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Reputational recovery under political instability: Public debt in Portugal, 1641–83

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Abstract

This article examines the reputation recovery of Portugal's public debt during the war of liberation against the former Habsburg ruler. Using novel datasets on long- and short-term debt and nominal interest rates, this study provides evidence that the sovereign borrower used debt credibility to build a pact of regime in a revolutionary context with implications for financing the war. The Portuguese kings followed an implicit budget balance rule as a reputational scheme, which made Portugal an exceptional case of military success with a low debt-to-GDP ratio and low interest rates. These conclusions contribute to the literature in various attributes of war finance, debt management, and state-making by showing that default avoidance could be as important to military success as fiscal capacity.

KEYWORDS
absolutist regime, credible commitment, debt sustainability, interest rates, perpetuities, self-enforced constraints

I | INTRODUCTION

Wars and political instability have a disruptive effect on financial markets, as governments often default on their debt obligations.[1] History also shows that the fate of sovereign debts has political significance, particularly in historical instances of state succession.[2] To signal a break with the past, insurgents can choose to repudiate debt, whilst protecting the property rights of the

[1] Eichengreen et al., 'Public debt', p. 19.

[2] Oosterlinck, 'Sovereign debt', p. 708; Barreyre and Delalande, 'Introduction', pp. v–vi.

overthrown government's creditors seems to be a less common strategy. This article addresses one such unusual historical case. During the Portuguese Restoration War against the Spanish Habsburgs (1640–68), insurgents chose to honour the discredited debts of their predecessors, regardless of the country's financial stress. This article examines why default was not an option and how the new government dealt with the resulting constraints to finance the Restoration War.

Whilst uncommon, the success of the Portuguese revolt against the Habsburg monarchy was not entirely unique in the political landscape of the seventeenth century. In the Dutch Republic revolt, there was also no debt repudiation, which raises the questions of why and how respect for the property rights of creditors helped the rebels consolidate their power and finance the wars that followed the revolts. In the case of the Dutch Republic, the features of a so-called tax revolution that eventually built the creditors' trust in short-term obligations during the Eighty Years' war are well known.[3] In contrast, little is known about Portugal's public debt at the time, other than that it developed on the basis of redeemable annuities (*padrões de juro*) issued on a large scale when the Spanish Habsburgs ruled the kingdom (1580–1640) and discredited by recurrent deferments after 1630.[4] The comparison of the two historical cases reveals different financial instruments and fiscal policies. In Portugal, payments on the ousted government's annuities were not suspended despite the war with Spain. We conjecture that the timely servicing of the public debt and compliance with the kingdom's 'fiscal constitution' raised the new regime's political capital, but this had implications for the financing of the war.[5] Ultimately, this policy imposed a limit on the demand for credit. In this sense, the revolt, although not meant to disrupt the fundamentals of the political regime, impacted positively on the monarchy's financial stability.

This hypothesis draws on insights from the dynamic model of reputation, which combines repeated play with political change.[6] According to this theory, meeting repayments in times of crisis signals the sovereign's willingness to pay more effectively than servicing debt in good times. It is reasonable to assume that an unproven government that honours obligations under conditions of political instability and uncertainty should 'graduate' quickly, especially if its predecessors frequently resorted to default to manage debt service.[7] The literature on public debt in nineteenth-century globalized markets has drawn heavily from theories of reputation,[8] whereas early modern scholars have focused instead on the extent to which political constitutions, that is, absolutist and parliamentary monarchies, differed in protecting the property rights of creditors.[9] Thus, early modern financial history has rarely considered a dynamic theory of reputation, which suggests

[3] Tracy, *Financial revolution*; Fritschy, 'Financial revolution', pp. 63–72; idem, *Public finance*, 81–92.

[4] Gomes, *Colleção de leis*, pp. 38–9; Costa, Miranda, and Nogues-Marco, 'Early modern financial development', p. 14.

[5] For the concept of 'fiscal constitution' applied to early modern systems, see Bonney, 'Introduction', pp. 5–6 and below, Section III.

[6] In game theory, repeated play takes into account that current actions of players impact other players future decisions.

[7] Tomz, *Reputation*, pp. 20–2, 224.

[8] After the seminal model of Eaton and Gersovitz, 'Debt with potential repudiation', pp. 289–90. See the detailed references in Tomz, *Reputation*, pp. 5–6. Flandreau and Zumer tested this perspective about cooperation being sustained by repeated play in *The making of global finance*.

[9] North and Weingast, 'Constitutions and commitment'. Following these authors' insights on the importance of representation in reducing the risk of default, but adding the constellation of represented groups, see Carruthers, *City of capital*; Stasavage, *States of credit*, and idem, 'What can we learn'. For different research avenues, see Coffman et al., *Questioning credible commitment*. In early modern financial history the theory of reputation, although not following a dynamic model, received new impetus; see Fratianni, 'Government debt'. In the same vein, for studies of the recurrent payment suspensions of the Spanish Habsburgs, see Álvarez-Nogal, 'The role played by short-term credit' and Drelichman and Voth, *Lending to the borrower*.

that context matters in making a particular institutional arrangement effective in minimizing political risk. It influences creditors' expectations about the sovereign borrower's preferences, regardless of the political constitution.

Our results demonstrate that the honouring of debt obligations and compliance with the 'fiscal constitution' became the building blocks of the insurgents' policy aimed at restoring credibility, which was ultimately reflected in impressive low interest rates charged on short-term maturities. Financially, the servicing of inherited debt forced the government to follow an implicit budget–balance rule that constrained the issuance of long-term debt during the war. As a result, Portugal proved to be a unique case of military success with a low debt-to-GDP ratio. This shows that the change in the political context made the 'fiscal constitution' an effective means of tying the king's hands.

The article covers the period from 1640 to 1683, beginning with the coup d'état against Habsburg rule and ending with the coronation of King Pedro of Braganza, when war and domestic tensions finally ended. Two types of data were employed in the analysis: a new and complete dataset containing the annual issuance of funded debt and a construction of Portugal's fiscal position based on scattered information on budget balances, military accounts, and short-term loans.

The evidence from Portugal's public debt contributes to several strands of the financial history literature. The first concerns the social distribution of debt and the scope it provided for debt management.[10] This study's newly compiled data show that the creditors were primarily members of the aristocracy and the church. Given the role of the aristocracy in government and the military throughout the revolutionary period, the overlapping interests of bondholders and decision-makers became evident. This finding suggests that the social distribution of the debt stock matters to the understanding of the sovereign borrower's constraints, in both absolutist and parliamentary regimes.[11] The second contribution has implications for the debate on early modern political constitutions and trends in interest rates.[12] This study demonstrates that compliance with the 'fiscal constitution' was in the king's self-interest, making this an illustrative case of self-enforcing constraints in an absolutist monarchy.[13] The third contribution is to provide new evidence that expands the range of early modern polities for which data on public debt and fiscal balances are available. This allows for further comparisons between the financial performance of state-building processes and the possibility of using debt levels as a measure of fiscal capacity.

