistent with the interpretation that the creditworthiness for city-states was dependent on merchant political dominance. It suggests

[15] As quoted in Gilomen (2003 p.131) based on a document in the archives of the city of Basel.

[16] I could not use the log of the difference because this figure was negative in some instances.

[17] The source for this variable is Bairoch et al. (1988).

that the examples provided at the beginning of this section were illustrative of a more general phenomenon. Most of the time institutional design gave merchants a dominant political position in city-states, but when institutions were altered to give merchants less power, then access to credit suffered. These empirical results support the distributive view of institutions but not the impartial view.

Though there is a striking correlation between merchant representation and city-state costs of borrowing, there are of course reasons why this correlation might not represent a causal effect. The estimation strategy controls for any unchanging factors at the city level, as well as any period specific factors that might bias the estimate on the merchant coefficient. Inclusion of city time trends helps rule out the possibility that changes in merchant representation were driven by trending factors that simultaneously influenced borrowing costs. These could have involved trends in economic activity in particular. So, for example, a city-state dominated by merchants might have greater economic activity and thus better ability to pay. However, in work elsewhere I have shown that merchant domination tended to be a double edged sword for growth, producing an initially higher rate of population growth followed by subsequent stagnation (Stasavage, 2014). The remaining possibility is that more sudden economic crises led simultaneously to merchants being thrown out of power and to increased costs of borrowing. Though available data do not allow for investigating this last possibility thoroughly, a look at city population might help. A sudden economic crisis might result in a city losing part of its population. In unreported estimates where I added city population to the specifications in Table 1 we continue to observe essentially identical results for the merchant coefficient.

Evidence in this section suggests that the city state advantage was dependent on distributive politics. It was the norm for city states to have representative political institutions that controlled spending, taxation, and debt. However, the link between these prerogatives and creditworthiness depended on the extent to which political institutions privileged some groups over others. Most of the time the political institutions of independent cities gave merchants predominant influence, but when merchants lost this power creditworthiness suffered. In the next section I will consider how four larger states sought to imitate the city-state model for long-term borrowing. I will suggest that larger states were only successful in doing so when they also had political institutions that privileged government creditors at the expense of those paying the taxes to reimburse debt.

4. How larger states imitated the cities

It is apparent from Fig. 1 that even if city-states pioneered long-term borrowing, after about 1500 AD territorial states also began to get into the game. In doing so, larger states often adopted institutional mechanisms for borrowing that resembled those in city-states, particularly with the issuance of perpetual annuities. Despite this commonality, the experience of larger states with long term borrowing was actually quite varied. In this section I will explore this variation by considering the cases of France, Great Britain, Castile, and the Dutch Republic. I will suggest that the evidence from these cases reinforces my prior conclusions about the relevance of the distributive view of institutions.

4.1. The Dutch Republic

The Dutch Republic was the first territorial entity that succeeded in borrowing at rates that only city-states had been able to obtain previously. That the Dutch were the first to do this is not particularly surprising. After all, the Republic was itself essentially a geographically compact league of cities, and much power within the Republic resided with the governing councils of these individual towns. Prior to its establishing independence in 1581, Holland was a province of the Habsburg empire, and as part of this, it had a representative assembly called the Estates of Holland. Over time, the Estates began to collect their own taxes and to issue their own annuities. Initially this system was used by the Spanish crown for its own purposes. After the Dutch revolt it would instead be used against Spain. On one level, the story of borrowing in the Dutch Republic seems consistent with the impartial view of institutions. The Republic had a representative assembly with strong prerogatives over spending, taxation, and debt, and it had an intricate system of financial management. All the boxes were checked in terms of having "good" institutions. The result of this was that by the early decades of the seventeenth century the Republic was paying annual servicing costs on its debt equivalent to an interest rate of only about three percent. This was unheard of outside of the context of the most successful city-states, such as Venice and Genoa. However, historians have suggested that Dutch financial success also depended on another critical element. As James Tracy has suggested,

Equitable or not, control of fiscal policy by men who themselves had heavy investments in state debt was the real genius of the Netherlands system of borrowing both

in its Habsburg beginnings and in its seventeenth century grandeur.[18]

