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Abstract

Men of finance raised funds for loans, *asientos*, to Philip II by trading short-term financial instruments in credit markets and by selling long-term annuities, *juros*. These activities are illustrated by an *asiento* with the Maluenda brothers (July 13, 1595), where short-term credit secured by the equity of the fleets from the Indies were, for more than one half, converted into funded life annuities that were sold by the Maluendas. The new analysis of this *asiento* relies on its dossier of more than 400 pages in the archives of Simancas, including the contract, the monitoring attachments, and the final audit.

JEL classification: N01, N13, N23, N43.

Keywords: public finances, Philip II, asientos, juros, methodology, archives, verification.

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I

Philip II was a shy man. The ruler of the dominant power preferred to make decisions on written *consultas* rather than through discussion. In 1592, when he visited his archives that he had reorganized in the castle of Simancas, he shunned the festivities that had been prepared by the villagers, preferring to shut himself in with the *legajos*[3] that are still there, intact. We now have documents on government finances whose richness is unequaled for any ancien régime. This wealth of information is illustrated by the financial contract that we study here.

Bequeathed with medieval traditions, rights, and limited fiscal and financial instruments, Philip II managed a global but fragmented empire from a small, core administration of councils and accountants that supervised the delegation of many governmental activities. The partial delegation of the revenues to the cities through contractual lump-sum payments (*encabezamientos*) on the taxes of *alcabalas* and *servicios* led to the conflict between the Crown and the *Cortes* of the mid-seventies when these payments had to be increased.[4] Financial affairs were critical for bridging fluctuating revenues and expenditures. They were practically managed, at home and abroad, by men of business, *hombres de negocios*. The expression is revealing: there was no clear frontier between bankers and merchants. Before the industrial revolution most private credit was used for trade. Credit could be granted and raised through letters of exchange, especially between commercial fairs, thus bypassing usury laws. The activities of credit and trade had to go together. Credit was necessary for trade but trade was necessary for credit: delays in commercial fairs would block the liquidation of letters of credit.

Dickson (1967) emphasized that the financial revolution in England, in the first half of the 18th century, could not have taken place without the specialized group of "moneyed men." In 16th-century Spain, the moneyed men were the *hombres de negocios*. They were often foreigners (Fuggers or Genoese bankers), or had foreign ties. However, the accepted view that they were foreign bankers from Genoa who engaged in foreign sovereign loans is incorrect. Many of them resided in Castile (as is mentioned in the financial contracts with the Crown), and they had an intimate knowledge of the domestic fiscal affairs and of the financial markets in Spain. They provided the indispensable connections between the savers, in Castile and abroad, and the borrower, the Crown. The interruption of that connection for more than two years after the suspension of payments on asientos in 1577 had a severe impact on the commercial fairs and the Castilian economy and played an important role in the conflict between the Crown and the *Cortes*[5].

As in any country before the 19th century, the government debt had two components,[6] funded and floating debts, juros and asientos, respectively. In 16th-century Castile, juros were long-

[3]Pérez, *L'Espagne de Philippe II*, p. 77.
[4]Álvarez Nogal and Chamley, "Debt policy under constraints", Álvarez Nogal and Chamley, "The strategy of Philip II"
[5] Ibid.
[6] The best introduction to the finances of Philip II still is Ulloa (1977).

term instruments, perpetual bonds or life-annuities, most of them redeemable (including some life-annuities), that were funded by earmarked revenues. Given the context of the fragmented and delegating monarchy, these revenues were heterogeneous and scattered through the realm of Philip II.

Asientos[7] were financial contracts between the Crown and the *hombres de negocios*, usually for one to four years. They specified disbursements for and repayments by the Crown, in Castile[8] or other places of military expenditures. The main part of the asientos was a short-term debt that was relatively expensive. As in other countries (*e.g.*, England in the 18th century), if the short-term debt became permanent, it would be refinanced by the less expensive long-term funded debt, juros. Under Philip II, before 1575, this conversion from unfunded to funded debt was prepared by collateralizing asientos through juros called *juros de resguardo*. After the resolution of the 1575 crisis, asientos could be converted into juros through other methods, as we will see in this paper. Both before and after 1575, the *asentistas* were also skilled underwriters for the sales of juros.

The loan part of the asientos, net of the collaterals, never accounted for more than 10% of the public debt, which at around 60% of gross domestic product (GDP), was the first to reach a "modern" level. However, perhaps because they are well organized in the archives of Simancas, asientos have attracted much more interest in the literature than juros. After the work of Ramón Carande,[9] who first provided an account with a description of the asientos of Charles V, in the 1960s Fernand Braudel published a series of asientos using data collected by Alvaro Castillo.[10] In the early 1970s, Modesto Ulloa made an impressive effort to collect an enormous amount of information about the *Real Hacienda* (royal budget) of Philip II, studying its main revenues and analyzing contracts signed during his reign.[11]In addition, he was the first to determine the annual amounts of the asientos in annual series. His work highlighted the importance of the series of documents that are preserved in the *Contadurías Generales* section of the archives of Simancas, which are kept chronologically and alphabetically by bankers. This source is now well known to modern historians. Henri Lapeyre[12], Felipe Ruiz Martin,[13] Roberto Canosa,[14] Carlos J. de Carlos[15] and many other authors who have continued to work on the finances of Philip II and have explored it further. Carmen Sanz Ayán and Juan E. Gelabert analyzed the asientos of the 17th century,

[7] In the rest of the paper, we will not use italics for words that have become common in the literature, such as *juros* and *asientos*.
[8] Some disbursements in Castile may have been used for letters of exchange in the wool trade with Flanders, that in turn financed expenditures in Flanders.
[9]Carande, *Carlos V y sus banqueros*
[10]Braudel, *El Mediterráneo*
[11]Ulloa, *La Hacienda Real de Castilla*
[12]Lapeyre, *Simón Ruiz et les Asientos*
[13]Ruiz Martín, "Las finanzas españolas"
[14] Roberto Canosa published a list of all the asientos signed by the Genoese between 1566 and 1610, using the *legajos* of the *Contadurías Generale*s. Canosa, *Banchieri Genovesi*
[15]Carlos Morales, *Felipe II: el imperio en bancarrota*

reconstructing the values of the contracts signed by Philip III, Philip IV and Charles II from the data provided by the *Contadurías Generales* section (CCGG).[16]

Recently, Drelichman and Voth have "coded" the contracts of all the asientos from 1566 to 1600 (more than 430) in the CCGG section of the archives into a database that establishes the basis for all their work on asientos. Unfortunately, most of their analysis have been presented in terms of overall statistics so the underlying contracts are not known. In their initial publications,[17] they present details for only one asiento, which was signed by the Maluenda brothers on July 13, 1595, and they repeat that information in their book.[18]Here, we analyze the same asiento, which we will call the Maluenda asiento[19]: it provides a remarkable illustration of the conversion of short-term unfunded debt to long-term funded debt.

An important issue in this paper is the use of the archives of Simancas, in particular for the asientos. In economic history, researchers must make the effort, as much as possible, to go back to unfiltered texts. This is particularly important for asientos because much information is in the wordings of the contract. A general reader does not have to go to the text itself but in this paper, we provide a simple access to the contract for the general reader. We have translated most of the contract.[20] The Maluenda asiento is particularly interesting because first, the contract contains much information on the role of financiers at the time, and second because the contract is only a part of a dossier of more than 400 pages in the archives of Simancas. In these archives, the main documents on asientos are placed in two sections, with some cross-references.

First, the files in the section of the *Contadurias Generales* contains the contracts, and, next to each contract, the attachments that report the monitoring by the royal accountants, which may be requested in the contract. Some of the annotations of the accountants refer to audits that were done much later, in the second part of the documentation. For the Maluenda asiento, the contract has 14 pages and the 12 attachments a total of 47 pages.

The second part of the documentation is in the *Contaduria Mayor de Cuentas* (CMC). This chamber of audits, like the *Cour des Comptes* in France today, reviewed all financial transactions, and, if necessary, could request new computations and transfers. All contracts in which the king promised to deliver any ducat to an individual passed through the CMC. The private parties of such contracts had to submit a sworn statement justifying all transactions. The royal accountants reviewed all the documents that supported the transactions. Such an audit always left a final account and a balance. Sometimes, the Crown was the debtor, but the

[16]Gelabert, *La Bolsa del rey*, Sanz Ayán, *Los banqueros de Carlos II*
[17]Drelichman and Voth, "The Sustainable Debts", Drelichman and Voth, "Serial Defaults, Serial Profits"
[18]Drelichman and Voth, *Lending to the Borrower*
[19] There were other asientos signed with the Maluenda brothers in 1595-1596. One of them on July 29, 1995 had a connection with the July 13 asiento.
[20]The transcription of the contract, copies of the contract and of the attachments are available at "`http://www.chamley.net/castile`".Given the state of modern technology, publications should provide more supporting documents than they currently do.

reverse could happen (as it did for the Maluendas). For the Maluenda asiento, the documents of the CMC total 354 pages.

The complete dossier of the Maluenda asiento includes many numbers, which we will report here. However in our analysis, we will also conduct a careful reading of the contract because its words are essential for understanding the structure of the financial transaction, its flexibility in implementation, and the practical side Philip II's financing methods. But the contract presents only a view ex ante. A central part of our information comes from the monitoring attachments next to the contract. These are critical for knowing what actually happened. Indeed, what took place eventually may be surprising. Moreover, although these attachments are written ex post, they may also clarify our understanding of the contract terms.

