

# The seventeenth-century depreciation of silver coinage in the Crown of Aragon\*

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**ABSTRACT.** This paper looks at the state policy applied to silver in the Spanish territories of the Crown of Aragon in the seventeenth century, where increasing demand for silver coins with a lower intrinsic than market value opened up debate on the debasement of the domestic silver coinage. The monarchy was weaker in the Crown of Aragon than in Castile, and it was therefore obliged to negotiate these measures with the elite and institutions of each kingdom. This paper examines the fiscal and monetary reasons for reforms, as well as the extent of political support achieved in each kingdom.

## 1. Introduction

THE GRADUAL DEPRECIATION OF NATIONAL CURRENCIES, either through enhancements or metallic debasements of the coinage, was a key feature of the monetary policy applied in the states of early modern Europe. A practice inherited from the late medieval period, this strategy could pursue fiscal or monetary goals. Recent studies have highlighted the decisive importance of monetary objectives for these decisions. Thus, Glassman and Redish (1988) argued from the cases of England and France that the successive depreciations carried out in Europe in the early modern period were a consequence of the need to avoid the difficulties and costs generated by the progressive undervaluation of the coinage.<sup>1</sup>

1. Glassman and Redish (1988). Thus, it has been estimated that silver coinage did lose on the average up to 2% of its weight from normal wear and tear in Europe during the medieval and early modern periods. See Day (1999), p. 12.

This process was a result of technical limitations governing minting, which, as far as coins were concerned, reduced the properties of durability and portability required in a perfect medium of exchange. Meanwhile, the shortage of legal gold, silver and billon money itself created the conditions for this process, encouraging the parallel use of counterfeit and clipped coins. More recently, Sargent and Velde have argued that depreciation was a rational policy response to remedy periodic shortages of “small change” in the market as coins became worn over time.<sup>2</sup> Given the need for petty coins in everyday transactions, these depreciations were absolutely necessary to avoid economically damaging price deflation.

Both these arguments implicitly assume the emergence of an ever-more coherent monetary policy among the leading European states during the early modern period. However, these states were still in the process of formation, and the authority of the monarch and central government differed widely in the various territories under their control. The limited nature of royal power is revealed in the co-existence of two kinds of coins in seventeenth-century states. Thus, the monarchy would usually issue the principal coinage, associated with the state in the regions that were more directly under its control, where it obtained the majority of its tax revenues. Other regions, however, enjoyed greater political autonomy and a separate institutional framework, and they conserved the right to issue their domestic coinage, which usually coexisted in the market alongside the principal currency. Like royal taxes, monetary policy had to be negotiated by the monarchy with the public institutions in these regions. Such negotiations accorded greater importance, not only to the existing legal systems but also to the interests of the elite of each kingdom, as represented in the institutions. Thus, monetary policy could sometimes pursue differing objectives and produce disparate economic outcomes in territories under the sovereignty of the same state.

This paper seeks to show this by examining the monetary policy

2. Sargent and Velde (2002).

applied to silver in the Spanish territories of the Crown of Aragon in the seventeenth century, which differed from the policy applied in Castile, the metropolis of the Spanish empire and the recipient of flows of American gold and silver. The minting of coins in Castile was a royal privilege and this had allowed the king to debase silver in the late Middle Ages for fiscal purposes,<sup>3</sup> but the Hapsburg monarchy proved tenacious in preserving the intrinsic value of the silver coinage in the sixteenth and seventeenth centuries. In contrast to the sharp reductions in the weight and fineness of silver coins issued in the rest of Europe,<sup>4</sup> the official metal content of the *real* remained constant between 1497 and 1686. This decision was intended to defend the high market price and prestige of the Castilian *real* in international trade in order to finance Spain's costly foreign policy through loans from merchants and bankers.<sup>5</sup> Nevertheless, the monarchy resorted to frequent issues and enhancements of billon coins in the seventeenth century to increase its revenues.<sup>6</sup> This measure caused inflation, conversion difficulties between coins and a rise in the premium received on payments in silver rather than billon in the domestic market.<sup>7</sup> Given the increasing appreciation of silver in European markets and the lower intrinsic value of foreign coins, this monetary policy encouraged exports of Castilian coins abroad, a process

3. Mackay (1981).

4. The official silver coin lost 66% of its metallic content in France between 1514 and 1666. See Glassmann and Redish (1988), pp. 86-87. If the intrinsic value of the Genoese and Milanese silver coins was lowered by between 20% and 30% in the second half of the sixteenth century, it was debased by a further 30% in Genoa and by some 20% in Milan between 1620 and 1700. See Cipolla (1994), p. 61 and (1952), pp. 172-5. According to the Spanish arbitrists, Cardona and Lasheras, the intrinsic value of the silver coin in Holland was cut by 44% between 1548 and 1622, and this metallic debasement reached around 80% by 1684. See National Library, VE-13-29 and Manuscripts, 6384-129.

5. Álvarez (1997) and (2001).

6. Hamilton (1975), pp. 87-115 and (1988), pp. 38-50; Domínguez Ortiz (1960); Motomura (1994); Santiago (2000).

7. Santiago (2000), pp. 81-207.

that was intensified by the Castilian economy's persistent deficit<sup>8</sup> and the indebtedness of the monarchy.<sup>9</sup> In those countries that were most capitalist and trade-oriented, like England and Holland, a 'dual' circulation of silver arose, which consisted of using Castilian *reales* and other coins with a high intrinsic value in foreign trade, and domestic or clipped and worn foreign coins in domestic trade.<sup>10</sup> Meanwhile, the reforms proposed by the arbitrists to end the persistent shortage of silver in Castile's domestic market in the seventeenth century were delayed.<sup>11</sup> Only after the monarchy had devalued billon coins by 75% in 1680 and had reduced the weight of silver coins by 25% in 1686 did monetary circulation stabilize in Castile: both the inflation of prices and the premium on silver were drastically reduced.<sup>12</sup> This metallic debasement was applied to all Castilian silver coins minted in Spain for use in the domestic market, while the former intrinsic value of the coins issued in Spanish America was maintained for use in international markets.<sup>13</sup>

The Crown of Aragon was a federation of realms that had coalesced in the late medieval period, including Aragon itself, Catalonia, Valencia and the Balearic Islands, and various Italian provinces. Situated in the north-east of the Iberian Peninsula, these lands had gradually increased their economic links with Castile in the sixteenth century after the unification of the two Spanish Crowns under a single dynasty by the Catholic Monarchs (Isabella of Castile and Ferdinand of Aragon) in the late fifteenth century. These links meant Castilian silver was used in trade throughout the Crown of Aragon during the early modern period to the

8. It has been estimated that the Castilian trade deficit widened from 30% of the value of imports at the end of the sixteenth century to 50% by the mid-seventeenth century. See Pérez García (1988), p. 270.

9. See notes 5 and 6.

10. Vilar (1972) p. 337.

11. Grice-Hutchinson (1982), pp. 203-210; García Guerra (2003); Andrés (1999); Sánchez Belén (1992).

12. Santiago (2000), pp. 201-248; Font (2008).

13. Hamilton (1988), p. 51.

detriment of the domestic currencies created in the medieval period, issues of which became increasingly rare. As each of the realms of the Crown of Aragon retained its own legal and institutional systems in the sixteenth and seventeenth centuries, the Spanish monarchy's power varied across the Aragonese territories, obliging the sovereign to negotiate separate monetary policies with the local authorities and elite through the agency of the Viceroy. Meanwhile, the *Cortes*, or parliaments, of each kingdom were convened less and less frequently, leaving the key role in these negotiations to three institutions: the *Real Audiencia*, or supreme court of justice formed by royal magistrates; the *Diputación*, a standing committee of the parliament formed by delegates of the estates, or social groups with representation in this assembly, whose mandate was to protect local rights; and the city council of each kingdom's capital, which usually enjoyed the exclusive or temporary right to mint silver coins. In particular, in the late medieval period, the regional elites of Catalonia and Aragon created more effective legal and institutional controls over the debasement of high-value silver coins than in Castile.<sup>14</sup> Despite these impediments, monetary policy in the Crown of Aragon adapted better to the seventeenth-century appreciation of silver in the European market than it did in Castile, and the intrinsic value of local silver coinage was reduced earlier, thanks to the monarchy's acute need for revenues.

