LENDING TO THE BORROWER FROM HELL:

DEBT AND DEFAULT IN THE AGE OF PHILIP II, 1556-1598

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Abstract:

Philip II of Spain was the first serial defaulter in history, failing to honor his debts four times. We analyze 457 lending contracts between the king and his bankers, and ask what allowed the sovereign to borrow so much while defaulting so often. Earlier work emphasized banker irrationality or, in line with the Bulow-Rogoff argument, the ability of lenders to punish the king. We show that the evidence speaks against these interpretations. Instead, what sustained lending was the ability of bankers to effectively cut off access to lending to Philip II. With no alternative means of smoothing consumption, while being faced with highly volatile revenues and expenditures, the king returned to servicing his debts. Defaults were quickly resolved via reschedulings. In line with the arguments by Grossman and van Huyck, we find strong indirect evidence that bank loans were contingent on the fiscal health of the Spanish Crown.

I. Introduction

What sustains international borrowing by sovereigns? Bulow and Rogoff (1989) argue that only punishment mechanisms outside the lending transaction itself can make international lending to governments sustainable. Other authors have emphasized the importance of reputation and the need for intertemporal smoothing.[1] In this paper, we examine one of the most famous historical cases in an attempt to decide which mechanism was responsible for sustained lending at the dawn of sovereign borrowing.

The episode we examine is the reign of Philip II of Spain, 1556-1598. He ruled the military 'superpower' of the sixteenth century and accumulated debts equivalent to 60 percent of GDP. Under Philip II the Spanish Empire reached its maximum territorial expansion. Spanish troops fought almost continuously in wars against France, the Dutch rebels, the English, and the Ottomans. Spain conquered the Philippines and added Portugal and its empire to the King's territories. While earlier sovereign rulers borrowed abroad, Philip II was the first to accumulate debts similar to those of modern states. He also became the first serial defaulter in history, declaring payment stops no less than four times during his reign.[2] We ask how the king could accumulate such high debts while defaulting repeatedly.

The incentive mechanisms underpinning international borrowing by governments have remained controversial. One school of thought argues that, in the presence of additional lenders, default is always a superior option for a sovereign. As Bulow and Rogoff (1989) famously showed, it is only in the presence of additional sanctioning mechanisms that international transfers to government borrowers can occur. Such sanctions can range from trade embargoes to military intervention. Some authors have argued that the 'gunboat diplomacy' of European powers in the 19th century – including armed intervention after the non-payment of debts – was crucial for sustaining the high volume of cross-border transfers.[3] In addition, Rose's recent

[1] Eaton and Fernandez (1995), Kletzer and Wright (2000), Wright (2002).
[2] Braudel (1966), Reinhart, Rogoff and Savastano (2003).
[3] Mitchener and Weidenmier (2005), Ferguson (2002). The high volume of transfers is documented in Taylor and Obstfeld (2004).

finding that defaulters suffer a sharp reduction in their trade volume with lender countries appears to reinforce the power of the Bulow-Rogoff argument.[4]

An alternative school of thought argues that reputation concerns are key. Eaton and Gersovitz (1981) argued that consumption smoothing might be sufficiently valuable that borrowers may not want to renege. Models based on reputational concerns explain the occurrence of (repeated) defaults as a result of lending being contingent on events over which agents cannot contract explicitly (Grossman and Van Huyck 1988; Arellano 2006). Some of the key technical challenges for reputation-based models were solved by Kletzer and Wright (2000). In particular, they argue that incentives for new lenders who might want to extend credit to a sovereign after a default can be structured in such a way as to discourage them from lending. This would make consumption smoothing impossible in the absence of access to borrowing facilities. For the Kletzer and Wright interpretation of sovereign lending to be applicable, new lenders have to be discouraged from coming in and offering funds when the marginal value of new resources is particularly high for the sovereign. They produce this by a 'cheat-the-cheater' setup in their model, whereby new lenders are at risk of being defrauded by the borrower. The setup is similar to the trader coalitions analyzed by Greif (1993).

Borrowing by Philip II is often considered as one of the origins of sovereign debt. At the same time, as North (1990) highlighted, the Spanish Crown faced severe problems in committing to repaying its debts.[5] It is therefore not surprising that Habsburg Spain should have become a testing ground for theories of sovereign debt. Conklin (1998) argues that, in the event of a default, bankers could punish the king with sanctions in the style predicted by Bulow-Rogoff. For such sanctions to be effective, they have to go beyond the exclusion from capital markets. In his view, Philip's Genoese bankers had an effective sanctioning mechanism at their disposal – the withholding of transfers. Philip's war machine ran on monetary fuel provided by regular transfers of funds from Spain to Flanders and other theatres of operations. If the bankers refused to make payments there, mutinies followed. These could be harmful indeed to Spanish interests. The sack of Antwerp in 1576, by troops that had gone unpaid for a year (an

[4] Rose (2005).
[5] Hoffman and Norberg (1994).

event known as "The Spanish Fury") did much to undermine the Habsburg position in the Low Countries. Sending specie itself overland or by sea, according to Conklin, was not an option because of the risks involved.[6]

In this paper, we argue that Philip II's borrowing is best understood as 'intertemporal barter' in the parlance of Kletzer and Wright. It was the need to smooth consumption that motivated reputational concerns and ultimately made lending sustainable. Fear of sanctions was not a crucial feature underpinning the high and rising levels of borrowing between 1556 and 1598. We first use new evidence from the Royal Archives in Simancas to show that the sanctions described by Conklin, if they were such, were never effective. Even when in default, Philip II had access to essentially unlimited transfer services by bankers. Second, we document a strong need for intertemporal smoothing. Philip II's coffers were continuously replenished by a large inflow of silver. In contrast to other tax revenues – which were farmed out – these revenues were highly volatile. Given that Spain was almost continuously at war in the second half of the sixteenth century, and had a commensurate need to spend, smoothing consumption was valuable. We document the extent to which short-term borrowing from bankers helped to mitigate the volatility of revenues. Next, we reconstruct the structure of lending relationships. Based on a new and comprehensive set of loan documents collected from the archives, we show that the bankers that provided over two thirds of the funds lent in overlapping coalitions – often extending loans jointly with other bankers, who in turn may have already made multiple loans with other partners in the past. The result was to align the incentives within a coalition of lenders, effectively ensuring that all members acted as one. Bankers outside the coalition did not have the smoothing capability to be a viable option for the king.

An earlier literature had argued that Philip II played 'bait and switch' with his bankers, consecutively defaulting on German, Genoese, and Portuguese bankers (Braudel 1966). If our interpretation is correct, defaults should not lead to additional turnover in the group of lenders. In particular, there should be no increase in the number or importance of new bankers entering into the business of lending to Habsburg Spain. We show that the composition of lenders is remarkably stable over

[6] Under normal conditions, defaults and sanctions should not be observed in Bulow-Rogoff framework. They are off-equilibrium events that require additional frictions. Conklin argues that informational asymmetries are responsible for the defaults, in line with work by Atkeson (1991).

time, even across default episodes. Indeed, we find that even German bankers caught in the first default of the 1550s, such as the Fuggers, were lending in the 1580s and 1590s.

Finally, we analyze the debt renegotiation after the default of 1575, for which there is unusually richly documentation. Faced with a borrower with an urgent need for cash, individual lenders tried to cut side-deals. In the end, these attempts came to naught, as the king rescheduled his debts in a general agreement with his bankers (the *medio general*). We analyze the incentive structure that prevented the de facto coalition of bankers from dissolving.

We proceed as follows. Section II summarizes the historical background and fiscal context of Philip II's debts. Section III describes our data and its limitations. Section IV shows why neither banker turnover nor an alleged 'transfer stop' are appropriate interpretations of what sustained lending. In section V, we examine the overlapping nature of banker consortia in before and after the defaults, and argue that Genoese lenders effectively acted as a 'bankers coalition'. Section VI concludes.