The paper has three parts. The first part analyzes the contract and presents an ex ante view. The second part analyzes the actual implementation of the contract, ex post, with its attachments and the audits of the CMC. The third part evaluates the results of Drelichman and Voth. Their discussion of the asiento is contradicted by the contract itself, and by the attachments and the audit of the CMC to which they do not refer.

II

The Maluenda brothers were successful merchants from Burgos who used their network in trade to develop financial activities. On July 13, 1595, they signed an asiento committing them to deliver twelve monthly disbursements to the Crown in Lisbon. All disbursements were equal, except for the first one that was doubled. They were divided into three parts with separate financings. The first sequence covered roughly the months of July and August 1595 through an immediate payment by the Crown, in Madrid. The second sequence of disbursements, from September to mid-December of the same year 1595 was financed by a credit, called Tranche A here, with a first claim on the income of the fleet of the same year 1595. Each year, with rare exceptions, the fleet brought precious metals from the Indies in early Fall. The third and final sequence ran from mid-December 1595 to June 1596. It was also financed by a credit, Tranche B, on the fleet of 1596, and provided an additional option for its early liquidation through the sale of lifetime annuities. When a credit balance existed between the Crown and the Maluenda brothers and the contract envisaged that balance as either positive (debt of the Crown) or negative, a 1% monthly interest rate was applied.

The translation of the full contract (except for a few trivial paragraphs toward the end) is included in the appendix. We will make references to the full contract and its reading is highly recommended for understanding the analysis. In the text of the contract, much space is devoted (somewhat tediously) to the details of the financing of each disbursement (principal and interest) by one of the sources (transfer or equity loan). These linkages thus divide the contract in three parts. The monitoring accountants would have to present separate computations of the interests for the two equity loans. The structure of the contract is summarized in Table 1.

Table 1 The structure of the Maluenda asiento (in ducats)

Date	Disburse	Principal	Interest (1%)	Pay back date	Additions
07/95	26,886 26,884.5[21]	Transfer	None	To be paid immediately (07/95)	
09/95	21,229.5				
Total	75,000				
08/95	5,655	Tranche A	(6 months)	12/95-01/96	Fee (2%): 1,950
09/95	26,884.5		(5 months)		
10/95	26,884.5		(4 months)		
11/95	26,884.5		(3 months)		
12/95	11,191.5		(2 months)		
Total	97,500				
12/95	15,693	Tranche B	(13 months)	12/96-01/97	Fee: 3,540 + Option to liquidate part or all of Tranche B by selling juros on 1 or 2 lives, perpetuals, or *alcabalas*
01/96	26,884.5		(12 months)		
02/96	26,884.5		(11 months)		
03/96	26,884.5		(10 months)		
04/96	26,884.5		(9 months)		
05/96	26,884.5		(8 months)		
06/96	26,884.5		(7 months)		
total	177,000				
Total	349,500				

Source: Archivo General Simancas (AGS), CCGG, leg. 92-1. Asiento 07/13/1595.

The transfer of 75,000 ducats

The contract could not be more explicit (page 3): the Crown makes an immediate payment of 75,000 ducats toward the first two disbursements in July and most of the third one in August. Therefore, the contract emphasizes that no interest should be paid on this transfer. This point

[21] There is no division of a ducat into 100 units of a smaller denomination. The contracts refer either to half ducat or to maravedis (mrs). One ducat is worth 375 maravedis. When some accounting documents report only maravedis, we convert them in ducats, with decimals.

is repeated in Attachment IV (see below), which is written at about the same time as the contract and provides a summary in four pages. Of course, no interest will show up in the monitoring attachments, as discussed later. Apparently, the Crown needed immediate disbursements in Lisbon towards military expenditures. In a rush, it immediately provided 75,000 ducats, in Madrid, to be transferred as soon as possible to Lisbon by the Maluenda brothers. We now turn to the remaining 274,500 ducats that were financed by the two credits.

The credits (274,500 ducats)

Tranche A of 97,500 ducats[22] covers the disbursements from the end of August to mid-December (following the transfer of 75,000 ducats). There is no specific date for the repayment, nor should there be one: these disbursements are financed by an equity credit with a first claim on the next fleet and a fixed interest rate of 1% per month (similar to our modern fixed-rate, home equity line of credit). The expression *del primer dinero* (page 3), means a first claim and does not state a time immediately after the arrival of the fleet. Page 4 explains in detail how to compute the interest: from the first day of the month of disbursement until the day, or the days, of effective repayment by the Crown. The list of examples includes the disbursement to be made no later than December 31, 1595, well after the arrival of the fleet. That example is meaningful because Tranche A pays for part of the December disbursement. The second part of page 5 explains that if the Crown paid early for the disbursements in Lisbon, and had a negative debt balance with the Maluendas, then the Maluendas would have to pay to the Crown 1% per month. Like any equity credit line, the contract provides some flexibility of repayment. Interest will have to be computed by public officials (page 5). These reports will be in the monitoring attachments.

An important item (page 4) justifies the 1% monthly interest rate as a compensation for the borrowing costs that will have to be incurred in the credit market.[23] The same sentence is repeated for the interests on Tranche B. A license is given to the Maluendas that frees them from any legal constraints on the interest rates of the credit market (page 13). "Exchange" in the expression *dar y tomar a cambio* or give and take in exchange, is not an exchange between currencies but a loan.[24] The contract thus explicitly acknowledges that for this particular asiento, the Maluendas may raise funds on the credit market.

In addition to the interests on Tranche A, there is a fixed fee to be paid to the Maluendas, without a date, at 2% of the Tranche (page 5), which is moderate even by modern standards.[25]

Tranche B, which pays for the disbursements in 1596, is modeled after Tranche A: it is an equity loan with a first claim on the next fleet (Fall of 1596). The clauses on pages 6-8 repeat,

[22] The numbers 97,500 and 177,000 may have been chosen because 177,000 is a round number: accountants used maravedis more often than ducats and 177,000 ducats is exactly equal to 66 million maravedis plus one thousand ducats. 177,000 is also roughly equal to the total disbursements in 1596.
[23] "para suplir a los daños de los cambios que a de padecer."
[24] The expression is derived from the Latin word for lending, *mutuari*,with the sense of the mutual obligation.
[25]Chamley, "Interest Reductions"

verbatim, the words for Tranche A. Note that the 1596 disbursements provided leverage to the Maluendas for the repayment of Tranche A. (However, this point will turn out to be moot).

The option in juros for Tranche B (177,000 ducats)

The contract specifies an option for the Maluenda brothers to be reimbursed for Tranche B at an earlier date by selling juros (pages 9-12). This clause will turn out to be central in the implementation. Sales of juros would shift the debt of the Crown from the Maluendas to the holders of the juros. The contract specifies the menu of authorized juros in Table 2.

Table 2 Menu of allowed *juros* for the option

Type of annuity	Nominal price for a rent of 1,000	Effective price for a rent of 1,000	Effective rate (%)
Annuities on one life	7,000	7,000	14.29
Annuities on two lives	8,000	8,000	12.5
Perpetuals	14,000	14,000	7.14
Perpetuals[26]	20,000	16,000	6.25
Sales of alcabalas[27]	30,000	30,000	3.33

Source: AGS, CCGG, leg. 92-1. Asiento 07/13/1595.

According to the contract, the sale of the life annuities should be established before the end of June 1596, and these annuities would begin to pay income from January 1, 1597. The Maluendas were bound to provide trimestral reports on the sales of juros (page 11). These reports are in the attachments next to the contract.

The contract also mentions two important points. The acts of sale should be written in the usual manner and the usual procedures should be followed for this option (page 9). There had been similar cases before. It also states that the annuities should be funded by revenues chosen by the Maluendas (page 9). The quality of an annuity depended on its source of funding and the Maluendas must have had good information about the best sources of funding.

[26] For the perpetuals with a price of 20,000 and an annual income of 1,000, that nominal price is reduced to 16,000. The contract makes sure that any official who would later monitor the sales of juros should be aware of the clause (page 11).

[27] The conditions for the sales of alcabalas are written on page 12 of the contract. No such sale will take place, the other options being more advantageous.

Concluding remark on the contract

Much of the contract is devoted to spelling out the details of the computation of the interest for which disbursement, to the payments that are excluded from the interest (the transfer of 75,000 ducats and the 2% fees), and to how the interests should be computed if there is a change in the date of payments by the Crown or if the bankers exercise the option of an early repayment through the sales of juros. These computations are abundant in the attachments. These details show that the contract is not about "agreed-on cash flows" going back and forth, with dates tied to the fleet arrivals, as claimed by Drelichman and Voth (discussed below).

The contract encompasses three financial agreements, a transfer and two loans at 1% per month, each with an equity (i.e., a first claim) on the first fleet that arrives after the Tranche's disbursements. The three parts finance a disbursement project in Lisbon and are obviously tightly related. In the implementation of the contract, there will be some substitution between Tranches A and B, but each will operate with its own accounting. Beyond the contracts, other linkages were generated by the continuing relation between the Maluenda brothers and the Crown. For example, the brothers signed another asiento two weeks later, on July 28 that also had a first claim on the 1595 fleet, and the payments from that fleet (with a first claim) were allocated to both contracts.

III

The archives of Simancas do not just keep the contracts of the asientos but all the documents that have been written by royal officials after their signature. The implementation of this contract is described in the 47 pages of the monitoring attachments that are next to the contract in the CCGG section of the archives. They are listed with a short description in Table 3. Attachments I-IV were written at the time of the contract. Attachments III and IV provide a summary of the contract; in the margins of Attachment IV, accountants have added some of the conclusions from audits by the CMC (*Contaduría Mayor de Cuentas*), that were done in 1606. Attachments V-XII are the accountants' reports in the monitoring of the contract. The interest computations are in Attachments VIII and IX. The sales of the juros are in the attachments X-XII.

