

Asientos as consolidation instruments in the public finances of a pre-modern state: from disparate revenues in Castile to steady streams in Flanders

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Abstract

Philip II, striving to preserve an inherited empire of dispersed territories and under the constraints of pre-modern public finances, relied on Genoese merchant-bankers to channel disparate sources of revenues in Castile and from the Americas into steady streams of cash deliveries for military operations, especially in Flanders. The multiple services, exchange rate conversion, collection of fiscal debt to the king, steady cash deliveries, refinancing of short-term into long-term debt were formalized in contracts, *asientos*, that, contrary to previous studies, do not fit the sovereign debt model. We analyze these activities in a representative contract. Other examples are provided.

Key words: Pre-modern state, flexible debt contract, sovereign debt, exchange rate, asientos, juros, archival documents.

JEL classification: N01, N13, N23, N43.

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Financial contracts between Philip II of Spain (1556-1598) and Genoese bankers, *asientos*, have been studied from the point of view of "sovereign debt." This view is, to a large extent, incorrect and misleading. In previous work (Álvarez-Nogal and Chamley 2014) we showed that the financial intermediation from savers in Spain to loans to the Crown was a critical component of the *asientos*. As a consequence, the most celebrated financial crisis of 1575-1577 was not a default on sovereign debt (Conklin 1998; Drelichman and Voth 2010), but the result of the struggle between Philip II and the Cortes. When the main cities of Castile, which were represented in the Cortes, rejected a tripling their tax contribution, Philip II stopped the payments to the Genoese bankers, thus activating a freeze of the domestic credit market, which triggered the stop of the commercial fairs. The economic crisis that followed pressured the Cortes to accept, after more than two years, a doubling of their tax contributions. Philip II then immediately resumed payments to the bankers who he had against legal proceedings during the crisis (Álvarez-Nogal and Chamley 2016).

The recent literature has focused on the features of *asientos* that seem to be easily quantifiable in some "coding."³ However, the data on the payments between the Crown and bankers can be interpreted only through a careful reading of the text of the contract because an *asiento* is not just a loan contract. It contains multiple provisions that provide critical information on the state of financial markets and on the public finances of Philip II. In this paper, we highlight one essential aspect of *asientos* that has been ignored in the literature, the consolidation of sources of revenues that were widely dispersed and sometimes small in the fragmented fiscal system of Philip II into strong and steady streams of disbursements for the army in Flanders.

³ To this day, there is no reliable series of the stock of the debt through *asientos*. As will be clear after reading the evidence that we present here, a tabulation of this debt would require a major effort in reading all the *asientos*. In Drelichman and Voth (2010, Figure 3 p. 821), the loan component of *asientos* is near or equal to the total amount of the contracts between 1587 and 1591, and it is equal to 100 percent of all the contracts for each year between 1592 and 1596. Álvarez Nogal and Chamley (2014, Figure 1) show that in the Maluenda contract signed in July 1595, because of the banker's sales of *juros*, the Crown was debtor of the banker only for the last two monthly disbursements (about 15 percent of the total amount of the contract). Compare also our interpretation of the Fiesco contract in this paper with Drelichman and Voth (2015).

The channeling of the dispersed sources of revenues into steady streams has to be put in the context of the fragmented realm of Philip II (Grafe 2011; 2013; 2015). He had inherited from his father Carlos V, in addition to Spain, an array of territories, in Italy, in the Eastern part of what is now France, and Flanders which include today's Belgium and Netherlands. These lands had not been gathered by conquest but through inheritances, marriages, births and deaths in the "game of thrones" that was played so skillfully by the Habsburg family (Elliott, 1965). Flanders, perhaps the most prosperous region of Europe, had welcomed the new king Philip II as a protector against the ambitions of the king of France. However, in the 1560s these Northern provinces initiated a war of independence that would last almost 80 years. These territories and the overseas empire over the recently discovered New World and the Philippines made Spain the superpower of its time.⁴

In attempting to maintain his rule over his empire, Philip II faced a growing set of military commitments at a time when their cost was greatly increased by the "military revolution" (Parker 1988; Thompson 1976). Most of the military spending took place away from the revenue base. Steady revenues came from Castile, with taxes on consumption and on trade. The significant income from the Americas was highly variable. It arrived once a year, around the month of October, through a convoy, the fleet, and was subject to the external shocks of the weather and attacks by the English.⁵

The fiscal structure and administration had not grown out of traditional practice to meet the new spending commitments. In the half century since the death of Isabella I, the scale of the budget had increased from 1.15 million to 4 million ducats (Ladero Quesada 2009, 672-676 and Ulloa, 1977). while the administration had not changed and was controlled by officials that had been university-trained in law. The role of the central administration was essentially that of accountants through the *Contaduría Mayor de Cuentas* in Madrid. By tradition, the tasks of enforcement and collection were decentralized. For example, the collection of the *alcabalas*, a sales tax, was entrusted to treasurers chosen by cities.

⁴ Thompson estimates the the annual revenues of Philip II were about seven times those of Elizabeth I in England (Thompson 1992, p. 10).

⁵ Álvarez-Nogal and Chamley (2014) analyse the structure of revenues and we show how this decentralization of internal revenues provided financial benefits to the Crown as it enhanced the safety of the long-term public debt, the *juros*.

Funds needed to be transferred from the multiple domestic revenue sources to distant and steady expenditures. At the same time, no real separation could be made between the flows of transfers and credit. The Genoese bankers came in as the experts in these operations. They had built experience over centuries in international markets and in the collection of scattered revenues (Felloni 1971) in an empire of trading posts in the Mediterranean Sea and up to the Black Sea. The father of Philip II, Carlos V, had already used their services (Carande 1943) but he had essentially relied on the Fugger because his main military activities took place in the Holy Roman Empire especially in the Germany undergoing the Reformation. When Genoa saw the opportunity to establish a strong relationship with the Spanish monarchy, Andrea Doria broke his alliance with the king of France and offered his fleet of galleys to the Emperor in 1528 (Pacini, 1999). After the split of the empire of Carlos V, Genoa was ideally positioned in the new geopolitical triangle of Philip II between Castile, Flanders and Italy. Furthermore it provided the harbor for the beginning of the “Spanish Road” that led to Flanders (see below).⁶ Under Philip II, Genoese bankers gained a dominant position in financial affairs of the kingdom (Ruiz Martín 1968) and they became the indispensable money men,⁷ whose services were formally set in contracts, *asientos*.

We focus on an *asiento* that was signed on April 3, 1591 between the Crown and a Genoese banker, Tomás Fiesco⁸ for 340,000 ducats. To put it in perspective, all *asientos* of the same

⁶ The *Casa di San Giorgio*, founded in 1407, implemented a consolidation of the public debt with equity, an operation that started the financial revolution in England only three centuries later (Felloni 2010). The same institution had the power to collect taxes and was therefore well informed on the practices of the collection of a variety of tax dues.

⁷ The growth of the financial market in England during the 18th century was not an exogenous or political event. It depended on the activity of money men who were driven by profit opportunities during multiple wars (Dickson, 1967).

⁸ Tomás Fiesco was an important figure, a merchant-banker with a long experience in financial affairs between Madrid and Flanders. Philip II intending to avail himself of his knowledge and reputation to have better access to international credit markets, commissioned him as *Factor General del rey* on February 26, 1592 (Lapeyre 1953; Carlos Morales 2008; Doria 1978; Dubet 1998). That charge (created by Philip II in 1556) was meant as a substitute for bankers and *asientos* when dealing with the credit market and money transfers (Ulloa 1977, p. 137; Hernández Esteve 2010, p. 87). In order avoid some of the financial troubles of his father, Philip II had created at the beginning of his reign in 1556 three *factores*, in Castile, Antwerp and Genoa, respectively, each with a strong experience in financial matters. Because of coordination problems, these offices were abandoned in 1560 and the charges had been vacant (Hernández Esteve 1984, p. 86-105). The project was resumed with Fiesco as a unique *factor*. By putting him in charge of all financial dealings with the bankers, Philip II would avoid separate negotiations with different bankers, especially when some *asientos* dealt with arrears on previous contracts (Dubet 2000). Unfortunately, Tomás Fiesco died in Madrid a year later, in September 1593 (Doria 1978).

year are presented in Appendix A. There were 25 of them for a total of about 5.7M ducats. There were only three *asientos* that were larger than the Fiesco *asiento*.⁹ We also discuss the evidence of this contract in relation with other contracts in the same year. In the contract of Fiesco we identify here seven types of financial services:

1. *The transformation of scattered revenues in Castile into large stable streams of expenditures in Flanders (mesadas)*: The central function of the contract was to fill the gap between the military expenditures in Flanders that required steady flows of disbursements and the myriad of revenue sources in Castile, indirect taxes that were managed by cities, farms, sales of offices and lands, etc..., in addition to the highly variable inflows of silver from the Americas. The merchant-banker was committed to deliver constant monthly payments, *mesadas*, over a period of about a year. These payments had to be reliable and steady for the pay of the army. The revenues in the domestic base were fragmented in numerous dues that were legacies of previous obligations and often controlled by local authorities. Some of them were mortgaged on previous liabilities. Under Philip II, there was no central collection of revenues and no central authority for the enforcement of the collection. We have seen that the royal administration focuses on the monitoring of the collection.
2. *Currency exchange*: The banker disbursed cash in Flanders, in a currency that was used by the army, Italian escudos, and was repaid by the king in the currency of Castile, the silver real. The contract sets a fixed exchange rate for the repayments by the Crown. The banker takes all the risk of the fluctuations of the exchange rate.
3. *Transfer of funds*: The first payments by Fiesco in Flanders were just a transfers that were covered by simultaneous payments of the Crown, with no interest. These transfers amounted to about one third of the contract.
4. *Credit*: For two thirds of the contract the matching of expenditures and revenues required intertemporal transfers most of them in the form of loans from the bankers. In the Fiesco contract, the mean maturity of these loans is about six months.
5. *Contingent clause on the fleet and flexibility*: The revenues from the Americas were highly variable as the silver came through an annual convoy that was subject to the external shocks. In addition, the various fortunes of war may have also required some flexibility for expenditures. A contingent clause in a contract took this variability into account.

⁹ At the time, the weekly income of an unskilled worker was a little more than one ducat. A soldier of the Great Armada received 4 ducats per month and a sailor 3 ducats. The Fiesco contract refers to a daily wage of 1.25 ducats when legal help is required.

6. *Debt refinancing into long-term annuities*: An accumulation of short-term shocks on the budget results in a permanent shock that according to the “tax smoothing” theory, requires a long-term fiscal adjustment (Barro 1979, 1987; Chamley 1985). These were absorbed by long-term annuities, most of them redeemable, tradable, either perpetual or for a lifetime of one or two people. The issuance of these annuities was the business of financial specialists and who could be in a better position than the Genoese bankers? An *asiento* was thus a natural vehicle to refinance short-term debt into long-term debt (Álvarez-Nogal and Chamley 2018). Many contracts included a clause by which the banker could get reimbursed through the sale of long-term annuities. These clauses took the form of an option that could be exercised by the banker and thus added flexibility to the contract. The imbedding of a such a refinancing option of the debt at lower interest in a large contract with financiers preceded by a century and a half the refinancings in England that were managed by the state, sometimes with great difficulties (Chamley 2011).
7. *Other financial services*: As an example of services, Tomás Fiesco was put in charge of settling old debts of the Crown with several merchant-bankers through the sale of long-term annuities.

I. The overall structure of a contract

The main purpose of the contract with Tomás Fiesco, hereafter TF, which was signed on April 3 1591, was to generate a steady flow of monthly cash disbursements, *mesadas* (month is *mes* in Spanish), to the army in Flanders. In this task, it is representative of the large *asientos* after the financial crisis of 1575-1577. The disbursements are specified at the beginning of the 24 pages contract, in one page and a half. The main business of the contract is the specification of multifarious sources that feed these *mesadas*, and a number of provisions to deal with difficulties in recovering these sources.

After an initial cash transfer, with no credit, Tomás Fiesco had to make constant *mesadas* from May 1591 to January 1592 (subject to some contingency to be analyzed below). The total amount of the cash deliveries (which include a lump-sum transfer in April 1591) is for 300,000 Italian escudos, 200,000 to be disbursed in Flanders (Antwerp, Dunkirk, Lille or Namur), and 100,000 in places chosen by TF either in the same cities of Flanders or in Burgundy



(Besançon, Gray), or Savoy (Chambery, Monluel).¹⁰ The Italian escudo was a standard currency for disbursements to the army in Flanders.

The merchant-banker will be paid in the currency of the revenues of Philip II, the Castilian real. Accountants used the ducat and the maravedi as units of account. Hence, immediately after the specification of the disbursements in escudos, the contract converts them in ducats at a fixed exchange rate, 300,000 escudos into 340,000 ducats. We will show later that the constant contract exchange rate overvalues the escudo in comparison with the market rate, which did fluctuate. Suffices to say here that the margin between the contract and the market rate was between 4 and 9 percent.

Figure 1: the Spanish Road

The first two disbursements by TF that take place in April (69,700 ducats) and May 1591 (a *mesada* of 30,033 ducats) are mere transfers of funds from Castile to Flanders with no credit from the banker. Actually, the king pays an excess of 5,300 ducats in April (*i.e.*, 75,000 ducats) and has therefore a credit with the banker. This credit is applied, with no interest, to the month of May where he pays 5,300 ducats less than the disbursement of the banker. This initial transfer is about 30 percent of the contract and was probably designed to meet some urgent need and to provide the banker with time to organize the collect of funds. We will see that the

¹⁰ All these places were on or near the “Spanish road” taken by the troops from Italy to Flanders across territories that either belonged to the empire of Philip II (Burgundy which was part of the inheritance from Carlos V) or to allies (Savoy). Antwerp, Dunkirk, Lille or Namur were located in Flanders, while Besançon and Gray in Burgundy were important trading centers. Chambery and Montluel belonged to the duchy of Savoy. Montluel was not directly on the Spanish road but provided a convenient place on the border of Savoy near Lyon and its important fairs (Parker 1972).

banker started almost immediately, April, to collect funds that would cover later disbursements.

The main part of the tasks of TF begins after the transfers, in June 1591. It concerns eight equal *mesadas* until January 1592 with a total of about 240,000 ducats. The liabilities of the Crown last until November 1592. All the payments in the contract, both from the merchant-banker and from the king are in units of a *mesada* of 30,033 ducats. This facilitated the monitoring of the contract by the royal accountants. We can therefore have a synthetic view of the contract that is presented in Table 1. Some details about the items are important and will be discussed in the following sections.

The disbursements by TF, in units of *mesada* (30,033 ducats) are recorded in Column 2. The disbursements and payments for the last three months of 1591 are subject to an option that will be analyzed later. The interest is paid in a lump-sum payment, in the last row, and we will analyze the implicit rate of return on the credit.

Column 3 presents the contractual payments by the Crown, also in units of 30,033 ducats. While the dates of the disbursements are clearly set, the contract may only specify a deadline for the payments by Crown. For example, the *mesada* of June 1591 should not be repaid later than at the end of the year 1591. The implementation of the repayment for this *mesada* will be analyzed below in detail and we will see that most of it was done well ahead of the deadline.

Column 4 presents the balance due (always in units of *mesada*) under conservative assumptions. Column 5 provides a succinct summary of the sources that the Crown can use for repayment. The last column presents the relevant pages of the contract. It is available on line (original, transcription and translation).

The last three *mesadas* of 1592 (October-December) are included in a clause that is contingent on the arrival of the fleet which was scheduled to arrive each year around the month of October with the silver from the Americas.

The three months between February and April 1592 are aggregated in one line since there is no payment during that time. Likewise for the 4 months between June and September 1592. Column 5 provides a succinct indication about the sources of the Crown's revenues that should be tapped for payments. This part of the contract will be central in this paper.

Table 1: Disbursements by TF and payments by the Crown in units of *mesada*

(The transfer is in grey, the fleet option in green and items with more details in the text are in pink).

1	2	3	4	5	6
Date	By Fiesco	By the Crown	Debt	Method for repayment	Page
4/91	2.32 (69,700)	2.5 (75,000)	0	Cash transfer	2
5/91	1 (30,033)	0.82 (24,733)	0		3
6/91	1		1	Not later than 12/91	4-5
7/91	1		2		
8/91	1		3		
9/91	1		4		
10/91	1 (0)		4		
11/91	1 (0)	3 ¹¹	4	option for the Crown: - if the fleet arrives, Crown either pays or drop payment and disbursement of three units - If the fleet does not arrive, the Crown pay from other sources from other sources (Millones/alcabalas, etc...) with monthly interest rate of 1%	6-9
		1 ¹²			10
12/91	1 (0)	1 ¹³	3 ¹⁴	Sales of lands, offices, <i>jurisdicciones</i> .	
1/92	1		3		
2-4/92			12	Total balance for 3 months each with 3 units	
5/92		1 ¹⁵	3	8 Millones /alcabalas or other revenues	11

¹¹ Pages 6 and 7. The payments on the fleet are in italics. See the text for a discussion.

¹² First half of 60,066 ducats (p. 9-10), the second half should be paid in May 1592.

¹³ Item (c), page 4.

¹⁴ Interest (lump-sum payment).

¹⁵ Item (c), page 4. We have taken the deadline for the payment, but the item is paid from the collection of debts that could take place earlier in the year.