II. Historical background

In the course of his reign, Philip II entered into contracts for more than 100 million ducats with his bankers. In an average year, he contracted short-term loans (*asientos*) for 2.7 million ducats, carried total outstanding debts of 44 million, and had revenues of 6.5 million. Figure 1 provides an overview of the king's fiscal position. Both revenues and debts were growing strongly during the second half of the sixteenth century. Our figures are in nominal terms. Even after correcting for inflation, taxes raised in Castile, combined with revenues from silver imports, grew markedly.[7]

[7] Drelichman and Voth (2007).

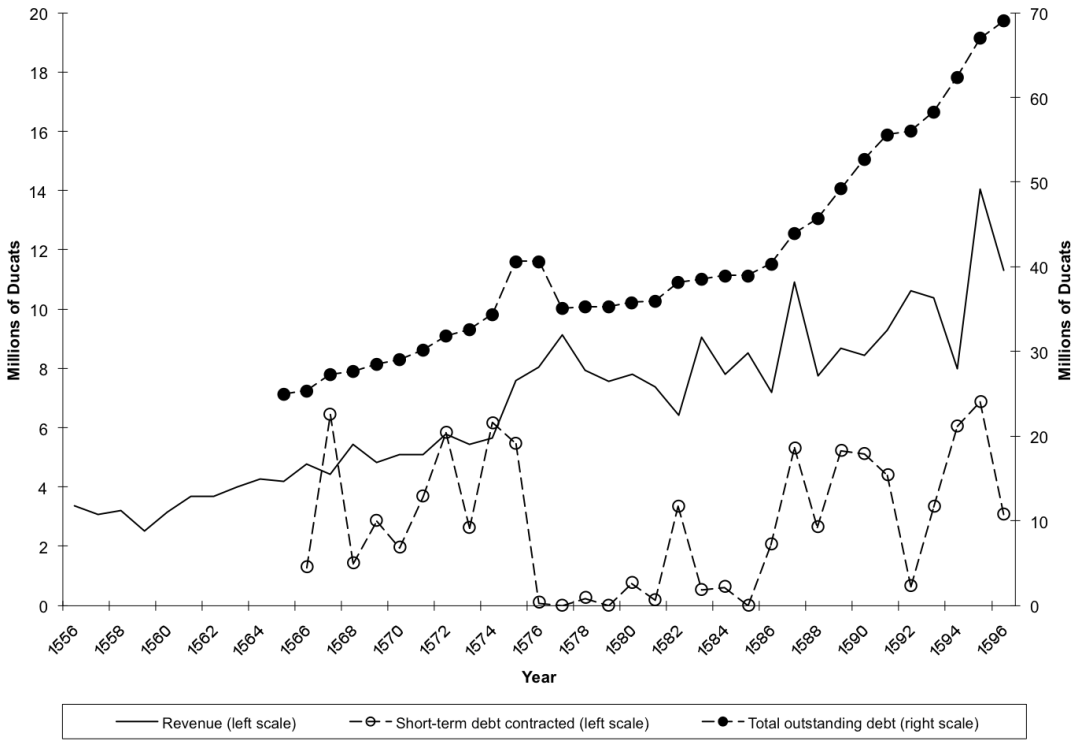

Figure 1: Philip II's fiscal position, 1555-1596

The first and second defaults, shortly after Philip II's accession to the throne, affected *asientos* contracted with the German Fugger and Welser banking families. A tentative settlement was brokered by Genoese bankers in 1560, involving the transfer of Crown monopolies and revenues. Disagreement between the king and his bankers about the terms ensured that lending did not resume in full until 1566.[8]

The third bankruptcy took place in 1575. It involved a suspension of interest payments, repayments of principal, and service of long term bonds held by the bankers as collateral. It affected 14.6 million ducats of outstanding debt. The bankruptcy occurred at a time of particular strain on royal finances. Expenses to defuse the Ottoman threat in the Mediterranean continued to run high, and the Dutch Revolt was flaring up in earnest. The king, meanwhile, used the default to negotiate a large tax increase with the Cortes, the representative assembly of the Castilian cities.

The bankers formed a consortium representing around 70 percent of outstanding debt. While the king tried to cut side-deals with many of them, none were actually concluded. Apart from one *asiento* recognizing an earlier debt from 1575, incurred

[8] Lovett (1980), Alvarez Nogal (2003).

with one Genoese banking family, there was no fresh lending to the king after the suspension decree (*decreto).* The third bankruptcy concluded with a *medio general*, a general accord with the bankers, in 1577. The agreement provided for write-offs of approximately 30 to 58 percent depending on the characteristics of each loan. On average, the king agreed to pay back 62 percent of his scheduled obligations. Repayment took the form of new long term bonds (*juros*), the issuance of which was made possible by the new taxes voted by the Cortes. In exchange for recognizing his debts, Philip obtained a new loan for 5 million ducats and the normalization of credit operations.

The fourth bankruptcy in 1596 involved a rescheduling of 7 million ducats, equivalent to two thirds of annual revenue. Once again, the trigger for the suspension of payments was a combination of negative fiscal news with battlefield difficulties. In 1594 the silver fleets did not sail, and the remittances of 1595, while larger than usual, failed to make up for the missed year. On the military front, the outbreak of the Elizabethan war demanded extraordinary expenses to face the French and British forces.

Compared to the third bankruptcy, the fourth was relatively mild. The earlier one had involved *asientos* worth twice as much, equivalent of two years' revenue at the time. The 1596 rescheduling only affected two-thirds of year's worth of revenue. It was also settled in swift order – by late 1597 a new *medio general* was in place and lending had restarted. The haircut amounted to less than 20% of outstanding debt – less than one third of the 1577 write-off.

III. Data

Our data are derived from the complete set of short-term loan contracts (*asientos*) between Philip II and his bankers. These are preserved in the Royal Archive of Simancas.[9] While earlier authors have collected data on the volume of loans, there has to this date not been a detailed investigation of contractual arrangements. Existing

[9] Archivo General de Simancas, Contadurías Generales, Legajos 86-93.

summary figures also suffer from double-counting and major gaps in the series.[10] These problems have been remedied in our new series of *asiento* borrowing.

Financial transactions between the bankers and the king involved transfers, loans, or exchange operations (and usually multiple combinations of these). Each contract is between 4 and more than 20 pages in length, setting out contractual details. In addition to the amounts lent and the repayment schedule, these can include: the places of delivery and repayment, the fiscal streams from which the amounts were to be repaid, the exchange rates to be used, export privileges for specie, transfer and exchange fees, the terms for collateral *juros*, additional benefits granted to the bankers (such as lifetime pensions), and the conditions when repayment are due. Many of the repayment clauses make the time of repayment (and sometimes, the interest due) contingent on the king's fiscal position, such as the arrival of the silver fleet or the collection of specific tax revenues.

The Spanish Habsburgs engaged in international borrowing as early as 1519, when John Jacob Fugger financed Charles V's successful bid for the Holy Roman Crown. Charles' borrowing was sustained largely by interpersonal relationships between the bankers and the king himself. Charles' loans were small by the standards his son Philip II would soon set.[11] Regular borrowing in Philip's reign (and in our database) starts in 1566, after the resolution of the second bankruptcy. On average, the king concluded between 15 and 25 *asientos* per year. Their duration varied between a few months and several years. The greatest length between intended disbursement and repayment in our sample is 31 months; the shortest, 2 months.[12] The largest loan is for 3.2 million ducats, equivalent to 6 months fiscal revenues for Castile. The smallest contract was for a mere 2,200 ducats.