The files in the CCGG section (contract plus attachments) were written before the *Decreto* of November 26, 1596 that declared a suspension of payments on all the asientos. We therefore consulted the audit of the asiento in the CMC section, which reports the sequences of the payments by the Crown to the bankers (*cargo*) and of the disbursement by the bankers (*data*), and also information on the names of the parties and places of the transactions.[28] We follow each of three parts (transfer and equity loans) for our analysis of the implementation.

[28]For some asientos, the archives contain not only the documents of the royal accountants in the CMC, but also many receipts for the transactions they recorded, as would be the standard practice today.

Table 3 Attachments to the contract

Attachments at the time of the contract (July 1595)

I. Letter of exchange signed by Francisco and Pedro de Maluenda, Madrid (07/12/95). Such a letter is attached to most asientos. It is mentioned on page 2 of the contract (2 pages).

II. *Obligación*: notary document of the banker that accepted the clauses of the asiento, Madrid, 07/15/1595 (3 pages).

III. *Cargo y data*: specifies the payment obligations of the banker (*cargo*) and of the king (*data*). Such a document is written at about the same time as the contract (2 pages)[29].

IV. *Quenta*: summary of the asiento. In this important document, the central part of the pages summarizes the asiento. In the margins, notes written by the royal accountants refer to documents dated 05/27/1598, and between 1595 and 1596 (4 pages).

Attachments monitoring the contract (July 1595-October 1606)

V. Export licenses for silver (probably in July 1595). More than a formal document, it contains notes on the implementation by the royal accountants on 10/19/1609 and 12/11/1614. Attachment VII expands on that document (2 pages).

VI. Certificates of the *Contadores Mayores de Cuentas*, October 13 and 19, 1606 (3 pages).

VII. Copies of the licenses for the exportation of silver and gold, expanding on V (8 pages).

VIII. First account of interest payments, 06/07/1596 (7 pages).

IX. Second account of interest payments, 02/22/1596. By date, it precedes Attachment IV but in the file, it is between Attachments VIII and X (3 pages).

X. First report on the sales of juros, 10/08/1595 (7 pages).

XI. Second report on the sales of juros, 01/12/1596 (2 pages).

XII. Third report on the sales of juros, 04/13/1596 (4 pages).

Source: AGS, CCGG, leg. 92. Asiento, 07/13/1595. Roman numbers are ours.

The transfer of 75,000 ducats

Recall that the transfer paid for the disbursements in June, July and most of August 95, and that it had to be made “sin dilación ninguna."The dates of the effective payments, from the accounts of the CMC, are presented in the next table.

[29] Attachment III explains the modalities of the payments in Lisbon. Gerónimo de Aranda was to receive 235,370 ducats for the total of 13 months. He was in charge of the disbursement in the kingdom of Portugal for the troops in Lisbon and the castle of its region. 94,293 ducats were to go to Martín Ruiz de Lariz, in charge of military disbursement in the islands of the Tercera and in the Acores. Finally, 19,837 ducats were allotted to Martin Gomez de Valdivieso, who was the payer in the island of Madera. Attachment III provides also information on the use of the Lisbon funds. For example some funds were sent to the islands by letter of credit, others in cash.

Table 4: Implementation of the transfer of 75,000 ducats

Dates (1595)	Payments by the Crown	Disbursements
07/18	30,351	
07/27	3,627	
08/03	1,892	
08/11	14,000	36,212
08/31		38,788
09/11	25,130	
Total	75,000	75,000

Source: AGS, CMC 3 época, leg. 32. *Cargo*.

By contract, the first disbursement by the Maluendas, nominally for June, had to be made no later than July 21. The audit by the CMC on December 23, 1617 states that the payment order was issued on July 21, and payment was made on August 11. The time interval is indicative of the payment delays that could occur, and the uncertainty about actual dates of payments. These delays may have been related to the method of transfer through letters of exchanges. They may also explain why, in the contract and in the computations by the accounts, the balances for interest rates are always calculated from the first day of the month of the disbursement, as it is clearly illustrated in the examples provided in the contract.

Tranche B (principal of 177,000 ducats)

The first action after the signing was on Tranche B (that should have come after Tranche A). As soon as the contract was signed, the option for annuities was exercised. According to the contract, the cédula[30] for the payments by the Crown in Tranche B had to be adjusted if juros were sold. Attachment IV specifies (annotations in the left margin of its page 3) that the cédula "was torn up because they demanded to be paid in juros and *alcabalas*."[31] A new cédula specified that all that was included in the first cédula (principal, interest and 2% fees) was to be paid in juros and alcabalas.

[30] A cedule (cédula) is the document that orders compliance with the agreements in the signed contract of the asiento. It is required for the execution of the agreements by the royal officials who often do not have access to the contract.
[31] AGS, CCGG, leg. 92. Attachment IV, 1596.

Table 5 Implementation of Tranche B (177,000 ducats)

1	2	3	4	5
Dates	Disbursements	Interest period	Juros sold	Cumulative
08/95			73,366	
09/95			5,867	
10/95			25,119	
11/95			800	
12/95	15,693	13 months	0	105,152
01/96	26,884.5	12 months	62,720	
02/96	26,884.5	11 months	0	
03/96	26,884.5	10 months	1,600	169,472
04/96	26,884.5	9 months	0	
05/96	26,884.5	8 months	7,528	177,000 (principal)
			20,472	
06/96	26,884.5*[32]	7 months	432	20,904 (interest)

Source: AGS, CCGG, leg. 92-1. Asiento 07/13/1595. Attachment IX, 02/22/1596 and AGS, CMC 3 época, leg. 32. *Cargo*.

The sales reports by the Maluenda brothers (contract page 11) are the attachments X, XI, and XII, dated October 8, 1595, January 12 and April 13, 1596, respectively, or every three months. They attest to the direct involvement of the Maluenda brothers in the trading of juros. After the third report, a principal of 7,528 ducats remained, plus the interest. These sales are also reported in the final revision by the CMC.[33] We use the complete documentation of the CMC to summarize the payment of Tranche B in Table 6. Note the brisk pace of the sales. By the end of August, sales of juros had already paid, in anticipation, more than 40% of the tranche.

The complete list of juros in the report of the CMC, including date, type, amount, and name, is presented in the Appendix. Consider again the menu of the options that were offered in the contract (Table 2). It is clear, to us, that the annuities on two lives are the most advantageous. Indeed, 65 of the 69 juros were for annuities with two lives, as reported in Table 6.There was only one perpetual at 7.14% and one at 6.25% (with the reduced price from 20,000 to 16,000) that were sold, probably for idiosyncratic reasons.

[32]An asterisk has been attached to the last disbursement in June 1596 because all the disbursements have not been completed by the Maluendas, as discussed later.
[33]AGS, CMC 3 época, leg. 32.

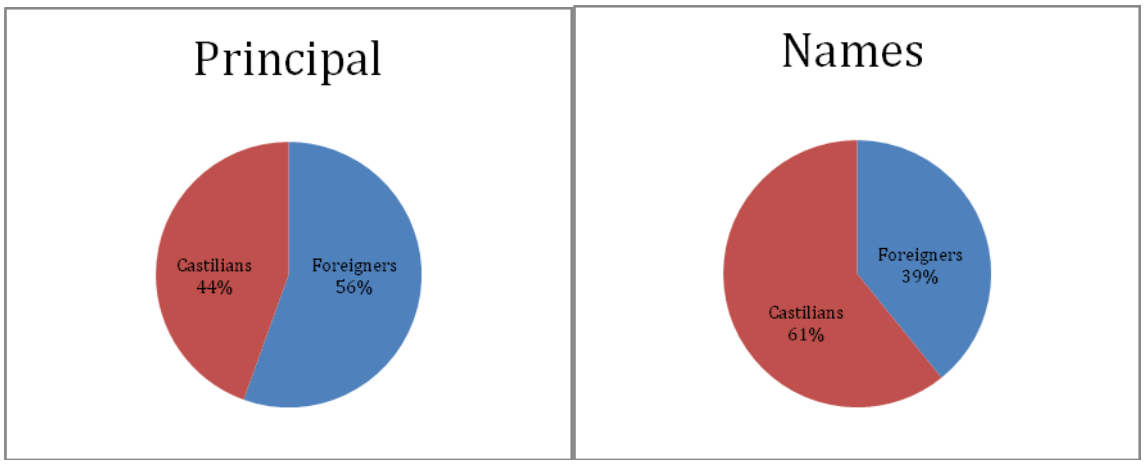
Table 6 Types of the annuities sold by the bankers

Quantity sold	Type	Percent of Total	
		Quantity of annuities	Capital
2	One life	3	2
70	Two lives	95	95
1	Perpetuals (7.14%)	1	1
1	Perpetuals (6.25%)	1	2
0	Alcabalas	0	0

Source: AGS, CCGG, leg. 92-1. Asiento 07/13/1595 and AGS, CMC 3 época, leg. 32. *Cargo*.

The principal of the juros range from 416 to 16,000 ducats with more than 60% above 1,000 ducats, a large sum at that time (a soldier could earn one ducat per week).[34] The 74 juros were sold to 35 Castilians and to 39 foreigners. Foreigners bought 56% of the total value of the juros: on average, they bought juros of higher value. These foreigners were mostly Genoese's and other Italians. By their family connections and the amounts of their investments, they must have had good information on the returns of the juros.

