

Incentives and interests

Monetary policy, public debt, and default in Holland, c. 1466-1489*

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Abstract

In the second half of the fifteenth century the largest towns in the county of Holland created substantial public debts. This article puts forward the hypothesis that towns speculated on sovereign monetary policy in the process. They exposed themselves and their creditors to fluctuations in the exchange rates between silver and gold coins, which initially caused the reduction of their real 'interest payments' due to ongoing debasement of silver coins, and thus allowed the towns some breathing space. However, when the sovereign decided to revalue silver coins, in 1489, the towns all of a sudden faced much higher expenses, and defaulted. The article explains the mechanism at play, and discusses evidence for speculation by the towns on sovereign monetary policy.

I

In 1504 a few government agents of Philips the Handsome (r. 1482-1506) reported on the finances of the town of Leiden, in the province of Holland. At the time, the town had already been in dire straits for many years, struggling with a towering public debt that the town did not manage to shrug off. Convinced that the town's finances should have improved by 1504, the government agents wrote a devastating report, in which they accused local magistrates of self-enrichment, and spoke of 'defunct government'.¹

Leiden was not the only town in Holland experiencing severe financial problems, causing both contemporaries and historians to wonder how the situation could have gotten out of hand. Why did so many towns create debts they eventually failed to service?² In an attempt to answer this centuries-old question, this article formulates the

¹ ...sobren ende crancken regemente... H.G. Hamaker, 'De stad Leiden in staat van faillissement', *Verslagen en mededeelingen van de vereeniging tot uitgaaf der bronnen van het Oud-vaderlandsch recht* 3 (1898) 181-207, pp. 184. Cf. corruption: M. Damen, 'Corrupt of hoofs gedrag? Geschenken en het politiek netwerk van een laatmiddeleeuwse Hollandse stad', *Tijdschrift voor Sociale en Economische Geschiedenis* 2 (2005) 68-94; W. Blockmans, 'Corruptie, patronage, makelaardij en venaliteit als symptomen van een ontlukende staatsvorming in de Bourgondisch-Habsburgse Nederlanden', *Tijdschrift voor Sociale Geschiedenis* 11 (1985) 231-247.

² There is a rather large literature on the financial problems of the towns of Holland: I. Prins, *Het faillissement der Hollandsche steden: Amsterdam, Dordrecht, Leiden en Haarlem in het jaar 1494, uit de wordingsgeschiedenis van den Nederlandschen Staat* (Amsterdam 1922); E. Dijkhof, 'Omme de meeste schade metter mynstere te verhuevene'. Lijf- en erfrenten in Gouda', *Skript* 7 (1985) 20-29; E. Sewalt, '1501: Haarlem onder curatele', *De klopkei: mededelingenblad van de heemkundekring "De Erstelinghe"* 25: 4 (2001)

hypothesis that town magistrates decided to shape their public debt in such a way that it contained a speculative element. They used a financial construction that initially reduced the interest payments the towns were due in an artificial way. The town magistrates speculated on the continuing depreciation of coins: as long as the ruler continued to decrease the silver content of silver coins, as he did in the 1470s and 1480s,³ the towns' interest payments decreased as well. The construction that will be explained in detail in section 2, allowed the towns to let their public debt rise to unprecedented levels.

Of course this was bound to go wrong. The towns of Holland created substantial public debts over the 1470s and 1480s, but they faced an enormous problem when Maximilian of Habsburg (regent 1482-1493; regent 1506-1515) decided to increase the silver content of silver coins at the end of 1489. Now the towns all of a sudden faced far larger interest payments, causing them to renege on their obligations.⁴ In 1492 Maximilian was forced to allow Haarlem a moratorium, protecting this town from claims.⁵ Since this town could no longer pay interest on its public debt, the town government feared angered creditors would seek compensation with citizens of Haarlem – something creditors were legally entitled to do. Shortly after Dordrecht, Leiden, Amsterdam and Gouda also received moratoriums – apparently Delft was the only of Holland's large towns that could do without.

Elsewhere in the Low Countries towns such as Antwerp, Bois-le-Duc, and Lier struggled with similar problems.⁶ Historians have therefore linked the towns' financial

18-23; H.W. Dokkum en E.C. Dijkhof, 'Oude Dordtse lijfrenten' in L.M. VerLoren van Themaat e.a. (red.), *Oude Dordtse Lijfrenten. Stedelijke financiering in de vijftiende eeuw* (Amsterdam 1985) 37-90, 87-88; W. Downer, 'De financiële toestand van de stad Leiden omstreeks 1500' (onuitgegeven manuscript, beschikbaar in het Regionaal Archief Leiden); J.D. Bangs, 'Hollands civic lijfrente loans (XVth century): some recurrent problems', *Publication du centre europeen d'études Burgondo-Médianes* 23 (1983) 75-82.

³ H.E. van Gelder, 'De muntpolitiek van Philips de Schone, 1482-1496', *jaarboek voor Munt- en Penningkunde* XXXVIII (1951) 42-54.

⁴ Although we should point out that the ruler, in the 1489 decree that called for increasing the silver content of silver coins, was aware of the problems this could cause for towns, and tried to limit the effects of this as far as possible. However, such attempts were of no avail (A. Groustra-Werdekker, *De muntordonnantie van 11 december 1489*. Bronnen uitgegeven door het Nederlands Muntmuseum 7 (Nieuwegein 2001) pp. 72-73; J.G. Stuurman, 'Met gelijke munt betalen eind XVe eeuw: het volle pond' in: H. de Schepper (red.) *Miscellanea consilii magni. Bijdragen over rechtspraak van de Grote Raad van Mechelen* II (Amsterdam 1984) 3-69, pp. 3-4).

⁵ The date of this first moratorium is derived from: E. Sewalt, 'Atterminatie ende staet. De rol van het landsheerlijk gezag bij de ondercuratelestelling van de stad Haarlem in de late middeleeuwen' (doctoraalscriptie Haarlem 1994, available in Noordhollands Archief) 63, 127-130.