Philip borrowed from several banking families, which were normally set up as partnerships. No fewer than nine members of the Lomelín family entered into loan

[10] The standard series in use is by Ulloa (1977). It suffers from double counting the *asientos* contracted by field commanders in Flanders. These loans were ratified and consolidated into Castilian contracts by the Council of Finance (Lapeyre 1953, p.48).
[11] The standard source on Charles V's borrowing is Carande (1987).
[12]. Unless otherwise noted, all summary statistics reported are extracted from the entire population of 457 asientos. The duration statistics in particular come from a 20% sample for which we have coded every individual clause. We are in the process of coding the remaining *asientos* in this fashion as well.

contracts with the Spanish sovereign. The Spinola contributeed 12 lenders, the Gentil 10, the Centurión family six, and the Fugger five.[13] Several members of the same banking family often lent as part of a single contract. On the 13th of March 1572, we find Gerónimo and Esteban Grillo lending 100,000 *ecús* to the king, and making them available in Sicily. The brothers Augustín, Tadeo and Pablo Gentil entered into several joint contracts between 1567 and 1569.[14] Lending in small-scale syndicates was common in our dataset. Out of a total of 457 transactions, 144 had multiple lenders. These account for 29 percent of total lending volume.

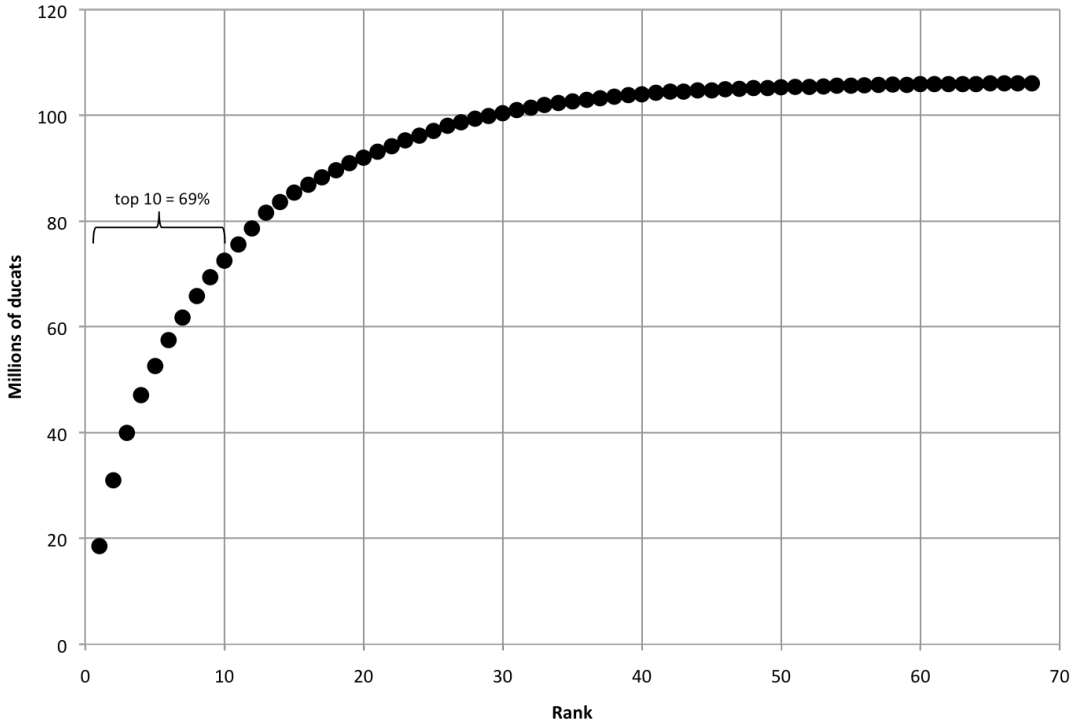

Figure 2: Cumulative lending value to Philip II, by rank of lending family

Lending to Philip II was heavily concentrated. The Spinola, Grimaldo and Fugger families alone accounted for over one third of the value of loan contracts in the Royal Archive in Simancas. The top 10 banking families were responsible for close to 70 percent of all loans; the top 20 banking families, for 88 percent. The bottom 45 lenders combined provided less credit than the biggest bankers to Philip II, the Spinola family. Figure 2 plots the cumulative value of money lent against the rank of the banking family. The distribution is highly unequal (Gini coefficient of 0.73).

[13] We use the Spanish spelling of the banking families' names throughout, as they appear in the archival documents.
[14] AGS, Contadurías Generales, Legajos 84 y 85.

While 68 families in total lent to Philip II at some point, only a handful of them provided the bulk of resources.

These lending relationships were significant not only in terms of total volume provided. They proved enduring, with lending by one generation after another. The Fuggers started lending to Charles V early in the century and continued all the way to 1596 without ever stopping for more than 9 consecutive years. John Jacob Fugger lent to Charles V in 1519; his son, Anton Fugger lent again in the 1550s; in the 1590, we find his great-grandson, Marcos Fugger, doing the same. During the second half of the sixteenth century, the Grimaldo lent 27 times, during the years 1566-1589. The record holders in terms of frequency were the Spinola, with a total of 63 loan contracts over the period 1566-1599.

One useful feature of short-term *asientos* was the ability to use them to transfer funds to far-flung corners of the empire. This, however, was not a dominant characteristic in the contracts before 1575. Table 1 summarizes the place for delivery of funds by the bankers, both in our entire sample and only in the period previous to the 1575 bankruptcy. While transfers involve 62% of the amount borrowed in the entire period, only 31% of the funds lent between 1552 and 1575 were delivered outside Castile. Flanders was the most prominent location for disbursement outside Castile as a result of the costly war there against the Dutch rebels. Expenditure on the Mediterranean fleet was partly met by the king's Italian tax revenues.

Table 1: Place of Delivery of asientos

a) 1552-1600

Location	Delivery	
	In ducats	In percent
Castile	39,957,384	38%
Flanders	39,479,770	37%
Italy	22,849,892	22%
Elsewhere	3,745,437	3%
Total	106,032,482	100%

b) 1552-1575

Location	Delivery	
	In ducats	In percent
Castile	27,396,282	69%
Flanders	8,247,993	21%
Italy	3,360,913	9%
Elsewhere	529,792	1%
Total	39,534,979	100%

While at different times during Philip's reign the borrowed funds were made available in different locations throughout the empire, repayment took place overwhelmingly in Castile. In our 20% detailed sample of contracts, we find that more than 96% of loan repayments were met from Castilian sources – either tax streams or silver remittances from the Indies. This is strongly consistent with the idea that the Spanish empire, for all its extension and might, was financed by a Castilian economy that was among the strongest in Europe at the dawn of the early modern age (Alvarez Nogal and Prados de la Escosura 2008).

IV. Sustaining Sovereign Borrowing

What happens when a borrower does not pay? Is there punishment in any substantive sense? If so, what form does it take? Does punishment outside the lending relationship occur, as in the case of trade embargoes and military interventions? Or is the country prevented from smoothing its consumption intertemporally? In this section, we discuss what sustained the sovereign borrowing of Philip II.

We first examine who lent to Philip II. If groups of irrational bankers were disappointed sequentially, then default episodes should be followed by massive turnover in the group of lenders. We show that turnover was minimal. Next, we turn to the transfer stop hypothesis presented by Conklin (1998), and demonstrate that a cessation of transfers never occurred – it was a punishment that wasn't. While the Genoese did not transfer funds for the Castilian crown, they failed to effectively punish the king. Other financiers stepped in and offered sufficient transfer services instead. We then show that an alternative interpretation based on reputational effects,

combined with the structure of lending arrangements, can account for the king's sustained access to loans.