Figure 1 Shares of juros



Source: AGS, CMC 3 época, leg. 32. *Cargo*

Many families bought more than one juro with heads on their families. For example, Joan Francisqui bought six juros that he placed on the head of all this children in various combinations. He remained the *de facto* beneficiary of these rents. Joan Imbrea followed the same strategy.

[34]Porreño, *Recueil des actions*, Thompson, "El soldado del Imperio", p. 34, footnote 46.

Table 7 Juros purchased by Joan Francisqui and Joan Imbrea

Annual income	Nominal owner	Principal	Rate
66.6	Sor Clara de Francisqui y Juan Pedro de Francisqui	533	12.5
66.6	Sor Julia y sor Clara de Francisqui	533	12.5
66.6	Juan Pedro de Francisqui y sor Julia de Francisqui	533	12.5
213.3	Sor Angela Benedita y Hortensia de Francisqui	1,707	12.5
213.3	Hortensia de Francisqui y Monaca de Francisqui	1,707	12.5
213.3	Monaca de Francisqui y sor Angela Benedita	1,707	12.5
200	Vicencio y Thomas Imbrea	1,600	12.5
200	Thomas y Antonio Imbrea	1,600	12.5
200	Antonio y Vicenzio Imbrea	1,600	12.5

Source: AGS, CCGG, leg. 92. Asiento, 07/13/1595, Attachment XII.

The contract specified that for the part of Tranche B that was to paid by juros, a monthly interest of 1% should to be paid[35] from the date of the disbursement that reimbursed by the sale of juros to the date when the juros begin to pay a coupon, which is January 1, 1597. These interest computations are placed in Attachment IX and are summarized in Table 8.A cédula on May 11, 1596, specified that the interest and the 2% fees, 20,904 ducats in Table 6,would be paid by the sales of three juros, which are described by Table 16 in the appendix.

Table 8 Computation of interests payments and fees on Tranche B

1	2	3	4	5
From	Principal	Until	Months	Interest
12/01/1595	15.693	12/31/1596	13	2.040
01/01/1596	26.885	12/31/1596	12	3.226
02/01/1596	26.885	12/31/1596	11	2.957
03/01/1596	26.885	12/31/1596	10	2.688
04/01/1596	26.885	12/31/1596	9	2.420
05/01/1596	26.885	12/31/1596	8	2.151
06/01/1596	26.885	12/31/1596	7	1.882
			Total interest	17.364
			Fee	3,540
Totals	177.000			20,904

Source: AGS, CCGG, leg. 92-1. Asiento 07/13/1595. Attachment IX, 02/22/1596.

[35] Because Crown pays the interest there is no issue about the effective date of payment of the juros to the Maluendas. If the payment occurs before January 1, 1597, the Maluendas could pass some or all the interest income to the buyer.

Tranche A and the cash payments after the first fleet

The Lisbon disbursements from the end of August to mid-December 1595 had been made under an equity loan with a first claim on the 1595 fleet. That fleet, commanded by Luis Alfonso Flores, arrived on September 17, according to a report from the *Casa de Contratación* in Seville.[36]At that time, the Maluenda brothers and the Crown knew that the sale of juros was proceeding at a brisk pace. The first trimestral report, coming on October 8, stated that juros had been sold for 92,085 ducats, more than half of Tranche B, which had a first claim on the next fleet in 1596. The first claim of Tranche B had been replaced by another cédula in July 1595, thus freeing the income of the 1596 fleet from that claim. It then made perfect sense to shift some of the equity of Tranche A from the 1595 fleet to the 1596 fleet. The principle of an equity line of credit would be applied, with a 1% monthly interest until repayment. The accountants divided Tranche A sequentially into two sub-tranches, A1 and A2.

Table 9 Cash payments by the Crown from the 1595 fleet

Date of payment	Amount
12/13/1595	12,693.33
12/29/1595	18,133.33
01/12/1596	36,266.67
01/19/1596	18,133.33
01/25/1596	25,477.33
01/27/1596	24,213.33
02/01/1596	5,440.00
02/08/1596	5,440.00
02/09/1596	2,133.33
02/10/1596	33,186.81
02/15/1596	5,333.33
02/16/1596	6,400.00
02/19/1596	1,813.33
02/22/1596	33,148.35
TOTAL	227,812.47
To first asiento (13/07/1595) Lisbon	61,899.82
To second asiento (26/07/1595) Flanders	165,912.65

Source: AGS, CCGG, leg. 92-1. Asiento 07/13/1595. Attachment VIII, 06/07/1596.

[36]Lorenzo Sanz, *Comercio de España*, vol. II, pp. 532-536 provides the exact date of the fleet.

Tranche A1 paid for the disbursements until the end of October 1595 (after the initial transfer of 75,000 ducats). The other disbursements, for November and part of December (see Table 1) were allocated to Tranche A2, to be paid with interests after the 1596 fleet. The Crown began to make payments from the first fleet on December 13, 1595. All the payments on the first fleet are reported in Attachment VIII and are summarized here in Table 9.

The payments in Table 9 were used not only for the asiento of July 13, 1595 but also for payments in the next asiento that was signed by the Maluendas on July 26, 1595. For the interest charge, the accountants followed the contract. The balance for the interest ran from the first of the month when disbursement was due (including that day), to the "day or days" of the payment by the Crown. The accountants made a correct computation by taking the mean date in Table 9, weighted by the amount of the payment for each date. The result, up to the third decimal, is January 25. Using this date as the last day for all balances, the accountants reported their results in Attachment VIII, on June 7, 1596 (Table 10).

The total of 61,899.82 ducats was charged on 227,812.47 ducats paid from the first fleet (Table 9). The remainder (165,912.65 of the 227,812.47 ducats) was paid for the second asiento of July 26. Note that a very small amount of 161.90 ducats was omitted from the October disbursement, for unknown reasons. It will be included in Tranche A2 (Table 10).

Table 10 Implementation of Tranche A1 (part of 97,500 ducats)

1	2		3	4	5	6
Transaction	Amount	Mean date*	Months	Days	Interest	principal and interest
08/01/95	5,655.00	01/25/1596	5	25	328.40	
09/01/95	26,884.50	01/25/1596	4	25	1,292.20	
10/01/95	26,723.60	01/25/1596	3	25	1,017.20	
Total	59,263.10				2,637.70	61,899.80

Source: AGS, CCGG, leg. 92-1. Asiento 07/13/1595. Attachment VIII, 06/07/1596.

The remaining balance and the suspension of payment (November 1596)

After the last payment for Tranche A1 on February 1596, Tranche A2 was the only balance due with a principal of 38,237.7 (= 97,500-59,263). The same June 7, 1596 report presents provisions for the interest to be paid on that tranche, summarized in Table 11.

Table 11 Payments due on Tranche A2
(provisions on payments to be made after the 1596 fleet)

1	2		3	4	5	6
Disbursement date	Amount	Payment date	Months	Days	Interest	Principal and interest
10/01/95	161.90	10/31/1596	13	0	21.00	
11/01/95	26,884.50	10/31/1596	12	0	3,226.10	
12/01/95	11,191.50	10/31/1596	11	0	1,231.10	
Total	38,237.90				4,478.30	42,716.30

Source: AGS, CCGG, leg. 92-1. Asiento 07/13/1595. Attachment VIII, 06/07/1596.

Columns 3 and 4 imply that the anticipated date for repayment is October 31, 1596, shortly after the expected arrival of the second fleet. The total amount due on October 31 would be 42,716.3 ducats. However, this assumes the most optimistic scenario. In an equity loan, the repayments could be made later, as they had been for Tranche A1.

The 1596 fleet arrived in October.[37]On October 26, 1596,[38] the Maluenda brothers signed an asiento for 165,000 ducats. On November 29, 1596, Philip II decreed the suspension of payments to all asientos.[39]The income from the fleet stayed in Seville and was not used for any payment to bankers. How did this decree affect our asiento?

Recall that royal accountants added notes to the attachments to the contract. On May 27, 1598, after the *Medio General* published the terms of settlement for the asientos, a note was added in Attachment IV:

> In the certification that was given on May 27, 1598, by Luis de Alarcón and Juan de Gamboa, accountants in charge of the liquidation of the accounts of the asientos taken by men of business (*hombres de negocios*) included in the decreto of November 29, 1596, it appears that from the sworn statements that the named Maluendas presented for the liquidation of their asientos, they declared to the Royal Finances of Her Majesty that the principal and interest until November 14, 1597 amounted to 37,380 ducats for the principal and interest from the asiento of 349,500 ducats. In conformity

[37]In June, the fleet of Nueva España, led by Pedro Menéndez Márquez was in La Habana and cast away in mid-July. It arrived at the same time as the fleet from the Tierra Firma, under the command of Francisco de Eraso. Ibid., vol. II, pp. 532-536.
[38]AGS, CCGG, leg. 92.
[39] The decision had been taken a few weeks before and during the previous months the Crown had secretly issued individual orders to stop payments (AGS, CJH, leg. 358, and Carlos Morales, *Felipe II: el imperio en bancarrota*, pp. 286-289.

of the settlement of the *Medio General* that was taken after the decreto, and after consultation with Her Majesty, it was ordered to pay to these men of business the amounts put in their sworn statements with a quarter in escrow before the liquidation of the accounts. These payments are ordered by two *cédulas* from Her Majesty on June 16, 1598 for the quantity of 37,380 ducats to be paid by the Tesorero General, one third in crecimientos of *juros de por vida* at 14,000 and the other two thirds in new juros at 20,000, with a quarter put into escrow.