6-9/92			8	4 months with balance of 2 units	
10/92		1 ¹⁶	2	Crusade, Subsidio and Escusado, description of revenues to be collected, guarantees.	11
11/92		1	1	Crusade, Subsidio and Escusado	12
Total (ducats)		8 (240,264)	50		
Interest		11,936		Sales of lands, offices, <i>jurisdicciones</i> , not later than 12/91	12-13

II. Collecting dispersed revenues and legal guarantees

The main part of the contract is devoted to the means of collecting revenues for repayment. A central argument in this paper is that large *asientos* provided the contractual means to merge many sources of revenues in Castile, some of them very small and all of them in the local currency, into steady streams of disbursements outside Castile in a foreign currency. This process is now illustrated with two items in the contract.

Final payment on the transfer (May 1591)

The Crown had to pay 24,733 ducats by the end of May 91 to cover the rest of the transfer by the TF who had disbursed 69,733 in April (covered by 75,000 ducats) from the Crown and would disburse the first *mesada* of 30,033 by the end of May 91. Since these operations were transfers without credit, the payment by the Crown had to meet the deadline. On page 3 of the contract we read,

“24,733 ducats from the service of the 8 *millones* that were conceded to me by my kingdoms in the payment at the end of May of the present year in the fiscal districts of he choice, and should he not receive it from that service, he will be paid in *alcabalas* or any farmed income that are administrated in my kingdoms and without lien for the said day at the end of May from the parties that he would request.”

¹⁶ Page 11. Ditto for the payment in 11/92.

That clause is emblematic of the issue in this section. The *millones* had been voted by the Cortes in 1590 after the disaster of the Great Armada, as an extraordinary tax of 8 million ducats in total over 6 years. The clause acknowledges that the Crown is not sure that payment can be made from that source of revenue. Hence, other sources of revenues are made accessible through the contract. However, which source can be tapped, free from a lien or other commitments, is also uncertain at the signature of the contract. The *alcabalas* were the most stable source of revenues. These sale taxes were administered by the cities that were bound by contract in the Cortes to deliver a fixed amount per year, the *encabezamiento*. The *encabezamiento* of a particular city was a tax that was subjected, as a first claim, to the service of *juros*, long-term annuities, which were specifically written on that city. Often the same office collected the *alcabalas* and paid the coupons of the *juros*. People in charge of tax enforcement had also a strong interest in receiving the income from the *juros*. The alignment between the interests of the bond holders and those of the tax collectors made these bonds the safest government liabilities (Álvarez-Nogal and Chamley 2014). Therefore, the Crown could claim revenues from some *alcabalas* only after the service of the attached *juros*. The accounting office had information on the available surplus of revenues in the various cities but the negotiators could not be absolute certain about which revenues were not mortgaged when the contract was established. Because of the decentralization of the system, some *alcabalas* could be fully committed whereas some others would still have an available surplus after the service obligation. From the text of the contract, we see that which *alcabalas* were available was not known at the signature of the contract. The availability of funds had to be verified by the royal accountants.

But one could not rule out that no fund could be found in *alcabalas* either. In this case, the merchant-banker could turn to “any farmed income without a lien from the parties that he [TF] would request.” The sentence illustrates the decentralization of the fiscal system. Fiesco had a long-standing relation with the Crown and had accumulated knowledge on the fiscal system of Castile. Without that knowledge, he would not have signed a contract that enabled him to claim income “from the parties that he would request.” He accepted the lack of precision in the contract because of his practice in a standing relation and also because he was given legal guarantees.

Both the Crown and the merchant-banker knew that the search and the collection of debts could require some expenses. Legal assistance is provided by the next paragraph of the contract:

“... he [TF] will be given judges if he requires assistance, at the rate of 500 maravedis of wages for travel expenses to his satisfaction.”

And this may not be sufficient! The next paragraph opens another direction for the repayments:

“and if the said payment orders do not suffice from the parties to which they are issued and if they remain uncertain or cannot be collected for any cause, then the shortfall and the part that remains uncertain has to be assigned [*librar*] to the said service or to any of the other farmed revenues that there could be for the said term or as soon as possible thereafter from the parties that he would request. He should be given the necessary *libranzas* (payment orders) and collection orders.”

The contract thus uncovers the existence of a tangle of mortgaged revenues about which the parties in the contract have little information at the time of the signature. The next paragraph protects TF once he has found some of the Crown’s revenues without lien from the claims of other creditors:

“These claims should have seniority over other claims issued or altered at a later date and the payments should be labeled in gold or silver and in no other money or tax anticipation of the usual form, without any delay.”\

The first payment by the Crown in the text of the contract (due not later than December 1591)

The payment at the end of May had a tight deadline because it was part of a transfer agreement. The other payments by the Crown were due much later. For the first of them, the contract did not include a specific date but it set a deadline, at the end of the year 1591. The payment covered one unit in the balance (i.e., one mesada of 30,033 ducats), and a lump-sum payment of 11,936 ducats for the interest of the entire contract.¹⁷ The payment is the sum of the third and the last line in Table 2. The scope of the potential cash sources is wider than for the first payment. On page 4, we read

“30,033 ducats from what is owed to me without lien in all of this year of 591 from the first of the current month of April until the end of said year in waste (uncultivated) land and the sale of local government positions, the knights tax, rights for tax exemptions of

¹⁷ We will see later that additional interests could be collected on a special account that was related to payments from the silver of the fleet.

villages and small villages, positions in the Military Orders and any other extraordinary income that in any manner could be owed to me now or in the future. These are to be chosen by TF or his proxy for liquidation.”

As for the May payment, because of the fragmentation of the sources of revenues that could be frozen by some lien from another debt, the contract had to include some flexibility, which was accepted by the experienced banker. As before, legal protection is provided in the next paragraph:

“And for the collection, TF will be provided without further ado the required cédulas and instruments for collection at his convenience, so that he or any proxy for him may recover what is due in the manner that I could do at the required dates according to the terms of these debts. For collection, TF will have executors who will have full jurisdiction (*vara alta de justicia*), days and wages necessary to pay the expenses to collect any payments from the payers, guarantors and all who have to pay.”

And even with help of these executors, TF may fail to get the payments. Hence, the following paragraph provides more contingent guarantees.

“It is declared that if any of the said obligations should turn out to be uncertain and TF could not collect them, others will be given, but he has to return the uncertain obligations back to the Royal Finance that he could not collect. He will receive new orders to collect the payment in other places, chosen by him, to receive the money in all this said year, as it was said, or as soon as possible in available revenues. If TF goes to justice to force the persons or municipalities to pay, and the sentences commanded that TF or his proxy has to give a security (*fianza*) according to the law of Toledo, it is my will that nobody should ask him for it, he will not have obligation to give it and there is not appeal to no one, except to my Council of Finance.”

For all the other payments of the Crown, these clauses are repeated, *verbatim* in most cases, as can be verified with the complete contract in the Appendix C. These clauses specify a wide range of local revenues that are admissible for the payment of the debt to the merchant-banker. They provide legal assistance and contingent plans for other searches if a first attempt turns out to be unsuccessful, and they provide right of seniority over other claims if necessary. All these clauses confirm the lack of information from the part of the fiscal administration at the time of the signature of the contract. Given the ongoing relation between the Crown and the merchant-

The actual implementation of the first payment by the Crown (not later than December 1591)

We can now turn to an example of the implementation of these clauses. An attachment to the contract in the archives of Simancas provides an exhaustive description of the payments that were made on the first tranche with the deadline at the end of 1591.¹⁸ All the funds came from the sales of offices or free lands. The attachment lists, for each individual payment, the month, the amount, the purpose of the purchase, the name of the buyer and his place. The complete list is presented in Appendix B (on line).

The information is summarized in Figures 2 to 4. The first two figures present the distribution of the payments by their amounts and their location, respectively. They provide a spectacular illustration of the process by which the *asiento* channels rivulets of revenues in Castile into a stream of *mesadas*. In Figure 2, the distribution of the amounts is highly skewed towards small values. The total of 41,970 ducats is made of 87 individual payments, most of them small or very small. The mean of the payments is equal to 482 ducats, and the median to 150 ducats. There are 53 payments of only 50 ducats, each for the purchase of a notary office.

Figure 3 presents the location of the revenues. It illustrates the dispersion of the sources of revenues throughout Castile that had to be tapped by the banker.

¹⁸ All the large *asientos* that were signed during the period that we consider here are neatly preserved in the archives of Simancas in the castle that was set by Philip II himself for the preservation of his archives. Most of these *asientos* are joined with attachments that have been written by the royal accountants who monitored the implementations of the contracts.