The next section focuses on the decision of the new dynasty not to repudiate the Habsburgs' debt, which was the first building block of the reputational recovery dynamics. Section III looks at Portugal's 'fiscal constitution' and the limits it imposed on the sovereign's demand for long-term debt. Section IV examines the core features of war financing, which included higher taxation and short-term borrowing, whilst debt-management operations are analysed in section V to determine

[10] Dickson, *Financial revolution*, pp. 250, 292 and ff.; Burg and 't Hart, '*Renteniers*'; Carlos and Neal, 'Micro-foundations'; Pezzolo, 'Venetian government debt'.

[11] For the sociology of the funded debt in the Spanish, English, and French monarchies, see Toboso Sanchéz, *La deuda*; Carruthers, *City of capital*; Álvarez-Nogal, *Oferta y demanda*; Hoffman et al., *Priceless markets,* pp. 173–4; White, 'Was there a solution'; Stasavage, *States of credit*.

[12] Carruthers, *City of capital*; Dincecco, *Political transformations*; Cox, 'Was the glorious revolution'; Chilosi, 'Risky institutions'; Stasavage, *States of credit*; idem, 'What we can learn'; Drelichman and Voth, *Lending to the borrower*; Álvarez-Nogal and Chamley, 'Debt policy'.

[13] Álvarez-Nogal, 'The role played by short-term credit', pp. 87–8. On the diverse institutional framework of absolutist monarchies and the implications for the financial soundness of the fiscal system, Spain and France have attracted the most attention from historians. See Grafe, *Distant tyranny;* Grafe and Irigoin, 'A stakeholder empire'; Velde and Weir, 'Financial market'; Sargent and Velde, 'Macroeconomic features'; Hoffman et al., *Priceless markets.*

whether creditors upgraded beliefs about the sovereign debtor. Section VI tests the robustness of the study's hypothesis and provides a comparative view of Portugal's debt level. The last section concludes and points to topics for future research.

II | NEITHER DEFAULT NOR REPUDIATION

Portugal was part of the Spanish Habsburg monarchy from 1581 until 1 December 1640, when a coup d'état ended the dynastic union. In taking the lead in this risky endeavour, the Duke of Braganza earned the support of his relatives and other high-ranking nobles. A total of 28 years were then spent fighting to regain political autonomy, but victory on the battlefields and the signing of a peace treaty in 1668 could not prevent unrest in the country. Royal court factions deposed the disabled first-born son of King João IV and handed the regency to his second son Pedro, whose enthronement in 1683 finally settled the instability that had marked some four decades of Portugal's history.

The way in which the insurgents handled the financial legacy of the deposed government was instrumental to the success of the revolt and to building the new dynasty's legitimacy. Contrary to what was expected from a struggle for political autonomy, where default or even repudiation could be a financial strategy, King João IV, former Duke of Braganza, preserved the rights of creditors of the ousted Habsburg ruler. He aimed at capitalizing politically on his willingness to service the debt held in *padrões de juro*, a financial instrument similar to the Castilian *juros al quitar*, the French *rentes*, and the Dutch *losrenten*. Under this contract, the sovereign sold a fiscal rent, with annual payments guaranteed by a specific tax revenue. Since the sale contained a buy-back clause (*pacto a retro*) that gave the sovereign debtor the right to dissolve the contract at the borrower's call, *padrões de juro* were redeemable.[14] In return, the creditor had full ownership of the annuities, which meant that these were transferable and negotiable in whole or in fractions in the secondary markets. Transferability required a royal chancery record confirming the identity of the new holder, either through an attachment or a new *padrão de juro*.

The ownership structure of these securities sheds light on why neither repudiation nor default was an option. As the *padrões de juro* were registered bonds, the king was aware that around 78 per cent of perpetuities were in the hands of the nobility and ecclesiastical institutions, the two social groups to which the small group of insurgents belonged (table 1).[15] Bondholders included many aristocrats who eventually held key positions in the new executive and military offices. Denouncing the Habsburg debt as illegitimate would have given the insurgents an economic windfall, but repudiating it would only alienate these people and other potential allies of the revolt.

The next stage in the process of building a pact with creditors occurred in 1645 when the Council of State discussed a plan to reduce the face value of the debt stock by 25 per cent to allow for the establishment of a fund from which all annuities could be redeemed over 65 years.[16] However, the king opposed the plan because it presupposed that creditors would accept a reduction of the

[14] The principle that the buyer could not demand dissolution of the contract was a common feature among rents sold in other European polities during the late middle ages (Munro, '*Rentes*', pp. 235–6).

[15] Costa and Cunha, *D. João IV*, chapter 1.

[16] Arquivo da Fundação Casa de Bragança (Vila Viçosa, Portugal; hereafter AFCB), book FCB, MBCB, BDM II, Ms. Adq 94, pp. 187–94: 'Modo para se desempenharem os juros'. The debt service represented 20% of the Crown's ordinary expenditure in 1641, and although lower than in other monarchies, it was the highest rate reached in the financial history of early modern Portugal. See Dias, 'Um documento', pp. 127–9 and Körner, 'Expenditure', p. 410.

TABLE 1 Ownership structure of *juros* in 1640

Social group	Principal of *juros* (million *réis*)	Principal of *juros* (%)	Number of *juros*
Nobility	292.38	56.57	162
Ecclesiastical institutions	110.79	21.43	168
Lay brotherhoods	35.81	6.93	46
Local elites	29.50	5.71	23
Businessmen	12.69	2.45	14
Clergy	5.39	1.04	3
Military personnel	1.20	0.23	1
Municipal councils	0.42	0.08	1
Liberal professions	0.14	0.03	1
No information	28.56	5.52	33
Total	516.88	100.00	453

Note: This snapshot of the social background of creditors in 1640 was taken from two interest rate reduction operations (one in 1656 and one in 1672–4). It therefore does not represent the entire universe of creditors, or the total amount of long-term debt; see online appendix 1.
Sources: Arquivo Nacional da Torre do Tombo (Lisbon, Portugal; hereafter ANTT), Royal Chancery Books; see online appendix 1. The social background of bondholders was determined through a targeted investigation of archival funds (Habilitações às Ordens Militares; Familiaturas do Santo Ofício; Leitura de Bacharéis; and Registo Geral de Mercês), which can be obtained via https://digitarq.arquivos.pt/ (last accessed, September 2021).

principal, whilst any policy that provided for full repayment of the funded debt was an exception at the time.[17] The king's decision must have helped to boost public confidence in the monarch's commitment to meeting his obligations.[18]

Servicing the long-term debt could not prevent new challenges from arising since military mobilization required funds and the kingdom's 'fiscal constitution' limited the monarch's financial scope for incurring further debt. The next section examines the second pillar of the king's policy of prudence, which, together with enforcement of bondholder's rights, paved the way for Portugal's sound fiscal position.

