

Refinancing the long-term redeemable public debt in Castile under Philip II

Preliminary draft

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The paper analyzes the refinancing of the long-term redeemable bonds (*juros*) in the 16th century Castile under Philip II. In the fragmented structure of the market for *juros*, refinancing took place not through coupon reduction, with a fixed face value, but through *crecimientos* that increased the capital of the annuity with a fixed coupon. Using archival sources, we analyze how the Crown took advantage of the declining trend of interest rate to refinance the long-term debt, long before the refinancing under Louis XIV and after the financial revolution in England. This analysis provides information on the cost of public borrowing in a fragmented market where *juros* were locally serviced by cities. We show that the refinancing was intertwined with the issuance of the unfunded debt, the *asientos* and had an impact on the cost of these *asientos* and the amount of debt reductions after financial crises.

Keywords: public finances, Philip II, asientos, juros, debt.

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Introduction

It is well known that redeemable bonds existed since the Middle-Ages: the loan contract would specify a fixed income of the lender and the capital of the loan could be determined without an explicit reference to an interest rate or the constraint of a usury law; the borrower would keep the freedom to untie himself by repaying the capital.

In 18th century England, as interest rates decreased with the development of the capital market, the government debt was refinanced through a reduction of the coupon rate of redeemable bonds, with the option of a cash payment at the face value (Chamley, 2011). In the middle of the century, after a failed attempt in 1737, such a policy succeeded in the centralized market that had developed after the "financial revolution" (Dickson, 1967).

Three centuries before, in 15th century Spain (more accurately Castile), the Crown took advantage of the declining trend of interest rates to refinance perpetual redeemable bonds (*juros*), which had originated centuries before during the Reconquista. As in England, the refinancing included a cash option but it did not affect a reduction of income for a fixed capital value. The refinancing of a *juro* left the income constant and increased its face value, hence the term *crecimiento*. This refinancing through a stock increase could be applied obviously only as a flow of refinanced *juros* while the reduction of income--English style--was applied the entire debt at one fell swoop.

Both methods are equivalent in a perfect capital market with random *crecimientos* and generate the same reduction of service of the entire debt. However, the reduction of the interest income on the entire debt requires a unified capital market and is not feasible in a fragmented capital market, which is the case of Castile. (We will discuss in the paper the merits of the interest reductions and the *crecimientos* in the context of the fragmented or unified markets).

We use primary sources:

1. The contracts of the *asientos* in the archives of Simancas. These contracts describe the operations of redemption and *crecimiento*. The standard interest reductions were done on

perpetuals from 7.14% (capital income ratio of 14) to 5% (ratio of 20) and from redeemable life annuities at 14% to perpetuals at 5%.

2. Accounts in the archives of Simancas on the *crecimientos* that were done by the bankers who had to report these operations to the Crown. These sources have never been studied.
3. Documents on the *juros* that were serviced by particular cities in Castile. These documents provide information on *crecimientos*, dates and amounts.

Public debt in Castile: juros and asientos

In the second half of the 16th century, (and in previous times), the domestic debt had two components: long-term redeemable perpetuals, *juros*, that were funded by specific taxes, with a large fraction that was managed at the local city level (that collected the taxes to service the *juros*); short- to medium-term debt, *asientos*, (never more than a third of the *juros*), which was unfunded, managed by Genoese bankers and eventually refinanced by *juros*. The devolution of the service of the *juros* to the cities, as in other places in Europe (Italy, Netherlands, France), enhanced the credibility of the debt but it fragmented the market for *juros* that were nevertheless tradable throughout the Realm. The Genoese bankers wrote *asientos* but, as the "money men" of the time (Dickson), they were also active in the market for *juros*.

A juro was a claim on a given income. Most juros were either perpetuals or life annuities written on one or two heads. Each juro was defined by its income and a face value. By paying the face value, the Crown can cancel its debt and stop any further payment on the juro. If the interest rate decreases, a redeemable debt can be refinanced at a lower rate. Government has used the redeemable feature of the public debt to reduce its cost. In France, England and other countries, the refinancing of the debt took the form of a lowering of the coupon, with no change of the nominal value of the debt.