Tracy has shown that the same merchants who purchased debt very often held positions of power both in the Estates of Holland as well as in the councils of individual cities that sent representatives to the Estates. It is also apparent that Dutch representative institutions were biased in favor of this group. In the Estates of Holland each of eighteen principal towns sent a representative to the Estates whereas the nobility and the countryside sent only one. Within the town councils that sent representatives to the Estates, representation was similarly biased in favor of those most likely to purchase debt. As a rule, the cities of Holland had not experienced the guild revolutions during the fourteenth and fifteenth centuries that reduced merchant power in some other European cities. Selection for a town council called the *vroedschap* (meaning "the wisdom") was typically based on a system of cooptation in which current members chose new ones, reinforcing the oligarchic character. Finally, following the city-state model, the Dutch Republic had a system of taxation where the bulk of the burden involved indirect taxes borne by those outside of town councils as opposed to direct taxes on those on the inside.

4.2. France

As an entity that was essentially a league of cities, the Dutch Republic found it easiest to adopt the city-state model when it came to government borrowing. Other states, such as France, also attempted to copy the city-state model without the same success. Individual French cities had issued perpetual annuities for centuries, and these were known as *rentes*. In a number of cases, French monarchs sought to borrow indirectly by having cities issue *rentes* in their name with the proceeds then forwarded to the crown. In 1522 the administration of King Francois I attempted a new tactic, issuing *rentes* in the king's name that would be managed by the municipal government of Paris located at the *Hôtel de Ville*. These would become known as the *rentes sur l'hôtel de ville*. On the surface, one might think that the transformation of 1522 represented the establishment of "good" institutions in France, but the subsequent history of the *rentes sur l'hôtel de ville* was a very tumultuous one.[19] Initially, in 1522, the French crown was able to market *rentes* at an interest rate of 8.33%.[20] This was considerably higher than the rate at which city-states were able to sell their annuities at the time. During the initial decades of their existence the French monarchy made sparing use of this financing mechanism and always serviced payments on the *rentes*. After 1561 this situation changed dramatically as the monarchy overextended *rentes* sales by obliging royal officials to take them. This put the Paris municipality into a position where it was obliged to stop payments, or in other words to default on the obligations.

So why was France less successful than the Dutch Republic in adopting the city-state model? Though one might think that the failure of the *rentes sur l'hôtel de ville* was simply a case of financial folly, the deeper reason involved the weak political representation of creditors in France. The ruling council of the municipality of Paris, which was charged with administering the *rentes*, initially had a composition much like that of Europe's city-states. Mercantile interests were dominant. Over time, however, this shifted as more officials were selected from other professions. An even more substantial problem was that at the national level creditor representation was very weak. The episode of the Estates General of 1576 illustrates this. By 1576 the French crown was in desperate financial straits, and it was forced to call France's national representative assembly, the Estates General, in order to gain its support in raising new taxes. One of the crown's stated objectives in doing so was that new revenues were necessary in order to maintain payments on all the *rentes* that had been issued. The Parisian delegation that was part of the Third Estate made exactly this point for the obvious reason that most holders of the *rentes* were located in Paris. However, the Parisian delegation was only a small part of the Third Estate and an even smaller part of the overall Estates General. As a result, though one might think greater control by a representative body is good for creditworthiness, in this case it was exactly the opposite. The provincial majority at the Estates General of 1576 refused to consent to new taxes to service *rentes* because they saw this as "an attempt to transfer money from the purses of the provincials to those of the Parisians."[21] As a consequence they had this to say about the crown's debts

"[i]f the affairs of the king are so desperate, he could make use of half of the *rentes* constituted on both the

[18] Tracy (1985 p.216).

[19] Though published over a century ago, the most detailed source for the early history of these *rentes* remains Cauwès (1895).

[20] The precision here derives from the fact that payments on *rentes* were quoted in fractions. So this meant that these particular *rentes* were sold with an annual return of 1/12 of the purchase price.

[21] This is the interpretation of Martin Wolfe (1972 p.167).

cities and communities of the kingdom, he could tax the financiers who have lent to him, or he could sell off church lands."

