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# *A ‘financial revolution’ reconsidered: public finance in Holland during the Dutch Revolt, 1568–1648<sup>1</sup>*

By W. FRITSCHY

‘State formation’ continues to be prominent on the agenda of economic historians. Much new research has been published in the past decade, and other work is under way.<sup>2</sup> In any theory of state formation in Western Europe a state’s capacity to borrow receives due attention. A ‘financial revolution’ is often mentioned as a precondition for a successful transition to an efficient fiscal state.<sup>3</sup> The Dutch Republic was among the great European powers until the end of the seventeenth century.<sup>4</sup> The Dutch capital market became famous for providing government loans even at an international level.<sup>5</sup> The relationship between Dutch state formation and Dutch public finance is therefore of special interest for the general debate on state formation.

The term ‘financial revolution’ came to prominence in economic history following the publication in 1967 of Dickson’s classic study, and in 1986 the term was reinvented by Tracy, whose book has also become a classic.<sup>6</sup> In his introduction Tracy portrayed Britain’s financial revolution as a dramatic rise in public borrowing, coupled with a shift from short-term to long-term debt in the form of low-rate securities guaranteed by Parliament and funded by hypothecated revenues.<sup>7</sup> Tracy’s focus was not so much on the rise in public borrowing at low rates of interest—which in fact was quite modest—as on institutional change. Holland’s fiscal system was transformed radically when the representative assembly of the province

<sup>1</sup> My acknowledgements are due to Jim Tracy for sending me a copy of his article ‘Keeping the wheels of war turning’ before publication; to Manon van der Heijden, Joost Jonker, Wayne te Brake, and Marjolein ’t Hart for their comments, to Henk van Nierop for encouragement, and especially to Jan Luiten van Zanden, Patrick O’Brien, Eileen Power, and three anonymous referees for their valuable suggestions to improve an earlier draft.

<sup>2</sup> Bonney, ed., *Economic systems and state finance*; *idem*, ed., *Rise of the fiscal state*; Cavaciocchi, ed., *Poteri economici e poteri politici*; Ormrod et al., eds., *Crises, revolutions and self-sustained growth*. W. Fritschy, M. ’t Hart, and E. Horlings, ‘The formation and efficiency of fiscal states in Europe and Asia, 1500–1914’, session 12, Economic History Congress Buenos Aires 2002, organized by P. O’Brien and F. Comin (available at [www.eh.net/XIII\\_Congress/cd/papers/12](http://www.eh.net/XIII_Congress/cd/papers/12); forthcoming, Cambridge 2004).

<sup>3</sup> Recent contributions, which also summarize earlier literature, are Ertman, *Birth of the Leviathan*, pp. 76, 213, 318, 324; Epstein, *Freedom and growth*, pp. 16, 170.

<sup>4</sup> Martin Körner, ‘Expenditure’, in Bonney, ed., *Economic systems*, p. 400, gives figures.

<sup>5</sup> Riley, *International government finance*.

<sup>6</sup> Dickson, *Financial revolution*; Tracy, *Financial revolution*.

<sup>7</sup> Tracy, *Financial revolution*, p. 1.

agreed to levy provincial instead of urban excises to fund the sale of provincial instead of urban *renten* (annuities) for the central government.<sup>8</sup> Thus short-term obligations at high interest rates could be converted into long-term debt at low rates.

One of Dickson's more important conclusions was that the 'financial revolution' enabled England to spend on war an amount that was out of all proportion to its tax revenue, and that this explains why Britain prevailed against a larger and wealthier France during the wars from 1689 to 1815.<sup>9</sup> Thus Tracy's study implies that it was the Habsburg central government which persuaded the States of Holland to adopt a system of public borrowing, and that this subsequently enabled the Dutch Republic to wage war against Habsburg Spain.<sup>10</sup> This article considers whether it was really the system of provincial *renten* and *renteniers* that gave rise to the dramatic increase in public finance in Holland during the years of the Dutch Revolt against Spain from 1568 to 1648.