The textbook case is 18th century England, the interest rate of the public debt decreased during the "financial revolution" that took place in the first half of the century (Dickson, 1967). The cost of the debt was reduced by two methods. The first was to use a budget

surplus, between wars, to buy back the debt when its market value was above the par value, because of the lower interest during the peace time. Such a method reduces gradually the flow of income that the government pays on the debt.

The second method was to reduce in one move the flow of income paid on the debt by refinancing the entire debt into bonds at a lower rate. This method can bring large benefits to the government but, in order to avoid any suspicion of default, it has to be done by a voluntary subscription that may fail (Chamley, 2011). Indeed, there have been few reductions of the interest on the public debt.

A prerequisite for the refinancing of the entire debt at a lower rate is a centralized market. There was no such market in Castile. Each refinancing involves transaction costs.

In Castile, we can see that the cost of the debt could also be reduced by two methods. The first one was the repurchase of individual *juros*. The technical term for redeeming a *juro* was "consumir". The second method was not a reduction of the coupon for a fixed principal but an augmentation of the face value of the *juro* for a fixed rent. The holder of the *juro* was given the choice between the repayment of the face value or the payment of an additional amount to match the new face value of the same rent. This augmentation of the face value was called a *crecimiento*.

Our paper analyzes this refinancing of *juros* under Philip II in the second half of the 16th century and the interactions between the refinancing of the *juros* and the issuances of *asientos*. The issue is central for our understanding of the credit market in the super-power of Europe at that time, the business of the Genoese bankers and the financial policy of the Crown. Refinancing of the *juros* could be done either through *crecimientos* or through outright repurchases at the face value. The Crown used both methods. We give here several examples of the refinancing of *juros* that took place within the *asientos*. The first illustrates the role of buying back the debt, the second the *crecimientos*.

“Consumo”: *juros* in Casa de la Contratación

The Casa de la Contratación (hereafter CdC), in Sevilla managed the revenues of the Crown from the arrivals of the precious metals in the Indies. The arrivals were subject to much variations and uncertainties. No stable income could be paid on these revenues. Furthermore, the Crown had direct access to them and could preempt them for any emergency. This context was well understood by all the market agents and the market price of these juros was much lower than their face value, less than half. Some data is given in the next table.

The juros de CdC were redeemed from time to time by the Crown. The Crown did not buy these juros at the market price. The Crown redeemed them at face value and these redemptions were included in the terms of asientos. The banker had to redeem juros de CdC. If he did not own them, he could buy them on the market. The gap between the face and the market value was used as a compensation to the banker. In this method, no interest rate appears in the contract. Here are two examples.

a) Bernabe Centurion's asiento in 1570

Bernabe Centurión had to deliver at the signature 100,000 ducats in Medina del Campo. The fair was that of May 1570 that was taking place at that moment. He would receive 160,000 ducats on the income from the fleet of the following year, 1573, that usually arrived in October. In order to receive the 160,000 ducats, he had to provide to the Crown juros de CdC of a face value equal to 60,000 ducats. If these were discounted at half, the profit for Bernabe Centurión was 30,000 ducats, for a maturity of less than 2 years.

b) The asiento signed by Domingo Lercaro in 1570.

Consider the asiento that was signed in March 1570 with Domingo Lercaro, with all transfers internal to Castile, for an amount of one third of 100,000 ducats (33,333 and 1/3 ducats), or 12.5 M in maravedis³, with repayment in July 1571. The contract states explicitly that no interest is paid, and that for that service "at a time of scarce money", the banker should receive the compensation of a life annuity (written on a head of his choice) at

³ One ducat equals 375 maravedis, or mrs. The disbursement is linked to the fair of Medina del Campo that is dated May 1569 and that is taking place at the time of the disbursement.

the capital income ratio of 7 with a capital value of 7/3 M mrs. Note how the terms of the contracts can be arranged such that there is no official interest rate.

The first part of the contract specifies that the banker delivers 12.5 M mrs in March 1570, that he is repaid 16,666,666 at the end of the contract (July 1571) when he also has to return to the Crown *juros* that are written on the *Casa de Contratación* (which receives its income from the silver of the Indies) for which he is paid their face value. In the language of the contract, these *juros* are "consumidos" by the banker. The face value of these *juros* is 4,166,666 mrs, namely exactly 1/3 of the amount of the loan. The buy back of these *juros* by the Crown is thus delegated to the expertise of the bankers. This clause is an indirect payment to the bankers: such *juros* are heavily discounted (at 50% according to some other sources, which will be analyzed in this paper) because of the uncertainties of the payments on the silver from the Indies. With a discount of 50%, the banker received an additional compensation of one 1/6 of the loan. The total compensation may thus have reached 1/3 of the loan for a maturity of than 1.5 years⁴.