In addition to contributing to the international debate, this study sets out to revise thinking about the circulation of money in early-modern Spain in recent historiography, a subject that has attracted unusual interest in the last fifteen years. Influenced by the pioneering studies of Hamilton and Domínguez Ortiz,<sup>15</sup> the recent research focuses on the policy applied to billon coinage in seventeenth-century Castile as an explanation for the economic decline of this kingdom and the foreign policy of the Hapsburg monarchy. Based on a wealth of official documentation, this research seeks to understand the impact of monetary

14. Spufford (1991), pp. 406-407.

15. See note 6.

policy on international credit, monetary and trade transactions rather than its effects on monetary circulation and economic activity within Castile itself.<sup>16</sup> Despite the work of Vicens Vives and Vilar, who linked the earlier depreciation of silver in Catalonia at the end of the seventeenth century to the region's more capitalist outlook,<sup>17</sup> monetary policy and circulation in the Crown of Aragon in the early-modern period has been largely ignored by historiography, which has tended to treat it as subordinate to conditions in Castile and scarcely relevant. As we explain in the following section of this study, however, monetary circulation in the Crown of Aragon was very different from conditions in neighbouring Castile. Affected by the increasing appreciation of silver in the international market, certain institutions and elites in the Crown of Aragon in the seventeenth century even attempted to construct independent monetary policies, based on models already applied in other European countries. However, differences in the relative power of the monarchy and the Aragonese, Valencian and Catalan elites, and differences in the prevailing consensus, determined the objectives pursued and outcomes achieved in each territory. The following section of the study describes the early metallic debasement of silver coinage in Valencia, and the subsequent two sections compare the monetary policies pursued in Catalonia and Aragon. The main conclusion is that monetary reform came earlier where the monarchy could achieve its fiscal objectives more easily. However, when the regional elites had real room to negotiate with the monarchy, they could create a relatively autonomous monetary policy in their territory, before the new Bourbon dynasty imposed a centralising monetary policy in Spain in the eighteenth century.<sup>18</sup>

16. On this historiography, see Santiago (2000), pp. 269-275.

17. Vilar, (1978), I, pp. 390-405.

18. Santiago (2000), pp. 249-261.

## 2. Monetary circulation in the Crown of Aragon in the seventeenth century

AS ALREADY MENTIONED, monetary circulation in the Crown of Aragon in the sixteenth century was characterized by the use of Castilian *reales*, the supply of which was increasing thanks to the constant arrival of silver from the Americas. Favoured by dynastic union with Castile, this was further encouraged by the reforming efforts of Ferdinand the Catholic (1479-1516) in relation to domestic silver coinage (see *Table 1*). The aim of these reforms was to increase the legal value of silver currency over billon by devaluing petty coins and changing its intrinsic value to facilitate conversion with Castilian *reales*. After the introduction of silver coins in Aragon in 1475 by John II, Ferdinand's father, in 1484 the parliament adopted the Castilian fineness of 22 carats for new issues of *medio* (half) *real* coins.<sup>19</sup> In 1519 and 1528, during the reign of Charles V, this parliament also agreed to use the Castilian standards of weight and fineness in all new silver coins minted.<sup>20</sup> Meanwhile the Catalan *croat*, near in weight to the Castilian *real* but of greater fineness (23 carats), had maintained the intrinsic value it had in 1285, but in 1493 Ferdinand the Catholic increased by 33% the nominal value fixed by Ferdinand I in 1415, that is from 18 to 24 *dineros*.<sup>21</sup> However, in 1480 in Valencia, Ferdinand the Catholic confirmed the weight and fineness of 22 carats, fixed in 1442 by Alfonso V for the *dieciocheno* or domestic coin minted in this kingdom from 1393 onwards. Despite the increase in forged and clipped coins on the Valencian market in the early-sixteenth century, Ferdinand ignored the petition from a commission formed by royal counsellors and delegates from the city of Valencia, set up after the celebration of the parliament in 1510 concerning the reduction of the weight of the

19. Gil (1976), pp. 276-277; Sesma (1986).

20. Asso (1983), p. 276. Despite this legislation, if the fineness of the Castilian *real* was 22.16 carats, that of the silver coins of Aragon was set at only 22 carats in 1484, and it thereafter remained unchanged throughout the sixteenth and seventeenth centuries.

21. Gil (1976), p. 246.

*dieciocheno* in order to prevent the exportation and clipping of these coins.<sup>22</sup> Probably as a result of the differences in silver appreciation in the market of each kingdom, the nominal value of these domestic coins as units of account did not exactly reflect (see *Table 1*) their intrinsic value: the *dieciocheno* thus preserved its traditional nominal value of 18 *dineros*, whilst the Catalan *croat* and the Aragonese *real* held a nominal value of 24 *dineros* at the end of the fifteenth century.<sup>23</sup> This fact caused several problems regarding the conversion ratio between domestic and Castilian silver coins from the sixteenth century.<sup>24</sup> Despite the differing degrees of alignment of local coins with the nominal and intrinsic value of Castilian *reales*, these latter were used throughout the Crown of Aragon, displacing a domestic silver money supply that was already shrinking as new issues became both rarer and smaller, especially after the mid-sixteenth century. Their increasing use boosted liquidity, stimulated trade and revitalised the economy as a whole throughout these territories.

Monetary circulation in the Crown of Aragon was affected by the declining retention of American silver by European economies as a result of growing appreciation and the hoarding of this precious metal in Asian markets. This process increased silver flows from one continent to another during the seventeenth and eighteenth centuries.<sup>25</sup> The subsequent contraction in the money supply raised the value of silver in the European market, but less in the Crowns of Castile and Aragon than in the markets of their trade partners. Thus, in 1611 the Catalan *arbitrists* estimated that silver was worth 16% more in neighbouring France than in Catalonia.<sup>26</sup> Despite this appreciation, the Spanish

22. Hamilton (1975) pp. 119-121; Mateu (1929), pp. 68-100.

23. On the official accounting system used in the Crown of Aragon, see notes 52, 53 and 54.

24. As example, see Hamilton (1975), p. 125.

25. Chaudhuri (1981), pp. 699-711.

26. Junquera (2002), p. 238. This process was prompted by the serious scarcity of silver that took place in France between 1588 and 1620. See Spooner (1972), pp. 316-322.

monarchy maintained a higher nominal value for silver than gold in Castile and a higher intrinsic value for its *reales* than in north-western Europe in the seventeenth century.<sup>27</sup> These decisions encouraged the export of Castilian silver abroad, especially as the depreciation of billon coins, the trade deficit and the financial weakness of the Castilian monarchy intensified<sup>28</sup>, with the result that the money supply contracted in the Crown of Aragon because of its dependence on Castilian coins. Encouraged by the French policy of crying up its silver currency,<sup>29</sup> the export of domestic and Castilian coins had already begun to increase in the last two decades of the sixteenth century. By the early seventeenth century, there was a clear demand in the Crown of Aragon for coins with their traditional face value but lower intrinsic value, in order to achieve a better alignment with the price of silver in Europe.<sup>30</sup>

These issues began to change the supply of silver money in the Crown of Aragon in two ways from the beginning of the seventeenth century. The first was simultaneously identified and deplored by the institutions of Catalonia, Valencia and Aragon.<sup>31</sup> This was the increasing presence of Castilian and domestic counterfeits, as well as clipped legal coins, all of which had a lower intrinsic than face value. The main source of foreign counterfeits was the south of France, where the legal coins issued in the Crowns of Castile and Aragon were not only used in trade but also re-struck as French currency at numerous mints, providing a sure profit because the new coins were issued with a higher face or lower intrinsic value.<sup>32</sup> The unremitting flow of silver to France intensified in the seventeenth century, not only because of its trade surplus with Catalonia, Aragon and Valencia<sup>33</sup> but because of the appreciation of silver in the

27. Motomura (1994), pp. 114-115.

28. See notes 5 and 6.

29. Boyer-Xambeau, Deleplace and Gillard (1994), pp. 119-123.

30. Mateos (2006), pp. 158-159.

31. Hamilton (1975), p. 129; Carrera (1944-47), II, pp. 260-272; Asso (1983), pp. 210-211.

32. Spooner (1972), pp. 172-189.

33. Redondo (1985-86); Casey (1983), pp. 99-102.

French market due to significant issues and debasements of billon by the French monarchy.<sup>34</sup> The same French merchants who exported silver from the Crown of Aragon would bring with them counterfeit Castilian and domestic coins on their next journey back to the Aragonese territories. The second problem was the appearance of legal domestic coins with a lower intrinsic value, as the institutions and the monarchy agreed debasements. Depreciation of this kind was attempted first in Catalonia and Valencia, and only somewhat later in Aragon. Success depended on two political factors. In the first place, it depended on the institutional flexibility of each realm to accept a metallic debasement of the silver coinage, a practice that was potentially unlawful and clashed with established custom. Secondly, in territories where the monarchy had not succeeded in establishing seigniorage in the Middle Ages, it required the institutions to provide political support and to compensate the monarchy financially for monetary reform. This was essential to persuade the Spanish Hapsburg monarchy, which was involved in an intense struggle for hegemony in Europe and in defence of its vast overseas empire, to provide silver, ever scarcer in Castile, for recoinage in the Crown of Aragon.