Information on the financing of the Dutch Revolt is scarce. De Vries and Van der Woude present a lucid summary but supply no figures for 1568-88 and incomplete data for the later years.<sup>11</sup> The data in 't Hart's thesis, on which they relied for this period, were mostly derived from the last phases of the war.<sup>12</sup> Parker offers interesting data for the early years, especially on foreign subsidies,<sup>13</sup> but does not attempt to present a coherent picture or to evaluate the importance of finance for the success of the revolt. Dormans concluded that it is not known how the States of Holland financed the early years of the revolt.<sup>14</sup> Tracy has recently drawn attention to the possible 'if not precisely quantifiable' role of confiscated émigré and ecclesiastical property in Dutch finance during the years 1572 to 1584. He has suggested that for those years that source might be seen as the 'sheet anchor' of Holland's finance, which prevented its unpaid debts from mounting to an unmanageable level.<sup>15</sup> His most recent article concludes that as late as 1599 Holland's fiscal credibility derived more from the cities than from the province as a whole.<sup>16</sup>

Section I of this article summarizes what is currently known about the financing of the Dutch Revolt in its earliest years. Next comes a reconstruction, based on new archival research, of public finance from 1574 to 1648 for the province of Holland, the most important of the seven provinces of the Dutch Republic. On the basis of this reconstruction, section III argues that during the first decades of the revolt Tracy's 'financial revolution' turns out to have been the first step of a 'tax revolution', and section IV contends that the domestic capital market became an important factor in Holland's provincial public finance only

<sup>8</sup> *Ibid.*, p. 221.

<sup>9</sup> Dickson, *Financial revolution*, p. 9.

<sup>10</sup> Tracy, 'Taxation system', pp. 96-7.

<sup>11</sup> De Vries and Van der Woude, *First modern economy*, par. 4.2.

<sup>12</sup> 't Hart, *Making of a bourgeois state*, p. 8.

<sup>13</sup> Parker, *Dutch Revolt*, pp. 148, 149, 217.

<sup>14</sup> Dormans, *Het tekort*, p. 22.

<sup>15</sup> Tracy, 'Emigré and ecclesiastical property', p. 257.

<sup>16</sup> *Idem*, 'Keeping the wheels of war turning', p. 144.

after 1600 and was characterized by the continuous expansion and prolongation of short-term 'obligations' rather than by their successful conversion into long-term *renten*. In sections III and IV the relationship between public finance and 'state formation', i.e. the shift from the urban to the provincial government level, is considered. Section V offers a summary of the argument and concluding remarks.

## I

At the start of the Dutch Revolt credit was simply not available. In 1567 the Prince of Orange fled Brussels before the Duke of Alva arrived with a mission to restore Catholicism in the Netherlands and to introduce centralized taxation. The prince's property in the Netherlands was consequently sequestered. In Germany he used his German possessions and family connections to raise money. He was able to make a personal investment of about 1 million florins towards the formation of an army to expel the Spanish troops from the Netherlands.<sup>17</sup> Yet his plan for a simultaneous attack on the Netherlands from four sides miscarried. Troops marching in from France were stopped in the south. A force paid for by Dutch refugee churches in England arrived in Flanders by sea but its members were captured. His brother Louis of Nassau won a battle against Alva's troops near Heiligerlee in the north in 1568, but lost the next battle at Jemmingen in the same year. Alva then simply evaded further battles with Orange's huge army of 30,000, which had entered Brabant from the east, until the prince had no money left to pay his soldiers.<sup>18</sup> Since such payments amounted to at least 5,000 florins a day for an army of that size,<sup>19</sup> he had to disband the army in February 1569. His biographer tells us that he had to leave Straatsburg immediately to evade his creditors.<sup>20</sup> The revolt ran out of money before it had really started.

In the next few years five new sources of money were tapped: the war at sea; foreign subsidies; debasement; ecclesiastical and other confiscated property; and advances from army leaders who were promised compensation in the form of ecclesiastical property. These sources are discussed in sequence. The contributions of the cities of Holland after July 1572 and the introduction of new taxes in 1574 are considered in the next section.

For the war at sea the Prince of Orange and his brother Louis of Nassau issued 'letters of marque and reprisal' which legitimated the capture of enemy ships by Dutch seamen. Privateers were expected to hand over a specified percentage of the booty to the prince. After his

<sup>17</sup> Parker, *Dutch Revolt*, p. 11. The Dutch pound was equal to the florin or guilder ('gulden'); this article uses the term 'florin' throughout.

<sup>18</sup> Parker, *Dutch Revolt*, pp. 108-10.

<sup>19</sup> *Ibid.*, p. 110, gives the daily wage of a soldier in 1568 as 3 or 4 'stuivers' (approx. 0.175 florin).