⁶ J. Hanus, *Tussen stad en eigen gewin. Stadsfinanciën, renteniers en kredietmarkten in 's-Hertogenbosch (begin zestiende eeuw)* (Amsterdam 2007) 21-47; B. Blondé, 'De saneringspogingen van de Bossche stadsfinanciën in de eerste helft van de zestiende eeuw: spiegel van een politieke, sociale en economische

problems to the rulers Charles the Bold (r. 1467-1477) and Maximilian, and their increasing demand for funds. To meet such demands, towns had to turn to financial markets, where they contracted long-term loans, usually at very reasonable interest rates ranging from c. 5-10%. In this way the rulers' demand for funding contributed to the towering public debts the towns of Holland struggled with.⁷ Usually the towns borrowed individually, but in 1482-1483 several of them had also teamed up to borrow an enormous amount of money. In this case several towns shared the obligation for timely interest payments; as soon as one of them reneged, all were in trouble.⁸ Such problems became all the more likely due to war, partisan strife, and a slumping economy that caused urban revenues to decrease during the final decades of the fifteenth century.

The idea that towns constructed their public debt in such a way as to profit from the depreciation of silver coins, contributes to the historiography in several ways. First, it links up with literature on the reorganization of public finance in Holland in the sixteenth century, described by James Tracy as a financial revolution. In this process, the organization of public debt moved from individual towns, to the Estates of Holland, the representative body that quickly gained importance and became Holland's governing body during the Dutch revolt (1572-1648). According to Tracy this centralization of public debt paved the way for the public finance of the Dutch Republic.⁹ Elsewhere, I have argued that this centralization must be regarded as a reaction to the financial problems of the 1480s and 1490s.¹⁰ The idea that towering public debt and the increase of the silver content of silver coins, in 1489, contributed to the collapse of town finances is well known. The idea that this towering public debt was the result of speculation is new,

realiteit?', *Driemaandelijks tijdschrift van het gemeentekrediet in België* 172 (1990) 65-75; H. Van der Wee, *The growth of the Antwerp money market and the European economy (fourteenth-sixteenth centuries)*. II. *Interpretation* (Leuven 1963) 106-107.

⁷ Except for the literature mentioned above, the development of the rulers' demand for funding is described in: W. Ryckbosch, 'Stedelijk initiatief of hertogelijke repressie? Financiële hervormingen en kredietbeleid te Gent (1453-1495)', *Tijdschrift voor Sociale en Economische Geschiedenis* 4 (2007) 3-28; E. van Cauwenberghe, *Het vorstelijk domein en de overheidsfinanciën in de Nederlanden (15^{de}-16^{de} eeuw)*. Een kwantitatieve analyse van de Vlaamse en Brabantse domeinrekeningen (Brussel 1982) 328-342; Van der Wee, *The growth of the Antwerp money market II*, 105-109.

⁸ J. Zuijderduijn, 'De laatmiddeleeuwse crisis van de overheidsfinanciën en de financiële revolutie in Holland', *Bijdragen en mededelingen betreffende de geschiedenis der Nederlanden* 125-4 (2010) 3-24; C.J. Zuijderduijn, 'The emergence of provincial debt in the county of Holland (thirteenth-sixteenth centuries)', *European Review of Economic History* 14 (2010) 335-359.

⁹ J.D. Tracy, *A financial revolution in the Habsburgh Netherlands. 'Renten' and 'renteniers' in the county of Holland (1515-1565)* (Berkeley/Los Angeles/London 1985).

¹⁰ Zuijderduijn, 'De laatmiddeleeuwse crisis van de overheidsfinanciën en de financiële revolutie in Holland'.

however, and may help explain why towns continued to increase public debt – even ‘to an absurd extent’, to speak with the historian Jan Marsilje.¹¹ Surely the town magistrates involved – coming from the ranks of merchants and entrepreneurs – were clever enough to come up with a shrewd technique to keep interest payments low in the short term. However, it seems they lost sight of the long-term, and in particular the possibility of the ruler changing his policy of continuing coin depreciation, and the risks this posed to urban finances.¹²

Second, the hypothesis we put forward in this paper can help explain the disastrous depreciation of silver coins 1470s and 1480s. In this respect the historian Wim Blockmans pointed out that the mighty towns of Flanders do not appear to have opposed this development: during meetings of the Estates of Flanders coin depreciation was hardly ever discussed. Blockmans concluded:

The towns reacted quite indifferently to the ruler’s autocratic and opportunistic behaviour, perhaps out of respect for his seignorage, and surely also because there were few ways to check coin circulation.¹³

It is indeed puzzling to see that the towns, commercial centers dependent on a solid monetary system, apparently did not react to coin depreciation. Opposition came not from townsmen, but from nobles and ecclesiasts: the historian Peter Spufford noticed these group protested against the ruler’s monetary policy because they were often dependent on income from rents and annuities. Due to coin depreciation, they faced a reduction in their incomes. The cronicler Jean Molinet (1433?-1507) the abbot and knight

¹¹ J.W. Marsilje, *Het financiële beleid van Leiden in de laat-Beierse en Bourgondische periode +/- 1390-1477* (Hilversum 1985) 316.

¹² Cf. the reliability of town magistrates the aforementioned articles by Damen and Blockmans, and M. van der Heijden, ‘Stadsrekeningen, stedelijke financiën en historisch onderzoek’, *NEHA bulletin voor de economische geschiedenis in Nederland* 13 (1999) 129-166, pp. 133.

¹³ *Zij betoonden zich vrij lankmoedig tegenover autokratisch en opportunistisch optreden [van de landsheer], misschien uit respect voor het heerlijk muntrecht, en beslist ook omdat de controlemiddelen op de muntcirculatie weinig efficiënt waren* (Blockmans, *De volksvertegenwoordiging*, 508).

of the order of the *Toison d'or*, Jean of Lannoy (1410-1493), was a major spokesman for *qui avoyent rentes*.¹⁴

This paper tests the hypothesis that town magistrates constructed public debt in such a way it consisted a speculative element. They expressed debts in silver coins, and thus profited from the ruler's depreciation policy: in this way they managed to keep urban public debt manageable. They did not do the obvious thing: to express debts in the far more stable gold coins, which was a much used method to safeguard transactions from losses due to depreciation.¹⁵ I focus on developments in Holland, where public debt caused a severe financial crisis, that also must be connected to the aforementioned sixteenth-century developments in the field of public finance. However, the speculative mechanism we present in this paper may also be instructive for other areas: many medieval rulers used coin depreciation as a source of income,¹⁶ and the creation of public debt by selling annuities in financial markets was also very common in large parts of the Northwest of Europe.¹⁷

The paper starts with a short introduction to monetary policy in the fifteenth century (II). Next, we explain how towns, under specific circumstances, could reduce interest payments by expressing debts in silver coin (III). A third section presents evidence for speculation: towns do not appear to have opposed the ruler's policy of coin depreciation. Furthermore, towns appear to have switched from expressing debts in gold coin, to silver coin in the 1470s, so right when coin depreciation gained momentum. Due to this switch urban public debt was no longer protected against fluctuations of the exchange rate between gold and silver coins, but rather exposed to this (IV). Conclusions follow (V).