The amount of 37,380 ducats corresponded to the 43,000 ducats in Tranche A2 (Table 10).[40]Given the care of the accountants, it is not surprising that the Crown accepted the statement.

In 1606, the CMC audited all the transactions related to the *asiento*. A summary report was put in Attachment VI: the Maluendas had disbursed only 339,079 ducats instead of the 349,500 in the contract, a shortfall of 10,420 ducats. All the transactions had to be reexamined by the CMC. Table 12 summarizes the revision. At the end, on that particular asiento, the Crown did not owe to the Maluendas: they owed to the Crown.[41]

Table 12 Final revision of the accounts by the Contaduria Mayor de Cuentas

	Ducats
Principal due	339,079
Interest due	28,903
Total due	367,982
Paid by the Crown	372,184
Balance (10/14/1597)	(4,202)

Source: AGS, CMC 3 época, leg. 32.

The swap from short-term equity credit to long-term annuities

The financing of a steady stream of disbursements in Lisbon for a year was obtained with remarkable exactitude and flexibility. The first claims on the fleets provided the equity for

[40] Some payments on Tranche A2 may have occurred after June 7, 1595.

[41]As an epilogue, at the death of Francisco the Maluenda, the accounts had to be settled for Pedro. In the archives of Simancas, we found the related documention. After the revision of the accounts of all the asientos that had been signed by the two brothers, the accountants of the Crown discovered that the company of the Maluenda brothers owed to the Crown 37,333 ducats (14 million mrs) and ordered the payment of that debt. The brothers went to court. As of 1624, when the revision took place, no payment had been made. As mentioned in the document, a number of the Maluenda brothers' asientos were settled together. By that time, the asiento of July 13, 1595 had been long settled.(AGS, Consejo and Juntas de Hacienda, leg. 606).

the credit but the contract enabled the parties to adapt the financing: the asiento generated a smooth swap of two thirds of the short-term equity credit to long-term financing.

Table 13 Net positions of the bankers with the Crown

1	2	3
Month	Cash balance	Net position
10/95	32,596	(46,597)
12/95	78,913	(11,779)
02/96	80,716	(27,976)
04/96	136,376	(13,091)

For some time, the Maluenda brothers sold juros for much more than what their disbursements in Lisbon. In order to estimate their position with respect to the Crown, we make the conservative assumption that the sales of the juros are net of all the interest due on January 1, 1597, from the date of the sale. (Under that assumption, the Maluendas would cash in the sales and pay all the interest in advance until the juros would pay rent). Table 13 presents, for different dates, their cash balance (where they are creditors to the Crown) and their position when the sales of juros, up to that date, are deducted from the cash balance. Until mid-April the Crown did not owe a debt to the Maluendas. The Crown owed a large debt to the holders of juros, and the Maluenda brothers were intermediaries for that debt.

IV

The Maluenda asiento is the showpiece of Drelichman and Voth (hereafter DV). It is emblematic of their methodology for all their work on asientos. They have constructed a data set that they thus describe[42]:

> "The complete series of 434 asientos issued under Philip II, and preserved in the Archive of Simancas, forms the basis of our study. Each contains a brief summary, reporting the names of the lenders, the date, and the total amount involved. Previous work on this series was based on these abstracts (Ulloa 1977) and did not analyze the terms and conditions of the loans in any detail. *Our data are based on the full text of the contracts*....
>
> The full archival series contains 4,997 handwritten pages, with an average of 12 pages per loan. *We transcribe every single clause and reconstruct agreed-upon monthly cash flow*. In addition, we code up to 89 variables for each *asiento*."

They attempt to reconstruct of cash flow because[43]

[42]Drelichman and Voth, "Risk Sharing with the Monarch", p. 55. A similar presentation is found in their other works. Italics are ours.
[43]Drelichman and Voth, "Serial Defaults, Serial Profits", p. 4.

> [We] "need to reconstruct the cash flows they generated to estimate the rates of return for each contract."

They use their own definition of a return, the "MIRR", rather than the standard internal rate of return for the following reason:

> "Using the MIRR is attractive because of the nature of asiento contracts. The cash flow of many asientos turned from positive to negative and back several times over the lifetime of a loan. Our sample contract with the Maluenda brothers is a case in point."[44]

Most of the results of DV are presented in terms of overall statistics that cannot be verified. The Maluenda asiento is the only exception in their main papers,[45] and we would expect a special care in their analysis. We follow our previous two-part sequence that separates the contract from its implementation.

Table 14 Agreed cash flows in the contract with the Maluenda brothers

	Original agreement					Settlement
	1	2	3	4	5	6
	Month	Disbursements	Repay-ments	Net cash flow	Description	
1	07/95	53,740		(53,740)	Initial disbursement of 26,856 ducats; first monthly disbursement of 26,884 ducats.	(53,740)
2	08/95	26,884		(26,884)	Monthly disbursement.	(26,884)
3	09/95	26,884		(26,884)	Monthly disbursement.	(26,884)
4	10/95	26,884	100,890	74,006	Monthly disbursement; repayment of 1,950 ducats; repayment of 97,000 ducats plus 1% simple interest for two months.	74,006
5	11/95	26,884	77,250	50,366)	Monthly disbursement; repayment of 75,000 ducats plus 1% simple interest for three months.	50,366
6	12/95	26,884		(26,884)	Monthly disbursement.	(26,884)
7	01/96	26,884		(26,884)	Monthly disbursement.	(26,884)
8	02/96	26,884		(26,884)	Monthly disbursement.	(26,884)
9	03/96	26,884		(26,884)	Monthly disbursement.	(26,884)
10	04/96	26,884		(26,884)	Monthly disbursement.	(26,884)
11	05/96	26,884		(26,884)	Monthly disbursement.	(26,884)
12	06/96	26,884		(26,884)	Monthly disbursement.	(26,884)
13	07/96	0		0		
14	08/96	0		0		
15	09/96	0		0		
16	10/96	0	201,780	201,780	Final repayment of 177,000 ducats plus 1% simple interest for 12 months plus 2% lump sum bonus.	0

[44] Ibid., p. 6, repeated in Drelichman and Voth, *Lending to the Borrower*, p. 175.
[45] Drelichman and Voth, "Serial Defaults, Serial Profits", p. 6.

17	10/97					137,059

The "agreed-upon cash flows" of DV are reproduced, verbatim, in the columns 1-5 of Table 14.[46] In contrast to our Table 1, note that the three-part structure has disappeared. DV see only "cash flows that swing from positive to negative multiple times" without discussing the reasons. This characterization misses the essential features of the structure of the contract.

In reducing the contract to cash flows, we would expect them to be faithful to the contract. From our previous analysis, the reader can see that except for the steady flow[47] of disbursements in Column 2, all the numbers in the table are wrong.

The payment of the 75,000 ducats is now set for November 1595 (Line 5, Column 4), with interest up to that date, an invention that is refuted emphatically by the contract (page 3). The payment of Tranche A (97,500 ducats) is set in October 1595 (Line 4, Column 4). Extensive evidence contradicts this interpretation, as discussed above. This tranche did not have to be paid immediately after the arrival of the fleet (set here at the median date).[48] This issue is about more than a particular date. It is about the essence of the contract as a credit with an equity on income from the fleet.

For Tranche B, DV relegate the juros option to a footnote...:

> "Bankers could request juros yielding a maximum of 7.14%. Under our discount rate assumption (also 7.14%), the present value of lifetime juros of any allowed yield would have been lower than their face value. We discuss this at length in Appendix A."[49]

There dismissive treatment of juros contrast, with the discussion by Ulloa. Whereas DV state that Ulloa "did not analyze the terms and conditions of the loans in any detail", in fact Ulloa gives a detailed account of the Maluenda asiento of July 13, including, on page 817, the complete and accurate menu of options, exactly as in our Table 2. On juros, DV write further:

> "Lifetime *juros* have a present value that is lower than their face value. We therefore disregard the option of the banker taking them in lieu of payment when calculating ex-ante returns."[50]

The misreading of the contract has fatal consequences for DV's analysis of its implementation.

---

[46]Column 6 reproduces their account of the implementation of the contract, which is in Table 4 in Ibid., p. 7.
[47] Column 2 refers to the first two pages of the contract, but total disbursements were smaller by 10,000 ducats.
[48] DV do mention the interest charge, of course. But they only mention the uncertainty about the arrival of the fleets: "We assume that the bankers expected the fleets to reach Spain in September, their median arrival month. [...]. Payment was therefore expected in October. If the fleet arrived later, the monthly 1% interest charge would accrue until the payments were made or the bankers received juros".Drelichman and Voth, "Serial Defaults, Serial Profits", p. 5.
[49]Ibid., p. 5.
[50]Ibid., p. 5.

Here, the issue of research in the archives of Philip II in Simancas has to be raised. The asiento contracts are in large boxes (*legajos*). All the documents in a *legajo* are in loose sheets without any binding. The attachments are next to the contract in question, before the next contract, so it is hard to miss them. In addition, the documents in the CMC section of the archives are important complements to the files in the CCGG section. Their neglect of all these documents leads DV to a description of the implementation of the Maluenda asiento that has no relation with what actually happened.

The transfer (75,000 ducats) of course did not take place in November 1595. It is never mentioned in the computation of interest, as in Attachments VIII and IX.Tranche A (97,500 ducats) was not paid in October 1595 but split into two parts, the first in installments between December 1595 and February 1596, the second still pending in October 1596, as in Attachments VIII and IX.