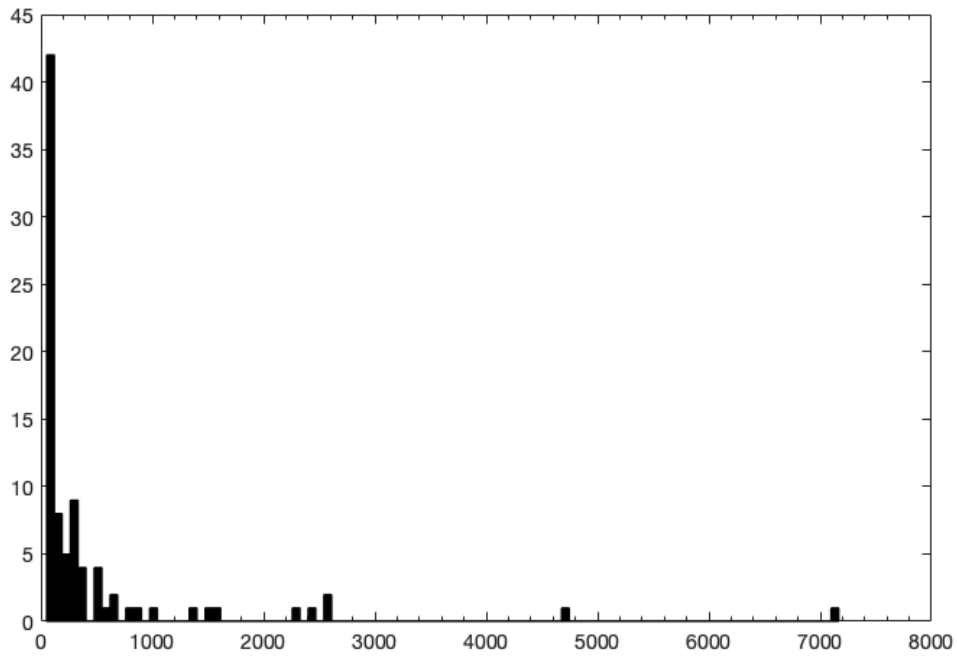


Figure 2: The distribution of the amounts of the payments in the first tranche (no later than 12/91)

The amounts are in ducats on the horizontal axis. The number of payments for each bracket are reported on the vertical axis.

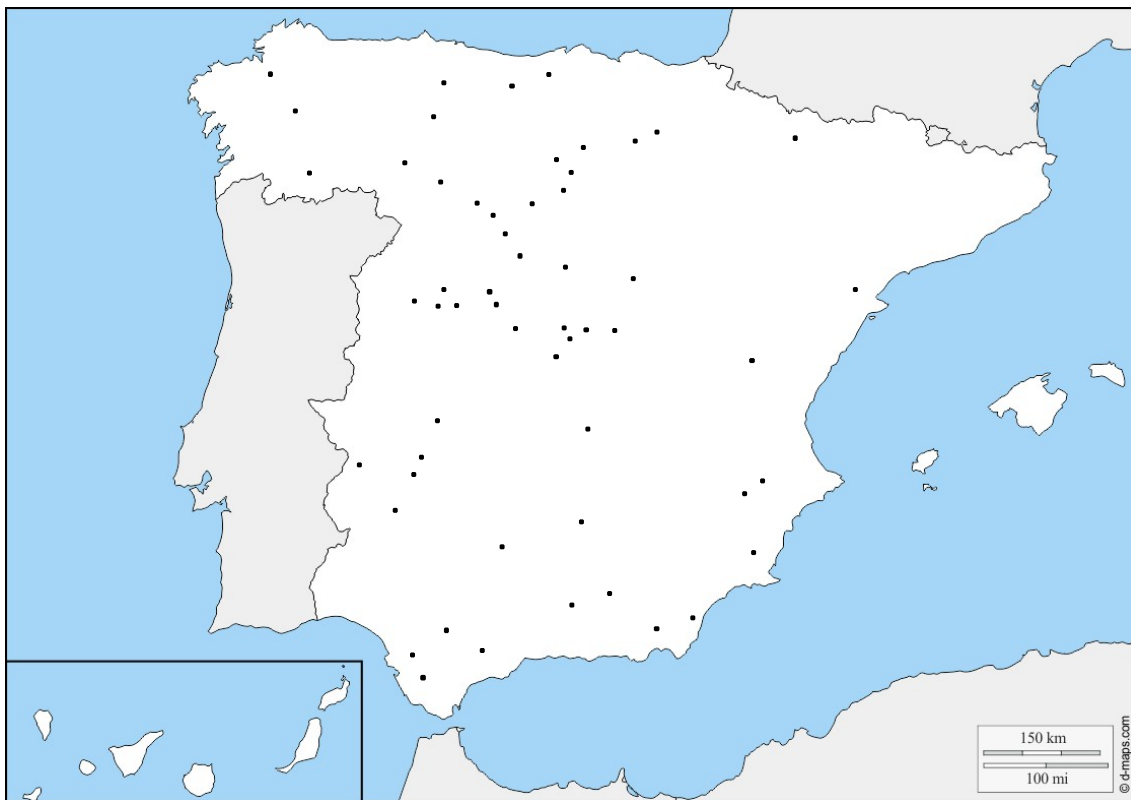


Figure 3: the geographical distribution of the payments for the first tranche

We have highlighted before that the sources for the payments towards the first tranche could not be specified accurately in the contract. The archival evidence about the implementation of the contract demonstrates why these sources could not be identified *ex ante*. Given the lack of specification, the number of the payments and the geographical dispersion of the funds throughout Castile, one could perhaps expect that these payments were subject to significant delays. The evidence shows that the opposite is true.

First, 11 payments (2,753 ducats out of the total 41,970 ducats had to be transferred to other sources. They reported in Table 2 of Appendix B. From the list in Appendices one can construct the cumulative distribution of of the payments' dates. It is presented in Figure 4 as a fraction of the total amount due. The payments started already before the first *mesada* that was paid in June! At the end of August, half the payment (that was due only at the end of December) had been made. According to the contract, the maximum length of credit for the payment of the June *mesada* was six months. Given the schedule of repayment in Figure 3, the actual length of the credit was only between 3.5 and 4 months.

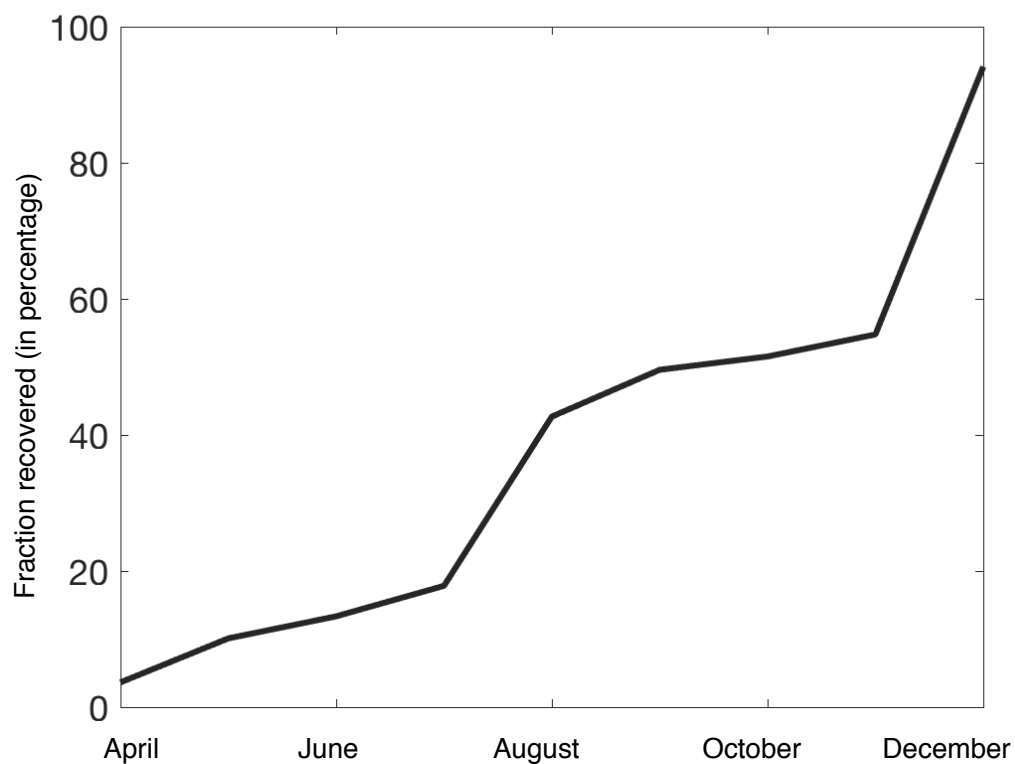


Figure 4: the time profile of the payments for the first tranche (not later than 12/91)

III. The rate of interest on the debt

The Crown recognized explicitly in the contract that the banker would raise the funds on the credit market.