In sum, the structure of French political institutions prompted a default, precisely because these institutions were not biased in favor of state creditors.

4.3. Castile

Sixteenth century Castilian royal borrowing has long had a very bad press. An important recent study by Mauricio Drelichman and Hans-Joachim Voth has forced scholars to revisit this conclusion in particular as it concerns affairs under Philip II. These two authors have investigated Philip's system of short term borrowing, based on contracts called *asientos* managed by a Genoese banking cartel. Rather than defaulting because he was insolvent, Philip's multiple "defaults" on the *asientos* are better described as anticipated haircuts, necessitated by liquidity crises, with subsequent conversion of *asientos* into perpetual annuities called *juros*. These two authors show further that in many cases short-term debt contracts under Phillip II were made explicitly state-contingent. In this sub-section, I will describe Castile's experience with the perpetual annuities called *juros*. Castile was something of an intermediate case, much more successful in gaining access to credit than was the French crown, but less successful than the Dutch Republic.

The kingdom of Castile was probably the first territorial state to issue perpetual annuities, a practice that became common as a means of finance towards the very end of the fifteenth century.[22] The *juros* were essentially the same type of instruments as the French *rentes* or the Dutch *renten*. As in France, the Castilian crown had actually issued annuities from a much earlier date. The original idea behind them had been to serve as royal grants in exchange for military service. When the Castilian monarchy began to use *juros* as a debt financing instrument the principal buyers of *juros* were the elites of the major Castilian cities.[23] The Castilian elites who purchased *juros* had considerable control over their management, both in terms of seeing that *juros* were serviced and in ensuring that a limit was placed on how many could be sold. This placed them in a much stronger position than French mercantile elites who purchased *rentes*. However, Castilian urban elites did not also have the more comprehensive control of public finances that was characteristic of city-states.

What was the end result of Castilian institutions for creditworthiness? First, it seems clear that creditors were willing to extend sizable loans to the Castilian crown. By the middle of the sixteenth century its total debt stock was on the order of ten times annual revenues. This was comparable to the amount of leverage that successful city-states could obtain. However, Castilian borrowing costs were substantially higher than those in the city-states of its time and also substantially higher than the borrowing costs to which the Dutch Republic was subject. In the early decades of the sixteenth century, the cost of servicing *juros* was equivalent to an annual interest rate of nearly ten percent. Over the course of the century borrowing costs dropped substantially, but in 1598 the cost of *juro* servicing was still over six percent, whereas interest rates on debt of the city-state of Genoa at the same time were only three percent.[24] Finally, the Castilian example in part shows an alternative route to creditworthiness to the one I describe elsewhere in this paper. Even if institutions do not give creditors political power, creditors might nonetheless be able to mimic this effect by forming a cartel.

4.4. Great Britain

Great Britain took much more time than Castile, France or the Dutch Republic to issue long term sovereign debt. One reason for this is that for much of the sixteenth and seventeenth centuries, British monarchs were not involved in large scale external military conflict. Another potential reason, as is well known, has to do with the structure of British political institutions. Prior to 1688 these placed relatively little constraints on monarchical action whereas afterwards they did. The House of Commons after 1688 exerted influence over spending, debt management, and tax collection.[25] The establishment of a system where crown ministers were responsible to the Commons helped cement this role.[26] Interestingly, when Great Britain first began borrowing long term with these institutions it was frequently referred to as "Dutch finance." This is a further indication of the lineage from Europe's city-states, to the Dutch Republic, to a larger territorial state such as Great Britain.

[22] This is based on the information in Ruiz-Martin (1975).
[23] See Drelichman and Voth (2014) on this point.
[24] This is based on borrowing costs reported in Ruiz-Martin (1975) and Drelichman and Voth (2014 p.92) for Castile and Day (1963) for Genoa.
[25] North and Weingast (1989).
[26] See in particular Cox (2011) on this point.