These two factors affected the issues of silver coins in Valencia in the sixteenth and seventeenth centuries, which were keys to the circulation of money throughout the Crown of Aragon. In contrast to the highly stable *croat*, the debasement of the Valencian *real* or *dieciocheno* by Ferdinand the Catholic in 1480 opened the legal door to a reduction in its weight, which was requested by a commission created after the parliament of 1510, on the grounds that the nominal value of the coin was lower than the market value of the silver.<sup>35</sup> In the reign of Charles V, another two commissions formed by royal counsellors and delegates from the city of Valencia, using the same reasoning, suggested that the weight established in 1480 for the *dieciocheno* be reduced by 25.25% in 1522 and by 29% in

34. Spooner (1972), pp. 185-188.

35. Hamilton (1975), pp. 122-124.

1547 without changing its nominal value of 18 *dineros* (see *Table 1*).<sup>36</sup> Both resolutions were accepted by the monarchy. This early metallic debasement was made possible by the absence of any legislation prohibiting debasement without the approval of the Valencian parliament, by the limited opposition put up by a *Diputación* that was less wealthy and powerful than those of Catalonia and Aragon,<sup>37</sup> by the desire of the city of Valencia to increase liquidity and stimulate trade, by the granting of seigniorage to the monarchy in 1547, and by the monarchy's interest in providing the active Valencian economy with a domestic coinage for use in its domestic market, thereby reducing its absorption of Castilian silver, which would then be exported to other countries. The complementary function of the Valencian silver coinage is evident from the modest size of the issues minted in the course of the sixteenth century.<sup>38</sup>

The importance of these monetary reforms as a legal precedent was shown at the beginning of the seventeenth century, when the appreciation of silver caused a flood of clipped, counterfeit and worn silver and billon coins in the market. This monetary disorder was all the more acute as the economy of Valencia had been seriously weakened after the Spanish monarchy decided in 1609 to expel the *Moriscos*, Moors forcibly converted to Christianity in 1526, who accounted for 26.77% of the population. Thus, Philip III reduced the 1547 weight of the *dieciocheno* by 11.82% in 1610 without arousing any monetary policy debate (see *Tables 1* and *2*).<sup>39</sup> This metallic debasement was intended to halt the flow of silver coins with a high intrinsic value to other European countries, encourage the return of counterfeit and clipped coins to the mint,<sup>40</sup> and help the capital's enfeebled finances by temporarily assigning

36. *Ibid.*

37. Casey (1983), pp. 239-240.

38. Hamilton (1975), pp. 121-126.

39. *Ibid.*, p. 132.

40. Depreciation of currency was a useful expedient to attract coins in circulation to the mint for restamping, widely applied in continental Europe in the late medieval period. See Munro (1973), pp. 11-41.

seigniorage to the municipal treasury. This measure also restored parity between silver and billon, which had been debased for the same reasons between 1607 and 1610, until it retained just 27.27% of its earlier fineness. As a final consequence, the aggressive debasement of silver coinage generated a higher profit, because of the practice of melting down and re-coining Castilian *reales*, which were undervalued in their legal parity with the *dieciochenos*, into which they were converted. This operation earned the Valencia mint average net profits amounting to 9% of the total coining costs incurred between 1614 and 1650.<sup>41</sup>

Nonetheless, the city of Valencia never enjoyed the privilege of issuing its own coins, which the monarch could grant either to institutions or to private parties.<sup>42</sup> In a crucial period of its struggle for European hegemony, the Spanish monarchy frequently allowed the city to mint silver coins between 1626 and 1650 (see *Figure 1*) in consideration of financial and military contributions, which were of enormous importance during the Catalan rebellion against royal power between 1640 and 1652.<sup>43</sup> Free of the need to negotiate with other institutions of the kingdom, the monarchy was able to obtain significant revenues, as the profits from the issues exceeded the official seigniorage. While refusing to allow issues of domestic silver in other territories of the Crown of Aragon, it concentrated on Valencia, which had a trade surplus that allowed its economy to absorb large quantities of *reales* from Castile. Many of these coins were then exported from the kingdom's ports to other European countries, either legally or as contraband, which the king's agents were powerless to prevent.<sup>44</sup> Thus, re-striking Castilian *reales* as Valencian silver coins with a lower intrinsic value ensured that the silver would be retained in the Crown of Aragon. As these were domestic Valencian issues, however, they did not affect the prestige of the Castilian *real* in

41. Hamilton (1975), p. 135.

42. *Ibid.*, p. 122.

43. Casey (1983), pp. 230-231.

44. Mateu (1958c), p. 38; Casey (1983), pp. 99-103.

international transactions and finance, and they had no impact on the negotiation of loans by the Spanish monarchy.

Given the monarchy's need for revenue, the issues of *dieciochenos* after 1626 were not related to the needs of the Valencian market or to issues of domestic billon, which remained moderate after the large issues of 1607-13. The volume between 1626 and 1650 was enormous, especially in 1626-28 and 1640-50, when the sharp depreciation of Castilian billon drove large quantities of silver out of Castile (see *Figure 1*).<sup>45</sup> These issues only stopped in the few years in which higher premiums on the purchase of Castilian *reales* eliminated the opportunity to gain a profit on re-coining. The rapid increase in the supply of silver coins in Valencia in the second quarter of the seventeenth century caused inflationary processes in the market, which were moderated by the absorption of Valencian coins in other territories of the Crown of Aragon. Nevertheless, issues of Valencian coins came to an end for thirty years, when the monarchy eased fiscal pressure on Valencia after the conquest of Catalonia in 1652. After the counterfeit Castilian *reales* from the Peruvian mint had been melted down on the orders of the monarchy between 1651 and 1654, no new coins were issued until 1682-1700 (see *Figure 1*). Meanwhile, the monarchy reduced the weight of the *dieciocheno* by 8.13% in 1682 and by 10.53% in 1693, compared to the weight fixed in 1610 by Philip III (see *Table 2*), without negotiating with the kingdom's institutions. This was done to compensate for the appreciation of silver on the market and to obtain a modest increase in seigniorage.<sup>46</sup> In order to raise its revenues, the monarchy ceased to entrust the minting of silver coins to the city of Valencia after 1688, leasing the right to private individuals through the agency of the Viceroy. Excessive issues of debased silver coins stoked price inflation in Valencia in the last decade of the seventeenth century.<sup>47</sup>

45. Mateu (1958b), pp. 54-57; Hamilton (1975), p. 135.

46. Mateu (1958c), pp. 44-53.

47. Hamilton (1975), p. 165.

The circulation of silver in the Crown of Aragon was affected both by the presence of counterfeit, clipped and worn coins and by the large issues of Valencian silver. In the first place, all these coins led to *de facto* 'dual' circulation of silver, as in other European countries, but in this case coins with a higher intrinsic value became ever scarcer. As predicted by Gresham's law, the false and low-value Valencian coins displaced Catalan, Aragonese and Castilian coins, which had a higher silver content, and these gradually disappeared from the domestic market, as they were hoarded or exported to other European countries. Secondly, they satisfied the market's demand for coins that were both lighter and less fine, in order to facilitate transactions. Though prohibited by the authorities in each of the kingdoms of the Crown of Aragon, the population used these coins increasingly, given the growing scarcity of silver on the market. The large issues of Valencian coins made in 1626-54 quickly spread to the south of Catalonia and Aragon, where the process was driven by significant Valencian imports of Aragonese meat and wheat.<sup>48</sup> Finally, all these coins changed the way cash payments were made. The abundance of legally or fraudulently debased silver coins undermined the population's confidence in their face value, causing frequent problems with conversion between coins in tax collection and commercial transactions. With a nominal value of 18 *dineros*, the *dieciocheno* was priced at 16 *dineros* in southern Aragon in the second half of the seventeenth century, but its intrinsic value, was in fact, only 11 or 12 *dineros*.<sup>49</sup> Because of this, by the middle of the seventeenth century it had become common practice in the Crown to weigh silver coins in order to establish their actual intrinsic value in cash transactions, as was also done probably with billon coins.<sup>50</sup>

48. Casey (1983), pp. 81-103.

49. Asso (1983), pp. 280-281; Archive of the Crown of Aragon, Council of Aragon, file 91.

50. In these cases, the intrinsic value of silver coins was set in *silver dineros per real* and not in billon *dineros*. See Sanahuja (2007), pp. 139-143. The practice of weighing

Though the counterfeit and legal billon coinage circulating in the whole of the Crown of Aragon suffered the same decline in intrinsic value as did silver, the premium obtained on payments in silver rather than billon was much smaller than in Castile.<sup>51</sup> The very moderate premium in the Crown of Aragon was due to the greater availability of silver coins with a lower intrinsic value than in Castile, where the Spanish monarchy sought to remove these coins from the domestic market in order to defend the prestige of the Castilian *real* until its metallic debasement in 1686. In addition, the supply of legal billon coins was smaller, as domestic issues were more restricted and were less common than in Castile, and the numerous debased Castilian petty coins did not circulate anywhere in the Crown of Aragon. Even so, changes in the weight and fineness of both silver and billon coins affected the relationship between the intrinsic value of real money and the nominal value of the Carolingian system of reckoning money (*libra*, *sueldo* and *dinero*) used in the Crown of Aragon.<sup>52</sup> Issued throughout the Crown of Aragon, the billon *dinero* played the necessary benchmark function to translate real money into imaginary money for accounting purposes in the late Middle Ages. A practice begun in the fifteenth century, but especially prompted by the monetary reforms introduced

coins in the Crown of Aragon mitigated the destructive potential of the decline in the intrinsic value of billon coins for the system of accounting money in the Europe of the late medieval and early modern periods. See Cipolla (1994), p. 42. As the system of account was, in essence, linked to silver, its debasement appeared as a separate problem from the supply and intrinsic value of billon coins in Catalonia and Aragon.