The sales of the juros are detailed in Attachments X-XII.The dismissal of the option on juros leads to the following statement by DV:

> "In October 1596, however, the king decreed the fourth suspension of payments of his reign. The fleet of 1596 did not arrive until late October, and hence *we know with certainty* that the final payment of the contract did not take place."[51]

That final payment, according to DV, is the entire 201,780 ducats of Tranche B plus interests (Line 16, Column 2). In fact, it had been entirely paid six months to a year before.

On the final balance due, DV write:

> "We assume that all payments go towards capital amortization first. This produces a lower bound for outstanding capital at the time of the default, and hence for the settlement payment. By this methodology, as of October 1596, the king would have owed the Maluenda brothers 171,324 ducats from this particular contract. We multiply this amount by 0.8 and enter it as a positive cash flow in October 1597. This yields a MIRR of–5.3%."[52]

Because they have misread the contract and do not refer to the attachments next to it, and the audits in the CMC, Drelichman and Voth are reduced to idle speculations. The archives flatly refute their conclusion that "the Maluenda brothers lost money on this particular contract."[53]

The reduction of the debt in the previous paragraph follows from the statement that "the 1597 settlement imposed a uniform 20% reduction on outstanding claims for all contracts."[54] Compare this with our previous quote from Attachment IV: "In conformity of the settlement of the *Medio General* that was taken after the decreto,... it was ordered to pay to these men of

[51]Drelichman and Voth, "Serial Defaults, Serial Profits", p. 8. Italics are added.
[52]Ibid., p. 8.
[53]Ibid.,p. 8, footnote 26.
[54]Ibid.,p. 8., repeated in Drelichman and Voth, *Lending to the Borrower*, p. 180.

business the amounts put in their sworn statements."[55] Contrary to their claim, Drelichman and Voth do not seem to have studied any *Medio General* in detail. In 1597, the 80% payment on debts is a benchmark of principle. A full analysis of the *Medio General* will require serious archival work on individual asientos and, most importantly, on the market for juros.

We can make three general observations about DV's research. First, given the gross mistakes in their discussion of the Maluenda contract, we have some doubts about the accuracy of their overall reports on the contracts, for example, on their decomposition of asientos between loans and transfers.[56]

Second, they have neglected the monitoring attachments that are inserted between two consecutive contracts in the CCGG section of the archives. Because some of the contracts allow for significant flexibility, the monitoring documents are obviously essential. DV have preferred to make their own assumptions on events, about which they are "absolutely sure." Their claim to have provided a "reconstruction of the year-to-year movements in Philip II's fiscal position"[57] rests on speculations that would have been unnecessary if they had drawn on all the available documents. The very large error on the final debt, both the final balance and on the *juros*, in the Maluenda contract, raises serious doubts about the validity of their claim.

Third, their methodology is flawed: the contracts cannot be represented as "agreed-upon cash flows" that may turn from positive to negative and back several times. For their showcase of the Maluenda contract, the methodology turns the contract on its head in a bizarre tautology: the rate of return on the contract is computed from the cash flows with dates under their assumptions (Table 14);[58]what do we learn from a rate of return that is computed from cash flows that are, by the contract, established from a monthly charge of 1%?

Even if the rate of return on the balances of the asiento were properly computed, we cannot know whether the Maluenda brothers made or lost money. As mentioned repeatedly in the contract, the funds can be raised in the credit market. The contract provides no information on the equity of the Maluenda brothers, as for any other asiento in DV's database. The Maluendas may just have been underwriters for the instruments of credits, the letters of exchange, and the sales of the juros, earning all their income from fees. We just do not know.

V

The Maluenda brothers asiento is one of many, but its thorough analysis shows that a better understanding of the finances of Philip II will require a careful reading of a number of contracts and of their attachments in the *Contadurías Generales* section of the archives of

[55] AGS, CCGG leg. 92. Asiento, July 13, 1595. Attachment IV.
[56]Drelichman and Voth, "The Sustainable Debts", figure 3, p. 821.
[57]Ibid., p. 814.
[58] We have some issues with definition the MIRR, which are not within the scope of this paper.

Simancas. This is especially true because the terms of the payments are not detailed in a number of contracts. That will take time and cannot be done in a "spreadsheet" history.

The Maluenda asiento points to at least four directions for future research. First, the raising of funds in the credit market is a central clause. Of course, neither the contract nor the monitoring attachments will tell us on how the Maluenda brothers did raise the funds. But we need to know more about the organization and the transactions of the credit markets at that time.

Second, the attachments provide a description of the handling of the contract in the settlement after the crisis of 1596 that is very different from the overall statement in the *Medio General*. We should beware of such overall proclamations.[59] A serious analysis of the settlements of each of the financial crises under Philip II has yet to be done.

Third, we have seen the importance of the sales of juros in the Maluenda contract. These and the clauses on the short-term credit market illustrate the pivotal role of the *asentistas* in the trading of short- and long-term credit instruments. We have to get away from the simplistic view of bankers making loans and investigate the central role of the "moneyed men" in many aspects of the finances of Philip II.

Fourth, the asientos were closely linked with the juros. That ought to be obvious from a theoretical point of view because any accumulation of short-term debt should be refinanced through long-term debt. We have shown in previous studies[60] that the crises in asientos were triggered by the crises in the sources of revenues for the service of the juros. Juros were 90% of the total public debt. A good understanding of the settlement of the crisis will require the analysis of the refinancing juros at lower rates through *crecimientos*. Research on juros is more difficult to extract because they have not been as neatly boxed as the asientos. Still, there is much information in the archives of Simancas that have been bequeathed to us by the shy King.

[59] For example, the official rate of the alcabala tax was 10%. The actual rate was closer to a few percentage points.

[60] Álvarez Nogal and Chamley, "Debt policy under constraints", Álvarez Nogal and Chamley, "The strategy of Philip II".

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APPENDIX

The text of contract[61]

* p.1	By my command, it is mutually agreed with Francisco and Pedro de Maluenda [FPM], residents in this Court on 349,500 ducats which at 375 mrs per ducat, amount to 131,062,500 mrs that will be provide for me in the city of Lisbon in my Realm of Portugal, the following.
13 payments by the Maluendas in Lisbon from July 95 to June 96.	First, the said FPMwill pay in the city of Lisbon 349,500 ducats to whom I would order in Castilian reales or in other cash currency of the same value, ... in the city of Lisbon in thirteen payments, 26,886 ducats for the first payment in 8 days after the presentation of the bill [see on page 2](*a ocho días letra vista*), and the 12 other payments have to be equal to 26,884.5 ducats, the first at the end of July, the second at the end of August, the third at the end of September, the fourth at the end of October, the fifth at the end of November and the sixth at the end of December, all terms [*plazos*] in this year of 1595, and the seventh at the end of January of the coming year of 596, and the eight at the end of February,..... and the twelfth and the rest at the end of June of 1596, all terms of the said year of 1596.

p.2 Letter provided the day before the signature (Attachment I). In case the King delays the order to pay.	For the fulfilment of the said 13 payments, FPM have given their letters no later than the 12th of July of this year of 95, and have delivered them to my Council of Finance committing themselves to pay the said 349,500 ducats in the said 13 payments, each of them in the said amount. If at any of the said terms, I would not have given the order to whom or how to pay, I understand that FPM, although the term would have been passed, will not be held responsible for the delays, nor for any related cost for which I am responsible. They will remain under the obligation to make these delayed payments according to my orders and to the said letters.

[61] The left column provides short summaries and slightly adapted page marks. In the text, paragraphs have been to facilitate the reading. An asterisk is attached to the most important pages. Words in parentheses and italics are added to the English translation for accuracy. Words in brackets are added comments. The notes on the left margin of the original contract have not been translated. The transcription of the contract, copies of the contract and of the attachments are available at "http://www.chamley.net/castile".

* p.3 Transfer of 75,000 ducats for the first three disbursements. No delay. No interest.	The said 131,062,500 mrs [349,500 ducats] have to be paid to FPM or to anyone empowered by them in this way: The 75,000 ducats, which amount to 28,125,000 mrs then in cash (*luego en reales de contado*) from my coffers of the three keys, such that in this there should be no delay whatsoever (*sin que en ello aya dilación ninguna*). These have to serve for the 10,082,250 mrs of the first payment in eight days after the presentation of the bill (*a ocho días letra vista*), and for the 10,081,687.5 mrs of the payment at the end of this July, and for the 7,961,062.5 mrs that have to be paid at the end of August, in the said amount of 10,081,687.5 mrs because the 2,120,625 mrs remaining in the said payment at the end of August have to be paid in the manner that will be declared below, and on these said 28,125,000 mrs there should be applied neither interest nor commission, nor cost nor any other charge whatsoever because for their use, I order them to be paid in anticipation.