It's clear that institutional changes after 1688 may have helped establish British creditworthiness, but it is also critical to ask who actually sat in the Commons and what their interests were. This once again shows the relevance of the distributive view of institutions. In previous work (Stasavage, 2003), I have argued that the extent of British creditworthiness after 1688 hinged critically on the identity of the party constituting the Commons majority. The Whig party was composed of a mix of large landowners as well as London-based merchants. It was these merchants, or "the monied interest" as it was referred to at the time, who were the primary domestic purchasers of the long term debts issued by the British state. Logically, then, when the Whig party held the Commons majority, investors anticipated it would take actions consistent with servicing debt. The support base of the Tory party, in strong contrast, was composed almost exclusively of landowners, and while they didn't own debt, they did pay the "land tax" that was used to service it. Many prominent members of the Tory party made statements critical of Britain's growing public debt and of the monied interest, and not surprisingly, when the Tory party held the majority in the House of Commons fears of a default on government debt emerged.[27]

The period between 1688 and 1715 was one of oscillating majorities in the House of Commons, and interest rates on government debt oscillated accordingly. After 1715 the Whig Party established a dominant position in the House of Commons that would last for a number of decades, and this was associated with a dramatic decline in interest rates on government debt. As the parliamentary leader most directly responsible for this, Robert Walpole (in office 1721 to 1742) adopted a new policy that helped defuse Tory opposition to debt servicing and which brought Great Britain closer into line with the financial model that had previously been adopted by Europe's city-states. This involved a shift towards greater reliance on indirect taxation, a move that was facilitated by the existence of a limited suffrage regime. In the years between the Glorious Revolution of 1688 and the establishment of Whig dominance in 1715, a sizable fraction of British revenues had come from direct taxes of which the land tax to which landowners were subject was the most important. Recognizing that the land tax was a continual thorn in the side of Tory landowners, Robert Walpole lowered rates on it and compensated for this by increasing indirect taxes.[28]

5. The diffusion of the British parliamentary model

In the previous section I argued that early territorial states were most successful in establishing creditworthiness when political institutions put government creditors in a privileged position relative to those paying the taxes to service debts. The divide between mercantile and landed interests was relevant in an era where the principal investors in government debt were merchants with liquid capital and where those investing in government debt were also most likely to be located in a country's capital. This situation persisted for some time.[29] Over time, however, ownership of government debt spread more widely among wealth holders. Therefore, the relative question for creditworthiness was not how merchants were favored relative to landowners, but instead whether political institutions were biased in favor of wealth holders more generally. At the same time, the nineteenth century was a period where the British practice of parliamentary responsibility spread across the European continent. The logical thing to ask is what effect this institution of parliamentary responsibility had on government creditworthiness in these other countries. The impartial view of institutions would suggest that states adopting parliamentary responsibility would have enjoyed lower borrowing costs. The distributive view would suggest that this would depend on whether parliamentary responsibility made ministers responsible to wealth holders. In what follows, I will show that available evidence supports the latter interpretation. However, I will also find that the magnitude of institutional effects on borrowing costs was substantially smaller than in the early period considered in the preceding sections. One possible interpretation is that as secondary markets for debt became more advanced, reputational constraints on creditworthiness played an increasingly important role relative to institutional constraints.

The nineteenth century was a period when European states undertook a number of important institutional

[27] See Stasavage, 2003 Chapter 5.

[28] In the two wars that Great Britain fought between 1688 and 1714 (the War of The League of Augsburg and the War of the Spanish Succession) customs and excise taxes represented 33% and 43% of total tax revenues respectively. During the period of relative peace between 1714 and 1742 customs and excise taxes represented 72% of total tax revenues (Stasavage, 2003 p.76). This transformation has recently been explored in depth by Seghezz (2014).

[29] As an example, in Great Britain as late as the middle of the eighteenth century ownership of government debt and Bank of England shares remained heavily concentrated in the London area. See Carlos and Neal (2006) on this point, something originally found by Dickson (1967).