51. Hamilton (1975) p. 144; Mateos (2006), p. 163. This premium was normally non-existent or less than 0.5% in Valencia in the first half of the seventeenth century. In Aragon the premium fluctuated between 1% and 2% between 1616 and 1625, rising to 3% in the second half of the seventeenth century.
52. The Carolingian system of account was based on three units, the *libra*, the *sueldo* and the *dinero*. One *libra* was equal to twenty *sueldos*, and one *sueldo* to twelve *dineros*. Though foreign to Castile, this system of account was the most widely used in Western Europe in the Middle and Early Modern Age. It was used throughout the Crown of Aragon, in the states of northern and central Italy, in France and in the Low Countries.

by Ferdinand the Catholic, this function was increasingly performed in the early modern period by domestic silver coins like the *real*, the *croat* and the *dieciocheno*.<sup>53</sup> Whereas the nominal value of these silver coins as units of account could be modified in neighbouring realms of the Crown as conversion ratio between domestic and foreign coins for commercial transactions,<sup>54</sup> it remained unchanged in its own native territory. As a result, the intrinsic value of the domestic silver coin set the rates in this region for the conversion of most local transactions in monetary terms. The essential benchmark function of these coins, linking real to imaginary money, was further strengthened as silver appreciated in the European market in the sixteenth and seventeenth centuries. Because of this, the metallic debasement of silver coins became the focus of monetary debate and reform in both Catalonia and Aragon in the seventeenth century.

### 3. Catalonia

A LEGACY OF THE LATE MEDIEVAL PERIOD, monetary policy in Catalonia in the sixteenth century was marked by the stability of domestic silver coinage (see *Table 1*). While the supply of billon was difficult to regulate, because numerous Catalan towns were free to issue petty coins and set their intrinsic value,<sup>55</sup> only the city of Barcelona could mint silver coins,

53. Day (1999), pp. 90-91. After the monetary reforms of Ferdinand the Catholic, the *real* and the *croat* were equal to two *sueldos* or twenty-four *dineros* in the system of account in Aragon and Catalonia during the sixteenth and seventeenth centuries, but the *dieciocheno* was worth just one and a half *sueldos* or eighteen *dineros* in Valencia.
54. This conversion ratio affected especially to Castilian and foreign domestic silver coins and varied in each territory of the Crown. Thus, in Valencia in 1594 the Castilian *real* was equal to twenty-three *dineros*, and the Aragonese *real* to twenty-two *dineros* whilst the Catalan *croat* was worth just twenty-one *dineros*. See Mateu (1958a), p. 24. Significantly, despite the variations of its intrinsic value, the nominal value of the *dieciocheno* remained fixed as the domestic coin of this kingdom in eighteen *dineros* during the sixteenth and seventeenth centuries.
55. This situation made it very difficult to align domestic issues of billon with issues of silver in Catalonia in the first half of the seventeenth century, until the monarchy gained greater control of the region's monetary policy after the end of the War of Secession (1640-52).

ensuring stability of their metal content. This exclusive privilege allowed the city to regulate the supply of domestic silver coins in Catalonia independently of the monarchy. The *croat* conserved an intrinsic value that was similar to that of the Castilian *real*, facilitating the financial and import transactions of the Barcelona bourgeoisie. These activities benefited from differences between the intrinsic and nominal values of Castilian silver coins compared to coins issued in France, Italy and other Mediterranean territories.<sup>56</sup> Stability also suited the rentier elite, largely the nobility and the clergy, whose income from tithes and seigniorial rents was fixed in silver.<sup>57</sup> As we shall see, this combination of interests between powerful social groups moderated the initial objectives of debasement, which were more concerned with the profitability of issues than with stimulating the regional economy. As any change in the intrinsic value of the silver coinage required royal approval, the opposition of the Catalan institutions and elite to the fiscal demands of the Spanish monarchy hindered the consolidation of monetary reforms.

If the Catalan economy was largely unaffected by the expulsion of the *Moriscos* in 1610, its monetary market suffered from over-issue and depreciation of billon coins by the municipalities and from a shortage of silver, beginning in the early seventeenth century.<sup>58</sup> Despite the large issues of *croats* by the city of Barcelona between 1601 and 1614 (see *Figure 2*), the supply of silver declined in Catalonia as a result of increasing exports of both Catalan and Castilian coins to France. Worn silver coins, that retained only around two thirds of their original intrinsic value, were already in use in the domestic market, although they were not accepted in international transactions. Consequently, the market premium on whole Castilian *reales* over other coins rose, and it became more expensive to acquire these coins for restamping as *croats*. If the city of Barcelona considered reducing the fineness of the *croat* to halt exports in 1607-08,<sup>59</sup>

56. See note 4.

57. Junquera (2002), p. 257.

58. Vilar (1978), I, pp. 392-393; Junquera (2002), p. 235.

59. Carrera (1944-47), II, pp. 262-263.

an invasion of counterfeit and clipped silver coins in 1610 spurred the institutions to debate metallic debasement of the domestic silver coin between 1610 and 1617.

As would also happen in Aragon, the reforms ignored the monetary theories devised by the Castilian arbitrists in the sixteenth and seventeenth centuries.<sup>60</sup> As well as on the previous reforms carried out in Valencia, they were based on the policy of 'dual' circulation of silver adopted in other European territories with political and economic links to the Crowns of Castile and Aragon, like Holland and Germany, but above all France and the Italian republics and kingdoms of Genoa, Florence, Rome, Naples and Sicily. The proposals ignored both the domestic billon supply and the possibility of changing the parity between Catalan gold and silver coins, focusing on quite different goals. Some saw metallic debasement as a means to reactivate the economy and argued that an increased supply of debased coins would encourage investment and consumption by lowering interest rates on loans. Above all, it was claimed, it would boost exports of agricultural and manufactured products by making their prices more competitive abroad, and this would improve the balance of trade. The other proposals, which were better received by the institutions, sought to halt the export of Catalan coins through defensive debasement, making them available for use on the domestic market, and to earn profits from restamping Castilian *reales*. Especially after 1614, both the advocates and detractors of metallic debasement reopened a debate that had already emerged in Catalonia in the mid-fifteenth century.<sup>61</sup> The stability of the *croat* was defended by the major financiers, the merchants involved in the import of grain and other products, and by the social groups in receipt of

60. Junquera (2002), pp. 265-284. On the development of Castilian monetary arbitristism in the sixteenth and seventeenth centuries, see notes 11 and 12.

61. As part of the struggle for control of the public institutions in Catalonia, the depreciation of the silver coinage led to a clash between the *biga*, the faction of rentiers and rich merchants, and the *busca*, the party of the urban producers, in Barcelona in 1451-58. See Vilar (1978), I, pp. 281-286. The economic interests defended by both parties were the same as those concerned in the debate between 1610 and 1617.

cash rents. Debasement, meanwhile, was promoted by the groups of urban producers and merchants involved in the export trade. As had happened in 1608, only the magistrates of the *Audiencia Real* considered the metallic debasement of the silver coinage to be illegal, supporting the position of the rentier faction. The initial weak opposition of the *Diputación* was overcome by the city of Barcelona, which succeeded in aligning the main secular and ecclesiastical institutions of Catalonia behind debasement.<sup>62</sup>

The outcome of this monetary debate was that the city petitioned the monarchy for the freedom to issue *croats* which would be 11.11% lighter than the traditional weight, with a fineness similar to that of the Castilian *real*. In 1617, after much discussion, the monarchy granted permission merely for the issue of only 100,000 *libras*, that were 5.55% lighter than the normal weight but minted to the Castilian standard of fineness.<sup>63</sup> The monarchy did not allow a larger issue or metallic debasement of the *croat* for a variety of reasons. In the first place, the Catalan institutions did not offer to pay any explicit seigniorage in exchange for royal consent to mint money with a lower intrinsic value, a precedent that would have allowed the monarchy to obtain significant revenues by raising seigniorage in the future. Secondly, the monarchy did not wish to facilitate access to the large quantities of ever-scarcer Castilian silver necessary to mint *croats*, as the operation would not provide it with any revenue. Thirdly, the monarchy feared that a sharp debasement of the Catalan coinage would accelerate the flight of Castilian *reales* to France, as a consequence of their higher intrinsic value.<sup>64</sup> As partial compensation, the monarchy raised the nominal value of gold against silver in 1614 to encourage flows of gold to Catalonia from other territories

62. Carrera (1944-47), II, p. 268; Vilar (1978), I, pp. 400-404. Consensus between the Catalan *Diputación* (*Generalitat*) and the city of Barcelona in the seventeenth century was made easier by the inclusion of the petty nobility in the city council and the ennoblement of certain parts of the bourgeoisie, bringing the interests of these two social groups closer together. See Amelang (1986).