III | COMPLYING WITH THE RULES: THE 'FISCAL CONSTITUTION'

During the 40 years of turmoil, the Portuguese government complied with a 'fiscal constitution' that dated back to the late middle ages.[19] Although it could not be effectively enforced against the king's will, the 'fiscal constitution' was a set of norms that defined both the instruments of a fiscal policy and the limits to the ruler's arbitrary power.[20] Adherence to these restrictions ensured the

[17] Such an effort had only been attempted in early seventeenth-century Venice. See Pezzolo, 'Venetian government debt', p. 72.

[18] Public confidence was not disturbed by monetary policy that eventually affected creditors' real incomes. There is no evidence of resistance to currency devaluation, which appeared to be a necessary means both to cope with the shortage of silver on the market and to replace coins bearing the name of the Habsburg kings with new ones bearing the title of the Portuguese monarch; Sousa, 'Moeda e Estado', pp. 779–82.

[19] Henriques, 'A thirteenth-century fiscal constitution', p. 53.

[20] For a revisionist approach to the concept of absolute monarchies in Europe, see Miller, ed., *Absolutism*. For the case of Castile, see Thompson, 'Castile'.

political stability of Habsburg rule in Portugal before the 1630s, when the pressure of financing wars in Europe and the empire caused Philip IV to disregard them, leading to tax resistance and eventually the coup d'état of 1640.

The fiscal rule that most constrained the monarch's decisions in issuing debt stemmed from the institutional distinction between ordinary and extraordinary taxation. Extraordinary taxes, levied as subsidies and so-called donations to the Crown, required the approval of the *Cortes* (representative assembly) and were assigned to a specific purpose, either military or diplomatic.[21] The limits on the issuance of debt stored in *padrões de juro* stemmed from this institutional feature of extraordinary taxes. As instruments with indefinite maturity, the annuity payments of *padrões de juro* could only be assigned to ordinary taxes, which were exempt from the sanction of the *Cortes*. Therefore, both the issuance of the funded debt and its credibility depended on revenues from the sales tax (*sisa*), customs duties, and revenues from monopolies on certain colonial trades.

After the *Cortes* approved the *sisa* in the 1380s as an extraordinary tax to finance the war with Castile, it was levied on a variety of transactions at a uniform rate. Despite regular complaints from the third estate, the monarchs managed to maintain the *sisa*, and it eventually became an ordinary tax with similar institutional features to the *alcabala* in Castile. Beginning in the 1530s, the administration of the tax was transferred to municipal governments through the introduction of a system of lump sums (*encabeçamento*) remitted to the royal officials responsible for the tax districts (*almoxarifados*) to which each municipality belonged.[22] Although the lump sums were reviewed every six years through bilateral negotiations between the monarch and the municipalities, they failed to raise significantly more money in each round, reflecting the gap that the collection method created between the actual taxable wealth and the tax yields. Nonetheless, in 1640 the *sisa* accounted for approximately 36 per cent of the Crown's receipts, thus relying on the domestic economy.[23]

Before the 1640s, custom duties contributed approximately 46 per cent to ordinary revenues. Together with excise taxes, this high percentage demonstrates the dependence of the kingdom's fiscal capacity on indirect taxes, whilst the remainder of the Crown's receipts came from trade monopolies on some colonial goods, which were also subject to critical fluctuations.[24] During this period, the conflict with the United Provinces (1630–54) affected trade with Brazil when the Dutch West India Company occupied the north eastern territory (Pernambuco and Paraiba). Similar setbacks affected the Crown's receipts on the basis of Asian commodities, owing to strong competition from the Dutch and English East India Companies in the Indian Ocean or in European outlets.[25]

At the outset of the revolt, ordinary taxes already offered reduced latitude for servicing the funded debt, for two reasons.[26] First, any increase in revenues from excises depended on strenuous

[21] In Portugal, the *Cortes* were composed of representatives of the three social estates (i.e., the clergy, the nobility, and the third estate) and met at irregular intervals at the summons of the king. Not surprisingly, the *Cortes*, which convened only twice during the 60 years of Habsburg rule, met six times between 1641 and the 1680s. For *Cortes* in Portugal, see Cardim, 'As Cortes de Portugal', pp. 441–3; Henriques and Palma, 'Comparative European institutions', p. 10.

[22] For an institutional description of the structure of the Crown's revenues, see Hespanha, *As vésperas*, pp. 112–24 and figures in Costa et al., *An economic history*, pp. 98–9.

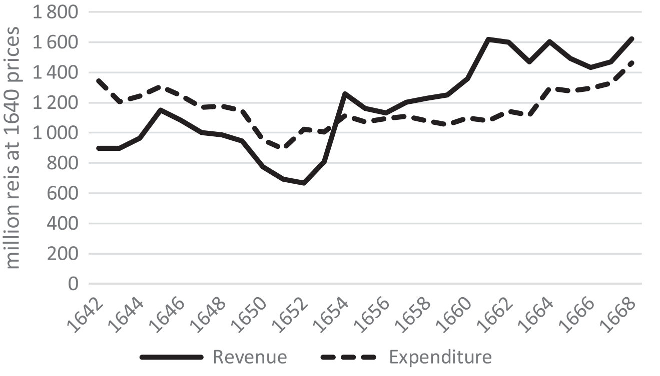
[23] Dias, 'Um documento', pp. 127–9.

[24] Ibid.

[25] Costa et al., *An economic history*, pp. 105–6.

[26] For the taxes that backed up the debt service, see the database in Costa, L. F., Sovereign debt and private credit in Portugal, 1640–1800 project (PI: Leonor Freire Costa), PTDC/HARHIS/28809/2017, available in http://debt.pt/ (accessed, 29-10-2022).

FIGURE 1 Primary balance, 1642–68 (constant prices). *Sources*: see online appendix 2. Deflator: Portuguese consumer price index in Palma and Reis, 'From convergence to divergence'.



negotiations with municipalities, and second, revenues from customs duties and trade monopolies were vulnerable to forces not controlled by the government. Whilst Habsburg rulers ignored these institutional constraints by imposing new taxes without convening the *Cortes*, the insurgent king's compliance with the fiscal system represented a clear cut with the past. It restricted the issuance of annuities and prompted the government to find a new tax base for the war against Spain.

IV | A NEW TAX BASE

The new dynasty's need to finance the war against the Habsburgs with taxes met with approval from the *Cortes*. In this context, a new universal tax was introduced to ensure the timely repayment of short-term debt incurred to solve liquidity problems. This type of policy in a fragile absolutist monarchy suggests that default would have had higher political costs than tax increases, even if the new taxation did not spare the regime's supporters.