* p.4 Tranche A (97,500 ducats) First claim on the 95 fleet Computation interest (Table 1), on 5,655 ducats, on 26,884.5 ducats, on 26,884.5 ducats, on 26,884.5 ducats, on 11,191.5 ducats.	And the other 97,500 ducats that amount to 36,562,500 mrs have to be paid in reales de contado or escudos of gold or in silver bars, to their choice, in the city of Seville with a first claim (*del primer dinero*) on the gold or silver that will come for me from any part of the Indies in fleets, squadrons, ship or vessel after the date of this asiento with in addition, the interest on the said 36,562,500 mrs at the rate of one per cent per month to compensate for the costs of the exchanges (*los daños de los cambios*)that have to be incurred. The said interest has to be determined and counted from the following days in this manner. On the 2,120,625 mrs from the first of August of this year of 95, for the rest of what is paid at the end of the said month of August, and on 10,081,687.5 mrs from the first of September, and on the other 10,081,687.5 mrs from the first of October and on the other 10,081,687.5 mrs from the first of November and on the 4,196,812.5 mrs in completion of the said 36,562,500 mrs [97,500 ducats] from the first of December, all these terms of this year of 1595, until the day or days in which they will be effectively paid and what the said interests amount to have to be paid together with the principal.

p.5	In addition, there will be paid 731,250 mrs that are two percent of the said 36,562,500 mrs that I give as a one time favor in addition of the

2% fee.	said interests for the costs, brokerage fees and commissions that may be incurred without a request for an account of these.
Royal accountants.	The determination of the said interest will be done, I order, by my officials in the *Casa de Contratación* of the Indies in the said city of Seville.
Cédula.	Towards this, FPM will be given an order (*cédula*) from me that they should be paid, without excuse nor delay whatsoever, the said 36,562,500 mrs [97,500 ducats] of the principal and the interests of these and the 731,250 mrs in this paragraph.
In case the Crown pays earlier, the Maluendas should pay 1% interest.	However, it is understood that in the case where the 36,562,500 mrs of the principal are paid before the terms by which they have to be paid according to this asiento, they have to be discounted for the anticipation at the rate of one percent per month from the day or days in which they are paid until the day or days in which they have to be paid in Lisbon to take into account the interest of the month in which they have be made in anticipation and in addition the two percent for the costs, brokerage and commissions such that these have always to be received.
Example to clarify this point.	For example, if they [FPM] are paid at the beginning of August and they pay at the end of September they have to reduce one percent from what they ought to have at the beginning of September which is when they would have to pay for this month what they have received in anticipation. And, respectively, if for the other months they receive an anticipated payment, the accounts have to done in the same manner.

* p.6	And the 177,000 that amount to 66,365,000 mrs have to be paid in reales or escudos of gold or in silver bars, to their choice, in the city of Seville as a first claim (*del primer dinero*) on the gold or silver that will come for me from any part of the Indies in fleets, squadrons, ship or vessel in the coming year of 1596 and thenceforward (*y de allí adelante*)[62] in addition with the interest on the said 66,365,000 mrs at the rate of one per cent per month to compensate for the costs of the exchanges that have to be incurred.
Tranche B (177,000 ducats).	
Same terms as Tranche A with a first claim on 96 fleet.	
Computation of interest (repeats the terms in Tranch A).	The said interest has to be determined and computed from the following days in this manner. On the 5,884,865 mrs from the first of December of this year of 95, which is the rest that is paid at the end of the said month of December and on 10,081,687.5 mrs from the first of January of the coming year of 1596, and on other 10,081,687.5 from

[62] The expression refers to any fleet that may come after 1596 or later, in the case of no fleet in 1596.

	the first of February of the said year of 96 and on other 10,081,687.5 mrs from the first of March

p.7 Continuation of the previous. 2% fee.	of the said year of 96, and on other 10,081,687.5, from the first of April of the said year of 96, and on other 10,081,687.5, from the first of May of the said year of 96, and the other 10,081,687.5 that remain in completion of the said 66,365,000 mrs, from the first of June of the said year of 1596 until the day or days in which they will be effectively paid, and the amounts of the said interests have to be acquitted and paid together with the principal. In addition there will be paid 1,327,500 mrs that are two percent of the said 66,365,000 mrs that I give as a one time favor in addition of the said interests for the costs, brokerage fees and commissions that may be incurred without a request for an account of these.

p.8 Repeat of page 5 for Tranche B. License to export, into Portugal, 349,500 ducats.	The determination of the said interest will be done, I order, by my officials in the *Casa de Contratación* of the Indies in the said city of Seville. Towards this, FPM will be given an order (cédula) from me that they should be paid, without excuse nor delay whatsoever, the said 66,365,000 mrs [177,000 ducats] of the principal and the interests of these and the 1,327,500 mrs in this paragraph. Item. It is given to FPM or to anyone empowered by them an export license to allow them to export from my Realms to that of Portugal, through any port or ports of their choice, the said 131,062,500 mrs in one time or more than one time in the manner of their choice and in any money of reales or escudos or in silver bars without any fee.

* p.9 Option for juros for 177,000 ducats (Tranche B). Menu of juros in the option.	Item. It is given to FPM from now on the option (*facultad*) to sell on the account (*tomar y vender a quanta*) of the said 66,365,000 mrs [177,000 ducats] and the interests thereof which have to be paid on the fleet of 96, an equal amount of annuities on one life (*juros de por una vida*) at 7,000 per thousand, and on two lives at 8,000 per thousand and at 14,000 per thousand at its full price and at 20,000 per thousand counted at the rate of 16,000 per thousand and alcabalas [description of the alcabalas option, which eventually was not used] and to place the said juros on any revenues and alcabalas of their choice in my Realms, on their own head or on the heads of the persons whom they will name or any empowered person by them or by the named persons for example, foreigners, ecclesiastics and lay people, to benefit from the said juros and alcabalas from January 1 of the coming year of

	1597. Of the maravedis that they [FPM] intend to sell in the said juros and alcabalas, I command that they write the sales acts in the usual form in

* p.10 Option for juros (continued)	order for the accountants of my *Contaduría Mayor de Hacienda* to allocate the privileges in accordance with the sales acts, with the provision that for the *juros de por vida* they should have the time to name the lives from now on until the end of the month of June in the coming year of 1596. Given the uncertainty on the said lives and the possibility of the death of the persons on whose head the said benefits are placed, they will not be incurred until the first day of January of 97, the date from which the said income is enjoyed. In the case where some benefits have been attributed have died, others will have to be named in replacement.
Limit date of June 96 for the sale of juros.	From now on until the said day at the end of June of 96, there must be time to liquidate (*consumir*) what is redeemed in the said juros in order to be omitted from the cédula that will be given for the said 66,375,000 mrs and their interests.
Obligation to report the sales of juros.	In order to know the juros that are being sold, FPM are obliged to give to the Accounting Office of the juros (*Contaduría de laRazón*), a declaration, signed by them and under oath, after each period of

p.11 Deduction of the juros from Tranche B.	three months, of the juros that they have sold. In this way, the amounts will be deduced from the cédula that will be given to them for the said 66,375,000 mrs and the amounts they will receive, with the interest, will be reduced accordingly. The said juros have to be attributed under the same conditions as for other asientos with other men of business.
Discount at 16,000 of the juros at 20,000.	I hereby provide the grace and grant to the said FPM and to the persons on whose heads are written the acts of sales of the juros at 20,000 per thousand of the 4000 mrs per thousand, which means that the said price of 16,000 that they have to pay for each thousand of income of the juros at 20,000 at the said price of twenty, that has to be put on the acts of sales, payments and other documents. I will command to Pedro Mexia de Tovar who is on the service of my General Treasury, or to that any other person that will serve in the future in the said office or who will be in charge of the sales of the said benefits of the acts of sale to carry the said privileges of the acts of sale...

p.12	Details on the application of the discount at 16,000 of the juros at 20,000	

* p.13 Exemption from any law regarding the interest rate.	I hereby give grace and exemption to FPM on all the interests and gratificationson what is contained in this asiento so that they legally can charge because of loans, costs and interests that they will have to incur in financial operations (*traer a cambio*) on the said 349,500 ducats and for the immobilization of their funds until the settlements that are given through this asiento, in order to make it more legally clear, I declare as non applicable any law or pragmatic of these Realms that would be against this contract and what is related to this asiento.
Guarantee against currency changes.	Item. Any change of a variation of the monies in these Realms within the time span of the fulfilment of what is contained in this asiento, would have to be without prejudice to FPM ...

p.14	Formal conclusion	

Table 15: Juros sold by the Maluendas for the principal of Tranche B (177,000 ducats).

Doc.	Payment to Treasurer	Annual Income	Head	Collector	Lives	Principal	Rate %	Date of sale
1	06/08/1595	300	doña María Pazero y Sor María Angelica monja	Juan Luis Paçero	2	2.400	12,50	6/8/1595
1	06/08/1595	400	Escipión y Laura Escorza	Gerónimo Escorza su padre	2	3.200	12,50	6/8/1595
1	06/08/1595	213	Tomasina Sauli y sor Ana María Spinola	Blanca de Imbrea	2	1.707	12,50	6/8/1595
1	06/08/1595	58	Joan Baptista Spinola y Blanca María Spinola	Juan Baptista Spinola	2	467	12,50	30/9/1595
1	06/08/1595	58	Juan Baptista Spinola y Madalena de Castañola	Juan Baptista Spinola	2	467	12,50	30/9/1595
1	06/08/1595	58	Juan Baptista Spinola y Faustina Castañola	Juan Baptista Spinola	2	467	12,50	30/9/1595
1	06/08/1595	58	Juan Baptista Spinola y Tomasina Castañola	Juan Baptista Spinola	2	467	12,50	30/9/1595
1	06/08/1595	58	Joan Baptista Spinola y Julia Spinola Castañola	Juan Baptista Spinola	2	467	12,50	30/9/1595
1	06/08/1595	52	Isabel Ruiz Lanchero y don Pedro Ruiz Lanchero su hijo	Isabel Ruiz Lanchero	2	413	12,50	30/9/1595
1	19/08/1595	150	Aurelia Doria		1	1.050	14,29	6/8/1595
1	19/08/1595	200	Pedro Mexia de Tobar y doña Antonia Solier Bernardo su mujer	licenciado Barrionuevo de Peralta	2	1.600	12,50	30/7/1595
1	19/08/1595	272	Gerónimo Doría Archiriboga y Feliciana del Espiritu Santo	licenciado Barrionuevo de Peralta	2	2.176	12,50	30/7/1595
1	19/08/1595	272	don Felix de Guzman y doña Agustina Fermin	licenciado Barrionuevo de Peralta	2	2.176	12,50	30/7/1595
1	19/08/1595	272	don Francisco de Texeda y doña Estefanía Fermín	licenciado Barrionuevo de Peralta	2	2.176	12,50	30/7/1595
1	19/08/1595	272	Alvaro de Monsalve y Dorotea de Santa Ana	licenciado Barrionuevo de Peralta	2	2.176	12,50	30/7/1595
1	19/08/1595	544	don Pedro de Castro marqués de Sarria y María de Jesus	licenciado Barrionuevo de Peralta	2	4.352	12,50	30/7/1595
1	19/08/1595	400	don Diego de Rivera Vazquez y doña Luisa de Barrionuevo su mujer	don Diego de Rivera	2	3.200	12,50	10/8/1595
1	19/08/1595	500	Octaviano y Geronimo Raxi	Jacome Raxio su padre	2	4.000	12,50	30/7/1595
1	19/08/1595	300	don Alvaro y doña Catalina de Ayala	Conde de Fuensalida	2	2.400	12,50	30/7/1595
1	19/08/1595	300	don García y doña Catalina de Ayala	Conde de Fuensalida	2	2.400	12,50	30/7/1595
1	19/08/1595	400	doña Vela y doña Antonia de Ayala	Conde de Fuensalida	2	3.200	12,50	30/7/1595