Banker Turnover

Braudel (1966) argued that Philip II managed to borrow massively, default often, and pay back little because he repeatedly fooled his bankers. First, it was the turn of German financiers to be ruined, having lent based on the reputation of Philip's father, Emperor Charles V, with whom they shared a personal relationship. Then came the turn of the Genoese, who bankrolled Philip's early years. After the 1575 default, Braudel argued, new money was provided by Spaniards. When these were ruined by Philip's fourth and last default in 1596, he could only turn to the Portuguese.

The traditional story of sequential default and financial ruin requires a fair deal of banker irrationality. Modern-day journalistic references to Philip's defaults often make this point, referring to bank lending as a "a sober business punctuated by odd moments of lunacy. Genoese lenders' indulgence of Philip II of Spain's expensive taste for warfare caused not only the first sovereign bankruptcy in 1557, but the second, third and fourth as well."[15]

As a first step, we examine the idea that successive waves of lemming-like lenders, first from Germany, then from Genoa, and finally from Portugal and Spain entered the borrowing game. We determine the nationality of the bankers in the complete set of 457 loan transactions in our database. The amount of lending by origin of the lender is given in Figure 3. Contrary to these claims, the data show that the composition of financiers was remarkably stable during the second half of the sixteenth century.

[15] The Economist, September 23-29, 2006.

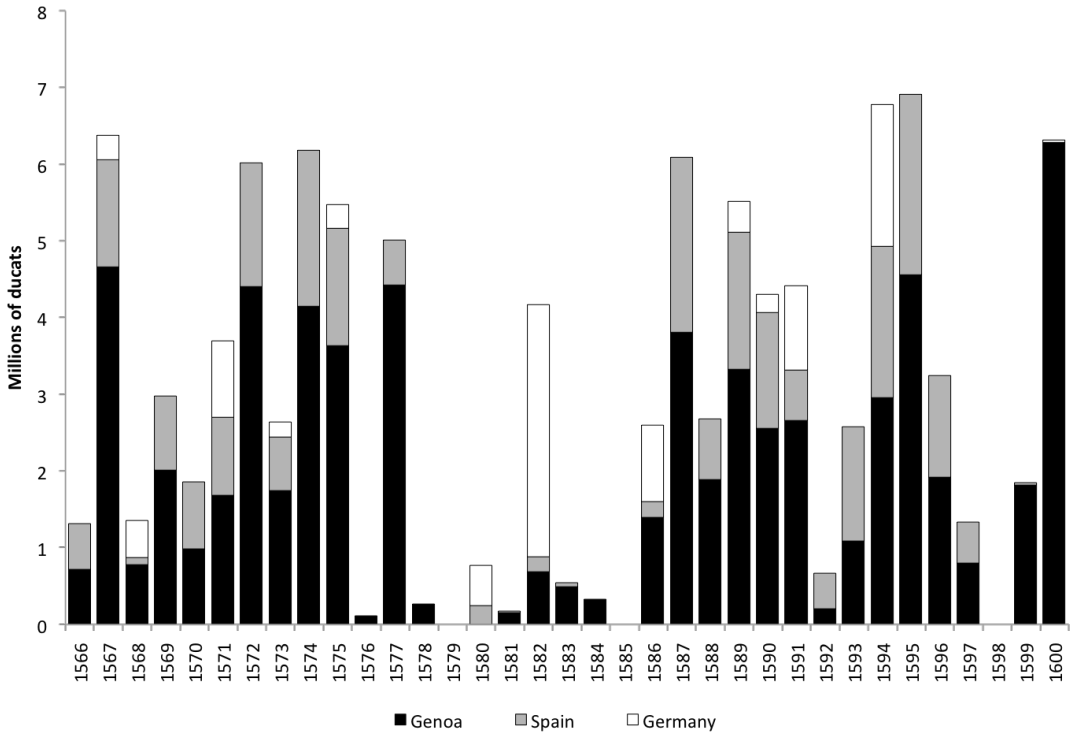

Figure 3: Nationality of lenders, 1566-1600

The Genoese provided exactly the same proportion of loans before and after the bankruptcy, 62.5%. Spaniards did not enter in the last period, contrary to earlier claims in the literature. They were lending for most of the second half of the sixteenth century, and their share actually declined after 1575, from 27.3 to 24.8 percent. The German bankers, who were allegedly burned by the first bankruptcy, were also a continuous source of funding. Their share actually increased after the bankruptcy of the 1570s, from 10.2 to 12.7 percent. There is little evidence to support Braudel's interpretation of lending as a repeated fooling of bankers of different national origins.

Figure 4 shows the composition of lending after the default, distinguishing bankers who had lent to Philip before the third bankruptcy. Immediately after the default, the overwhelming amount of lending came from lenders who had lent to the Spanish king before. In the six years after 1576, fully 90 percent of funds were made available by lenders who had lent before the bankruptcy. As late as 1586, more than 9 out of 10 ducats borrowed by the king came from the same group of bankers who had financed his previous ventures.

As time goes by, the same banking families provide a high but eventually declining share of total funding. As late as 1594, however, over 70 percent of funds borrowed in the short-term loan market come from the same families that had been active before 1576. As total borrowing increased in volume, the share of the old bankers declined somewhat. The correlation coefficient between the share of 'old bankers' and total borrowing is -0.2. Gradual attrition combined with this effect appears to account for most of the fluctuations in Figure 4.

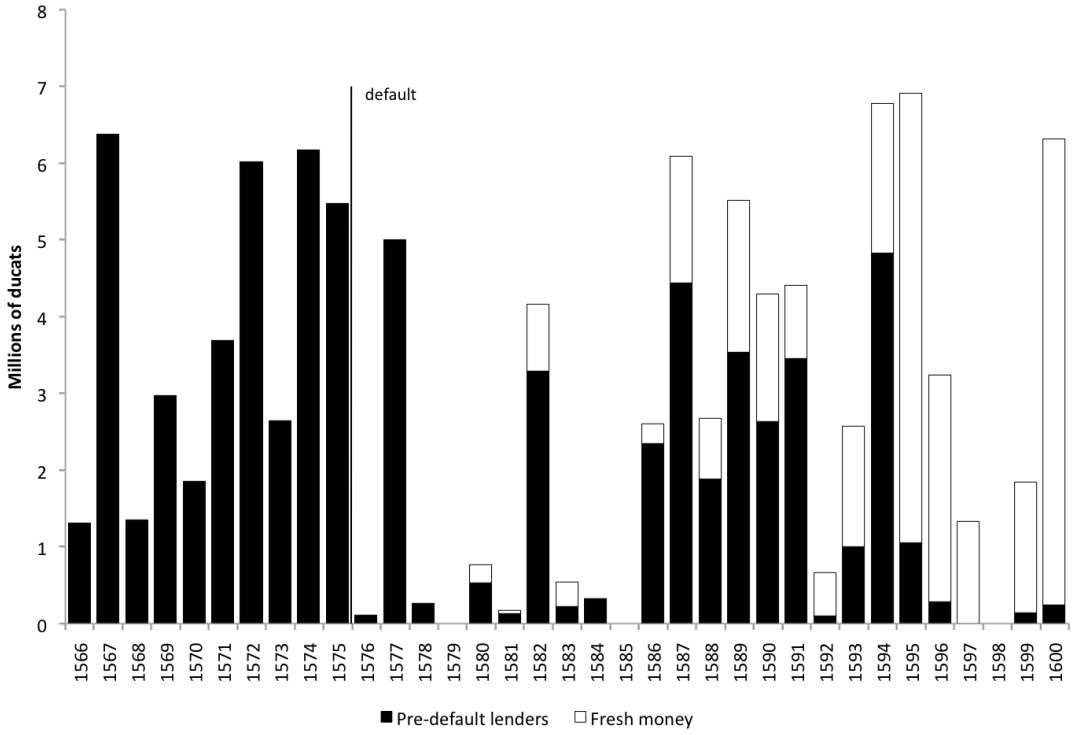

Figure 4: Value of lending by bankers with a pre-default relationship, and of fresh money, 1576-1596

Not all of the funds provided after the bankruptcy came from earlier creditors. A key question is if the frequency of repeat business in Figure 4 is unusually high by the standards of Philip's borrowing. Our data allows us to rule this out. If we define repeat lenders as those who offered funds during one of the last fifty transactions, we obtain a broader, time-varying measure of banker turnover. Since there are 457 transactions during our sample, this is equivalent to examining a moving window containing a little more than the last 10% of loan transactions.