63. Carrera (1944-47), II, pp. 271-272.

64. Junquera (2002), p. 237.

where the ratio was less favourable for use in international transactions instead of silver.<sup>65</sup>

Having obtained permission only for a partial, limited debasement that would eat into its own potential profits, the city of Barcelona decided not to go ahead, and instead minted *croats* at the traditional weight.<sup>66</sup> Favoured by a temporary fall in the premium paid on the Castilian silver used in these issues, the decision sought to maintain Barcelona's prestige in international financial transactions. When, however, it became clear that the new coins minted would fast disappear from the market, in 1626 the city found itself obliged to petition the Catalan parliament for the freedom to issue *croats* that would be 11.11% lighter, as it had done in 1614-17. This reform was not approved.<sup>67</sup> The parliament closed in 1626 without passing any measures, after its members refused to have any part in raising the tax burden along the lines proposed by Philip IV's chief minister, the Count-Duke of Olivares, a measure that was intended to make the Crown of Aragon contribute to the funding of the monarchy's costly military campaigns. As an expression of this discord, the Viceroy of Catalonia rejected the metallic debasement of the *croat* in 1630. Whereas the city of Barcelona did, in fact, sometimes mint slightly lighter coins than the traditional *croat* (between 2.8% and 5.2%) between 1620 and 1636, the *croat* was not officially debased and the monarchy's uncooperativeness limited the importance of these issues. The weight of the *croat* was reduced by 15.48% between 1640 and 1652, after Catalonia had foresworn its fealty to the Spanish monarchy in favour of France (see *Table 2*).<sup>68</sup> Even so, this metallic debasement was hampered by the shortage of silver, compared to the over-issue of billon coins with very low fineness by numerous Catalan municipalities. The silver and billon coins minted during the War of Secession, which bore the effigy of the French kings

65. Vilar (1978), I, p. 397.

66. *Ibid.*, p. 403.

67. Carrera (1944-47), II, pp. 359-360.

68. Crusafont (1996), pp. 165-167.

Louis XIII and Louis XIV, were eventually collected and melted down after the conquest of Catalonia by Philip IV's forces in 1652. In their place, in 1653-54, new *croats* were minted that were 10% lighter, as well as billon coins with their nominal value reduced by 50%.<sup>69</sup>

As billon retained an intrinsic value higher than the nominal value fixed in 1654, these coins were often exported to other territories, such as the kingdom of Valencia. Despite a certain shortage of "small change" existing in Catalonia, there were no new issues of billon coins during the second half of the seventeenth century.<sup>70</sup> However, silver monetary reform won more general backing from the institutions and the monarchy in the last quarter of the century. Thus, Charles II agreed in 1673 to debase the new silver coin, called the *real*, on the adoption of Castilian fineness. When that year the city of Barcelona proposed a reduction in the weight of the coin of between 9.6% and 19.2% of the intrinsic value of the Castilian *real*, the Viceroy decided on an even more audacious debasement of 26.47%.<sup>71</sup> As shown in *Table 2* and *Figure 2*, this depreciation of the coin was maintained in the periodic issues carried out in the last quarter of the century (1674-77, 1682 and 1693). In 1698 the weight of the Catalan *real* was even lowered by 40% against the intrinsic value of the Castilian *real* prior to the 1686 debasement, when the coins issued by the French king, Louis XIV, after the occupation of Barcelona in 1697, were restamped.<sup>72</sup> This was done to increase the profits from the issue for the Barcelona municipal treasury. Meanwhile, relinquishing their previous reticence, the Viceroys insistently pressed the city Castilian silver to mint new coins between 1674 and 1705.

The climate of consensus surrounding the metallic debasement of Catalan coins arose from the convergence of various interests. Although the monarchy did not obtain any seigniorage, it granted the city of Barcelona the freedom to issue coins in exchange for its implicit coopera-

69. Carrera (1944-47), II, pp. 361-363; Gil (1976), pp. 432-433.

70. Mateu (1929), p. 147; Carrera (1944-47), II, pp. 363-364.

71. Carrera (1944-47), II, pp. 364-365.

72. *Ibid.*, pp. 366-367.

tion in the defence of Catalonia during the wars with France (1673-78, 1683-84, 1689-97). Many of the Castilian *reales* owned by the monarchy in Catalonia had already lost a substantial part of their weight, which made it necessary to restamp them as domestic silver coinage to prevent a collapse of confidence in their face value, which would have disrupted trade.<sup>73</sup> As the debasement was more modest than in Valencia, the premium obtained on transactions paid for in good Castilian silver increased only moderately, limiting the flight of coins to France. However, as a result of their lower intrinsic value, Valencian silver coins continued to predominate in the south of Catalonia.<sup>74</sup> The minting process was controlled by the merchant bourgeoisie, and the city of Barcelona tried to adapt the amount of its issues to meet actual market demand, refraining from excessive issues designed to obtain quick profits and expel Valencian coins from Catalonia. For this reason, several times the city refused to acquire Castilian *reales* offered by the Viceroy for restamping as Catalan silver coins.<sup>75</sup>

#### 4. Aragon

WHILE ITS SILVER COINAGE SUFFERED the same undervaluation as in Catalonia, monetary debate on the matter of debasement arose in Aragon only in the last quarter of the seventeenth century. Neither the severe economic recession, caused in 1610 by the expulsion of the *Moriscos*, who accounted for 18.85% of the population, nor periodic invasions of low-value counterfeit and foreign coins, that began in the early seventeenth century, prompted reform of the kind undertaken in Valencia. Thus, while the three very modest issues of domestic billon coins (1611-18, 1655-57 and 1677-80) did reduce the weight of the *dinero*, though only by 20%, the stability of the Aragonese *real's* intrinsic value was not even questioned until the 1660s.<sup>76</sup> There were various

73. *Ibid.*, pp. 365, 368.

74. Casey (1983), p. 99.

75. Vilar, (1978), I, p. 427.

76. Mateos (2006), pp. 164-168.

reasons for this delay. In comparison with Barcelona, the influence of the city of Zaragoza on the kingdom's monetary policy was relatively weak, as it did not acquire the exclusive right to mint coins until 1677. Until then, the king granted the privilege to a private party with whom the municipality negotiated to control the issues of silver carried out at the traditional intrinsic value in 1611-12 and 1651-52 (see *Table 2*).<sup>77</sup> Meanwhile, the clergy and the nobility were strongly represented in both the Aragonese parliament and in the *Diputación*, and their members included numerous rentiers, who refused to reduce the intrinsic value of silver coins, because they feared losing income from agricultural tithes, seigniorial rents and interest on loans,<sup>78</sup> since all these contracts were priced in silver coins as the essential benchmark for conversion into the money of account.<sup>79</sup> Insofar as it might affect the intrinsic value of the coinage, this elite was also hostile to granting any seigniorage to the sovereign, a right the monarchy had relinquished in the medieval period in exchange for the tax known as the *impuesto del monedaje* or *impuesto del maravedí*.<sup>80</sup> In order to guarantee a stable intrinsic value for the coinage, by 1482 they had even passed a law that required the approval of the parliament for any new issues of silver.<sup>81</sup> Whereas this condition came to be ignored in the seventeenth century, because the *Cortes* were only rarely convened, the regional elite continued to regard

77. *Ibid.*, pp. 169-170.

78. This monetary policy was clearly carried out by this rentier elite in Aragon since the late medieval period. See Zulaica (2003), p. 612.

79. This can clearly be seen in the arrangements under which the nobility and the Church leased tax-farming rights (ecclesiastical tithes and seigniorial tributes) to the leading merchants of Zaragoza in the sixteenth and seventeenth centuries. These contracts generally set the consideration payable to the lords for the taxes assigned in libras and sueldos, two of the units used in the official accounting system. Occasionally, however, the sum would be fixed directly in silver reales. See Gómez Zorraquino (1987a), pp. 66-72 and (1987b), pp. 79-81.

80. Orcastegui (1983).

81. Mateu (1983), p. 115.

any debasement of the silver coinage without the approval of the parliament, or the *Diputación* acting on its behalf, as unlawful.<sup>82</sup>

Given these obstacles, only two issues of Aragonese silver coins were minted in the whole of the seventeenth century (see *Figure 3*), in 1611-12 and 1651-52, and even these were not motivated by the need to remedy the scant money supply but by the desire of the monarchy to melt down the numerous counterfeit Castilian silver coins that had invaded the kingdom, the so-called *reales bosquejos* struck in France and *reales*, with a lower intrinsic value than usual issued by the Peruvian mint, whence they had entered Castile and finally made inroads into the Crown of Aragon. These issues were, then, purges similar to those carried out in Castile, Catalonia and Valencia, and they were motivated by the monarchy's interest to safeguard the international prestige of the Castilian *real*. As a consequence, the quantities of Aragonese *reales* issued were exactly equal to the amount of false Castilian and Aragonese coins found in the kingdom, which it was necessary to melt down and restamp.<sup>83</sup> These new Aragonese coins conserved a similar intrinsic value to the Castilian *real*, and they were therefore exported to France and other European countries just as swiftly. As the kingdom's institutions were to discover, most of the major issue of 470,000 *libras* in Aragonese *reales*, carried out in 1651-52, had disappeared a quarter of a century later.<sup>84</sup> This perpetuated the predominance of Valencian silver coins in the south of Aragon, in addition to the counterfeit and clipped coins used throughout the territory.