1	19/08/1595	100	don Gaspar Vázquez y don Gómez Vázquez de Loaysa	Diego Gutierrez de Silva	2	800	12,50	30/7/1595
1	19/08/1595	140	Joan Baptista y Vicencio Doria	Juan Baptista Doria	2	1.120	12,50	6/8/1595
1	19/08/1595	400	Antonio y Julian Escorza	Gerónimo Escorza su padre	2	3.200	12,50	10/8/1595
1	19/08/1595	400	Juan Baptista y Orazio Escorza	Gerónimo Escorza	2	3.200	12,50	10/8/1595
1	19/08/1595	150	Juan Baptista y Aurelia Doria su mujer	Juan Baptista Doria	2	1.120	12,50	6/8/1595
1	19/08/1595	213	Sor María Jacinta Doria y sor Aurelia Felice Pasan	Blanca de Imbrea	2	1.707	12,50	10/8/1595
1	19/08/1595	213	Sor María Querubina Spinola y sor Paula Mayola	Paula Mayola	2	1.707	12,50	10/8/1595
1	19/08/1595	213	sor Candida Cataliana Justiniana y sor Orclaravo y Rasea conversa	Blanca de Imbrea	2	1.707	12,50	10/8/1595
1	19/08/1595	213	Sor Dominga Saluzio y sor Estefana Catano	Blanca de Imbrea	2	1.707	12,50	6/8/1595
1	23/08/1595	56	doña Isabel de Rueda y Gabriel de la Esquina	Isabel de Rueda	2	450	12,50	19/8/1595
1	29/08/1595	500	don Fernando Lujan y doña Juana Enriquez su mujer		2	4.000	12,50	26/8/1595
1	29/08/1595	500	don Fernando Lujan y sor Gabriela de la Anunciación		2	4.000	12,50	26/8/1595
1	30/08/1595	500	Esteban Pascua y Vicencia Lasaña	Mateo Senarega	2	4.000	12,50	26/8/1595
1	30/08/1595	451	Rafael de la Torre y Pablo Lasaña	Mateo Senarega	2	3.610	12,50	26/8/1595
1	02/09/1595	267	Marieta y Juan Francisco Escalla	Juan de Escalla su padre	2	2.133	12,50	30/8/1595
1	02/09/1595	267	Andrea y Margaritina Escalla	Juan de Escalla su padre	2	2.133	12,50	30/8/1595
1	22/09/1595	200	Doña Francisca de Loaysa y doña Isabel de Vitoria y Loaysa	Tomé de Vitoria	2	1.600	12,50	16/9/1595
1	07/10/1595	500	Lelio Doria	Pelegrina Doria	1	3.500	14,29	30/9/1595
1	07/10/1595	100	María y Francisca Zoalli	Nicolao Zoalli	2	800	12,50	30/9/1595
1	07/10/1595	100	María y Verónica Zoalli	Nicolao Zoalli	2	800	12,50	30/9/1595
1	07/10/1595	100	Francisca y Verónica Zoalli	Nicolao Zoalli	2	800	12,50	30/9/1595
1	07/10/1595	61	Joan Baptista Spinola hijo de Nicolao y Paula Castañola hija de Benito	Juan Baptista Spinola	2	488	12,50	30/9/1595
1	11/10/1595	250	Lelia y Galeazo Justiniano	César Justiniano	2	2.000	12,50	7/10/1595
1	11/10/1595	250	Cesar Justiniano y Violante Justiniano su hija	César Justiniano	2	2.000	12,50	7/10/1595
1	25/10/1595	176	don Diego de Rivera Vazquez, caballero de Santiago		Q	2.464	7,14	20/10/1595
1	25/10/1595	267	doña Isabel de Castilla		Q	4.267	6,25	20/10/1595

1	27/10/1595	500	Francisco Ferrari y Joan Paulo Echiavarria	Francisco Ferrari	2	4.000	12,50	20/10/1595
1	27/10/1595	500	Francisco Ferrari y Joan Paulo Echiavarria	Francisco Ferrari	2	4.000	12,50	20/10/1595
1	13/11/1595	100	Pedro y Gerónimo de Guevara	Francisco de Guevara	2	800	12,50	8/11/1595
1	17/1/1596	200	Vicencio y Thomas Imbrea	Joan Imbrea	2	1.600	12,50	31/12/1595
1	17/1/1596	200	Thomas y Antonio Imbrea	Joan Imbrea	2	1.600	12,50	31/12/1595
1	17/1/1596	200	Antonia y Vicenzio Imbrea	Joan Imbrea	2	1.600	12,50	31/12/1595
1	17/1/1596	440	Oracio de Francesqui y sor Julia de Francesqui	Oracio de Francesqui	2	3.520	12,50	31/12/1595
1	17/1/1596	427	sor Julia de Francesqui y sor María Sicilia hija de Agustino de Franqui	Oracio de Francesqui	2	3.413	12,50	31/12/1595
1	17/1/1596	427	sor Maria Sicilia hija de Agustino y de Oracio de Francesqui	Oracio de Francesqui	2	3.413	12,50	31/12/1595
1	17/1/1596	67	Sor Clara de Francisqui y Juan Pedro de Frnacisqui	Joan Francisqui	2	533	12,50	31/12/1595
1	17/1/1596	67	sor Julia y sor Clara de Francisqui	Joan Francisqui	2	533	12,50	31/12/1595
1	17/1/1596	67	Joan Pedro de Francisqui y sor Julia de Francisqui	Joan Francisqui	2	533	12,50	31/12/1595
1	17/1/1596	213	sor Angela Benedita y Hartenisia de Francisqui	Joan Francisqui	2	1.707	12,50	31/12/1595
1	17/1/1596	213	Hartenisia de Francisqui y Monaca de Francisqui	Joan Francisqui	2	1.707	12,50	31/12/1595
1	17/1/1596	213	Monaca de Francisqui y sor Angela Benedita	Joan Francisqui	2	1.707	12,50	31/12/1595
1	20/01/1596	107	Vicencio y María Spinola	Felipe Spinola	2	853	12,50	15/1/1596
1	31/01/1596	2.000	don Gerónimo y doña Francisca de Guzmán hijos del conde de Olivares	don Pedro de Guzmán	2	16.000	12,50	28/1/1596
1	31/01/1596	1.000	doña Francisca y doña Inés de Guzmán	don Pedro de Guzmán	2	8.000	12,50	28/1/1596
1	31/01/1596	1.000	don Gerónimo y doña Leonor de Guzmán	don Pedro de Guzmán	2	8.000	12,50	28/1/1596
1	31/01/1596	1.000	Francisco Hernando de Vallejo y don Gerónimo de Guzmán	Francisco Hernando de Vallejo	2	8.000	12,50	28/1/1596
1	29/03/1596	100	Diego de Pareja y don García de Pareja	Diego de Pareja	2	800	12,50	22/3/1596
1	29/03/1596	100	Diego de Pareja y doña María de Pareja	Diego de Pareja	2	800	12,50	22/3/1596
2	05/05/1596	441	Joan Antonio de Alcázar y don Luis de Alcázar		2	3.528	12,50	18/5/1596
2	05/05/1596	500	Rodrigo Suarez y doña Constanza Suarez		2	4.000	12,50	18/5/1596
	TOTAL	21.808				177.000		

Table 16: Juros sold by the Maluendas for the interest and 2% fee on Tranche B

Juros sold to pay the interest of Tranche B (177,000) and the 2% fees.

26/06/1596	54	Miguel de Corella y doña Ana María Laynez su mujer		2	433	12,50	12/6/1596
05/07/1596	1.500	Leonor Dalvo y don Melchor de Alcazar		2	12.000	12,50	18/5/1596
05/07/1596	1.059	Joan Antonio del Alcazar y don Luis de Alcazar		2	8.472	12,50	18/5/1596
					20.904		

Sources: 1: AGS CCGG 92-1. Attachments X, XI y XII.

2: AGS CMC 3época, 32. Cargo.

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