“And because the said TF in order to make the payments that he has to make of the said 300,000 escudos in agreement with this asiento for which he receives consignations with such a long term and has to make many arrangements and raise credit for a long time and a large quantity of mrs, I hold it for good that he should receive as reward and gratification for the many interests that he has to carry and suffer, for this reason and for the cost of the recovery of the said consignations, 11,936 ducats” (p. 12).

The contract sets a lump-sum payment of 11,936 ducats in regard to the borrowing costs of the bankers. It is not a profit for the banker because of the borrowing costs and we cannot compute the net profit of the banker because we don't know the details of the financing by the banker. The only rate that can be computed, and this is what we do here, is the rate on the funds that are lent to the Crown.

The three *mesadas* that are disbursed in the last quarter of 1591 are treated separately in the contract, as we will see below. We should ignore them for the computation of the interest. The implicit monthly rate should be computed on the balance from five *mesadas* that were disbursed from June to September 1591 and in January 1592. The accounting of the balance is greatly facilitated by the use of the *mesada* of 30,033 ducats as a unit of transfer both for the merchant-banker and for the Crown. Following the standard practice in *asientos* at the time, interests were not compounded. Hence, we only need to add the “month-units” of the balances, in Column 4 of Table 1.¹⁹ We make the convention, that the interest is computed on the balance at the beginning of a month and includes the disbursement in the same month while the payments of the Crown are credited only at the end of the month. The method generates an upper-bound on the *ex ante* debt balance (according to the contract) that is equal to 50. If the disbursements and the payments of the Crown are credited at the same time, this number should be reduced by 5 for a total of 45 month-units.

¹⁹ This convention was used in other *asientos*, e.g., the Maluenda contract (Álvarez-Nogal and Chamley 2018).

The contract sets a fixed lump-sum payment of 11,936 ducats,²⁰ to be paid not later than 12/91 (pages 12 and 13), although the final debt is paid only in November 1592. One unit is paid at the end of May 92 (page 10),²¹ and the remaining two units are scheduled for October and November 1592 (page 11).

If we take a total balance of 50 units, the monthly rate of return is $r = 11,936 / (50 \times 30,033) = 0.79\%$. (If we take a balance of 45 units (where disbursements and payments are counted at the same date, the rate is 0.88%.²²) The value of the rate is a little below the standard rate of one percent per month. Perhaps this lower value can be explained by the timing of the interest payment which precedes completion of the disbursements by the banker.

We will see that the additional interest that is paid on the last three *mesadas* of 1592, if the fleet does not arrive, is 1 percent per month. From these numbers one can safely conclude that the contract did not deviate significantly from the standard interest rate for the *asientos* at the time, which to one percent per month on the balance due.²³

IV. Other services

The option to reduce the size of the contract

The contract provides the Crown with an option to reduce the number of payments of TF and the Crown by three *mesadas*. At the bottom of page 6, we read that the Crown has to pay

²⁰ We do not know why the amount was of 11,936 ducats, instead of, for example 12,000 ducats. Accountants did not use ducats but maravedis as units of account. 11,936 ducats are valued at 4,475,000 mrs, but 12,000 ducats are equal to 4,500,000 mrs. Perhaps some other transfers were made informally.

²¹ These payments take place relatively late because the *millones* (8M mrs) are collected in November and May.

²² We have seen that the first tranche of 30,033 that was due in December 1591 was paid in half already by the end of August, four months before. That reduces the total balance by two units and increase the *ex post* rate by 0.04%.

²³ The rate has the same value in the Maluenda contract (Álvarez-Nogal and Chamley 2018). From a letter of Pliny the Younger we know that a monthly rate of one percent was already standard around 100 A.D in the Roman Empire.

“90,100 ducats with first claim on the first gold, silver or reales that will arrive for me from any part of the Indies or their islands to any part or harbor from my kingdoms and in Portugal of the current year of 91. These have to be paid soon [*luego*] after the arrival of the ships...”

However, an option can be exercised at that time of arrival of the fleet. Continuing at the top of page 7,

“...with the express condition that if 30 days after the arrival, what is expected from the Indies of this current year is not collected by TF, because one has decided not to pay him, he is not obliged to disburse the last payments from the end of October on in this current year of 591.”

The option is to be exercised by the Crown. If it does not pay 90,100 ducats to TF, then he is not obliged to pay the three *mesadas* of October, November and December 1591 that total of 90,100 ducats.

The last possibility is that the fleet does not arrive. In that case, the option does not apply and TF should disburse the three *mesadas* of the last quarter in 1591. Since there is no income from the fleet, the collection of the funds for payment is likely to take time. Therefore, the contract states explicitly that a special account will be opened to track the balance due on these three *mesadas* and that an interest of one percent per month will be charged on the existing balance. The previous quote is followed immediately by:

“If at the end of October of the current year, TF, because the fleet has not arrived, wants the 90,100 ducats to be paid on the Crusade, Subsidio and Excusado or on the ordinary and extraordinary service of my kingdoms that are paid to me, or from any debt that are owed to me, he may request that the 90,100 ducats should be paid on all these revenues, the payment orders have to be given to him with in addition, an interest of one percent per month, counted from the said day at the end of October of this current year until the days the payment orders are effectuated.”

Our analysis of an *asiento* with the Maluenda brothers has shown how a similar clause was implemented when the merchant-banker collected payments on the fleet. Using the archival documentation from the *ex post* monitoring of the contract, we showed that the payments were staggered over a few weeks. The documentation showed how the accountants computed the interests on the balance due, at the same rate of one percent per month, pro rated to the exact

days of the payments by the Crown (Álvarez-Nogal and Chamley 2018). That rate is therefore not a “penalty”²⁴ and there is no default contingency in the contract. One percent was the standard rate at the time on unfunded debt. It is about the same as the rate on the overall contract (see above).

What is the meaning of this option that enables the Crown to reduce *pari passu*, the disbursements by TF and the payments to him for a quarter of the size of the contract? One should focus first on what seems to be the worst case, the no-show of the fleet. In this contingency, nothing is changed in the schedule of disbursements by TF. Of course, other means of repayments will have to be found, and these included in the contract. These means, “Crusade, Subsidio and Excusado or on the ordinary and extraordinary service,” are similar in nature to the other payments in the contract.

The main feature of the option is that it cannot take the excuse of the absence of the fleet to avoid payments to TF. That absence is public information that is observable by the banker and the contract is written on that public observation. The arrival of the fleet is also a public observation but the content of the fleet may not be verifiable by the banker. In that case, it is up to the Crown to make the decision to pay or not to pay. If the Crown does not pay, then the banker does not pay either.

On balance, the arrival of the fleet is better news than no fleet. Far from being a clause for contingent default, the option has a higher value when the news turn out to be good rather than bad.

We actually know the turn of events: the fleet of 1591 did not arrive on time and only a fraction of money arrived in other ships, months later, in Seville.²⁵ One had learned in the summer that Drake was waiting in the Azores. As a precaution, the silver was stored in La

²⁴ The term is used by Drelichman and Voth (2015) who take this Fiesco *asiento* as the sole example of “contingent debt and excusable defaults” Their interpretation and their quantitative reconstruction of the contract are incorrect. Anyone can verify in the transcription or the translation of the contract that we provide.

²⁵ The fleet had already lost 16 ships on the outbound because of the bad weather when entering Veracruz. On the return, another tempest (it was hurricane season after all), sank half of its 78 ships. The commander of the fleet, Antonio Navarro de Prado, was investigated and denounced by the merchants who had lost their ships, a usual procedure (Lorenzo Sanz 1979, p. 270-271; Pérez-Malláina 1996, p.85.)

Havana and returned to Spain aboard four frigates in January 1592. One may wonder whether the possible presence of Drake had been envisioned at the signature of the *asiento*.

The exchange rate operations

The resources used by the Crown to pay the merchant-banker were based in Castile either from domestic revenues or from the silver that arrived from the Americas in Seville. They were counted in *maravedis* (mrs), or ducats, which was a unit of account. (There were no coins in ducats). A ducat had a fixed rate of 375 *maravedis* (mrs) and although many contract clauses are in *maravedis*, for simplicity, all amounts are reported here in ducats.

In a contract, after the simple presentation of the disbursements in Flanders, the first task was their conversion into ducats to determine the obligation of the Crown in paying the merchant-banker. Hence, on page 2 of the contract, the total disbursements, 300,000 escudos, are converted in maravedis, at the fixed rate of 425 mrs per escudo, for a total of 127,500,000 mrs. One escudo is converted into ducats at the rate of $425/375=17/15$ and 300,000 escudos are equivalent to 340,000 ducats.

The exchange rate between the ducat and the escudo fluctuated in the market, not because of currency manipulations—there were none since both currencies were based on precious metals—but because of the variations of the liquidity requirements in different places and times. Given the fixed rate in the contract, the merchant-banker took all the risk of the exchange. The main reason for the conversion of all disbursements into ducats at a fixed rate was probably to simplify the monitoring of the contract by the royal accountants and the computation of the interest on the debt balance. The method also helped the Crown to plan its expenditures that depended on resources that were denominated in ducats.