In these circumstances, proposals to reduce the intrinsic value of the domestic silver and billon coinage were first made by royal institutions like the Viceroy or governor of the kingdom, and the *Real Audiencia* after 1660, with the explicit aim of establishing seigniorage to generate new revenues for the monarchy. The governor of the kingdom thus ordered

82. Archive of the Crown of Aragon, Council of Aragon, file 91.

83. Mateos (2006), p. 165.

84. Archive of the Crown of Aragon, Council of Aragon, files 91 and 195.

tests to be carried out in 1663 and 1664 to gauge the population's acceptance of new silver *reales* with a lower intrinsic value.<sup>85</sup> These institutions were in favour of debasing the billon coinage, rather than silver, without the approval of the Aragonese parliament, but they were hesitant to proceed with any significant debasement of intrinsic value.<sup>86</sup> Initiatives of this kind increased in intensity, when Juan José de Austria became Viceroy of Aragon in 1669-76, especially after he had created the *Junta de Comercio* in 1674 as the commission responsible for examining the kingdom's economic problems (the French control of trade, the decline of craft trades, the scarcity of money and depopulation).<sup>87</sup> The creation of this body opened an economic debate that culminated in the proposals brought before the parliaments of 1677-78 and 1684-86 by the Aragonese arbitrists, and before the Council of Aragon as the monarchy's advisory body for issues concerning the Spanish territories of the Crown of Aragon.<sup>88</sup>

This monetary debate coincided with the discussion that arose in Castile under Charles II (1665-1700), concerning the need to lower the nominal value of the billon currency and debase silver coins.<sup>89</sup> The Aragonese debate largely ignored the billon currency, which the authorities of the Crown of Aragon had depreciated much less than in Castile.<sup>90</sup> According to the bullionist thinking that prevailed throughout Europe in the medieval and early modern periods,<sup>91</sup> which linked a country's economic prosperity to the possession of precious metals, the debate focused on silver coinage. The scant interest in gold not only shows that it was very scarce in an inland region like Aragon, but also highlights the essential role of silver coins in driving economic activity and for the conversion of value into the terms of

85. Mateos (1997), p. 263.

86. Archive of the Crown of Aragon, Council of Aragon, file 91.

87. Nacional Library, Manuscript 9825, V, folio 18v-20r.

88. Sánchez Molledo (1997), pp. 1052-1105, 1345-1346, 1419-1421.

89. See notes 11 and 12.

90. See note 6.

91. For the case of Spain, see Grice-Hutchinson, (1982), pp. 143-145.

the money of account. With the exception of Manuel Lasheras, the Aragonese arbitrists did not follow the thinking of their peers in Catalonia and Castile, who supported the metallic debasement of silver in the seventeenth century. Rather, their arguments refer to the observation of economic processes in Aragon and foreign countries and, above all, to the monetary policies adopted in Catalonia and Valencia.

As had happened in Catalonia, the monetary reforms proposed formed part of a wider debate about Aragonese trade policy. Supporters of the protectionist line that triumphed at the parliament of 1677-78, which banned cloth imports and raised tariffs on foreign manufactures, the majority of the Aragonese arbitrists recommended defensive debasements of the silver coinage to stop it from being exported to France and so to correct the trade deficit. In 1674 Antonio Cubero Sebastián proposed a 25% reduction in the weight of the *real* to the *Junta de Comercio*, and Pedro Borrúel proposed a reduction of 18.88% in the fineness of the coin to the Aragonese parliament in 1678.<sup>92</sup> Only Manuel Lasheras made an original contribution to this debate, when in 1684 he recommended raising the nominal value of the Aragonese *real* by 17.65%, adapting enhancement to the free-trade policy that had triumphed at the parliament of 1684-86, which derogated the previous protectionist legislation. Apart from providing revenues for the king, the seigniorage obtained from the issue would compensate the *Diputación* for lowering the tariffs charged at the kingdom's customs posts, as well as financing further issues with a similar intrinsic value to the Castilian, Catalan and Valencian *reales*. This metallic debasement would increase liquidity, prevent the hoarding and export of coins, and facilitate trade with the other regions of Spain. This measure would also encourage manufacturing by improving the price competitiveness of local goods over foreign imports, mainly from France.<sup>93</sup>

The supporters of debasement found their main institutional support in the city council of Zaragoza, which in 1677 had been granted the

92. See note 88.

93. Sánchez Molledo (1997), pp. 1082-1105.

*maestría de la ceca*, the privilege of minting coins in Aragon, although it still required a royal licence for each issue. The city's elite had sought minting licences from the Spanish monarchy in vain from 1658 onwards, except for the issue of billon carried out in 1677-80, in order to pay the municipal debt out of the expected profits.<sup>94</sup> Made up of bourgeois members of the liberal professions,<sup>95</sup> the city council was quick to pick up the main ideas expounded in the monetary debate. Thus, the protectionist arguments used in 1683 to justify the issue of new coins were replaced by the free-trade proposals espoused by Manuel Lasheras in 1688.<sup>96</sup> Both the city of Zaragoza in 1683 and Manuel Lasheras in 1684 even argued that the monarchy was already issuing *reales* in Castile that were 16.65% lighter than the usual weight, in order to encourage transactions in the domestic market. This was some years before the Spanish monarchy in 1686 officially proclaimed the creation of the provincial *real* for domestic transactions, with a 25% reduction of the weight.<sup>97</sup>

However, the debasement was flatly rejected by the *Diputación*, which was stacked with nobles and clergy, members of the rentier groups.<sup>98</sup> The *Diputación* financed the publication of numismatic studies and took legal action in the Council of Aragon in the 1680s to defend its right to participate in any new Aragonese issues and to preserve the intrinsic values of coins established by law and custom, unless the parliament authorised a change.<sup>99</sup> Crucially, the monarchy abandoned its initial support for reform, given the difficulty of profiting from any debasement of silver after it had granted the city of Zaragoza authority over the mint in 1677, and the *Real Audiencia* recognised the lawfulness of Aragonese monetary stability in 1686-89.<sup>100</sup> Lacking sufficient political and

94. Archive of the Crown of Aragon, Council of Aragon, files 91 and 198.

95. Jarque (1994).

96. Sánchez Molledo (1997), pp. 1076-1081; Archive of the Crown of Aragon, Council of Aragon, file 91 and National Historical Archive, file 51361.

97. Sánchez Molledo (1997), pp. 1076-1096.

98. Jarque and Salas (2001-2002).

99. Mateos (2006), p. 183.

100. *Ibid.*

economic incentives, in contrast with the situation in Catalonia and Valencia, the monarchy did not authorise any new issues of silver (see *Figure 3*). As the monetary debate flickered out about 1690, the lack of institutional consensus prevented any chance of creating an independent monetary policy in Aragon.

## 5. Conclusions

AS IN THE REST OF EUROPE, the appreciation of silver in the seventeenth-century market changed the pattern of monetary circulation in the Crown of Aragon, which had been based on the predominance of the Castilian *real* in the sixteenth century. Both domestic and Castilian silver coins had a lower nominal than intrinsic value in a market where there was strong demand for lighter coins with a lower fineness. In a similar response to that found in other European countries, a 'dual' circulation of silver emerged in the Crown of Aragon, a phenomenon unknown in Castile, where the Hapsburg monarchy was at pains to protect the intrinsic value of the Castilian *real* until the debasement of 1686. At the same time as domestic and Castilian coins with a high intrinsic value were reserved for international trade, an ever-increasing number of clipped, counterfeit and worn coins with a lower metal content were used for the domestic market. The scarcity of silver coins with a high intrinsic value was made more acute in the Crown of Aragon because of the appreciation of silver in the markets of neighbouring countries like France and their trade surpluses with both Castile and Aragon. In these countries, imported Aragonese and Castilian silver was restamped as counterfeits or legal coins, with a lighter weight and lower fineness, some of which found their way back into the Crown of Aragon, because the French merchants controlled the main trade flows. The institutions of the Crown of Aragon thus considered the possibility of debasing domestic coinage to generate revenues and stimulate the regional economy by improving the money supply. While these legally or fraud-

ulently debased coins did facilitate transactions, the population lost confidence in their nominal value to the point where it became common practice to weigh coins in order to determine their metal content. Meanwhile, whilst the nominal value of these silver coins *qua* units of account could be modified in neighbouring realms of the Crown as conversion ratio between coins for external transactions, it remained unchanged in its own native territory. As silver had finally replaced billon as the benchmark for conversion into the money of account from the late-fifteenth century onwards, the intrinsic value of each domestic coin set the rates for the conversion of most local and regional transactions in monetary terms. As a consequence, the debasement of silver became the fulcrum of debate and monetary reform in the Crown of Aragon in the seventeenth century.

The earliest efforts to debase silver coinage were made in the coastal regions of Valencia and Catalonia, whose cities were home to a powerful merchant bourgeoisie, and not in Aragon, where rentier groups held sway. The greater control exercised by the Spanish monarchy over minting and better relations with the municipal elite facilitated metallic debasement in Valencia. This policy was first implemented in 1610, with the aim of eliminating coins with a lower intrinsic than nominal value, and it became important as a result of the large issues of coins struck between 1626 and 1654. The monarchy's support for these measures sought, on the one hand, to generate revenues and, on the other, to restrain exports of the Castilian *real* without affecting its international reputation by creating a domestic coin with a low intrinsic value. Repeated only in 1682-1700, these issues were essentially intended to provide revenues for the monarchy, but they nevertheless mitigated the shortage of silver throughout the Crown of Aragon by providing coins that were better aligned with the needs of the market.