In its first sessions of 1641 and 1642, the *Cortes* authorized the levy of 860 million *réis* annually in extraordinary taxes to cover the costs of military mobilization, which represented an increase of about 75 per cent over the ordinary government revenues of the 1630s.[27] This was a reasonable estimate, considering that official reports put war expenditures at 585–660 million *réis* before 1661, when the fiercest phase of the fight began, and about 1102 million *réis* were spent annually thereafter.[28] War budgets justified the imposition of an income tax (*décima*) on all types of income (interest, rents, wages, and profits) at a rate of 10 per cent. Revenues from the *décima* were intended to pay for approximately 80 per cent of war expenditures, with the remainder paid by levies on the consumption of meat and wine and through additional duties on Brazilian sugar imports. Since the *décima* was a universal tax that covered all types of income, it created the conditions for an overlap between creditors of short-term loans and taxpayers and represented a major change in the kingdom's tax structure, as it gave unprecedented weight to direct taxes.[29]

A fiscal effort was implemented from 1642 onward and eventually allowed for primary surpluses to occur. Figure 1 shows the primary budget balance, that is, the difference between the government's revenue and its non-interest expenditures.[30] It provides information on the extent to

[27] Hespanha, *As vésperas*, p. 156.

[28] Freitas, *O combatente*, pp. 348–9. For the series of war expenditures and how it was constructed see online appendix 2.

[29] Costa et al., *An economic history*, pp. 116, 127.

[30] The reconstruction of Portugal's fiscal position, detailed in online appendix 2, is based on: 1) annual data on debt issuance – funded and short-term debt – that allow us to identify annual financing needs and estimate the primary budget balance,

TABLE 2 Short-term debt, 1643–68

Year	Loan (monetary values, million *réis*)	Loan (tons of silver)	Interest rate (%)	Price of one gram of silver (*réis*)
1643	600	31.5	5	19.016
1646	120	6.3	n/a	19.016
1648	535.9	28.1	2	19.016
1652	528	27.8	2.5	19.016
1658	2920	153.5	n/a	19.016
1668	200	8.4	n/a	23.771
Total	4904	255.6		
Annual average	**196.1**	**10.2**		

Sources: Data for 1646 and 1658 in Smith, 'The mercantile class', pp. 78–80, 86, 97, 127–8; other values and interest rates: AFCB, book, FCB, MBCB, BDM II, Ms. Adq 94; BA, book 51-VI-19, fl. 359–64; silver prices: Valério, *Estatísticas*, vol. 2, pp. 623–34.

which the government could meet its obligations without incurring additional debt. The primary deficits coincided with the first phase of the war, in which there were minor military actions with the exception of the battle of Montijo, near Badajoz. The deficits were thus the result of difficulties in collecting an entirely new income tax rather than of rising expenditure. In fact, war spending in nominal values remained almost flat from 1645 to 1656, before Philip IV's army was finally able to invade Portugal and capture some strongholds in the wake of the Peace of the Pyrenees (1659). Military mobilization increased significantly thereafter as the Portuguese government anticipated the invasion of Philip IV's army. To deal with the expected military pressure, two additional tax hikes provided primary surpluses. The *Cortes* of 1654 had approved the levying of an additional sum of 520 million *réis* by the *décima*, since the sum of 860 million *réis* authorized in 1641 to cover war expenditures had not been reached. This meant a doubling of the tax rate (20 per cent) on income from Crown property (*bens da coroa*) held by members of the aristocracy. The second tax increase occurred in 1661, without convening the *Cortes*, but as a result of negotiations with the municipalities. It doubled the *sisa encabeçamento* for two years initially, but was maintained until the end of the war.[31]

The government resorted to short-term loans to manage expenditure, attempting to ensure the timely payment of troops and military provisioning.[32] The loans granted by merchant–financiers were repaid in full. There is no evidence of payment suspensions or forced consolidation of short-term debt in the *padrões de juro,* despite the Crown's liabilities reaching the significant amount of 255.6 tons of silver in 28 years (4904 million *réis*, as the lower bound of the estimate). Remarkably, only approximately 8.4 tons (200 million *réis*) remained to be repaid in 1668 when the peace treaty was signed (table 2), confirming that the tax increases after 1654 were crucial to achieving

which depends strictly on taxes and other sources of state revenue, whilst expenditure does not include the debt service; 2) scattered observations of specific years for which state budgets or budgets prepared by the military authorities are available; 3) information from the *Cortes* of 1668 that only 8% of the short-term debt remained to be repaid; the computation of repayments of the last short-term loan was adjusted to this information. For sources, see appendix 2. The information obtained shows that military spending remained almost unchanged from 1644 to 1656, whilst there was even a slight decrease in military mobilization in the early 1650s; thereafter, the deployment of larger armies drove up expenditures.

[31] Guimarães, 'As finanças', p. 63.

[32] As was the case with the *asientos* in Castile; Gelabert, 'The king's expenses', p. 232.

primary surpluses that ensured debt sustainability. Therefore, the amount of debt was implicitly constrained by the anticipation of the *décima* yields.

The successful management of the floating debt led to falling interest rates. At the outbreak of war, merchant financiers charged interest at 5 per cent,[33] whereas in 1652 one outstanding loan bore interest at 2 per cent, and another was negotiated at a rate of 2.5 per cent (table 2).[34] Nominal interest rates of 2–2.5 per cent reveal this to be an extraordinary case of cheap credit, especially given the higher rate (6.25 or 5 per cent) that the same merchant financiers charged on obligations and IOUs in the private credit market.[35]

The young dynasty's exceptional access to credit at low cost brings into question the merchants' involvement in the revolt.[36] Their capital ventures in military provisioning and embassy financing were intertwined with overseas entrepreneurship, as shown by a detailed study.[37] The social boundaries of the group did not coincide with those of the Portuguese bankers who financed the Crown of Castile beginning in 1627.[38] The pursuit of political favours, symbolic capital, and social rewards may have been the reason for the financiers' alignment with the new government.[39] However, once they became involved in financing the insurgents' struggle, the outcome of the war mattered to them as much as it did to the sovereign borrower. The high probability that Philip IV would repudiate the debt in the event of victory may have encouraged cooperation and prompted the merchant–financiers to lend money at low rates.

Regardless of the connections this group had with the insurgents, Portugal paid less for the war than the Habsburgs. For loans with short maturities, Philip IV (1621–65) and Carlos II (1665–1700) typically paid 8 per cent.[40] The contemporary view of this advantage was commented on in the only gazette published in Portugal at the time, which asserted that 'a Castilian army certainly spends seven or eight times more than an equally numerous Portuguese one; this is the same as if the kingdom had proportionally access to greater funds [than Castile]'.[41] In military matters, decreasing interest rates in a context of war was no less important than the state's capacity to raise funds through taxation.