Table 2: Value of repeat lending

Year	Repeat lending	Total lending	% repeat lending
1567	2,057,479	6,465,559	32%
1568	862,338	1,342,573	64%
1569	2,635,439	2,972,428	89%
1570	1,791,884	1,847,884	97%
1571	2,582,594	3,691,307	70%
1572	5,113,067	6,013,067	85%
1573	2,542,702	2,636,035	96%
1574	6,078,038	6,177,371	98%
1575	5,207,780	5,472,220	95%
1576	106,667	106,667	100%
1578	263,326	263,326	100%
1580	526,116	760,480	69%
1581	145,467	165,467	88%
1582	3,471,023	4,158,709	83%
1583	268,000	539,529	50%
1584	-	321,600	0%
1586	2,388,843	2,594,427	92%
1587	5,696,620	6,085,154	94%
1588	2,398,133	2,673,400	90%
1589	4,793,010	5,511,490	87%
1590	3,839,989	4,292,085	89%
1591	4,058,554	4,408,932	92%
1592	655,503	655,503	100%
1593	2,490,383	2,565,383	97%
1594	4,425,388	6,776,862	65%
1595	4,858,768	6,909,154	70%
1596	2,556,799	3,237,365	79%
Total	71,813,908	88,643,976	81%

Source: Archivo General de Simancas, Contadurías Generales, Legajos 86-93

As Table 2 shows, the volume of fresh lending by bankers without a prior relationship was small throughout. On average, 81 percent of the funds provided came from bankers who had lent during one of the last 50 loan transactions. In the run-up to the bankruptcy, the ratio fluctuated between 32 and 98 percent. If we compare the eight years before and after the 1576 suspension, we find that 79 percent of lending was repeat business beforehand; afterwards, it was 80 percent. A t-test for the equality of the percentage of repeat lending yields a test statistic of 0.04, which is not significant at any conventional level.

Repeat lending continued across the bankruptcy, and much of Philip's borrowed money came from bankers who had lent to him before 1575. The data in Figure 4 and Table 2 establish that, conditional on lending being observed, bankers with earlier

connections made large contributions to total volume. It is nonetheless possible that many others, whose expectations had been disappointed by the bankruptcy and the haircut imposed by the *medio general*, decided to stop their lending activities. To examine this issue, we plot the percentage of bankers lending in any one year who will not lend again to Philip (and the volume of financing provided) in the years covered in our database. Figure 5 gives the results.

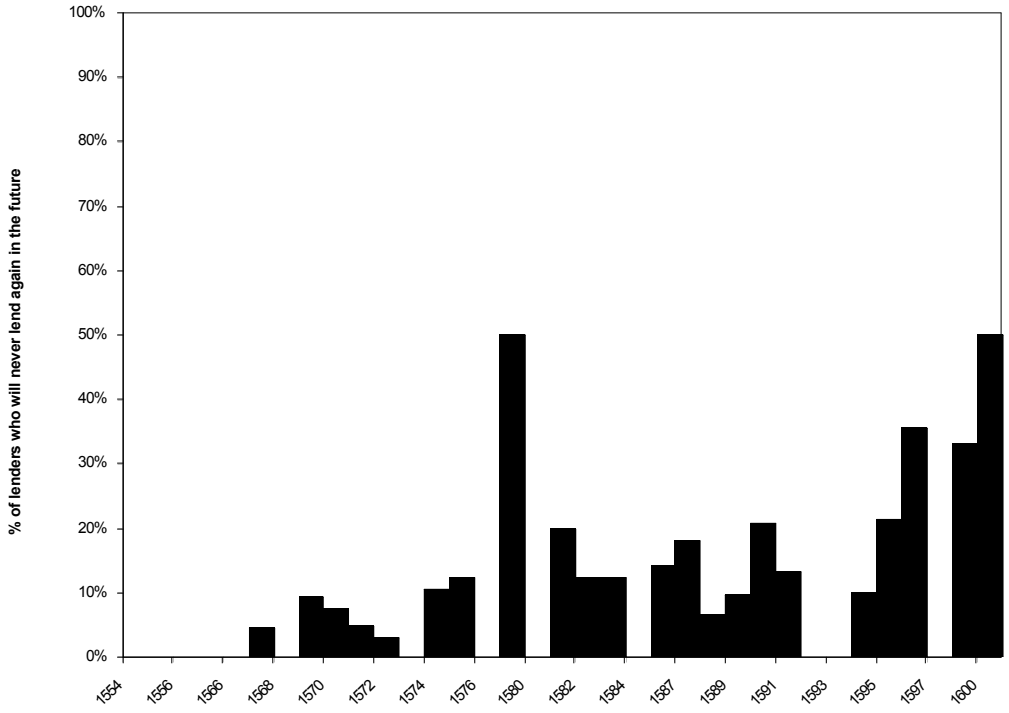

Figure 5: Lenders who will never lend again to Philip II (percentage of all lenders in any one year)

Few lenders terminated their lending relationship with Philip II. Conditional on having lent in a single transaction, the chance that the same banker will enter into another contract is 88 percent. Since our dataset ends in 1600, those lending for the first time later in our sample period have less of a chance to enter into repeat business. This explains the gradual increase of the proportion in the 'never again' category over time. Crucially, the period before the bankruptcy of 1575 does not show a spike in bankers who exit our sample subsequently. Bankers who lent before the bankruptcy were *less* likely to quit than those who lent immediately afterwards (6% vs. 10% in the five years before and after.[16]

[16] The spike in 1578 of 50% is the result of only two loans being taken out – one of which was with a lender who did not lend again.

The 1575 bankruptcy was the biggest default in Philip II's reign. Nonetheless, lenders who had established a business relationship with Philip before 1575 were not likely to cut it afterwards. Repeated lending by the same banking family made up a steady proportion of total funding. Turnover amongst the group of lenders maintaining a lending relationship was constant throughout our sample. Few bankers exited the business, and their proportion did not rise after the events of 1575. These results suggest that, by and large, the same financiers lent to Philip before and after the 1575 bankruptcy. The folly of bankers, lured into lending by the king, only to be ruined by default after default, cannot account for the behavior we document.

A first look at Table 2 could suggest that the years *following* the medio general of 1577 only showed low amounts of lending. Is there reason to think that access to substantial credit suffered after the default? We argue that this is unlikely, for two reasons.

First, Philip came off the settlement with a fresh loan for 5 million ducats, provided by the Grimaldo, Lomelín, De La Torre, Centurión, Spinola, Grillo, Cattaneo, Lercaro and Gentil families. This is similar to the peak volume of pre-default lending. Second, tax revenues from the ordinary sources and from the silver were unusually strong in the years 1576-1581. Figure 6 compares annual tax revenues with the pre-1575 trend. Total revenue grew from a little more than 3 million ducats in 1555 to over 14 million in 1595.[17] While revenues grew at a steady rate before 1575, the fiscal and military crisis spurred rapid revenue growth thereafter. This trend was reinforced by a windfall of silver revenue. For example, in 1577, the king's fifth from silver imports reached 2.2 million ducats. The average in 1570-75 had been a mere 0.8 million. A big tax increase agreed by the Cortes also improved the Crown's fiscal position. Part of the increase was front-loaded, leading to a temporary spike in tax collection. Sales tax revenue grew from 1.3 to 3.7 million ducats in 1576 and 1577, before settling down at a new annual rate of 2.7 million – twice its pre-default rate.[18]

[17] Since inflation was eroding the value of silver, the real increase was smaller – a plus of 76% over the period instead of 270%. Cf. Drelichman and Voth (2007).
[18] The data is from Drelichman and Voth (2007).