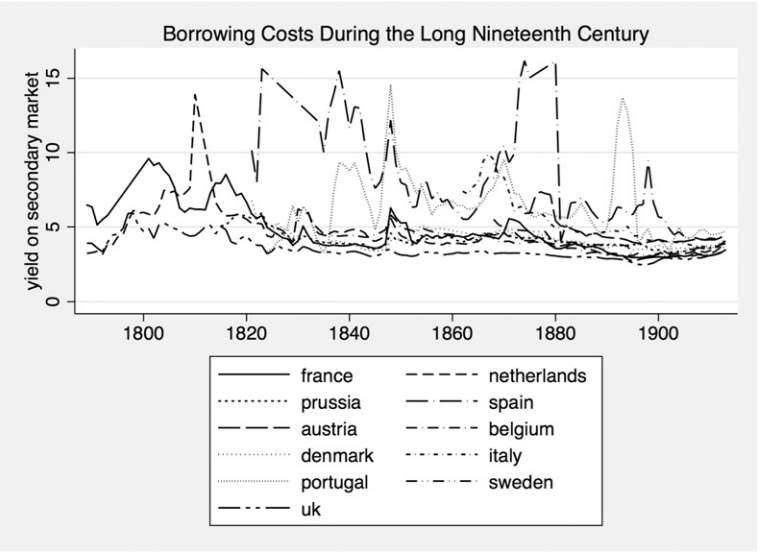

Fig. 2. The figure shows secondary market yields for long term government securities, 1789–1913. See Dincecco (2011) for complete details on the construction of these data.

reforms, of which parliamentary responsibility was but one. Chief among these in the political arena was the extension of the suffrage. European governments experimented with a wide variety of suffrage restrictions, generally based on either literacy, income, or wealth. Over the course of the nineteenth century governments proceeded to drop these restrictions, but the process was a long one that varied from country to country, and in some cases suffrage reforms were reversed for a time. In important book, Mark Dincecco (2009, 2010, 2011) has recently suggested that the adoption of constitutional limitations on executive authority, in the model of Great Britain after 1688, were associated with lower yields for long-term government debt. The inference he draws is that institutions thus helped governments to establish their creditworthiness. In this section, I will present evidence to suggest that institutional changes of this sort only resulted in lower borrowing costs when there was a regime of limited suffrage in place that privileged wealth holders (Fig. 2).

To investigate this question empirically I will make use of a new data set assembled by Dincecco (2011) on secondary market yields on long term government securities for eleven European states.[30] Drawing on a wide variety of sources for each country, he compiled a time series of the yields on the debt instrument (or instruments) that most closely resembled a British consol, a perpetuity. Next, to chart the spread of parliamentary responsibility in each of the eleven countries I will draw on work by Przeworski et al. (2012). Finally, I will make use of several sources on the development of the suffrage, and chiefly Flora (1983). My goal is to use these data to examine the correlation between yields on debt, parliamentary responsibility, suffrage restrictions, and the interaction between these two institutional features. The specifications I will use to consider this question can be found in Eqs. (3) and (4) below.

$$\ln\ r_{it}^{S} = \alpha + \beta_1 P_{it} + \beta_2 S_{it} + \beta_3 P * S_{it} + \eta_i + \theta_t + \varepsilon_{it}. \quad (3)$$

$$\ln\ r_{it}^{S} - \ln\ r_{it}^{UK} = \alpha + \beta_1 P_{it} + \beta_2 S_{it} + \beta_3 P * S_{it} + \eta_i + \theta_t + \varepsilon_{it}. \quad (4)$$

In Eq. (3) the dependent variable is the natural log of the yield on government debt, whereas in Eq. (4) the dependent variable is the difference between the log yield on debt and the log yield on UK consols.[31] British consols were generally perceived to be the safest government debt instrument at the time. However, they were certainly not risk free, and in rare cases some countries had yields on their debt lower than the consol yield. Therefore we should be considering both Eq. (3) and Eq. (4) estimates. In each of the two equations the yield (or spread) is modeled as a function of a dummy

[30] Austria Belgium, Denmark, France, Great Britain, Italy, the Netherlands, Portugal, Prussia, Spain, Sweden.