V | THE FUNDED DEBT

Among the consequences of low interest rates on short-term maturities was the government's ability to initiate interest rate reduction measures on the inherited debt stored in *padrões de juro*. This section first analyses how this financial instrument fell into disrepute during Habsburg rule, before examining the extent to which debt management under the Braganza reflected creditors' upgraded beliefs about the sovereign debtor.

33 AFCB, book FCB, MBCB, BDM II, Ms. Adq 94.

34 Biblioteca da Ajuda (Lisbon, Portugal; hereafter BA), book 51-VI-19, fl. 359.

35 Costa, 'Elite mercantil', p. 123.

36 Although these merchant–financiers were not deposit banks, they used their commercial and financial networks to lend large amounts to the state; ibid., pp. 121–4.

37 Smith, 'The mercantile class'.

38 Domínguez Ortiz, *Política y hacienda*, pp. 130–1; Álvarez-Nogal, *El crédito*, pp. 134–5, 265.

39 Social rewards were still included in state credit contracts drawn up a century later; Costa, 'Capitalistas'.

40 Álvarez-Nogal, 'The role played by short-term credit', p. 83; Sanz Ayán, *Los banqueros*, pp. 36, 71, 76.

41 *Mercurio Portugues*, January 1664, Lisbon, Oficina de Henrique Valente de Oliveira.

The evolution of the funded debt in Portugal between 1580 and 1640 was particularly impressive. Outstanding debt was twice the state revenue in 1580 and continued to rise until it reached 4.4 times total revenue in 1641.[42] This increase went in tandem with the erosion of the credibility of annuities, as revenues from ordinary taxes did not keep pace with the level of the Crown's indebtedness. By 1607, most districts no longer had the fiscal space to service new *padrões de juro*.[43] The first signs of lender distrust arose after the deferral and, in some instances, suspension of annuity payments, as was the case with those guaranteed by the revenues of the House of India (*Casa da Índia*). Not surprisingly, the attempt to reduce the interest rate of old bonds, which bore 6.25 per cent in 1614, to 5 per cent met with resistance from creditors and prompted the government to tap the financial resources of the Lisbon City Council. The Council issued municipal bonds to raise the liquidity needed to pay off the existing bondholders who had rejected the reduction, and in return received a *padrão de juro* at 5 per cent interest. Whilst further loans from the Lisbon City Council followed,[44] a serious blow to the credibility of this financial instrument came in the 1630s. The Crown regularly seized interest payments and levied a new tax, the *meia anata*, on the revenue from *padrões juros*, without the assembly of the *Cortes*. In 1637, after a 25 per cent cut, bondholders received only 50 per cent of the interest due to them.[45] Senior court officials at the time openly admitted that *padrões de juro* had fallen into disrepute.[46] As a result, on the eve of the revolt, some institutional creditors saw the annuities sold by the Duchy of Braganza as a much safer investment.[47]

Since the new dynasty had inherited a discredited debt instrument, it took several years for interest rate reduction measures to be carried out. They were aimed at lowering the old bonds, which paid interest at 6.25 per cent, to 5 per cent, and followed a set of formalities that complied with the contractual provisions of the *padrões de juro*. Accordingly, investors had three options: to increase the principal and keep the same income; to accept the interest rate reduction and the subsequent cut in the annuity; or to reject the reduction and liquidate the principal at par. Similar operations are documented for the Castilian *juros al quitar* and the Dutch *losrenten*.[48] In Portugal, these operations did not change the stock per se, but released tax revenues that eventually allowed further issuance of debt and expansion of the creditor base.

Generally, voluntary interest reduction operations had limited results for several reasons. First, if most creditors opted to liquidate their holdings, the operation could be jeopardized by lack of funds or credit rationing. Second, if bond holdings were concentrated in a few financial institutions, a coordinated creditor response could prevent the operation from succeeding.[49] The third reason follows from the previous one, as the institutional mechanism of public offering of

[42] Arquivo Nacional da Torre do Tombo (Lisbon, Portugal; hereafter ANTT), Royal Chancery Books; see online appendix 1.

[43] Magalhães, 'Padrões de juro', p. 95.

[44] Gomes, *Collecção de leis*, pp. 70, 201–6, 307–11; Hespanha, 'Os poderes', pp. 224–5. This practice seems to have anticipated a common practice in Castile in the mid-seventeenth century, when large sums of *donativos* from the Madrid City Council solved the financial problems of the Habsburgs. See Andrés Ucendo, 'Government policies'.

[45] Hespanha, 'Os poderes', p. 229.

[46] Silva, *Collecção chronologica*, pp. 43–6.

[47] Arquivo Histórico da Santa Casa da Misericórdia do Porto, Série D, Banco 8, book 5, fl. 9v, 1640–01–24.

[48] Álvarez-Nogal and Chamley, 'Debt policy', pp. 195–6; Yun-Casalilla, *Iberian world*, p. 169; Fritschy, *Public finance*, p. 156.

[49] Dickson, *Financial revolution*, pp. 31, 214; O'Brien, 'Mercantilist institutions', p. 193; Chamley, 'Interest reductions', pp. 556–7.

securities could impact the size of the creditor group, whilst short- and long-term credit remained segmented markets.

In the Portuguese case, we conjecture that this type of operation had a high chance of failure owing to credit rationing. Liquidity depended on investors' perceptions of risk, which was especially critical in fiscal districts where the economy was most affected by the deployment of the army. As for the coordinated response of creditors, it seems to be of little importance in this case, since in mid-seventeenth-century Portugal no organizations mediated the public offering of debt securities. The success of the campaign could instead be affected by the dispersion of creditors across the country, which gave the Treasury Board a crucial informational role. Each time the government resorted to this type of refinancing operation, the holders of the old annuities were collectively asked to communicate their decisions (to accept the reduction or sell the bonds) within 30 days through edicts published in the main cities of the kingdom.[50] The royal agency had to coordinate with bondholders and sought to ensure liquidity, via the sale of new *juros*, to pay out the owners of old annuities who rejected the reduction.[51] This goal was achieved through guarantees that the servicing of interest payments on the new bonds would exactly match the tax streams freed up by the reductions to the old bonds. This precaution was mentioned explicitly in the new *padrões de juro.*

During the period under observation, two interest rate reduction operations were implemented in 1656 and 1672–4. A comparative examination of the inner workings of both campaigns provides us with evidence of an upgrading of creditors' beliefs in the sovereign borrower. The number of old *padrões de juro* and the amount of capital involved from one campaign to the next indicate a growing acceptance by bondholders, and the effectiveness of the Treasury Board in finding new creditors. Ultimately the group expanded and the outstanding debt subject to interest rate reduction rose. The 1656 campaign affected 14.32 per cent of the stock, whereas the 1672 campaign affected 33.78 per cent.[52]