Overall, lending declined by 0.9 million for the period 1576-82, while revenues surged by 2.1 million. It is therefore hard to conclude that the Crown found itself shut out of credit markets after the *medio general*. The observed decline in borrowing was in all likelihood the result of unusually strong tax revenues driven by windfalls from silver and the rise in taxes negotiated with the Cortes.

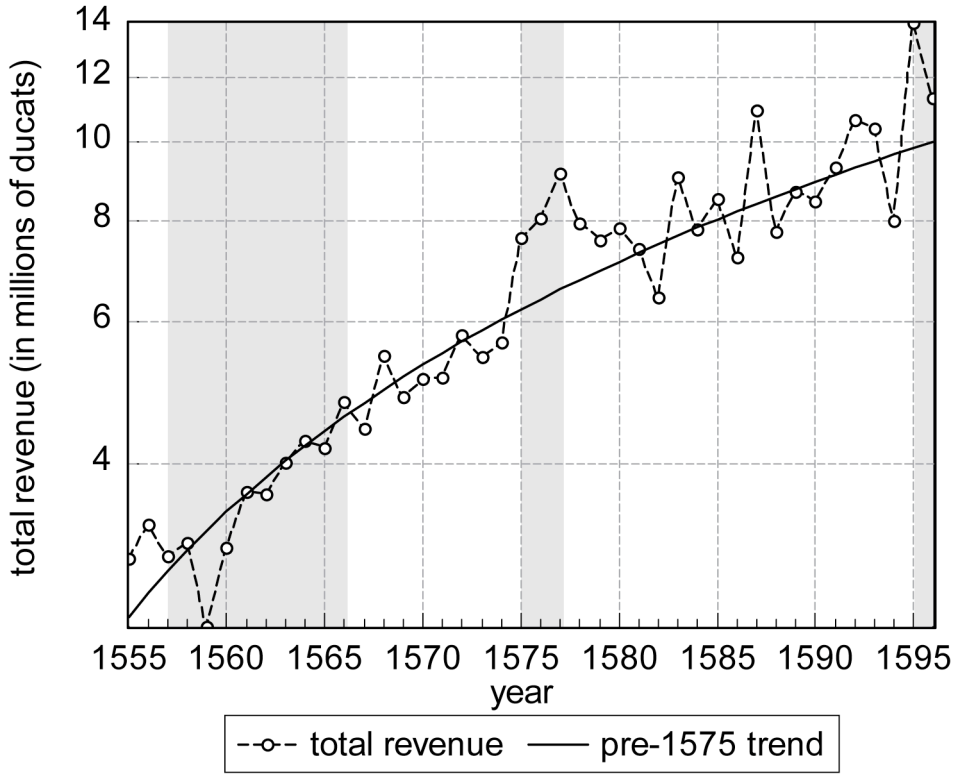

Figure 6: Crown revenue, 1555-1596, trend and actual values (shaded areas=defaults).

Stopping Transfers

Conklin (1998) concludes that sanctions sustained lending to Philip II. This is in line with the arguments in Bulow and Rogoff (1989). The Genoese punished the Spanish king by refusing to transfer funds to his armies in the Netherlands. Military disaster ensued, the king settled with his bankers, and the penalty was revoked. There is one crucial shortcoming in this tale – the penalty was never effective.

To be sure, the king cared deeply about the outcome of the Dutch war. Under the Duke of Alba, Spanish forces mounted a major offensive to subdue the rebels in 1570-75. Expenditure for the war ran at close to 2 million ducats per year, at a time when total revenue was no more than 5-6 million. According to Conklin, Philip had few, if any, options to transfer funds besides resorting to the Genoese. No other banker would have had the ability to transfer the amounts required by the Crown. Physically shipping silver would have been too dangerous. Sending coins through hostile France was impossible; transfer by boat through the channel could be hazardous, as evidenced by earlier gold transfers that had been seized by Elizabeth of England;[19] and the Spanish road from Italy to the Netherlands was considered too dangerous and expensive.

Since transfer operations are separate from credit operations, the Genoese could have continued to transfer funds even though their loans were in default. By refusing to do so, according to Conklin, they imposed a severe penalty:

> "It is abundantly clear, however, that freezes on lending and on transfers were forcefully imposed from 1575 to 1578. The two freezes were separate measures: the freeze on transfers could have been eased even as new loans were denied, since the king could have simply paid silver up front for new transfers. However, both measures were imposed, with the consequence that the Crown's capacity to make war beyond its borders was seriously impaired until it reached an agreement with its lenders." (Conklin 1998, p. 492)

The crucial problem with the penalty argument is that transfers continued at a healthy pace during the suspension of payments. There is no evidence that the Genoese

[19] Parker (1998).

'transfer embargo' had any effect on the availability of funds. Table 3 shows a time series of transfers to Flanders between 1566 and 1577.[20]

Table 3: Amounts transferred to Flanders, in current ducats.

Year	Transfers
1566	106,667
1567	1,906,235
1568	437,338
1569	315,733
1570	276,107
1571	0
1572	400,492
1573	767,702
1574	1,574,755
1575	2,318,813
1575 (d)	108,422
1576 (d)	889,988*
1577 (d)	1,192,933

(d) indicates amounts transferred after the suspension of payments and before the *medio general*.

*In addition to this amount, Conklin (1998, note 11) reports that the Crown physically transported slightly under 400,000 ducats to Flanders in 1576.

Source: Archivo General de Simancas, Contadurías Generales, Legajos 86-93; Vázquez de Prada ; Lapeyre (1953).

The suspension of payments decree was issued on September 1, 1575. Following this, the Genoese did in fact stop all lending and transfers. Other bankers did not lend, but they did transfer funds.[21] In particular, the Fugger were ready to issue letters of exchange on their correspondents in Flanders if they received silver up front.

In total, German and Spanish bankers transferred 2.2 million ducats on behalf of Philip II during the two years of the suspension. If one adds the 400,000 ducats the Crown transported itself to Flanders, this yields an average of 1.3 million ducats per year. In the three years previous, remittances ran at 1.55 million per annum; if the four previous years are considered, the yearly average was 1.2 million. Viewed from this angle, the suspension of payments had virtually no effect on the Crown's ability to transfer funds to its troops. Transfers in 1576-7 were only low when compared to the peak remittances of 1574 and 1575. Variability from one year to the next, however, was substantial. Only longer-run averages contain information about 'normal' rates of

[20] Our coding of the *asientos* in the archive of Simancas allows us to separate transfers to Flanders from those to other destinations, which were not part of Conklin's penalty.
[21] Conklin (1998) uses "Genoese" to designate all bankers.

transfer. To the extent that remittances were somewhat lower in 1576-7, it is not clear that inability to transfer was to blame. In the two years before the bankruptcy, the king had received loans and silver revenue to the tune of 13 million ducats. In the two years after, he only had access to 3.3. Ordinary revenues rose by approximately 2.5 million ducats. Free cash flow was therefore down by more than half, easily enough to explain the decline in transfers. As the liquidity crunch eased, transfers revived. In 1577, when silver revenue reached a record 2.2 million, payments to Flanders increased rapidly even before the *medio general* settled old claims by the creditors.[22]

During the years in which he had no access to credit, Philip provided funds to his military commanders on a similar scale as in earlier times. If there was a transfer embargo by the Genoese, it had little bite. To explain why lending to Philip II was sustainable, we need to turn elsewhere.