[31] As in the case of my prior estimates, I could not use the log of the difference because in some instances this difference was negative.

variable P that takes a value of 1 if parliamentary responsibility is in place and a dummy variable S which takes a value of 1 if at least fifty percent of adult males can vote. In cases where more than fifty percent of males can vote but there is not direct election of representatives or the secret ballot is not in place, I reclassify S as taking a value of zero. In the specifications I also include an interaction term P*S. The specifications also include country fixed effects, year fixed effects, and some specifications also include country time trends. All these controls are particularly important because I am pooling together a rather heterogeneous set of countries. I also include a lagged dependent variable here because the specifications will be estimated using annual data, and one might expect institutional changes to impact yields only gradually.[32] One might also consider introducing time-varying controls into the specifications in Eqs. (3) and (4). In the literature on debt it is common to control for episodes of default, revenues, exports, deficits (current account or fiscal) and whether a state was on the gold standard. However, for my analysis many of these variables would be "post treatment" and therefore inclusion would lead to biased estimates of the effects of parliamentary responsibility and the suffrage. So, for example, if a restricted suffrage improves creditworthiness one reason it might do so is if it prompted a state to run smaller fiscal deficits.

Results of the estimates can be found in Table 2. To ease interpretation with the interactive effect, in Table 2 I present point estimates for three distinct scenarios: (1) only parliamentary responsibility is in place, (2) only an expanded suffrage is in place, and (3) both parliamentary responsibility and an expanded suffrage are in place.[33] The case when neither parliamentary responsibility nor expanded suffrage were in place is the base group. In practice the regime of only expanded suffrage without parliamentary responsibility was quite rare. Therefore the discussion will focus on the point estimates for scenarios (1) and (3).

Table 2
Institutions and Borrowing Costs During the Long Nineteenth Century. OLS estimates with robust standard errors in parentheses and p values in brackets. For estimates where yield is the dependent variable N = 923. Otherwise N = 799. Data at annual frequency from 1789 to 1913. Yield is the log of the secondary market yield on the long term debt instrument most closely resembling British consols, as collected by Dincecco (2011). Spread is the difference between yield and the natural log of yields on British consols. Only responsibility is a dummy taking a value of 1 if parliamentary responsibility is in place and fewer than 50% of adult males can vote. Only suffrage takes a value of 1 if more than 50% of adult males can vote, and there is not parliamentary responsibility. Both takes a value of 1 if both responsibility and suffrage of at least 50% are in place.

	(1)	(2)	(3)	(4)
	Yield	Yield	Spread	Spread
Lagged yield	0.800	0.765		
	(0.058)	(0.070)		
	[0.000]	[0.000]		
Lagged spread			0.795	0.757
			(0.061)	(0.074)
			[0.000]	[0.000]
Only responsibility	−0.0288	−0.0245	−0.0254	−0.0196
	(0.014)	(0.013)	(0.016)	(0.014)
	[0.039]	[0.066]	[0.111]	[163]
Only suffrage > 50%	−0.004	0.003	0.003	0.012
	(0.014)	(0.0140)	(0.015)	(0.016)
	[0.775]	[0.806]	[0.858]	[0.435]
Both	0.032	0.0400	0.040	0.053
	(0.016)	(0.0187)	(0.018)	(0.021)
	[0.040]	[0.033]	[0.023]	[0.013]
Country fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
Country time trends	No	Yes	No	Yes

As can be seen in Table 2, the results are quite clear and consistent. Parliamentary responsibility is only correlated with lower bond yields when it is accompanied by a limited suffrage regime in which fewer than fifty percent of adult males can vote. This is true regardless of whether the yield or the spread over British consols is the dependent variable, and time trends are included. In column (2) the long run effect of shifting to a regime of parliamentary responsibility without expanded suffrage would be estimated to reduce the yield in a country that started at 6% to about 5%.[34] This is a significant effect, though it is a substantially smaller one in magnitude than the institutional effects implied by my regression analyses using borrowing costs from earlier periods.

[32] Inclusion of a lagged dependent variable in a fixed effects specification does introduce a bias because the lagged dependent variable will necessarily be correlated with the error term. However, this bias is largest in panels where the number of time periods is short, as in less than 30 based on the Monte Carlo results in Judson and Owen (1999). In my setting the number of time periods is several multiples of that, so any induced bias should be minimal.

[33] That is, in Table 2 the estimate for scenario (1) is the effect of shifting P from 0 to 1 when S = 0, the estimate for scenario (2) is the effect of shifting S from 0 to 1 when P = 0, and the estimate for scenario (3) is the combined effect, and associated standard error of shifting both S and P from 0 to 1.