“Crecimiento”: the Gerónimo de Salamanca’s asiento in 1570 and Bernabé Centurion in 1572

A second example is the largest *asiento* that was signed in 1570, with Gerónimo de Salamanca and some bankers. The amount was 600,000 ducats, which is about one fifth of the total of all *asientos* for the year. The loan is disbursed in Medina del Campo⁵, and the repayment is also internal to Castile. The interest rate on the loan is stated in the contract at 8 percent from 01/01/1570 to 12/31/1573 (4 years), and 12 percent after that date. The rate of 8 percent is low. The lenders received therefore two additional compensations:

(i) A life annuity (*juro de por vida*) with a capital ratio equal to 7, (i.e. a rate of 14%) of an income equal to 12,000 ducats. The capital value was therefore 84000 ducats.

⁴ The contract includes interesting additional clauses that the banker may raise the funds from the credit market in Castile (*dar y tomar a cambio*). This essential feature of *asientos* is discussed extensively in Álvarez-Nogal and Chamley, 2014).

⁵ There were 16 *asientos* signed in that year.

(ii) *Crecimientos* of *juros*: *juros de por vida* at the capital income ratio of 7 (14% rate) were converted into perpetual redeemable *juros* (*juros al quitar*) at the rate of 5%, with a capital ratio of 20. The amount of rent on the *juros* was 12000 ducats. Hence, the augmentation is equal to 13 times 12000, which is a capital value of 160000 ducats.

The total additional compensation is therefore 244,000 ducats (160,000 + 84,000). In order to have a rough estimate of the actual interest rate paid on the loan, one can deduct the 244,000 from the 600,000 disbursement, namely 356,000 ducats, and multiply the rate of 8% by 600/356. The actual rate is therefore 13.5%. This may be an upper-bound on the financial compensation that assumes that the augmentation of the *juros de por vida* is immediate. (Delays would lower the adjusted rate).

Bernabé Centurión signed on March 3, 1572 an *asiento* of 100,000 ducats. For part of his compensation, he was put in charge of the *crecimiento* of life annuities at 14% (with a capital income ratio of 7), into perpetuals at 5% (capital income ratio of 20). The transaction was for a total rent of 15M mrs (See Appendix 1. Table 1).

Crecimientos and the Philip II's financial system

These two examples of buy-backs and *crecimientos* are not particular cases. In 1570, half the *asientos* had a clause of buy-backs. There are numerous additional documents of *crecimientos* for the years between 1566-1573. According to the books of the General Treasurer, *crecimientos* generated revenues of 128000 ducats for the Crown for two years between 1566 and 1568.

The *crecimiento* that was attached to the second *asiento* above was simple. But a given *asiento* could include multiple *crecimientos* as shown in Table 1 at the end of this proposal, for the *asiento* of March 3, 1572, with Bernabé Centurión (See Table 1. Appendix 1).

A critical point is that the *crecimientos* were not forced loans and that the option of redemption in cash was indeed effective. We have abundant archival information about this in the notarial acts that are preserved in archived. But the cash redemption is already illustrated in Table 1 of the old life annuities and the new perpetuals. Some owners of the

old annuities indeed chose the cash option and are not in the list of new owners.

Since there was no unified market for the *juros* in Castile (and we have alluded to the reasons), there is no simple price to evaluate the interest rate and the cost of borrowing long-term for the Crown. The analysis of *crecimientos* may be the most important tool that we have for this evaluation.

Conclusions

In summary, these examples show that the understanding of the market for *juros* is essential for our understanding of the *asientos*, for the computation of their rates of return, both *ex ante* and *ex post*. The two financial instruments cannot be separated. In particular, the financial settlements after the crisis of 1575-77 and 1596 included *crecimientos*. An analysis of the latter will provide information on the amount of debt reduction in the settlements and on their mechanics.

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