The Genoese Coalition

We now show that the Genoese provided funds in overlapping groups of bankers. This created a de facto network or alliance of financiers, which would act as one and effectively formed a 'lenders coalition'. They did so when the default of 1575 came. Since Philip II could not do without the lending capacity of this Genoese network, he was eventually forced to settle.[23] Cutting him off from further loans was sufficient to enforce contracts.[24] The necessary condition for this to occur is that lenders coordinate their actions, and that older debts are senior to new ones. If these conditions are met, existing lenders have monopoly power even if there is a competitive fringe of alternative borrowers, as in the model by Kovrijnykh and Szentes (2007). More broadly, we interpret the behavior of the Genoese and the sustained lending as evidence in favor of models emphasizing the role of reputation in sovereign lending.

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[22] Lovett (1982).

[23] Other examples of historical network analysis include Jobst and Flandreau (2005) and Carlos, Neal and Wandschneider (2007).

[24] We therefore take issue with the claim in Alvarez Nogal (2003) that lenders did not act as a cartel. This is what happened de facto under Philip II. We cannot speak to the nature of lending relationships during the longer period with which he is concerned. We do not explain why the king would not repudiate his debts and replicate the consumption smoothing by placing deposits with other bankers. It is worthwhile noting that no early modern sovereign ever engaged in such a transaction.

Much lending took place in simple bilateral contracts between the king and an individual banker. In numerous cases, however, lenders joined forces to provide funds. Approximately one third of all transactions involved more than one banker. To take the dynastic nature of lending relationships into account, we focus on contracts that involved more than a single banking family. Some of these had ties through intermarriage, like the Grimaldo and Lomelín families.[25] We count any two banking families that lend at least once to the king jointly as connected.

Some of the co-lending relationships involve multiple loans by a stable group of bankers. For example, Lucián Centurión and Agustín Spinola lent together no less than 7 times in 1566-7. In other cases, the co-lending only occurred once. By tracing the family connections through joint lending, we can examine the direct and indirect connections that financiers established. Most of the network members were engaged in repeated interactions with each other. The Grimaldo and Spinola families often co-lent, as did the Judice and Doria and the Centurión and De Negro. One family stands out as the 'spider in the web' – the Spinola. They had no less than 16 other banking families as partners in at least one of their transactions. In the language of network analysis, their 'centrality' is very high. The next most central family, the Doria, only lent together with seven other dynasties. The Doria and the Spinola networks were linked, both directly, through loans provided by the two families, and by both families co-lending with the Grimaldi, the Lercaro, the Marín and the Maluenda. All in all, the list of names on the asiento contracts with the Spanish crown reads like a Who-Is-Who-In-Genoa – the Spinola and Doria had played a leading role in Genoese politics since the 1270s. Andrea Doria reinstituted an aristocratic constitution in the first half of the sixteenth century. Battista Spinola served as Doge in the 1530s. Figure 7 provides an overview of the network's structure.

[25] The text of the medio general specifies that Esteban Lomelín is Nicolao de Grimaldo's son in law. AGS, Consejo y Juntas de Hacienda, Libro 42.

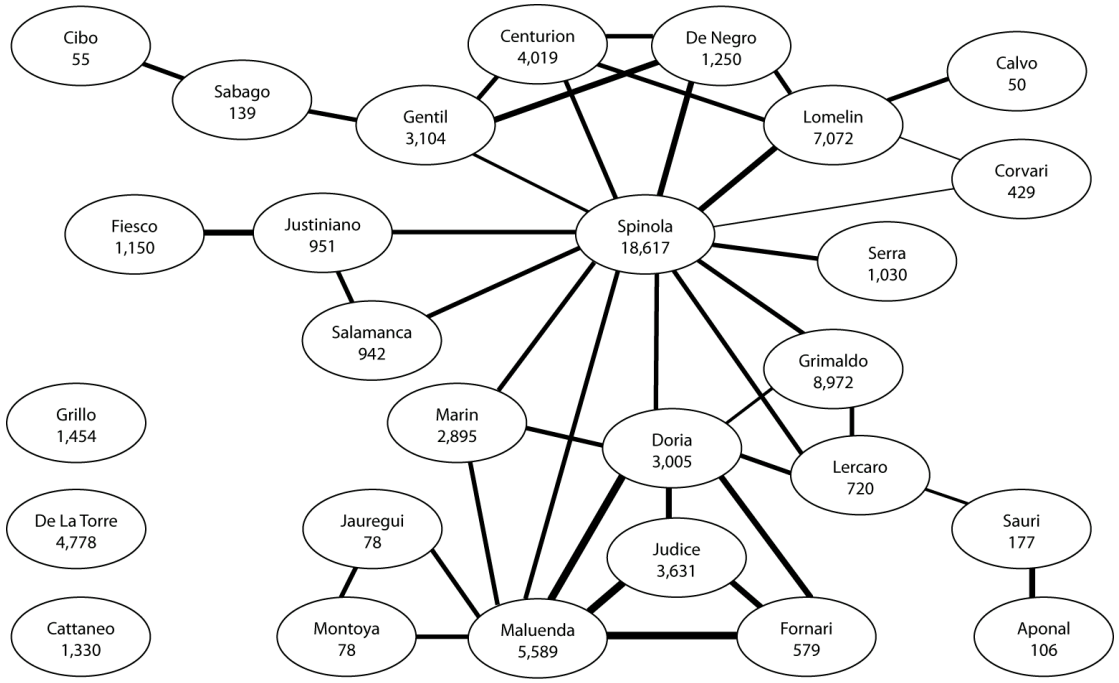

Figure 7: The Genoese network[26]

Not all the bankers in our sample were connected with each other, either directly or indirectly. We call all transactions by bankers who co-lent in the past, either through joint loans or through sharing business partners, network lending. Bankers in the network accounted for a disproportionate share of transactions and lending volume. While there are only 27 families in the largest network we identified, out of a total of 68, they accounted for 67 percent of principal extended to the king, and almost the same proportion of all transactions (Table 4).

[26] The numbers below family names indicate total lending in thousands of ducats. The thickness of connecting lines indicates the average size of joint loans on a log scale. The Grimaldo, Lomelín, De La Torre, Centurión, Spinola, Grillo, Cattaneo, Lercaro and Gentil families are all linked in the four contracts stipulated in the *medio general*; those links are not drawn for expositional clarity – hence the three unconnected families on the left hand side. The links established in those contracts are the strongest in terms of capital involved.

Table 4: Network lending

	number of		
	families	transactions	volume lent*
Network	27	308	71.4
Non-network	41	149	34.6
Total	68	457	106
Network	40%	67%	67%
Non-network	60%	33%	33%

Source: Archivo General de Simancas, Contadurías Generales, Legajos 86-93
Note: * volume lent is in millions of ducats.

Over time, the role of the network declined slightly (Figure 8). Before the bankruptcy of 1575, network members accounted for 72 percent of lending; after it, their share fell to 64 percent. There is only one year – 1582 – when the king borrowed substantially, but without funds from network members. The 4 million ducats lent in 1582 can be thought of as an upper bound on what non-network members had to offer.