[34] In an analysis that does not examine parliamentary responsibility, which does examine suffrage for the 1880–1913 period Flandreau and Zumer, 2004 identify a negative correlation between yields and an expanded suffrage. However, their analysis does not include controls for common time period effects, and we know that both suffrage and yields were trending in the same direction during this period.

Before accepting the idea that the spread of the suffrage led to an upward shift in yields on government bonds, we ought to also entertain another possibility. Perhaps this effect was only temporary because suffrage extensions were often moments of substantial uncertainty?[35] To make sure that the results reported in Table 2 do not simply reflect a temporary increase in yields around the time of democratization, I augmented the specification in Eqs. (3) and (4) by adding a pulse dummy that takes a value of one in the year the suffrage reached 50% of the adult male population, 0 in all years prior, and zero in all subsequent years. I did the same for parliamentary responsibility. The results in almost all cases showed that these pulse dummies were not statistically significant, and the other coefficients remained largely unchanged.

The estimation results suggest that parliamentary responsibility was only associated with lower borrowing costs when combined with a political regime of limited suffrage, with the ability to vote being determined either directly by wealth or by factors, such as literacy, that are closely correlated with wealth. We do not know for certain whether these differences in borrowing costs were driven by differences in perceived creditworthiness. What is clear though is that there is more evidence here for the distributive view of institutions than for the impartial view.

Is there any further evidence one can provide to support this assertion? As it turns out, during the late nineteenth century the financial and associated press in London was a keen observer of debt politics in other European countries, and in particular those in countries of the European periphery where British investors might find higher yields than at home. Even a cursory look at press reports from this period suggests that they did not subscribe to the view of a democratic advantage when it came to sovereign borrowing, and in fact quite the opposite. So, in an assessment of Portugal's financial situation in 1908 the Lisbon correspondent from the *Times* of London reported this.

"The root of the manifold evils from which Portugal has long suffered would undoubtedly seem to be what he [the Lisbon correspondent] declares it to be — namely, the Parliamentary system as it has been hitherto applied there. Portugal is blessed with a constitution framed on the most liberal principles, but the masses of the people, unfortunately, seem to be hardly fitted to fulfill with discernment the responsible duties which it imposes upon them. The suffrage is extremely wide. All citizens who can read and write, or who pay taxes amounting to 500 reis — about 2s. 2 1/2d. — are entitled to the vote."[36]

We can see very similar opinions from other quarters. After Portugal experienced a democratic revolution in 1910, the *Economist* admonished its new government in the following (patronizing) terms.

"We would warn the new Government against the idea so prevalent in Latin countries that the mere establishment of a Republican Government and the waving of a Republican flag are enough to introduce an era of honesty and prosperity."[37]

Portugal's Iberian neighbor hardly received better treatment by the British press. In the wake of an earlier democratic revolution in Spain the *Times of London* observed this.

"The effect of every so-called "Democratic" revolution has been to diminish the resources and to add to the burdens of the State. People have been led to expected that the main wonders to be wrought by liberty should be exception from taxes and multiplication of public offices; that as little should given and as much should be get out of the country as every man could contrive. Even at this moment the Republicans in Spain are announcing a millennium such as even Henry IV of France in his most sanguine dreams about a "*poule* in every peasant's *pot-au-feu*" never imagined."[38]

These are just three quotes covering only two countries, but it is certainly enough to suggest to us that the London press of the *belle époque* was apprehensive about the effect of the spread of democracy on government credit. These assessments are consistent with my econometric findings in this section; the diffusion of British style parliamentary responsibility was only associated with lower yields on government debt as long as it was also accompanied by a regime of limited suffrage.

6. Potential lessons

European sovereign borrowing began around the year 1200, and in this paper I have traced its history

[35] Dasgupta and Ziblatt (2014) have recently shown that yields on British consols temporarily increased around the time of the passage of Britain's first reform act in 1832, but there was less of an effect with the two subsequent reform acts of 1867 and 1884. Niall Ferguson (2006) has shown how the London market for international bonds was sensitive to political crises during this period.