II

¹⁴ P. Spufford, *Money and its use in medieval Europe* (Cambridge 1989) 313-314, 318; P. Spufford, 'Coinage, taxation and the Estates-General of the Burgundian Netherlands', *Anciens pays et assemblées d'états . Standen en landen XL* (1966) 61-88.

¹⁵ Van der Wee, *The Antwerp money market II*, 108.

¹⁶ Spufford, *Money and its use*, 289-318.

¹⁷ C.J. Zijlenderdijn, *Medieval capital markets. Markets for 'renten', state formation and private investment in Holland (1300-1550)* (Leiden/Boston 2009) 152-174.

In the late middle ages coinage was an important source of income for rulers: rulers levied a tax over coinage (in Holland this tax was called *sleischat*), they could temporarily alienate coinage¹⁸, and they could profit from coin manipulation.

For the counts of Holland, taxation of coinage was an important source of income since the fourteenth century.¹⁹ However, for them to tax coinage, the counts had to make sure coins were produced in the mint. They therefore tried to ensure a steady supply of precious metals going to the mint, but since other rulers tried to achieve the same thing, competition for precious metals was fierce, in particular between the dukes of Burgundy (who were counts of Holland since 1433) and the kings of England. The arena was mainly the important wool staple of Calais: since the fourteenth century the dukes came with regulations aimed at preventing precious metals flowing to England via Calais. The English king Edward IV (1442-1483) in his turn tried to foster this flow of precious metals, as he could use these to finance the Wars of the Roses (1455-1485) and to protect the wool staple of Calais. Edward ordered that in Calais, buyers of English wool had to pay at least half of the purchase price in good English coin, or precious metals – and not using financial instruments such as bills of exchange. His goal was to make sure at least half of levies on imports could be received in precious metals, which would go to the royal mint of Calais for remelting – allowing Edward to profit.²⁰

Edward's monetary policy would go at the expense of duke Philip the Good of Burgundy (r. 1433-1467): 'good coin' and precious metals would flow to the mint of Calais, and ultimately contribute to Edward's revenues, while 'bad coin' with a low alloy would circulate in Philip's territories. Philips therefore reacted with a ban on imports of English cloth.²¹ English cloth traders were forced to leave the important trading towns of Antwerp and Bergen-op-Zoom, and had to relocate to Utrecht, which was not yet under Burgundian rule. Only after Philip's death, in 1467, did this situation end: Charles the

¹⁸ Spufford, *Monetary problems*, 144-145.

¹⁹ Zijderduijn, *Medieval capital markets*, 55; Bos-Rops, *Graven*, 34.

²⁰ Munro, *Wool, cloth and gold*, 158-160.

²¹ Munro, *Wool, cloth and gold*, 163-164.

Bold (1467-1477) improved the ties with Edward, and the latter abandoned his monetary policy in 1473, ending the period of 'bullionism' in Anglo-Burgundian relations.²²

In spite of this 'bullionism', Philips reign was characterized by monetary stability: the duke abstained from coin manipulation. Perhaps this was in part due to the influence on monetary affairs the towns of Holland had acquired since the mid-fourteenth century.²³ Since Philip had succeeded countess Jacqueline of Bavaria in 1433, Holland experienced a period of coin stability,²⁴ which ended under his successor Charles the Bold: he ordered his munt masters to gradually decrease the alloy of silver coins. This monetary policy was continued by Maximilian of Habsburg, who used coin manipulation to finance rising military expenses due to war with France, the revolt of the Flemish towns (1482-1485) and other revolts in the Low Countries (1488-1492).²⁵

Mint manipulation affected the alloy of the Flemish groat, the most important silver coin of the Low Countries, which silver content was gradually decreased between 1466-1489 (figure 1). This only came to an end in 1489: the silver content of the Flemish groat was brought back to the 1466 level. Of course, the gradual decline of the silver content before did not go unnoticed: merchants and money changers were quick to find out about this. As a result, the dukes of Burgundy had to adjust exchange rates between weakened silver coins and stable gold coins: the exchange rates of gold coins mounted, in particular in the 1480s.

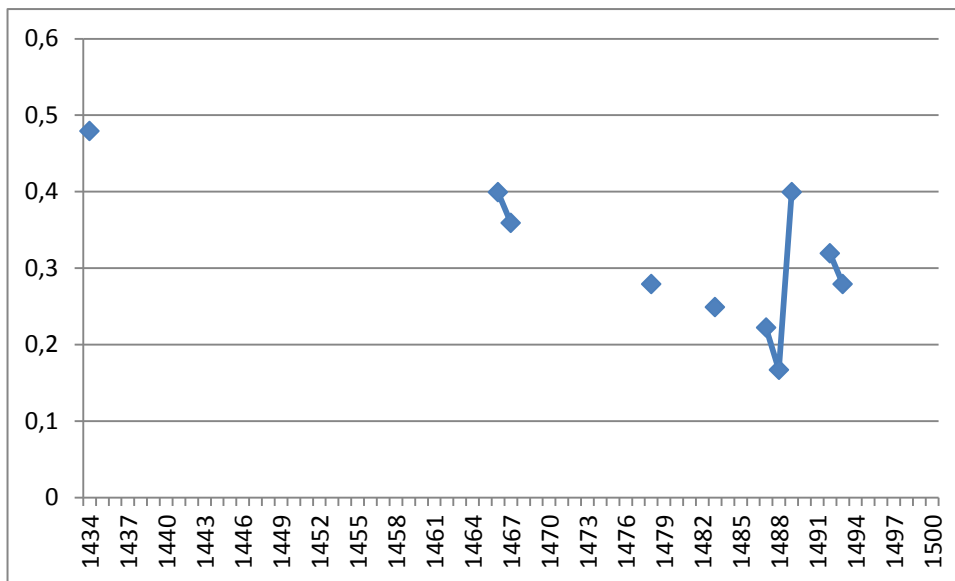
²² Munro, *Wool, cloth and gold*, 178.