It proved more difficult to consolidate the policy of metallic debasement in Catalonia and Aragon, both of which had a more autonomous monetary policy. In addition to the opposition of the financial and

rentier elites, the reform proposed by the city of Barcelona was blocked in Catalonia by the monarchy, which feared an increase in exports of silver to France and was unhappy with the local population's rejection of increasing royal taxes and authority. After the secession of Catalonia from the Spanish monarchy (1640-52), the city and the monarchy reached an agreement with regard to the debasement of silver in the last quarter of the seventeenth century. This agreement increased the control of the silver money offer by this city oligarchy in the territory. Issues of silver in Aragon were confined by the monarchy to purging the market of counterfeit Castilian coins, and monetary stability was defended by rentier groups with strong political representation. After the monarchy proposed debasement for fiscal reasons in 1660, the institutions finally took up the debate between 1674 and 1690. Despite municipal support, the debate gradually petered out in the absence of institutional consensus or any enthusiasm on the part of the monarchy, given the difficulty of generating any income from seigniorage. No monetary reform was thus implemented, hindering all possibility of creating silver domestic coins better adapted to the market value in this territory.

To conclude, as Glasman and Redish had stated, the debasement was a clear institutional response to the undervaluation of the silver coinage in the Crown of Aragon. However, unlike Sargent and Velde's opinions, this policy was not influenced either by the scarcity or abundance of billon, which had lost its function as a benchmark for the money of account, a role it had partially played since the late Middle Ages. The abundance of domestic billon coins with a low intrinsic value at the beginning of the seventeenth century favoured the metallic debasement of silver in Valencia, but not in Catalonia. Meanwhile, this reform never happened in the Crown of Aragon, precisely where there had been no excessive billon issues or debasements, and where the shortage of "small change" was most acute. Unlike these monetary objectives, the debasement of silver was strongly influenced in each of the territories of the Crown of Aragon by the interests of the Spanish monarchy. These rightly

aimed to raise revenues, above all, as well as to defend the international prestige of the Castilian *real* and to halt the increasing export of silver to other European countries, especially France. As the legal and institutional framework of the Crown of Aragon prevented depreciation of the billon currency along similar lines to that carried out in Castile, the monarchy accepted metallic debasement of the domestic silver coinage sooner than in Castile to achieve its objectives. In the absence of an overarching monetary policy for the whole of the Crown of Aragon, this debasement occurred sooner where it was easiest for the monarchy to reach its aims, given its greater control over the minting process. When the monarchy was forced to negotiate monetary reforms for fiscal reasons under more difficult conditions with the local institutions, metallic debasement was either put off or failed for lack of consensus. If this agreement was finally achieved, the regulation of the supply of domestic coins did allow regional elites to formulate a relatively independent monetary policy which was more able to curb the effects of silver circulation in the Crown of Aragon in the seventeenth century.

- \* This work is included in the research projects HAR2008-05425, entitled "Fiscality, property rights and institutional change in Spain during the seventeenth century" and HAR2008-1074, entitled "Economy and politics in the building of the Modern Spanish State, 1650-1808". Both projects have been financed by the Ministry of Science and Innovation.

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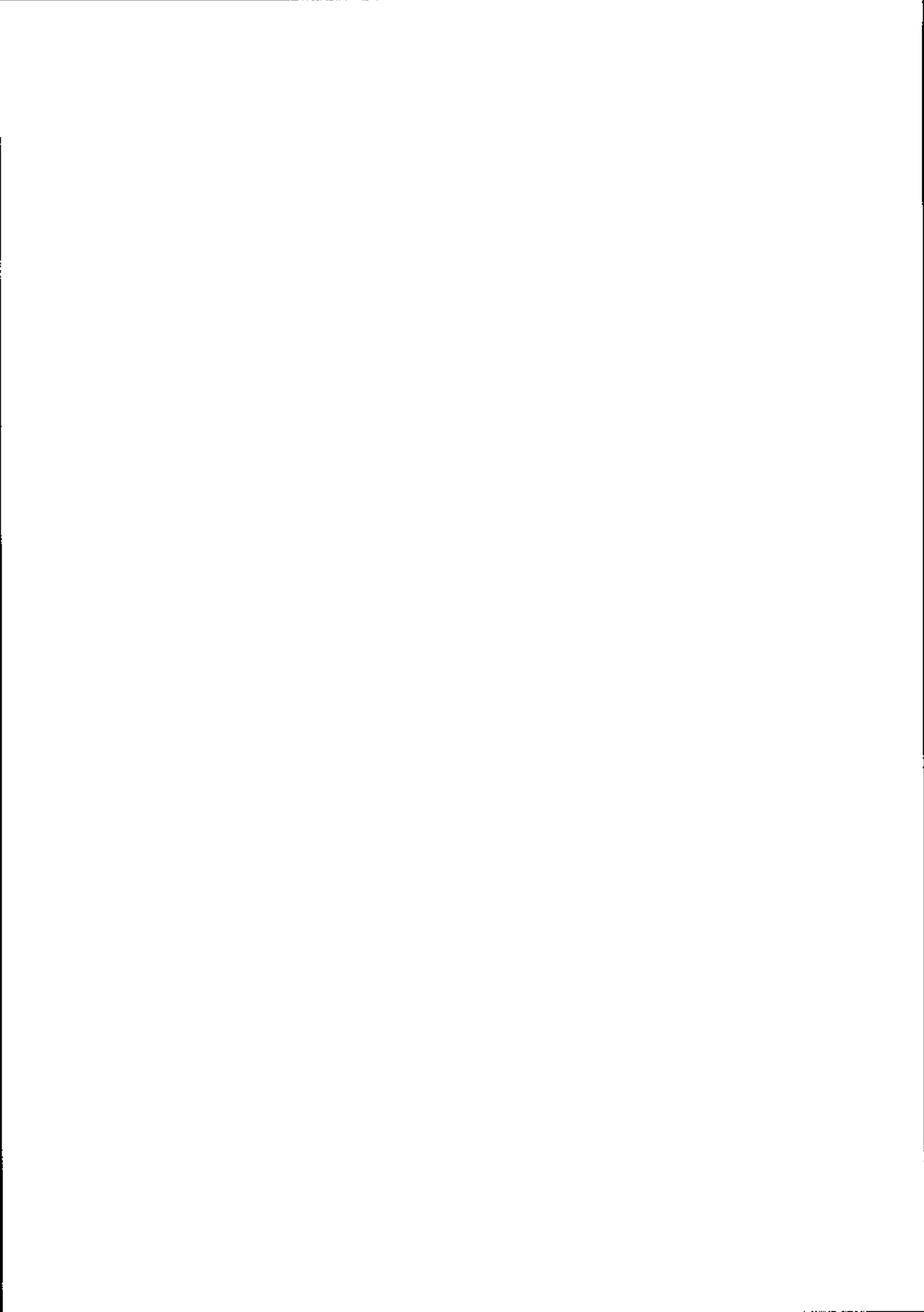
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## **APPENDIX**

The seventeenth-century  
depreciation of silver coinage  
in the Crown of Aragon



**Table 1. Issues of silver coins in the Crown of Aragon (1480-1598)**

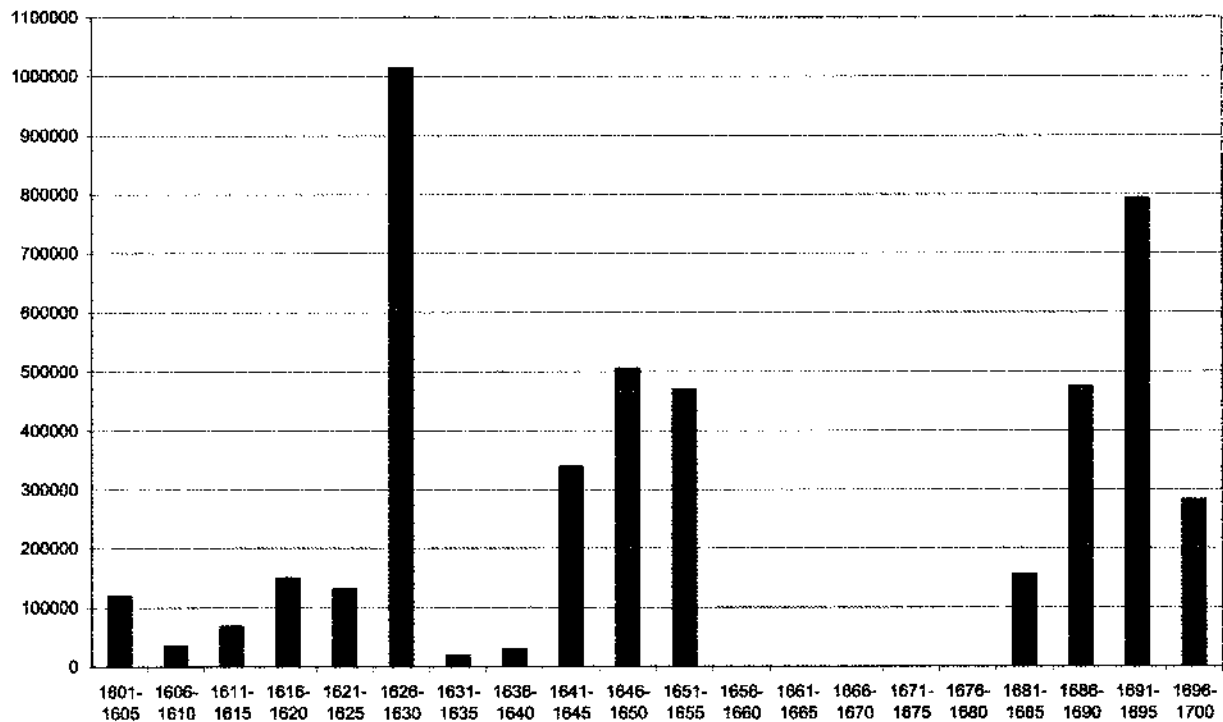
Region	Unit	Issue date	Fineness	Number of pieces/marc	Weight
Valencia	<i>dieciocheno</i>	1480	22 carats (11 <i>dineros</i> )	72	3.00 grams
Valencia	<i>dieciocheno</i>	1524-39	22 carats (11 <i>dineros</i> )	88	2.45 grams
Valencia	<i>dieciocheno</i>	1554-98	22 carats (11 <i>dineros</i> )	91	2.37 grams
Catalonia	<i>croat</i>	1493	23 carats (11.5 <i>dineros</i> )	72	3.12 grams
Catalonia	<i>croat</i>	1543-45, 1595-98	23 carats (11.5 <i>dineros</i> )	72	3.12 grams
Aragon	<i>medio real</i>	1484	22 carats (11 <i>dineros</i> )	128	1.80 grams
Aragon	<i>real</i>	1519-56	22 carats (11 <i>dineros</i> )	67	3.42 grams