In order to compare the exchange rates in the contract and in the market, we use the data of Lapeyre (1955). The cash payments in Flanders were, according to the contract, in escudos of 57 patards, which are equivalent to 114 *gruesos*.²⁶ For the evolution of the market rate during the time span of the Fiesco contract in Table 2 we use the data of Lonchay (1907). The place of exchange are Medina del Campo, a little town in the middle of Castile, where the main

²⁶ One patard=2 *gruesos*. (Lonchay 1907, p. 1012).

commercial fairs took place twice a year,²⁷ and Antwerp, a city close to the places of disbursement in the contract.

The exchange rate at the time of the signature (February 1591), was 104.5-106 *gruesos* per Castilian ducat. Consider the first line of Table 2. We take the benchmark of 105 *gruesos*. If one has to pay in Medina 375 mrs for 105 *gruesos*, then 114 *gruesos* (the escudo of the army in Flanders) are worth 407.14 mrs. The contract's rate of 425 mrs implies a commission of 4.4 percent.

Table 2: Exchange rate between Medina del Campo and Antwerp

Date	Ducat (<i>gruesos</i>)	Mean	Asientos			
			Feria price	Agustin Spinola 1589	Ambrosio Spinola 1590	Tomás Fiesco 1591
Feb-89	102	102	419.12	408		
Jun-89	104 - 105	104.5	409.09	408		
Oct-89	105 - 106	105.5	405.21	408		
Feb-90	102.6 - 103	102.8	415.86	408	430	
Jun-90	102 - 102.5	102.25	418.09	408	430	
Oct-90	102.5 - 103	102.75	416.06		430	
Feb-91	104.5 - 106	105	407		430	425
Jun-91	105 - 105.5	105.25	407		430	425
Oct-91	105 - 105.5	105	407			425
Feb-92	100 - 101	100	427			425
Jun-92	109.5 - 115	115	372			425
Oct-92	110 - 111	110	389			425

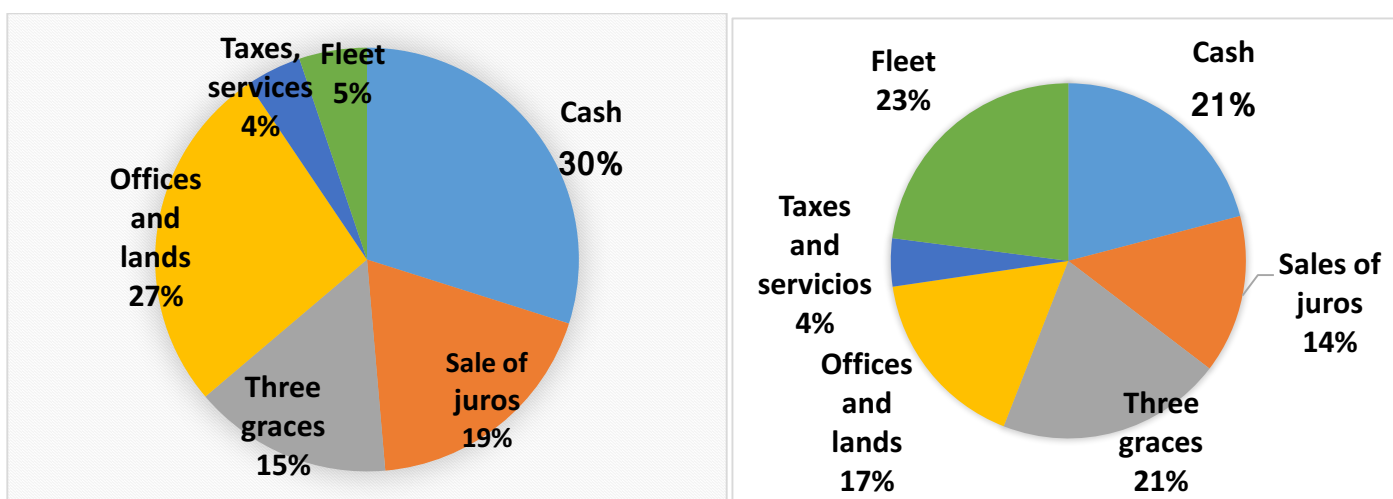
Source: Lapeyre (1955, Tables XV and XVI, p. 499-500) and AGS, CCGG, 90.

Table 2 shows that after the signature of the contract, the exchange rate did fluctuate. Below a rate of 101, as in February of 1592, the merchant-banker loses on the exchange (Column 6). However, no payment was due from the Crown in that month. In 1592, the Crown had to make payments in May, October and November, each for a unit of 30,033 ducats (Table 1) when the market value of the ducat was relatively high (Column 3). For the closest fairs, the *ex post*

²⁷ At that time, many financial contracts were contingent on the dates of commercial fairs, which acted like clocks for the contracts (Álvarez-Nogal and Chamley 2016). Medina del Campo had a monopoly on the trade for the exchange in Castile (Espejo and Paz 1908; Ruiz Martín 1987).

margin between the contract and the market was around 10 % (June) and 14% (October and November).

Table 2 presents the market and the contract exchange rates for the period during two very large contracts of 2.5M ducats each that were signed at about the same time and that served the same purpose, *i.e.*, delivering steady flows of payments in Flanders. Agustín Spinola signed on March 16, 1589, a contract to deliver 13 *mesadas* between April 1589 and April 1590 for the huge total of 2.5M ducats (more than a quarter of the annual revenues of the Crown). Another contract of 2.5M ducats is signed with Ambrosio Spinola on February 28, 1590, also for 13 *mesadas*. On the first contract the *ex post* margin for the Agustín Spinola is negative, except for one month. The margin on the Ambrosio contract is large, between 12 to 24 percent. Exchange rates varied between *asientos* according the condition of the markets and the strategies and liquidity positions of the bankers. Figure 3 presents the distribution of the sources of repayments for these two *asientos*.



Augustín Spínola: 13 *mesadas* (4/89-4/90)

Ambrosio Spínola: 13 *mesadas* (3/90-3/91)

Figure 4: revenue sources for repayments in two *asientos*

Many items that we have described in the Fiesco contract are found in these two *asientos*. For example, in the contract with Agustín Spinola, a payment of 100,000 ducats from the fleet that is delayed can be replaced by revenues in the Crusade, Subsidio or Escusado. Another clause provides an option to sell *juros* at the rate of 6 or 7 percent, instead of waiting for the arrival of the fleet.

The option for selling *juros*: refinancing short-term into long-term debt

The contract provides Tomás Fiesco with an option to get reimbursed through the sales of *juros*, long-term annuities, on behalf of the Crown, up to a maximum of 100,000 ducats which is about 40 percent of the contract net of the transfer (p. 14). In previous work, we described in details the exercise of such an option in an *asiento* of about the same size that was signed in 1595 (Álvarez-Nogal and Chamley 2018). In 16th century Spain, the dominant part of the public debt (more than 90%) was in long-term annuities (perpetuals or life-annuities) that were redeemable and tradable. Perpetuals had an annual rate between 5 and 7 percent. (Recall that the so-called price revolution in 16th century generated an average annual rate of inflation of about one percent in Spain). *Asientos* filled short-term gaps between the expenditures and the revenues of the state but given their high rate, as compared to the *juros*, they were never meant to be long-term instruments. Given the fragmentation of the capital market with *juros* written on various sources of earmarked income, the merchant-bankers were the experts could exploit their expertise in the selling of the *juros*. They welcome the opportunities for such refinancing from short-term to long-term debt. The last three payments by the Crown came in May, October and November 1592, well after his last disbursement in January 1592. Tomás Fiesco may have not waited for these payments. We do not have the documentation. He could get the cash early by selling *juros*. The Maluenda brothers exercised their option to sell *juros* immediately after the signature of the contract.

V. Conclusion

Our text-based approach highlights the richness of the functions that are performed by a standard *asiento*. These functions provide the evidence for the central role of the merchant-bankers of Genoa as the money men of Philip II. Such men were critical in the development of capital markets in the Italian cities, in the Netherlands and, especially, in 18th century England, as shown in the path breaking work of Dickson.²⁸ We expect that other studies of financial contracts of merchant-bankers will confirm the critical role they played in the pre-modern states.

²⁸ The contrast between the money men in England and France in the 18th century should be the subject of further research.