²³ J.A.M.Y. Bos-Rops, *Graven op zoek naar geld. De inkomsten van de graven van Holland en Zeeland, 1389-1433* (Hilversum 1993) 182-183.

²⁴ Spufford, *Money and its use*, 312-313.

²⁵ Spufford, *Monetary problems*, 141-142; Van Gelder, *De Nederlandse munten*, 59-60; Van Cauwenberghe, *Het vorstelijk domein*, 328-342.

Figure 1. Silver content Flemish groat 1434-1494



Source: H.E. van Gelder en M. Hoc, *Les monnaies des Pays-Bas Bourguignons et Espagnols 1434-1713* (Amsterdam 1960) 14, 20, 27, 38, 44, 49, 53, 54.

III

In the late middle ages the towns of Holland created public debt through annuity sales: these financial instruments allowed them to attract large sums of money. The towns sold life annuities (*lijfrenten*) to purchasers, who paid a principal to receive an annuity for the rest of his or her life. The annuity usually was c. 10% of the principal. A second financial instrument the towns sold, redeemable annuities (*losrenten*) were hereditary: annuities were paid to the purchaser, or his or her heirs, until the town redeemed the principal. The annuity usually was 6,25% of the principal.²⁶

Life annuities and redeemable annuities could be expressed in gold or silver coin. Gold coin offered the advantage of hardly ever being tampered with,²⁷ which is why many creditors and debtors decided to express transactions involving postponed payment

²⁶ Cf. surveys: M. van der Heijden, *Geldschieters van de stad. Financiële relaties tussen stad, burgers en overheden 1550-1650* (Amsterdam 2006); Verloren van Themaat, *Oude Dordtse lijfrenten*; Kernkamp, *Vijftiende-eeuwse rentebrieven*.

²⁷ Van Gelder indicates that the gold guilder of Burgundy 'contained a constant quantity of gold' (Van Gelder, 'De muntpolitiek', 49; Van Gelder en Hoc, *Les monnaies*, 19, 36, 47. Cf. the stability of gold coins in the late middle ages: L. Fantacci, 'The dual currency system of Renaissance Europe', *Financial History Review* 15 (2008) 55-72, pp. 58-59.

in gold coin.²⁸ Stable gold coin thus helped participants in exchange to reduce the 'fundamental problem of exchange'.²⁹ However, during the period of coin debasement in the 1470s and 1480s, the towns of Holland decided to express their annuities in unstable silver coin. In doing so, they used moneys of account (*rekenmunten*): fictitious currencies used for accounting purposes, and to make dealing with silver coins less elaborate. Moneys of account were used within financial administrations, and did not exist as real currencies.³⁰

There were two types of moneys of account: the first was a currency based on the Carolingian division 1 pound = 20 shillings = 240 pennies. Multiples of the *basismunt* such as the *vlaamse groot*, were expressed in shillings and pounds. Thus, 12 *vlaamse groten* were one shilling, 240 *vlaamse groten* one pound. The second type was based on an existing coin. For our period the *Rijnse gulden* of 20 *stuivers* provides a good example: this money of account also existed as a real coin.³¹ Initially the money of account *Rijnse gulden* and real coin *Rijnse gulden* had the same value (20 *stuivers*), but this changed due to depreciation of the silver coin. As a result, in 1489 there was a money of account *Rijnse gulden* of 20 *stuivers*, and a real coin worth 45 *stuivers* of Utrecht.³²

The annuities the towns of Holland sold in the second half of the fifteenth century were usually expressed in *ponden Vlaamse groten*, a money of account that connected the annuities to the silver Flemish groat. However, when these annuities were purchased, or paid out by the towns, gold coins were used: annuities and annuity payments involved large sums that could not be paid out in hundreds of silver coins. This construction, whereby the principal was paid in gold coin, and the annuity was paid out in gold coin, but the contract was expressed in silver coin, exposed the participants in exchange to market risk. This construction can best be compared to a present-day contract where the

²⁸ Marsilje writes: 'thus payments were [by expressing them in gold coin] safeguarded against debasement of silver coin, which soared during the reign of the house of Bavaria' [1354-1433] (Marsilje, *Het financiële beleid*, 154 en 239). Cf. Van der Wee, *The Antwerp money market* II, 108; Stuurman, 'Met gelijke munt betalen', 22.

²⁹ A. Greif, 'The fundamental problem of exchange: a research agenda in historical institutional analysis', *European review of economic history* 4 (2000) 251-284.

³⁰ H.E. van Gelder, 'Rekenmunt', in: E.J.A. van Beek (red.) *Encyclopedie van munten en bankbiljetten* (Alphen aan den Rijn 1986-2002) R31-R32.

³¹ Cf. de opkomst van de Rijnse gulden als rekenmunt: Spufford, *Monetary problems*, 18-19.

³² Van Gelder, 'Rekenmunt'.

creditor pays the principal in euros, the debtor pays interest in euros, but the contract is expressed in dollars. The result is both creditor and debtor being exposed to fluctuations in the exchange rate of euros/dollars.

In the fifteenth century the same applied to the exchange rate between gold and silver coins: since annuity payments were expressed in silver coin, but made in gold coin, in the event of debasement of silver coin towns could do with decreasing payments in gold coin. Two examples may help clarify this: in the first, someone purchases an annuity with the town of Haarlem, in 1477. He pays a principal of 160 Rhenish guilders, and acquires an annuity of 10 Rhenish guilders. The parties agree to express the annuity in the Rhenish guilder, a stable gold coin. In this case, the debasement of silver coin does not affect the annuity payment: the town of Haarlem every year pays 10 Rhenish guilders.