The campaign of 1656 took place during the war, when Portugal's political independence was still uncertain and the Habsburg legacy negatively affected lenders' confidence (table 3). New *juros* offered at an interest rate of 5 per cent were likely unattractive; liquidity required to make the operation a success may have been hard to meet. The government could only tap into the savings of the lay brotherhoods and the nobility, the latter being then politically committed to the new dynasty. Both categories provided 59 per cent of the funds for the new *juros*. The second campaign, in 1672, produced better results, not least because the political backdrop was different, as were the measures taken to reduce interest rates. Four years after the peace treaty with Spain, the Treasury Board was in a position to take advantage of the collective notification procedure and the tight schedule given to bondholders. It treated the absence of a response as consent to the reduction. Given the communication barriers within the kingdom, this plan may have had its benefits. More important, however, was the fact that in this second operation the Treasury Board received double the amount of credit via new *juros* sold at 5 per cent. At this point, some prominent Lisbon businessmen acted as the primary lenders, ensuring 42 per cent of the funding. Seemingly, this capitalist group had deepened its loyalty to the new dynasty (table 3).

Despite the increased confidence of lenders, many *padrões de juros* paying 6.25 per cent remained on the market. The financial outcomes of the two campaigns illustrate the limitations

[50] ANTT, Chancelaria de D. Pedro II, liv. 12, fls. 274–82v, 1673–12–05.

[51] Gomes, *Colleção de leis*, pp. 220–1, 314–16.

[52] Estimation based on newly compiled datasets. See online appendix 1.

TABLE 3 Social backgrounds of new bondholders, 1656 and 1672–4

	1656			1672–4		
Social group	**Principal of *juros* (million *réis*)**	**Principal of *juros* (%)**	**Number of new *juros***	**Principal of *juros* (million *réis*)**	**Principal of *juros* (%)**	**Number of new *juros***
Nobility	20.55	33.91	15	42.24	34.84	6
Lay brotherhoods	15.25	25.17	11	23.76	19.59	5
Businessmen	10.06	16.60	6	51.18	42.21	6
Ecclesiastical institutions	4.85	8.00	4	2.6	2.14	2
Clergy	0.80	1.32	1	1.48	1.22	2
No information	9.09	15.00	13	0	0.00	0
Total	**60.60**	**100.00**	**50**	**121.26**	**100.00**	**21**

Sources: ANTT, Royal Chancery Books; see online appendix 1.

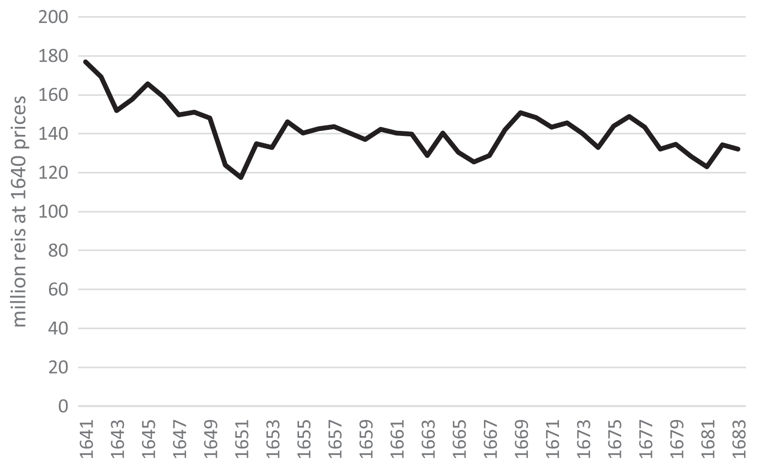


FIGURE 2 Service of long-term debt, 1641–83 (constant prices). *Sources*: ANTT, Royal Chancery Books; see online appendix 1. Deflator: Portuguese consumer price index in Palma and Reis, 'From convergence to divergence'.

of a system that relied on personal transactions and depended entirely on the communication between central government agencies and potential bondholders. Unlike in France, where intermediation by notaries allowed the market to expand,[53] the absence of a specialized market-maker seems to have kept the group of bondholders in Portugal within narrow boundaries. Since other uses of this security indicate its creditworthiness, namely as collateral in credit transactions or as part of an entailed estate, the mechanism of the public offering rather than public distrust must have accounted for the results of each operation.

Notwithstanding the hurdles posed by the public offering of securities, the debt management operations had the expected effect of reducing debt–service spending (figure 2) and ensured the

[53] For Castile, see Toboso Sánchez, La *deuda pública*, pp. 172–3; for France, Béguin, 'Notaries', pp. 197–8.

TABLE 4 International comparison of Portugal's fiscal position

Country and years	Growth rate of revenue (%) (1)	Revenue/ GDP (%) (2)	Average debt service/ revenue (%) (3)	Debt/ GDP (%) (4)	Average primary surplus/revenue (%) (5)
Castile, 1566–96	3.3	2.7–9.5	51	14.7 51.4	31.5
Dutch Republic and Holland, 1600–79	5	11	*c.* 32	*c.* 50	negative
England 1665–90	1	4.5	6	39	negative
Portugal, 1642–68	**5.7**[a] **3.8**[b]	**4**	**14**	**11**	**8**

Sources: Portugal: authors' estimation, online appendices 1 and 2; Portugal's GDP from Palma and Reis, 'From convergence to divergence'. Castile: Drelichman and Voth, *Lending to the borrower*, table 28; in columns 2 and 4, two different figures are presented, depending on different GDP estimates. Netherlands and Holland: col. 1, nominal values for Holland from 't Hart, *The making of a bourgeois state,* p. 138, table 5.2; col. 2, period 1621–71, from Fritschy, *Public finance*, p. 169; col. 3, year 1630, idem, *Public finance*, p. 241; col. 4, year 1630 from idem, *Public finance*, p. 241; col. 5, Drelichman and Voth, *Lending to the borrower*, table 28. England: col. 1, from O'Brien, 'Political economy', table 1; col. 2, from idem, 'Political economy', table 2; col. 3, average debt service (1689–97) from idem, 'Political economy', table 1; col. 4, outstanding debt from Brewer, *Sinews*, p. 30 and GDP at current prices (average of the period 1665–90) from O'Brien, 'Political economy', table 2; col. 5, for the period 1688–97, from Brewer, *Sinews*, p. 30.
[a]Nominal values.
[b]Real values.

king's greater ability to draw on funded debt in later periods. Thus, the development of the public debt in the early eighteenth century delivers additional evidence of investors' increased trust in *padrões de juro*. Whilst the monarchy financed the Restoration War without any significant recourse to funded debt, Portugal's participation in the War of the Spanish Succession (1703–13) was an altogether different story. By then, the government issued substantial amounts of funded debt, and short-term loans, including those from English creditors, were eventually consolidated. As a result, from 1670 to 1718 the debt stock grew 68 per cent in nominal value compared with 8.7 per cent in 1641–69 (online appendix 2). This was a significant consequence of the Restoration period, considering that the rise of the debt stock was achieved under the rules of an unchanged fiscal constitution. The *décima* contributed to this result because, like the *sisa* in the late middle ages, it became an ordinary tax after the Restoration War. In the eighteenth century, the issuance of *padrões de juro* could be, and was, serviced by the income tax.