REFERENCES

- Álvarez-Nogal, Carlos and Christophe Chamley. "Debt policy under constraints: Philip II, the Cortes and Genoese bankers," *Economic History Review*, 67, no.1 (2014): 192-213.
- Álvarez-Nogal, Carlos and Christophe Chamley. "Philip II against the Cortes and the credit freeze of 1575-1577," *Revista de Historia Económica/ Journal of Iberian and Latin American Economic History*, 34, no. 3 (2016): 1-32. Carande Ramón, Dickson
- Álvarez-Nogal, Carlos and Christophe Chamley. "Refinancing short-term debt with a fixed monthly interest rate into funded juros under Philip II: an asiento with the Maluenda brothers," *Economic History Review*, 71, no. 4 (2018): 1100-1117.
- Barro, Robert J. "On the determination of public debt," *Journal of Political Economy*, 87, no. 5 (1979): 940-971.
- Barro, Robert J. "Government spending, interest rates, prices, and budget deficits in the United Kingdom, 1701-1918," *Journal of Monetary Economics*, 20, no. 2 (1987): 221-247.
- Carande Ramón. *Carlos V y sus banqueros*. Barcelona: Editorial Critica, 1987 (first edition 1943).
- Carlos Morales, Carlos Javier de. *Felipe II: el imperio en bancarrota. La Hacienda Real de Castilla y los negocios financieros del rey Prudente*, Madrid: Editorial Dilema, 2008.
- Chamley, Christophe. "Efficient Taxation in a Stylized Model of Intertemporal General Equilibrium," *International Economic Review*, 26, no. 2 (1985): 452-468.
- Chamley, Christophe. "Interest reductions in the Politico-Financial Nexus of Eighteenth-Century England," *The Journal of Economic History*, 71, no. 3 (2011): 555-589.
- Dickson, Peter G. M. *The Financial Revolution in England*, London: Macmillan 1967.
- Doria Giorgio. *Nobiltà e investimenti a Genova in Età moderna*, Genova: Istituto di Storia Económica, 1995.
- Doria, Giorgio. "Consideraciones sobre las actividades de un "factor-cambista" genovés al servicio de la Corona española», in Otazu, A., *Dinero y Crédito (siglos XVI al XIX)*. Madrid, 1978: 279-293.
- Drelichman, Maurizio and Hans-Joachim Voth. "The Sustainable Debts of Philip II: A Reconstruction of Spain's Fiscal Position, 1566-1596," *Journal of Economic History*, 70, no.4 (2010): 814-843.
- Drelichman, Maurizio and Hans-Joachim Voth. "Risk sharing with the monarch: contingent debt and excusable defaults in the age of Philip II, 1556-1598," *Cliometrica*, 9, no. 1 (2015), 49-75.
- Dubet, Anne. "Una reforma financiera imposible: los erarios públicos y montes de piedad en tiempos de Felipe II." In *Felipe II (1527-1598): Europa y la monarquía católica*, edited by José Martínez Millán, 205-237, Madrid: Parteluz, 1998.

- Dubet, Anne. "El arbitristo como práctica política: el caso de Luis Valle de la Cerda (¿1552?-1606), *Cuadernos de Historia Moderna*, 24, (2000): 107-133.
- Elliott, John H. *Imperial Spain 1469-1716*, London: Edward Arnold, 1963.
- Espejo, Cristóbal, and Julián Paz. *Las antiguas ferias de Medina del Campo*, Valladolid: Tipografía del Colegio de Santiago, 1908.
- Felloni, Giuseppe. *Gli investimenti finanziari genovesi in Europa tra il Seicento e la Restaurazione*, Milano: A. Giuffrè, 1971.
- Felloni, Giuseppe. "A profile of Genoa's 'Casa di San Giorgio' (1407-1805): a turning point in the history of credit." *Rivista di storia economica*, 26, no. 3 (2010): 335-346.
- Grafe, Regina. *Distant Tyranny. Markets, Power and Backwardness in Spain, 1650-1800*. Princeton: Princeton University Press, 2012.
- Grafe, Regina. "Polycentric States: The Spanish Reigns and the 'Failures' of Mercantilism," In *Mercantilism Reimagined: Political Economy in Early Modern Britain and its Empire*, edited by Philip J. Stern and Carl Wennerlind, 241-262. Oxford: Oxford University Press, 2013.
- Grafe, Regina. "Distant Tyranny: polycentric state-building and fiscal systems in Spain 1650-1800," In *State Cash Resources and State Building in Europe 13th – 18th centuries*, edited by Katia Beguin and Anne L. Murphy, Paris: IGPDE, 2015.
- Hernández Esteve, Esteban. "Las cuentas de Fernán López del Campo, primer Factor General de Felipe II para los Reinos de España (1556-1560)," *Hacienda Pública Española*, 87, (1984), 85-105.
- Hernández Esteve, Esteban. *La Historia de la Contabilidad, vía privilegiada de aproximación a la investigación histórica: Cuentas de los fondos recibidos por la Factoría General de los Reinos de España para financiar la guerra de Felipe II contra el Papa Pablo IV y Enrique II de Francia (1556-1559)*, Madrid: 2010.
- Ladero Quesada, Miguel Ánge. *La Hacienda Real de Castilla, 1369-1504*. Madrid: Real Academia de la Historia, 2009.
- Lapeyre, Henri. *Simon Ruiz et les Asientos de Philippe II*. Paris: EHESS, 1953.
- Lonchay, Henri. *Etude sur les emprunts des souverains belges au XVIe et au XVIIe siècle*. Bruxelles, 96 pages, in-8^o, Extrait des *Bulletins de l'Académie royale de Belgique*, classe des lettres, n^o 12 (December), 1907.
- Lorenzo Sanz, Eufemio. *Comercio de España con América en la época de Felipe II*. Valladolid: Servicio de Publicaciones de la Diputación Provincial, 1979.
- Pacini, Arturo. *La Genova di Andrea Doria nell'Imperio di Carlo V*. Firenze: Olschki, 1999.
- Parker, Geoffrey. *The Army of Flanders and the Spanish Road: 1567-1659*. London: Cambridge University Press, 1972.

Parker, Geoffrey. *Military Revolution: Military Innovation and the Rise of the West, 1500–1800*. Cambridge: Cambridge University Press, 1988.

Pérez-Mallaína, Pablo Emilio, *El hombre frente al mar*. Sevilla: Universidad de Sevilla, 1996.

Ruiz Martín, Felipe. "Las finanzas españolas durante el reinado de Felipe II," *Cuadernos de Historia. Anexos de la revista "Hispania"*, 2, no.2 (1968), 109-173.

Ruiz Martín, Felipe. "Las Ferias de Castilla," en Lorenzo Sanz, E., *Historia de Medina del Campo y su Tierra*. Valladolid, 1987, pp. 267-299.

THOMPSON, I. A. A. *War and Government in Habsburg Spain, 1560-1620*. London: Humanities Press, 1976.

THOMPSON, I. A. A. "The Invincible Armada," In *War and Society in Habsburg Spain. Selected Essays*, edited by I.A.A. Thompson, 1-19. Norfolk, Aldershot, 1992.

Ulloa, Modesto. *La Hacienda Real de Castilla en el reinado de Felipe II*. Madrid: Fundación Universitaria Española, 1977.

APPENDIX A

Asientos signed in Madrid in 1591

He puesto la fecha de la primera letra en Bruselas			Provisión	Provisión	los escudos a 57 placas en Amberes			Consignación
first disb.	signature	merchant banker	ducats	escudos	mrs/ escudo	disb. number	place of disb	
Flanders	15/03/1591	21/05/1591 12/05/1591	Antonio Suarez de Vitoria y Juan Luis Vitoria Ambrosio Spínola	100,000			Antwerp & Cologne	Extraordinario
		12/05/1591	Ambrosio Spínola		1,600,000	4308x200K	Flanders, Burgundy and Savoy	Tomas Fiesco la mitad y la otra los Maluenda
		12/05/1591	Ambrosio Spínola		600,000	factoria6x100K	Antwerp, Lille, Namur and Burgundy	
		18/06/1591	Ambrosio Spínola		100,000	4302x50K	Besançon and Chambery	
Flanders	22/11/1591	02/03/1592	Ambrosio Spínola	24,988			Antwerp	
Flanders	01/02/1591	21/05/1591	Bautista de Franquis	84,000			Antwerp & Cologne	Rentas y Extraordinario
		05/04/1591	Diego de Albuquerque y herederos, Gonzalo de Salazar y Joan de Carmona	200,000			Madrid	Rentas
		23/04/1591	Francisco y Pedro de Maluenda		300,000	425	Antwerp and Besançon	Renta y Extraordinario
Flanders	01/02/1591	21/05/1591	Francisco y Pedro de Maluenda	211,000			Antwerp & Cologne	Millones
Flanders	30/09/1591	02/03/1591	Francisco y Pedro de Maluenda	136,499			Antwerp	juros y rentas
Flanders	01/02/1591	21/05/1591	Juan Luis Vitoria	60,000			Antwerp & Cologne	Rentas
Flanders	30/09/1591	02/03/1592	Juan Luis Vitoria	96,744			Antwerp	Extraordinario
Flanders	30/09/1591	02/03/1592	Julio Gentil hijo de Agustín	73,828			Antwerp	Cruzada y Subsidio
Flanders	01/02/1591	21/05/1591	Marco Antonio Obada	30,000			Antwerp & Cologne	Rentas
		30/03/1591	Maros Fucar y hermanos	600,000	200,000		Madrid, Besançon and an old debt	Cruzada
Flanders	01/02/1591	21/05/1591	Octavio de Marín	211,000			Antwerp & Cologne	Rentas y Extraordinario
Flanders	30/09/1591	02/03/1591	Octavio de Marín	51,311			Antwerp & Cologne	Rentas y Extraordinario
		01/03/1591	Pedro de Baeza vecino de Lisboa				Galleys of Lisbon for a year	
		13/02/1591	Pedro de Baeza vecino de Lisboa				Armada	
Flanders	30/09/1591	02/03/1592	Pedro de Ysunta	9,086			Antwerp	Rentas
Flanders	01/02/1591	21/05/1591	Simon Ruiz	54,000			Antwerp & Cologne	Rentas
Flanders	01/02/1591	21/05/1591	Simon Ruiz	50,000			Antwerp & Cologne	Rentas
Flanders	30/09/1591	02/03/1591	Simon Ruiz	85,186			Antwerp	Rentas
		03/04/1591	Tomas Fiesco		300,000	4258x30.033K	Antwerp	Rentas y Extraordinario
Flanders	30/09/1591	02/03/1592	Tomas Fiesco	102,423			Antwerp	Rentas
			TOTAL	2,180,065	3,100,000			