In the second example, someone purchases an annuity with the town of Haarlem, in 1477. He pays a principal of 160 Rhenish guilders, and acquires an annuity of 10 Rhenish guilders. However, now both parties agree to express the annuity in a money of account that is linked to the Flemish groat – the contract mentions an annuity of 1,67 *ponden Vlaamse groten*. As long as the silver content of the Flemish groat declined, the town of Haarlem could suffice with paying the annuity with fewer gold coins. In 1489, shortly before the revaluation of silver coins, Haarlem could suffice with paying c. 7,5 Rhenish guilders – which means the creditor lost 2,5 Rhenish guilders per annum.

The consequences this had for Haarlem's public debt, between 1466 and 1500, are depicted in figure 2. The town 'borrowed' money by selling life annuities and redeemable annuities: these were the financial instruments used most often to attract large funds. Life annuities were purchased by a creditor, who paid for an annuity that was paid for the remainder of his or her lifetime. The annuity usually was c. 10% of the principal. Redeemable annuities were hereditary, and to be paid until the debtor had repaid the principal. The annuity usually was 6,25% of the principal.³³

³³ Cf. a more elaborate survey: M. van der Heijden, *Geldschietters van de stad. Financiële relaties tussen stad, burgers en overheden, 1550-1650* (Amsterdam 2006) 24-26; J. Hanus, *Tussen stad en eigen gewin. Stadsfinanciën, renteniers en kredietmarkten in 's-Hertogenbosch (begin zestiende eeuw)* (Amsterdam

Figure 2 shows three elements: first the estimated total public debt of the town of Haarlem. This consisted of life annuities and redeemable annuities the town was due to pay every year. We should point out, however, that figure 2 presents a scenario based on the data of Haarlem's annuity sales between 1466 and 1500. A few elements were not taken into account: annuities sold before 1466,³⁴ and annuities sold after 1466, but terminated before 1500 – life annuities due to the passing away of creditors, redeemable annuities due to the town repaying the principal (which did not happen very often) – the line is therefore tentative.

Following this scenario, a first line expresses what would have happened were all annuities expressed in gold coin. A second line expresses what would have happened were all annuities expressed in silver coin, and subject to debasement. Both scenarios do not differ much until 1482. Between 1483 and 1489 this changes: in case Haarlem had linked its public debt to silver coin, the town profited from the ruler's monetary policy. The difference between the gold and silver coin scenario was at a maximum of 12.000 lb. Hollands in 1489 – as also becomes evident from figure 3, showing the development of the difference between both scenarios. Using a silver coin scenario, Haarlem was able to reduce its expenses, as becomes clear from line three in figure 3, giving the total revenues of Haarlem, excluding 'borrowing' by selling new annuities. Those of Haarlem thus could reduce annuity payments by expressing life annuities and redeemable annuities in silver coin and moreover: in the silver coin scenario annual payments even decline after 1485, even though the town continued to sell annuities for several years.

As soon as Maximilian decided to increase the content of silver coin, in 1489, to the level of 1466,³⁵ those of Haarlem no longer profited from favourable exchange rates: in 1490 the town paid 44.000 lb. Hollands for annuities, while this had been less than 22.000 lb. Hollands a year before. Since at that point already the town lost half of its

2007)14-16; L.M. Verloren van Themaat, 'Geschiedenis van de lijfrente', in: L.M. Verloren van Themaat et al (red.), *Oude Dordtse lijfrenten. Stedelijke financiering in de vijftiende eeuw* (Amsterdam 1985) 7-15.

³⁴ The public debt that existed before 1466 was probably quite modest: between c. 1435 and c. 1466 the towns of Holland were hardly active in financial markets, and gradually managed to reduce the number of annuities they owed (Zuijderduijn, *Medieval capital markets*, 152-168).

³⁵ According to Van Gelder Maximilian's main motive was this: after suppressing the revolt of the towns of Flanders, and the end of the war with France, in 1489, the ruler's financial situation improved, so he could abandon his debasement policy (Van Gelder, 'De muntpolitiek', 48-49).

revenues on annuity payments, a doubling of these expenses amounted to a disaster.³⁶

Not only towns were confronted with an unpleasant surprise: others that had made transactions involving postponed payments – rents, loans, downpayments etc. Debtors who had made transactions for an amount expressed in silver coin had to pay more after the mint ordinance of 1489; creditors, on the other hand, profited.

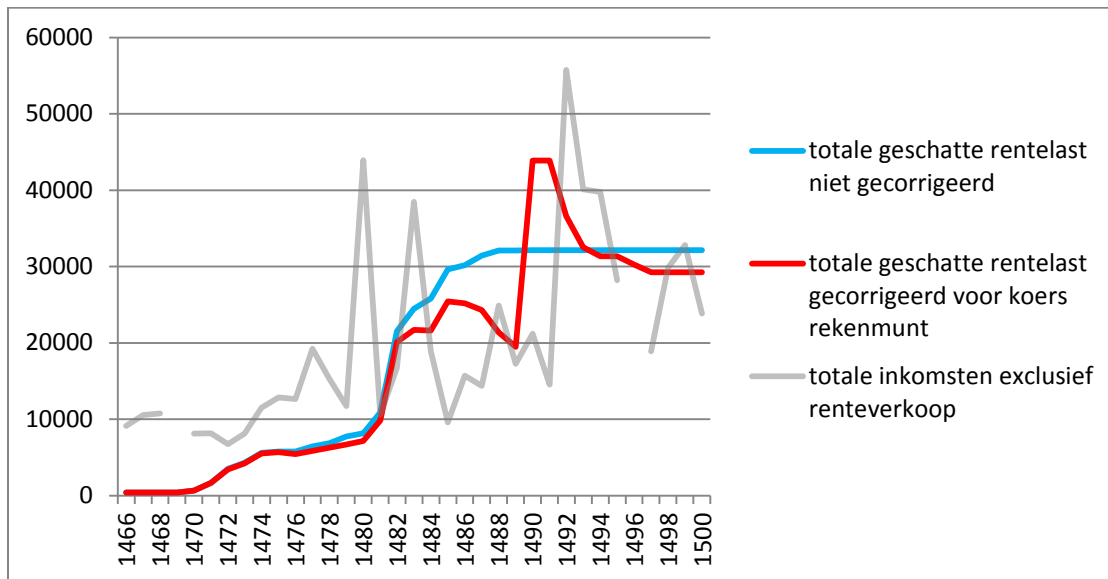
This may raise questions about financial expertise, first of all among town magistrates. They caused the towns of Holland to enter a demolition course, creating a large public debt that would become unsustainable in the event of a revaluation, such as that of 1489. It is difficult to imagine experienced town magistrates, usually themselves active in trade and industries, did not see this risk. And with respect to annuity buyers: were they tricked by the towns? This may be true for part of the annuity buyers, but the majority of them came from the political and economic elite – and they too surely would have known a thing or two about finance?³⁷ It may have simply been the case that annuity buyers took the risk of fluctuations in the exchange rate: in practice coins were repeatedly revalued and devalued, which means during some periods they received less than anticipated, and during others more.³⁸