VI | A LOW-DEBT ECONOMY

Portugal fought for its autonomy from 1640–68 without defaulting or repudiating debt, which allowed for an expected fall in interest rates during the war. These positive outcomes were both the cause and the consequence of a stable debt stock. Next, we examine the idiosyncratic features of this case. We adopt a comparative perspective and further discuss the reasons for the limited recourse to credit by conjecturing that the supply side rather than the demand side of the market could have determined the observed debt-to-gross domestic product (GDP) ratio.

Table 4 presents data from Portugal together with data from three other western European polities that provide a meaningful framework for comparison. It considers the other country struggling for autonomy, the Dutch Republic, as well as their common opponent, the Spanish monarchy.[54] It also includes the English case as a textbook example, as major changes in public finance occurred shortly thereafter. The average annual growth in per capita tax revenues, reaching 5 per cent in nominal terms, put Portugal in a similar position to the Dutch Republic. The ability to drive up the tax burden was an exceptional achievement of the rebellious dynasty. Note, however, that the level measured by the revenue-to-GDP ratio remained significantly different. If military spending drove the fiscal effort, the duration of the war in question must have played a role. The Eighty Years' War, or the Dutch War of Independence, demanded a 4.5-fold increase in spending – from approximately 2.9 million guilders in the 1580s to 11.5 million guilders in 1648 – equivalent to a maximum annual expenditure of 109.2 tons of silver.[55] In Portugal, by contrast, expenditures doubled (from 528.5 million *réis* to 1101 million *réis* in the 1660s) but never exceeded 46.3 tons (online appendix 2).

In addition to constraints imposed by the respective fiscal constitutions, each country's fiscal capacity depended on the performance of its economy under wartime pressures and the structure of its tax administration, which affected both the revenues-to-GDP ratio and debt levels. Portugal's economic growth was not far from that of the province of Holland between 1500 and 1650 (about 0.40 per cent of real GDP per capita),[56] but higher than that of Spain, which underwent a declining trend from approximately 1570.[57] Nevertheless, Portugal's tax revenues-to-GDP ratio appears modest (4 per cent), suggesting that tax collection procedures held back revenues from keeping pace with the expansion of the tax base. Portugal's revenue-to-GDP ratio was undoubtedly far below the 11 per cent estimated for the Dutch Republic (table 4). Portugal's military success seems to have required a significant variation in the tax burden, notwithstanding a limited state fiscal capacity.[58]

Table 4 also reveals the greater reliance on debt financing in the case of the Dutch Republic compared with Portugal. According to the literature on Dutch financial history, the debt level in Holland reflected the reputational recovery of the insurgents' government after decades of credit rationing and financial repression. The outset of the revolt involved the suspension of annuity payments (*losrenten*) (1572–8), the confiscation of property from Catholic institutions, and some forced loans.[59] In 1598, the States of Holland were still having difficulty borrowing through *losrenten* at 8.3 per cent interest, and were therefore forced to raise money through short-term obligations at 12 per cent interest.[60] Creditors refrained from providing funds at low interest rates, forcing the government to raise money through a plethora of excises ('common means'). Since tax collection was farmed out three times a year, tax yields developed in tandem with the province's economic performance. Over time, general knowledge of growing tax revenues restored public

[54] We resort to data on the late sixteenth century, when public debt is deemed sustainable in Castile according to estimation by Drelichman and Voth, 'Debt sustainability'. This refers to the period preceding the critical financial stress that characterized Philip IV's reign. The data and the period notwithstanding are meaningful for our exercise as they indicate a budgetary position with debt sustainability. We are interested in comparing Portugal with cases of sustainable debt because only then can we assess whether Portugal's debt was low enough to stay within the limits that ensured credibility.

[55] 't Hart, *The making of a bourgeois state*, pp. 164–5.

[56] Palma and Reis, 'From convergence to divergence', p. 499.

[57] Prados de la Escosura et al., 'Growth recurring'; Palma and Santiago-Caballero, 'Patterns of economic growth', p. 2.

[58] For a broader perspective of the fiscal capacity of European cases compared with the Ottoman empire, see Karaman and Pamuk, 'Ottoman state finances'.

[59] Fritschy, 'Financial revolution', pp. 59–62.

[60] Idem, *Public finance*, p. 75.

TABLE 5 Debt sustainability

	Standard indicators of debt sustainability					
	D	***D****	***D–D****	**PS**	**r**	**g**
	Debt level (Debt/GDP) (observed)	Sustainable debt level (computed)		Primary surplus/ GDP	Interest rates	Rate of growth
Portugal 1640–68	0.11	0.08	0.03	0.003	0.05	0.01

Sources: authors' estimation based on online appendices 1 and 2.

credit in the province and caused interest rates to fall. By 1618, issuing interest rates of obligations were as low as 6.25 per cent.[61]

The low debt-to-GDP ratio appears as the most striking feature of the Portugal case study, given that short-term debt was raised at impressively low-interest rates shortly after the outbreak of the revolt. This would be a significant difference from the experience of either the province of Holland or of Castile. Thus, we put forward the hypothesis that the observed debt-to-GDP ratio was a policy objective rather than a market constraint. Compliance with the fiscal constitution severely restricted the issuance of funded debt, whilst it signalled the new dynasty's pursuit of debt credibility from the outset of the revolt.

The test to this hypothesis measures debt sustainability. To this end, we compiled a new dataset on short- and long-term debt, and the cost of debt service from archival sources (online appendix 1), and assessed Portugal's fiscal balance in 1642–68 by constructing the government's budget constraints on the basis of secondary sources that offer information on the state's revenue and expenditures (online appendix 2). Our interest rate series are an estimation of the ratio of long- and short-term debt service to the stock of debt. As the measure of debt sustainability also requires a GDP growth rate, we computed the average annual compound rate relying on a series of GDP nominal values.[62]

The measure of debt sustainability is given by a debt-to-GDP ratio (D^*) consistent with $D^* = PS/(r-g)$, where PS is the average primary surplus over the GDP in the period 1642–68 discounted by the difference between the interest rate (r) and the rate of growth (g) (table 5).[63] The difference between the observed (D) and the computed (D^*) debt-to-GDP ratio offers information on how actual primary surpluses consistently allowed for stable debt levels.