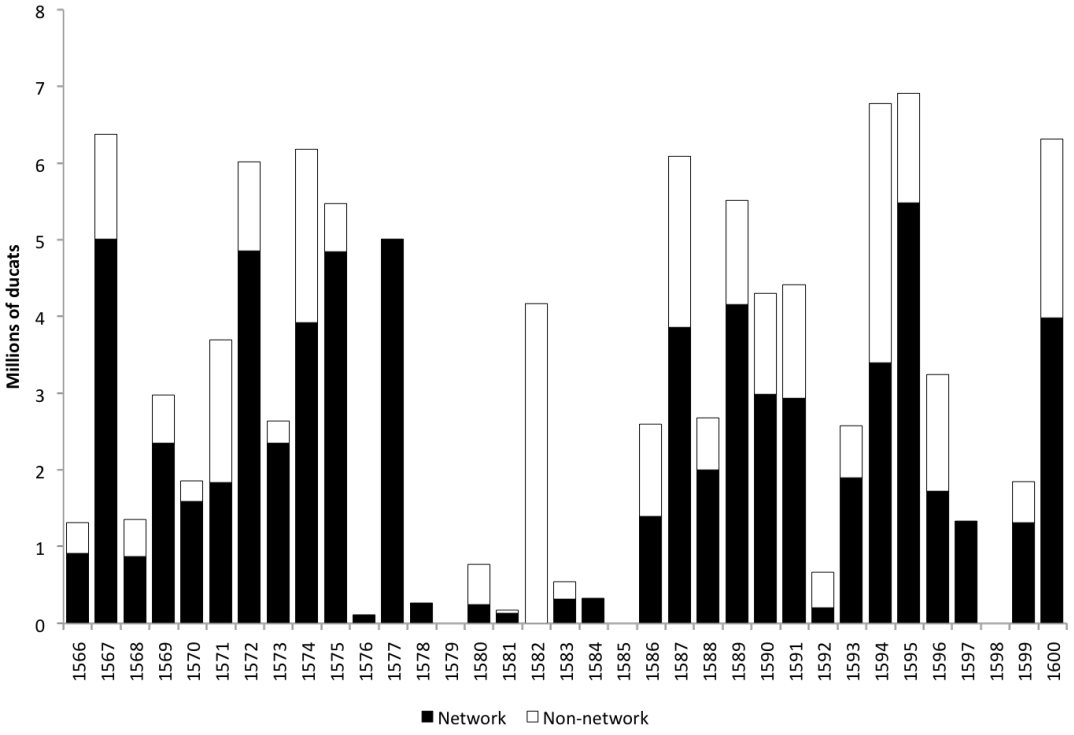

Figure 8: Lending by network members, 1566-1600

There is also ample anecdotal evidence that the lending network centered on the Spinola family 'acted as one'. During the debt renegotiations in 1576-7 and 1596-7, the representatives of the king repeatedly tried to cut side-deals with individual

bankers.[27] They most notably targeted Spinola family, the monarchy's largest lender and the central actor in the network, attempting to split it from the coalition with promises of recognition of its entire debt. Lorenzo Spinola in 1576 and Ambrosio Spinola in 1596 both engaged in discussions with the Crown in order to secure their exemption from the decree and provide new loans. Those negotiations utlimatey came to naught, as pressure from the other network members convinced them not to conclude a separate agreement (Lovett 1982; Sanz Ayán 2004). These attempts to split the coalition and combine fresh borrowing with preferential treatment on old debts did not succeed. The ties woven by the co-lending in the network (or reflected by the nature of overlapping loan contracts) were strong enough for the bankers to 'say no' at a time when the value of a marginal loan must have been exceedingly high for the Spanish Crown.

Only one family managed to secure preferential treatment in both the 1575 and 1596 bankruptcies – the Fuggers. They were not members of the Genoese coalition, and hence the network's incentive structure had little effect on them. While the details of the accords between them and the monarchy remain murky in the historiography, it is possible that they suffered a smaller haircut than the rest of the bankers, or no haircut at all.[28] We argue that their preferential treatment was related only to the transfer services they provided. In particular, they did not provide a single ducat of fresh lending during the payment stops, and hence did not violate the Kletzer-Wright setup.

As we have shown above, the Fuggers continued to provide transfer services for the Crown whenever they received silver upfront. These transfers could not have been provided by a banking family that held loans in default. Their incentive would have been to keep the upfront payment from the king rather than deliver it in Flanders (note that this does not require any Conklin-style sanctions). The king, therefore, needed to keep current with at least one banking family. The Fuggers, who were the only family outside the Genoese to have access to a large network of correspondents, were the obvious choice.

[27] Ulloa (1977), Lovett (1980), Lovett (1982), Sanz Ayán (2004).
[28] The sources disagree on the treatment of the Fuggers. Ulloa (1977) says that in 1575 they were exempted from the decree – meaning that they suffered no haircut – while Sanz Ayán (2004) reports they were not. It is nonetheless certain that they continued to negotiate separately with royal officials long after the network members had consolidated their common front.

The competitive fringe

The Fuggers, together with 40 other families, did not belong in the Genoese network, and hence constituted what we call the competitive fringe. In some traditional models that emphasize reputational lending the presence of outside competitors can be enough to break down the sustainability of lending. This did not happen in sixteenth-century Castile. The king's smoothing needs were so large that they could not be met without the 70% of total funds provided by the Genoese network. Only in two years could the competitive fringe lend more than 3 million ducats – the network did so in nine. The fringe reached its peak lending in 1582 with 4.1 million ducats. That year, the Fuggers alone provided 3.2 million ducats – and then withdrew from the market for the next three years. The network lent over 5 million ducats in 1567, 4.8 in 1572, 3.9 in 1574, and a further 5 in 1577 at the resolution of the default. Even with the powerful Fuggers, the competitive fringe simply did not have enough resources to meet the king's demands. We therefore interpret the structure of the credit market as in the model of Kovrijnykh and Szentes (2007), who show that lending can be sustained in the presence of a competitive fringe as long as a dominant borrower has a degree of monopoly power.

VII. Conclusions

Sovereign lending is always sustainable as long as there is only one provider of smoothing services (both lending and deposit banking). This is true as long as smoothing consumption has substantial value for the government. As Bulow and Rogoff (1989) note, if there is no additional lender that can offer sufficient smoothing services, lending can occur even in the absence of penalties. Philip II had access to more than one lender. However, because of the specific way in which financiers acted and structured incentives amongst themselves, the largest and most important bankers acted as if they were a single financial entity – a 'lenders coalition'. We argue that, effectively, Philip II only had access to less than two lenders. This implies that we can account for the Crown's access to finance with the reputational mechanisms outlined in Eaton and Gersovitz (1981) or in Kletzer and Wright (2000).

The fiscal and military history of the period provides evidence in favor of this argument. Conklin (1998) concluded that lending to Philip II was sustained by the continuous threat of punishment. Without a war on the king's hands in which he needed the transfer services of the Genoese, lending relationships may well have collapsed. Because of this, Conklin argues, the bankers had an incentive to stop lending just at the point in time when victory was within the grasp of Philip's armies in Flanders. This interpretation is problematic since lending continued at a high pace throughout Philip's reign, even during periods when the theatre of military operations did not require transfer payments. With warfare a continuous feature of the king's reign, however, the need to anticipate revenue and smooth consumption was crucial.

The Genoese created a coalition through multiple overlapping lending relationships. This ensured that they could act like one large banking house when it came to the crucial issue in sovereign lending – what to do in case of default. In addition, there was a fringe of smaller financiers lending to the king. The fringe's resources were insufficient to replace the Genoese, and offer the smoothing services the king needed.

The crucial test for our hypothesis is the default of 1575. In contrast to the argument in Conklin (1998), we find little evidence of a transfer stop. The Fuggers and other bankers continued to offer transfer services as long as they were paid up-front. What ensured a quick settlement with the bankers was the fact that the default was seen as excusable by the bankers. An unfortunate confluence of military necessities, combined with weak tax and silver revenues, made a rescheduling necessary. As soon as revenues revived, the king quickly settled. We conclude that, at the dawn of sovereign debt financing, reputational mechanisms and the forging of effective bankers' coalitions were sufficient to sustain lending.

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