³⁶ Zijderduijn, *Medieval capital markets*, 152-168.

³⁷ M. Boone, *Geld en macht. De Gentse stadsfinanciën en de Bourgondische staatsvorming (1384-1453)* (Gent 1990); Tracy, *A financial revolution*.

³⁸ Drelichmann and Voth recently suggested that the creditors of Philip II agreed to temporary defaults, because they knew that their investments would be profitable in the long run (M. Drelichman en H.-J. Voth, 'Serial defaults, serial profits: returns to sovereign lending in habsburg Spain, 1566-1600', *Explorations in Economic History* 48 (2011) 1-19).

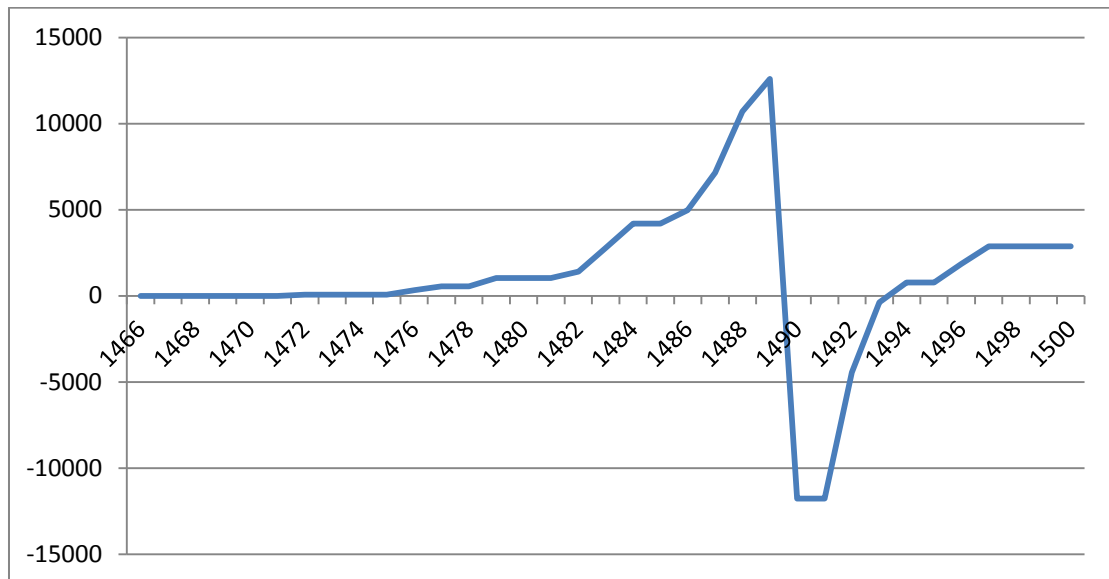
Figure 2. Scenario's development annuities Haarlem was due 1466-1500 (Ib. Hollands)



Source: J.C. van Loenen, 'De rente-last van Haarlem in de vijftiende eeuw' (unpublished manuscript, available in Noordhollands archief Haarlem).

The figure shows two scenarios, based on annuity sales by the town of Haarlem between 1466-1500. The scenarios show annual annuity payments based on the following assumptions a) the life annuities and redeemable annuities sold in this period were not terminated or redeemed b) All annuities sold in this period were linked to silver coin. The objective of the figure is not to give a precise reconstruction of the annuities Haarlem was due (we lack the evidence to do such a thing) but to show broadly the effects of of the mechanism we discuss in this paper.

Figur 3. 'Reductions' gained by Haarlem according to scenario's in figure 2 (Ib. Hollands)



Source: see figure 2.

IV

Jan Marsilje, an expert of late-medieval urban finance, characterized the growth of public debt in the second half of the fifteenth century as absurd. The mechanism described earlier may help us understand this absurdity: it reduced annuity payments, causing urban finance to remain in order – albeit using a financial trick. Towns could continue paying annuities for a relatively long time, and maintained their creditworthiness, allowing them to continue selling *renten* for a relatively long time as well.

Was this a strategy used by town magistrates to extend the urban budget? Or to put it another way: did town magistrates use the ruler's monetary policy, by speculating on ongoing debasement? Two elements may illuminate this issue: attempts by towns to stop debasements, and the linking of annuity contracts to gold and silver coin.

Let us first of all take a look at the towns' reactions to the rulers' monetary policy: what did town magistrates think of this? Did they discuss the issue during meetings of the representative council, the *Staten van Holland*? Unfortunately, little is known about how often 'monetary policy' was on the agenda: the data of the historian Henk Kokken,

who studied the representative council in this period, do not allow for singling out coinage as a fiercely debated topic among the towns of Holland.³⁹

A look at the situation in Flanders may be instructive though. Earlier we mentioned Wim Blockmans' conclusion that, during the debasements, the towns of Flanders did not really show much of an interest in monetary policy. This is remarkable because towns usually favoured good economic institutions, such as stable coinage.⁴⁰ For example, in the first half of the fifteenth century we see the towns frequently, and successfully, interfering in monetary affairs. For this influence they paid a price: the towns 'paid' the ruler to abstain from debasement, for instance by agreeing to the latter's requests for taxation. Back then urban influence on monetary affairs was so strong that declaration of new mint ordinances often depended on the fiat of the towns in the Estates General and Provincial Estates.⁴¹