Sources: Mateu (1929) pp. 87-102; Hamilton (1985), pp. 122-126, Gil (1976), pp. 276-277, 288-289, 419-466; Crusafont (1986), pp.164-170; Sesma (1986), pp. 1034-1036.

**Table 2. Issues of silver coins in the Crown of Aragon (1601-1700)**

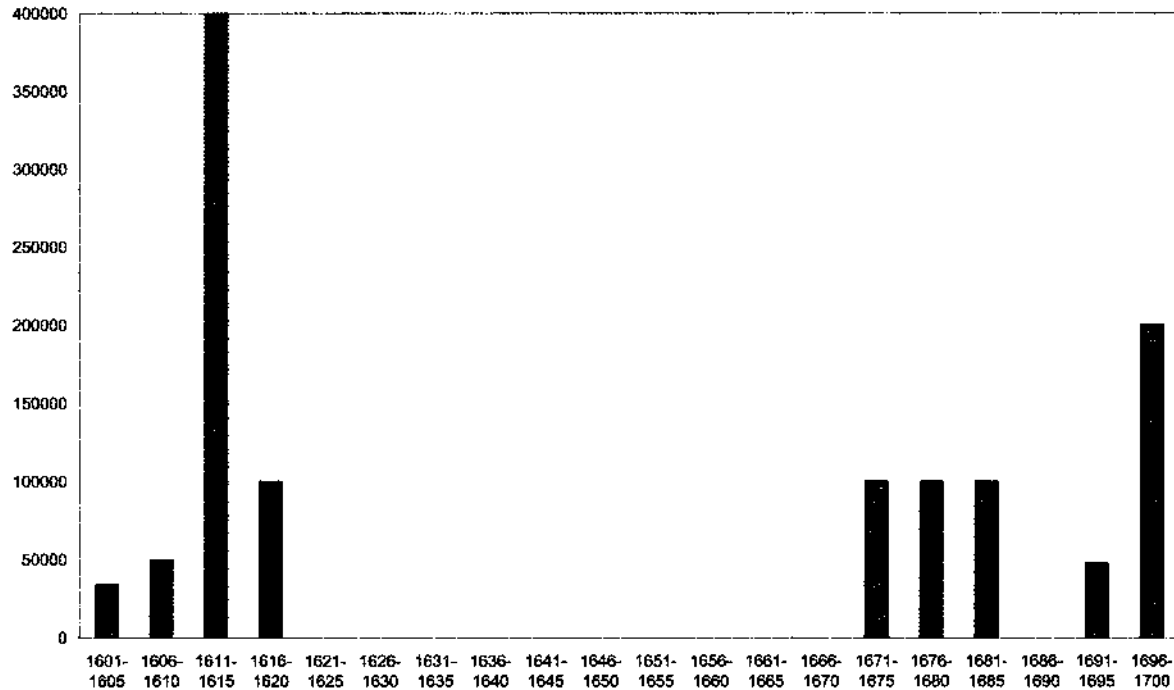
Region	Unit	Issue date	Fineness	Number of pieces/marc	Weight
Catalonia	<i>croat</i>	1601-14	23 carats (11.5 <i>dineros</i> )	72	3.12 grams
Catalonia	<i>croat</i>	1619-36	23 carats (11.5 <i>dineros</i> )	72-76	3.04 grams
Catalonia	<i>croat</i>	1640-52	23 carats (11.5 <i>dineros</i> )	85	2.64 grams
Catalonia	<i>croat</i>	1653-54	23 carats (11.5 <i>dineros</i> )	80	2.81 grams
Catalonia	<i>real</i>	1674-93	22.5 carats (11.16 <i>dineros</i> )	90	2.50 grams
Catalonia	<i>real</i>	1698	22 carats (11 <i>dineros</i> )	110	2.04 grams
Valencia	<i>dieciocheno</i>	1604-10	22 carats (11 <i>dineros</i> )	91	2.37 grams
Valencia	<i>dieciocheno</i>	1611-81	22 carats (11 <i>dineros</i> )	103	2.09 grams
Valencia	<i>dieciocheno</i>	1682-92	22 carats (11 <i>dineros</i> )	110-112	1.92 grams
Valencia	<i>dieciocheno</i>	1693-99	22 carats (11 <i>dineros</i> )	115	1.87 grams
Aragon	<i>real</i>	1611-12, 1651-52	22 carats (11 <i>dineros</i> )	67	3.42 grams

Sources: Mateu (1929), pp. 134-149; Gil (1976), pp. 419-466; Carrera (1944-47), II, pp. 259-368; Vilar (1978) I, pp. 349-427; Crusafont (1996), pp.164-170, 177; Mateos, (2006), p. 167.

Figure 1. Issues of Valencian silver coins in the Seventeenth Century (in *libras*)

Sources: Hamilton (1975), p. 140; Mateu (1958c) pp. 45-53.

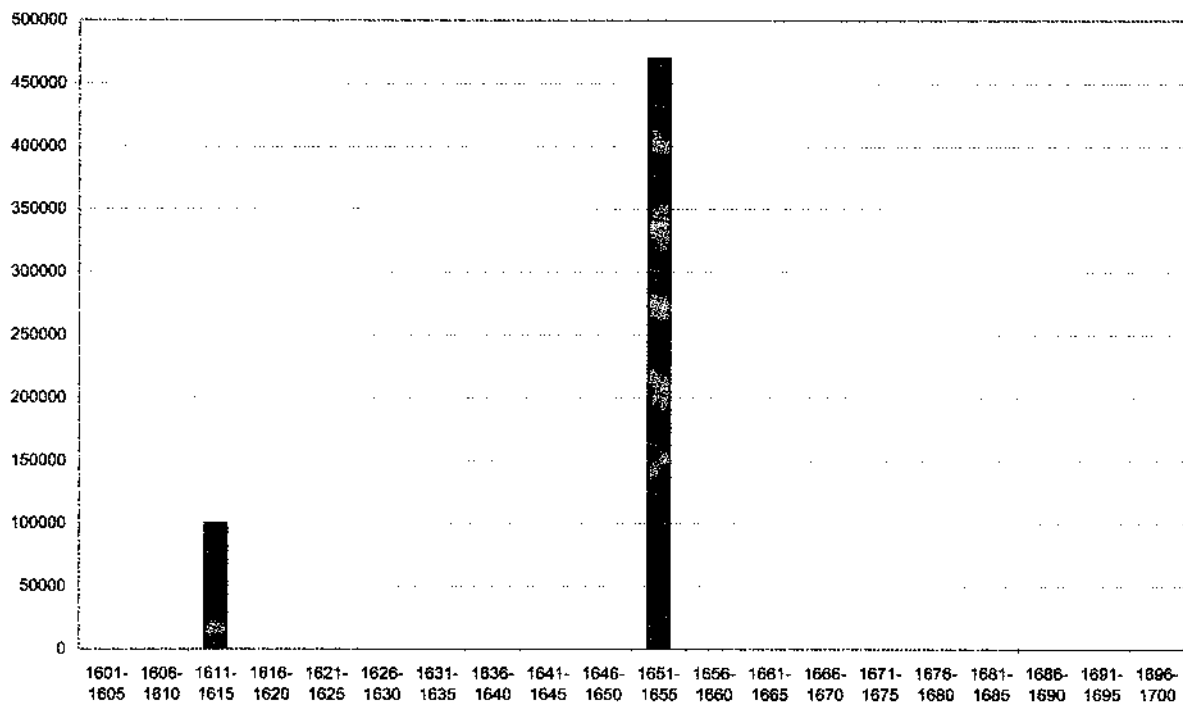
Figure 2. Issues of Catalan silver coins in the Seventeenth Century (in libras)



Sources : Carrera (1944-47), II, pp. 260-368; Vilar (1978), I, pp.392-427.

Note: Despite their moderate amount being accepted, there are no reliable estimations of the quantities of silver coins minted in Catalonia between 1620 and 1654.

**Figure 3. Issues of Aragonese silver coins in the Seventeenth Century (in libras)**



Sources : Mateos (2006) p. 167.