Table 5 presents the results of our estimation. Considering the state of war, the small difference between (D) and (D^*) indicates the government's pursuit of keeping the debt controlled. This inference is reinforced by the fact that interest rates for short- and long-term maturities decreased, suggesting that the government was not financially constrained by the market. On the other hand, it seems unlikely that Portugal could have financed the war by further increasing its funded debt without defaulting. In other words, the insurgents' policy of prudence required that Portugal remain a low-debt economy by the international standards of the time, even though

[61] Idem, 'Financial revolution', p. 78.

[62] Palma and Reis, 'From convergence to divergence'. We are grateful to the authors for providing the nominal values on which the series published in their article are based.

[63] This is consistent with Drelichman and Voth, 'Debt sustainability': D should be higher than D^* to test debt sustainability. In our case, the sustainability problem is incidental to our goal, since we aim to infer from the difference the existence of a fiscal space that would service more debt. Similar discussion for France in White, 'Was there a solution?'.

the insurgents were able to impose a new income tax and change the tax system by enlarging the share of direct taxes.

The low debt-to-GDP ratio was the outcome of a policy, which in turn had two consequences. One was the recovery of public trust in the *padrão de juro*, a financial instrument backed by a contract with clauses similar to those of British consols.[64] The other consequence was a declining risk premium. Considering the use of *padrão de juro*, it is worth noting that Castile issued a similar perpetuity (*juros al quitar*) and used it extensively as *juros de resguardo* to repay short-term loans. For more than 70 years, this financial instrument allowed the Habsburg monarchy to manage its debt relying on the *Cortes* to authorize further tax revenues to service a soaring debt stock.[65] This policy is reflected in the debt-to-GDP ratio in table 4. In terms of the importance of *juros* for the Crown's financing, however, the Iberian kingdoms differed in one crucial aspect. Portugal's restoration of political autonomy established the reputation of this financial instrument, whilst Castile stopped issuing long-term debt in the last years of Philip IV's reign and never resumed; *juros* fell into discredit owing to recurrent taxation on the income of capital and the forced reduction of interest rates.[66] Similar political institutions and financial instruments produced different effects. The 1640 revolt in Portugal provided an appropriate context for the effectiveness of the fiscal constitution in limiting the king's demand for credit.

Portugal's unexpectedly low rates of interest compared with Holland require additional discussion. Political representation has been considered an important variable of political risk since the seminal work of North and Weingast,[67] but the notion that parliaments are a condition for credible commitment is still the subject of scholarly debate.[68] The Portuguese Restoration War did take place in the context of regular meetings of the *Cortes*,[69] but these assemblies did not monitor spending, which is a key difference between this proto-parliamentary regime and modern political representation. Moreover, interest rates in Portugal fell during a period when the *Cortes* did not convene (1645–54).

This comparative approach to Portugal's public credit in the seventeenth century emphasizes the context of the sovereign borrower's willingness to pay and how this impacted the political capital of the government, regardless of the role that representation played in decision-making. Creditors' beliefs that the sovereign would meet debt obligations seemed to unite the two Habsburg victors. In Portugal's so-called absolutist monarchy, this was the result of an implicit balanced–budget rule that constrained the demand for credit. For the province of Holland, part of a republic, it was the result of an impressive fiscal capacity in a thriving economy that assured holders of obligations that they could eventually be repaid if they so desired.

The comparison presented here, however, has left open the question of the interrelation between debt credibility and the liquidity of financial instruments. In Holland, or in a merchants' republic, the liquidity of bonds resulted from debt holders' preferences for indefinite postponements of repayment, in part because obligations became marketable securities that could be

64 Chamley, 'Interest reductions', p. 555.

65 Álvarez-Nogal and Chamley, 'Debt policy', pp. 193–5.

66 Toboso Sanchéz, *La deuda*, pp. 182–4; Álvarez Nogal, *Oferta y demanda*, pp. 33–4; Comín Comín, *Las crisis*, p. 77 ff.

67 North and Weingast, 'Constitutions and commitment'.

68 Ogilvie and Carus, 'Institutions', pp. 418–28; Gelderblom and Jonker, 'Public finance', p. 27. Even in parliamentary England, it was thought that the size of debt might lead to despotism; see Daunton, 'Politics of British taxation', p. 124.

69 Henriques and Palma, 'Comparative European institutions', p. 10.

endorsed and were tax-free upon transfer.[70] In Portugal, the policy responsible for restoring the credibility of *padrões de juro* limited the growth of the debt stock, thus reducing the likelihood of new investors entering in the market.

VII | CONCLUSION

This study has demonstrated how public debt functioned as a political tool in the early stages of state-building. Portugal's path to a sound fiscal position in the midst of war and domestic instability was created by refraining from demanding forced loans, servicing long-term debt punctually, and negotiating low-interest rates on short-term loans. But the Portuguese case also illustrated that the long-term effect of the insurgents' policy of prudence was the country's low debt-to-GDP ratio, the lowest yet documented from a comparative perspective. This ratio does not indicate credit rationing, but rather that Portugal's king refrained from borrowing. Compliance with the fiscal constitution, which offered little room for debt service, and protection of the property rights of bondholders, most of them potential allies of the new regime, were the pillars of a financial policy under political instability. In this sense, our results decouple the problem of debt credibility from the political regime.

Although this policy was not designed as a forward-looking strategy, it enabled the Portuguese kings to continue issuing perpetuities well into the eighteenth century, in contrast to the Spanish Habsburgs' monarchy after 1665. The different paths of the Iberian kingdoms shed light on how similar regimes that shared the same ruling dynasty for 60 years nevertheless experienced divergent financial developments owing to changes in the context in which institutions were called upon to restrain the king's decisions.

These findings may be useful for future studies that examine the relationship between debt credibility and the state's fiscal capacity on the one hand, and the liquidity of financial instruments on the other. If the policy responsible for restoring the credibility of the *padrões de juro* restricted the issuance of this debt instrument, public debt could hardly be a driver of future increases in the state's revenues. Thus, the Portuguese monarchs' conservative view on the fiscal pact between the Crown and the kingdom, which left the collection system of ordinary taxes unchanged, sheds light on the role of debt in maintaining the fiscal constitution. Moreover, and assuming that the liquidity of a financial instrument is a variable of the debt stock,[71] the policy of prudence in Portugal would have prevented the market from scaling. Together with the sociology of bondholders who bought and held *padrões de juro* as safe as real estate, the question to ask is whether, paradoxically, debt credibility became the cause of an illiquid market.

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[70] Fritschy, *Public finance*, pp. 76–8.

[71] Sussman, 'Financial development', p. 504.

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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