In the second half of the fifteenth century towns no longer managed to exert much influence on monetary affairs, causing the debasement. It is possible to single out a few reasons for this. The first is straightforward: it was not always possible to influence the rulers' monetary policy. Sometimes the latter decided on monetary affairs without allowing the towns a say in this, such as happened in 1474.⁴² But on the other hand we see only few urban attempts to put a stop to debasement.⁴³ In heavily commercialized monetary affairs hardly featured on the agenda of the Estates between 1477 and 1488, only 20 times, or on average 1,7 times per year. Figure 4 shows that monetary affairs were much more often discussed before and after – over the period 1385-1506 on average five times per year. Also when we look at 'monetary policy' compared to other issues, such as internal and external affairs, finance, defence, trade, industries, justice, the period 1477-1488 is a low: 'monetary policy' amounted to 4,95% of all topics discussed, while over the period 1385-1506 this was 10,00%. After 1488 we witness an

³⁹ Kokken, *Steden en Staten*, 257-261. Kokken classified negotiations about coinage, together with numerous other topics, as 'trade'.

⁴⁰ Spufford, *Monetary problems*, 151; Marsilje, *Het financiële beleid*, 155-156.

⁴¹ The influence of the estates general and provincial estates on monetary issues has been discussed in: Peter Spufford: P. Spufford, 'Coinage, taxation and the Estates-General of the Burgundian Netherlands', *Anciens pays et assemblées d'états*. *Steden en landen* XL (1966) 61-88.

⁴² Kokken, *Steden en Staten*, 258.

⁴³ One of the scarce attempts is visible in the *Groot Privilege* of 1477, when the towns tried to gain a say in monetary policy (Kokken, *Steden en Staten*, 258-260).

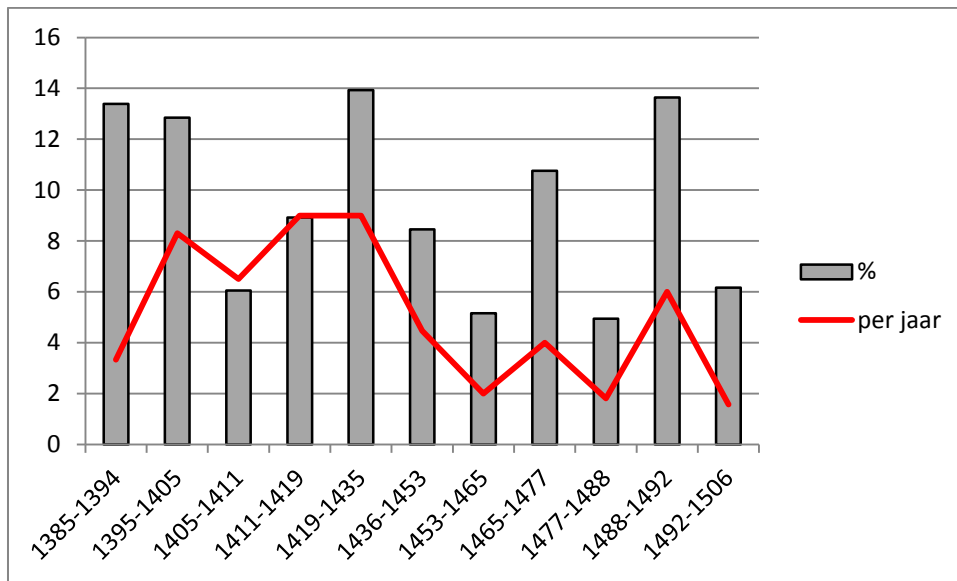
increase to 4,8 per year between 1488 and 1492. This increase was probably caused by the enormous problems the revaluation of the silver coin, in 1489; this did not have anything to do with the prior devaluation.

To be sure: the moderate interest the towns of Flanders displayed was not caused by the Revolt of the towns of Flanders (1482-1485): between 1477 and 1488 Blockmans still counted 294 meetings of the Estates of Flanders, on average 26,7 per year (to compare: between 1385-1506 there were 4055 meetings, on average 36,0 per year).⁴⁴ We interpret the limited interest in putting a stop to debasement as the result of the 'incentives' coming from the large public debt the towns of Flanders, such as Ghent, had created since 1453?⁴⁵ Surely, the towns did not want to further their own demise by opposing the debasement policy that allowed them some much-needed breathing space; this must be why they kept silent time and again, not protesting continuous debasements of silver coin.

⁴⁴ Blockmans, *De volksvertegenwoordiging*, 545.

⁴⁵ Cf. the increasing public debt of Ghent after the *Vrede van Gavere* (1453): Ryckbosch, 'Stedelijk initiatief of hertogelijke repressie?', 19-24 and especially figure 2.

Figure 4. Meetings about monetary policy of the Estates of Flanders, 1385-1506



Bron: Blockmans, *De volksvertegenwoordiging*, 545.

The line indicates the average number of meeting where monetary policy was discussed, during eleven periods.

The columns give the share of the topics 'monetary policy' of the total number of topics.

The periods are based on the typology Blockmans used.

The political actions of the towns of Flanders are in line with the hypothesis of town magistrates speculating on ongoing debasement of silver coin. However, speculation implies a conscious choice: in this case a choice linking public debt to silver coin, and thus expose annuity payments to fluctuations in the exchange rate, and refraining from linking public debt to stable gold coin. The latter was a well-known technique that was frequently used in the late middle ages, as becomes evident from data collected in the appendix. These data are based on the sample of fifteenth-century annuity contracts sold by towns in the Northern Low Countries, and edited by J.H. Kernkamp.⁴⁶ Until the 1470s towns expressed annuities in gold coin, thus safeguarding these transactions against fluctuations in the exchange rate. After this, we see a gradual shift: the towns of Leiden, Amsterdam and Schiedam began issuing annuities expressed in silver coin. The same is true for Dordrecht, examined by Verloren van Themaat et al: in the 1470s we observe a

⁴⁶ J.H. Kernkamp (red.), *Vijftiende-eeuwse rentebrieven van Noordnederlandse steden* (Groningen 1961).

shift to silver coin.⁴⁷ Jan Marsilje saw the same development in Leiden, concluding that in the second half of the fifteenth century the town switched from gold to silver coin in the annuity contracts.⁴⁸

Why do we observe this shift at the time of ongoing debasement of silver coin? The most straightforward explanation is to think that towns anticipated on the rulers' monetary policy. Such speculation would also explain why we do not see a linear development in the use of either silver or gold coin over time: it rather seems that towns decided for either one based on circumstances. To give some examples: in the fourteenth century annuity contracts were linked to silver coin.⁴⁹ From the beginning of the fifteenth century they were expressed in gold coin.⁵⁰ Next we again observe a return to silver – as is indicated in the appendix. Finally, after 1489 Schiedam and Dordrecht continued to issue annuities linked to silver coin:⁵¹ did they speculate that after the revaluation of 1489, they had entered a new era of continuous debasement?