[36] "The Situation in Portugal." *Times*, 21 March 1908.

[37] "The Revolution in Portugal" The Economist. 8 October 1910.

[38] "Spanish Finances" *Times* 22 May 1869.

through to the beginning of the twentieth century. This history provides support for the distributive view of institutions; creditworthiness was enhanced when institutions were biased in favor of government creditors. European history provides less support for the impartial view of institutions. Governments that attempted to replicate city-state borrowing without providing power to creditors faced higher costs of borrowing. Later governments that adopted parliamentary responsibility without restricting the suffrage encountered the same problem. What lessons can we draw from this history for debt politics today?

The first lesson is for scholars interested in the effect of democracy on debt and the question whether there is a democratic advantage when it comes to sovereign borrowing. What we need to recognize is that "democracy" itself represents a bundle of institutions, some of which may favor creditworthiness and others not. Establishing democracy may mean that there are greater constraints on whoever is making decisions regarding debt, taxation, and spending. However, establishing a democracy is also likely to change the identity of the pivotal person making decisions over fiscal policy. What matters then is what this person's interests are, and this will depend on whether they hold debt. The empirical literature on this question has focused almost exclusively on investigating the correlation between borrowing costs and institutions without considering this question involving the identity of pivotal decision makers. There is an obvious reason for this; quantitative measures of institutions are relatively easy to construct whereas measuring interests is much more murky, but that doesn't make them any less important. Seven centuries of European history suggest to us that sometimes establishing democracy will improve creditworthiness and sometimes it won't. This may be why scholars have had difficulty proving that a "democratic advantage" exists.

The second lesson is for those interested in investigating the effect of rules and procedures limiting fiscal policy. There has been very considerable debate about these concerning both quantitative limits on debt and deficits as well as procedural rules. The lesson of European history for these debates is that we need to consider the interests of those individuals actually charged with implementing the rules. As an example, when we do this with the euro zone we get a more complete sense of how its institutions are biased in favor of pro cyclical policy. When the euro was first designed, many commented on the idea that a three percent deficit rule would induce pro cyclical behavior on the part of governments compared to a rule based on the cyclically adjusted fiscal deficit. But what happened in practice was that the rule was broken anyway, so it wasn't this feature alone that induced pro cyclical behavior. What has induced procyclicality is the way in which euro zone procedures are enforced by policymakers with vastly differing interests depending on whether one is in good times or bad times, with good times defined as those when markets are willing to lend to governments at affordable rates. During good times, in order to be sanctioned for not following the rules a euro zone member government needs a super majority of member states arrayed against it. The supermajority requirement means that the pivotal decision maker for the rule will be someone favoring a looser policy than the median decision maker. In other words there is a bias towards looser policy. Consider now what happens in bad times, and in particular those times when a country needs a bailout. Now there must be near unanimous approval for this by member states. Here there is a clear bias in favor of austerity since the union decision maker in favor of the tightest policy stance is now pivotal. In sum, it isn't the numerical targets that have made euro zone policy pro cyclical; it is instead the super majority and unanimity requirements. The logic of the distributive view of institutions helps us to understand this.

The third and final lesson involves the more general contribution of European history for understanding debt politics. In too many cases the early history of European sovereign debt is passed off as a tale of woe where impecunious monarchs defrauded unsuspecting financiers. Therefore the question becomes how the British in 1688 figured out a way to get us out of this trap. But the story of sovereign creditworthiness is actually a much older one which is full of episodes that can shine light on how we think about debt today. So, I have suggested in my work that if European city-states were able to borrow long term well before large territorial states, then asking why this was the case may provide more general insights. Likewise, if Philip II was able to establish state contingent debt contracts, as shown by Drelichman and Voth (2014), then we need to ask why this was the case and why such contracts are so much rarer today. Finally, Dincecco (2011) has shown that it is possible to consider later interactions between institutions and debt in a broad set of countries. Ultimately, looking at debt in a long run perspective, as Reinhart and Rogoff (2009) have suggested, gives us more analytical leverage for thinking about debt today.

Appendix A. Supplementary data

Supplementary data to this article can be found online at http://dx.doi.org/10.1016/j.eeh.2015.09.005.

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