APPENDIX B

Table 1: Sources of revenues for the payment due no later than December 1591

Year 1591		Ducats		type	buyer	location
April		50		Notary office	Francisco Arcillo Ureña	Larrede
		50		Notary	licenciado Juan Pérez de Merida	Terrados
		50		Notary	Juan Ochoa de Lariaga	Matilla
		560		Free lands		Alcalá de Henares
		516		Free lands		Medina Sidonia
		300		Free lands		Campo de Calatrava
	total		1,526			
May		87		regimiento	Pedro de Tapia	Barajas
		50		Notary	Juan Alvarez de Melgarejo	Muñoz y Guareña
		50		regimiento	Anton Sanchez	Cantin
		175		Notary	Martín Muñoz de Sancha	Arenzana de Abajo
		175		Notary	Juan Urraca de Baños	Arenzana de Abajo
		80		receptoría	Juan de Luna	Galicia
		50		Notary	Juan Ruiz de Ledesma	Mesón de Carrestro
		70		regimiento	Anton Sanchez Parejo	Linares
		50		Notary	Francisco García Ortiz	Masa
		50		Notary	Andres de Montejano	Barciales
		50		Notary	Andrés Lariz de Durango	Quintanilla
		50		Notary	Alonso Gonzlez Carrera	Alberguería

		350		alferazgo y depositaría	Juan Ronco de Parga	Betanzos
		210		alferazgo	Juan de Floresgal	Mojacar
		267		regimiento de las lanas	Francisco Ruiz Herreros	
		267		regimiento de las lanas	Juan González Serrano	
		684		tierras baldías		Alcalá de Henares
	total		2,714			
June		1,360		tierras baldías		
July		997		exención	villa de Villanueva de Vogas	
		50		escribanía	Blas Sanchez y otros	Santa María
		50		escribanía	Andres de la Fuente	Orejudos
		50		escribanía	Diego de Buiza	Ajosderrubios
		325		regimiento	licenciado Luis de la Tobilla	Ronda
		100		regimiento	Juan de Aguila	Huercal
		160		regimientos	García de Salazar	Zaratan
		50		escribanía	Francisco Tomé	Anaya
		50		escribanía	Blas Esteban	San Julian
		50		escribanía	Antón de Cespedes	San Miguel
	total		3,242			
August		333		primera instancia	villa de Hernan Perez	
		901		correduría	villa de Fuente el Sauco	
		70		escribanía	Martín de Quintanilla	Cazuar
		50		escribanía	Juan de Palacio y otro	Cascajales
		50		escribanía	Rodrigo de Balbuena y otros	Marana

		50		escribanía	Juan de la Peña	Terrones
		500		escribanía	Lázaro Martínez y otros	Hellín
		115		escribanía	Pablo González y otros	Herradon
		50		escribanía	Juan Sanchez de Montañal	Quercal
		2,300		escribanía	Pedro de Baeza	Jeréz de la Frontera
		400		3 regimientos	Francisco de Peñalosa y otros	Carbón la mayor
		50		escribanía	Alonso de la Fuente	Alcazarén
		50		escribanía	Gonzalo de Eslava y otros	Sancho Gómez
		50		escribanía	Pedro Gutierrez y otros	Herguesuelas
		50		escribanía	Luis Alonso de Riora y otros	Fuentesclaras
		50		escribanía	Juan Perez Eupino y otros	Carrascal
		4,695		tierras baldias		Badajoz y Merida
		395		tierras baldias		Villabrájima
		279		tierras baldias		Alcalá de Henares
	total		10,438			
September		2,559		tierras baldias		Campo de Calatrava
		178		procuradoría de la Audiencia		Granada
		150		correduría	Blas Hernandez Aguado	Molina
	total		2,887			
October		50		escribanía	Francisco Granjal y otro	Mencerreys
		50		escribanía	Juan de Jaen y otros	Pedro Layn
		300		coposición de regimientos	lugar de la Mata	

		150		regimiento	Pedro Sanchez Vela	
		220		regimiento	Bartolomé Rest y otros	Sar
octubre		50		escribanía	Francisco Tercero y otros	Domingo S
	total		820			
November		50		escribanía	licenciado Juan Pérez de Merida	Terrados
		100		escribanía	Juan de Mar	Tortosa
		100		escribanía	Antonio Pérez de Lacilla	Corral
		210		alferazgo	Juan Flores	Mojacar
		400		alcaldía de carcel	Miguel Alonso de Escobar	León
		250		regimiento	Alonso Rodriguez Salguero	Santos de Maymona
		250		regimiento	Alonso Rodriguez Navarro	Villena
	total		1,360			
December		2,467	Not collected	escribanía de censos	Lázaro Martínez y otros	Madrid
		100		escribanía	Juan Diaz de Valdeon y otros	Valdeón
		325		regimiento	capitan Benardo de Villalta	Guadix
		1,500		primera instancia	villa de Totana y Aledo	
		50		escribanía	Juan de Berga	Atapuerca
		50		escribanía	Cristóbal de Ibarra	Cilleruelos
		50		escribanía	Andrés Diaz de Laynez	Santo Domingo
		125		regimiento	doctor Luis Ramirez de Arellano	Villaescusa
		50		escribanía	Francisco Arcillo	Larrade

		7,167		tierras baldías	ciudad	Xerez de la Frontera
		2,550		tierras baldías	vecinos	Arahal
		531		Free lands	vecinos	Talavera del partido de Merida
		181		Free lands		Jerez de la Frontera
		504		Free lands		Medina Sidonia
		326		Free lands		Córdoba
		659		Free lands		Lerma
		1,565		Free lands		Atienza
January		783		procuradoría	Rodrigo de Llerena	Madrid
	total		18,983			
TOTAL			41,969			

Table 2: Replacements of defective payments in the first tranche (Table 1)

Initial date	Object	Place	Buyer	Ducats
12/1591	notary	Madrid	Lázaro Martínez	2.200
5/1591	lands		vecinos de Corpaquilo	171
8/1591	lands	Villa Brajima		1
12/1591	notary	Atapuerca	Juan de Vergara	50
12/1591	notary	Santo Domingo	Antonio Díaz Laynez y su mujer	50

06/24/1591	lands		Antonio del Visso y Miguel Romero	19
7/1591	notary	San Miguel de Alperones	Antonio de Céspedes y Miguel de Ayllón	50
	notary	Fuentesclaras	Luis Alonso de Nora	50
1/1591		Atienza		57
8/1591	lands	La Garrovilla	Constanza Benítez	5
12/1591	clerk	Valdeón	Juan Díaz de Valdeón	100
			Total	2.753
Actual date and transaction				
01/7/1591		Alcuesca		2.136
12/19/1591	clerk	Coyn	Rodrigo Marquez	175
01/01/1592	notary	Borona	Juan Díaz de Segovia	50
01/05/1592	notary	Erguisuelas	Pedro Gutierrez de Tras	50
08/12/1592	notary	Fuentesclaras	Luis Alonso de Nora	100
06/07/1592	notary	Borona	Juan Díaz de Segovia	50
	notary	Morana	Pedro de Valbuena	50
	notary	Domingoseñor	Francisco Ercero	50
4/1592	lands	Pezuela		92
			Total	2.753