Finally, it is useful to look at the coin revaluation of 1489: the ruler, Maximilian, did lend his towns a helping hand. The decree ordering the revaluation did contain a transitional arrangement for annuities and other obligations contracted since 1487 because the ruler recognized the revaluation would cause enormous problems.⁵² However, as soon as it turned out this arrangement did not suffice, Maximilian granted many towns a moratorium. As a result, the people that had invested in annuities ultimately paid the price: they had to wait for their annuities, or had to agree with reduced annuity payments. The construction ruler and towns agreed to may therefore be considered as strategic default: well-timed renegeing with limited consequences.⁵³ Usually rulers opted for strategic default, but it is imaginable that towns followed suit as soon as they became important intermediaries between ruler and financial market.

⁴⁷ Verloren van Themaat, *Oude Dordtse lijfrenten*, 123-127.

⁴⁸ Marsilje blames 'a gradual growth of the practice of relating financial obligations directly or indirectly to silver'. (Marsilje, *Het financiële beleid*, 240-242, 247).

⁴⁹ Cf. various examples: H. Vangassen, *Bouwstoffen tot de historische taalgeografie van het Nederlands. Noordhollandse charters* (Brussel 1964) 12-17.

⁵⁰ Cf. various examples: Vangassen, *Bouwstoffen*, 166-167.

⁵¹ Schiedam: appendix; Dordrecht: Verloren, *Oude Dordtse lijfrenten*, 125-126.

⁵² Groustra-Werdekker, *De muntordonnantie van 1489*, 72-73; Stuurman, 'Met gelijke munt betalen', 3-4.

⁵³ Cf. *strategic default*: Y. Barzel, 'Confiscation by the ruler: the rise and fall of Jewish lending in the Middle Ages', *The Journal of Law and Economics* 35 (1992) 1-14; J.M. Veitch, 'Repudiations and confiscations by the medieval state' *Journal of Economic History* 46 (1986) 31-36.

V

In this paper we formulated the hypothesis that the towns of Holland speculated on ongoing debasement of silver coin. We have demonstrated how towns could profit from this, by expressing their public debt in silver coin: this reduced their annuity payments. This technique allowed towns some much-needed breathing space in a financially difficult period, and even allowed towns to prolong 'borrowing' in financial markets – perhaps it even invited town magistrates to do so. The towering – and absurd – public debts the towns created must in part be understood as the result of this mechanism.

The towns hardly resisted against coin debasement: during meetings of the Estates of Flanders coinage was hardly discussed – even in the 1470s and 1480s when debasement soared. It seems what we observe is a 'lock-in effect', where the public interest gained the upper hand: town magistrates realized that continuation of the rulers' monetary policy was beneficial for the town's treasure chest. Putting a halt to debasement would increase pressure on urban finances, revaluation amounted to a disaster. As a result, town magistrates could no longer support the private interest: a stable coin, to be obtained by opposing the rulers' monetary policy. In the late fifteenth century such opposition therefore did not come from town magistrates, but from nobility and clergy.

Considering this lack of opposition, town magistrates apparently knew very well what was at stake. As long as the towns did not oppose the rulers' monetary policy, they stood a good chance of continuing debasement, allowing them to profit from expressing annuities in silver coin. As we have seen, towns did not decide to reorganize their public debt, by expressing newly-issued annuities in gold coin, and thus to prevent future problems. This suggests that town magistrates, spurred on by financial demands of the rulers, preferred a short-term policy, speculating on ongoing coin debasement. Perhaps they even anticipated a transitional arrangement in the event of a revaluation – after all,

for the rulers the towns were too important financial intermediaries to allow them to collapse.

Appendix. Payment techniques annuities fifteenth century

Year	Town	Payment	Gold/silver
1402	Haarlem	40 gouden Gentsche nobel	Gold
1408	Leiden	7 ½ Engelse nobelen	Gold
1435	Utrecht	3 lb. 6 s. 8 p. 'alse enen Wilhelmus Hollantse schilt laetst tot Dordrecht geslegen voir vier pont gerekent'	Gold
1458	Utrecht	100 pont gelts 'alse enen overlansche Rijnschen gulden voir deser tijt gemunt ende geslagen voir vijff pont gerekent'	Gold
1464	Amsterdam	20 guede goudene Gwilhelmus Hollantse schilden lest tDordrecht geslagen, joff payment dat also guet is...'	Gold
1472	Amsterdam	33 guede goudene overlantse coirvorste Rhijnsche guldene of payment also guet	Gold
1472	Leiden	7 gouden Rijnse	Gold

			guldens 'voir datum des briefs geslegen'	
1476	Amsterdam	1 lb. gr. VI.		Silver
1479	Amsterdam	1 lb. gr. VI.		Silver
1480	Utrecht	30 lb. ... also enen Rijnsche gulden current, viertich groeten Vlaemisch voer elcken Rijnsche gulden, in elcker tijt der betalinge voer vijf pont gerekent'		Silver
1485	Leiden	4 lb. gr. VI.		Silver
1486	Amsterdam	5 s. 10 p. gr. VI.		Silver
1486	Schiedam	1 lb. gr. en 10 s. gr. VI.		Silver
1493	Schiedam	8 lb. Hollants... 'mit alsulcke paymenten als in buersen gaen zullen		Silver

Source: Kernkamp, *Vijftiende-eeuwse rentebrieven*.