<sup>20</sup> Swart, *Willem van Oranje*, p. 33. A detailed list (running to 76 pages) of everything pawned by the prince was made in Jan. 1572 in an attempt to keep some of the paintings and carpets with Nassau insignia for the family at the auction: Brouwer Anchor, 'Lijsten van door prins Willem I verpande goederen'.

arrival in England the Prince of Orange attempted to form a fleet of privateers financed by Dutch Calvinist merchants in exile. It is not known how much money he raised, but the merchants withdrew their support as soon as it became clear that the pirates would not hesitate to hijack Dutch merchantmen as well. Privateering remained the means by which rebels at sea financed themselves in those early years.<sup>21</sup> Their first success was the capture of the city of Brielle in Holland on 1 April 1572.

Amounts for the war at sea produced by privateering were not insignificant, but were much lower than the sums required for the army. Between 1573 and 1576 privateers' booty provided 445,380 florins for the revolt, on average about 148,000 florins per year.<sup>22</sup> The province of Zeeland was more important than Holland as a base for naval warfare in the early years. In 1572 Zeeland started to issue permits of trade with the enemy, known as *licenten*, to finance war at sea. In 1573 the Prince of Orange sanctioned the introduction of the same tactic for Holland.<sup>23</sup> Between 1574 and 1577 the *licenten* yielded on average about 150,000 florins per year for both provinces.<sup>24</sup> The licent money was added to the 'convoy' money already levied to protect the merchant fleet. The two together developed into simple custom duties collected by the five admiralties of the Dutch Republic and were earmarked for naval expenditure. These funds are not discussed further in this article because they were not administered by the States of Holland, but by the admiralty boards which were responsible to the States General of the Republic.<sup>25</sup>

Besides the Prince of Orange, his brothers Louis and John of Nassau also invested heavily in the early stages of the Dutch Revolt.<sup>26</sup> A sum of about 300,000 florins is reported as their contribution between 1568 and 1573.<sup>27</sup> Queen Elizabeth I of England supported the revolt in 1572 with a subsidy of about 300,000 florins, but withdrew her support subsequently because of complaints by English merchants about the activities of the Dutch privateers. Apart from the English subsidy, an amount 'possibly as much as 200,000 florins' a month, according to Parker, was reaching Orange from France throughout 1573 and the early months of 1574.

<sup>21</sup> van Loo, 'Kaapvaart, handel en staatsbelang', p. 350.

<sup>22</sup> Enthoven, *Zeeland en de opkomst van de Republiek*, pp. 64, 401.

<sup>23</sup> Grapperhaus, *Convoyen en licenten*, p. 16.

<sup>24</sup> Enthoven, *Zeeland en de opkomst van de Republiek*, p. 400; 't Hart, *Making of a bourgeois state*, p. 101, gives a figure of 850,000 florins from licences alone in 1573. Her (secondary) source is doubtless mistaken. The surviving account of Holland's war treasurer, Valckestejn, to July 1574 gives an amount of 38,729 florins for 'licenten'; the account of Nicolaes van der Laen, Holland's receiver general, gives a figure of 103,323 florins, also to July 1574: Algemeen Rijksarchief ((General State Archive); hereafter ARA), inventory (hereafter inv.) nos. 20-2.

<sup>25</sup> In 1590 the revenue from 'convooien en licenten' at the five admiralties, which had by then become the customs of the Dutch Republic, was about 1 million florins, and in 1648 about 2.8 million: Becht, *Statistische gegevens*, tab. 1; Holland's tax revenue was about 3 million florins in 1590 and about 11.4 million in 1648.

<sup>26</sup> Swart reports that in 1575 William of Orange even offered his principality of Orange for sale to the Pope in an effort to secure funds for his army: Swart, *Willem van Oranje*, p. 59. No information is given as to whether or at what price the sale was effected.

<sup>27</sup> For more detailed information, see Glawischnig, *Niederlande*, p. 94. Parker, *Dutch Revolt*, p. 148 gives 0.6 million florins; according to Glawischnig the original amount was more than doubled by interest during the following decade.

This would give a total of 1.2 million florins for 1573, which is scarcely credible in light of the dire financial needs of Holland and the small size of the army under the command of the Prince of Orange at the time. An accompanying footnote casts doubt on the source and suggests a total from France of about 250,000 to 300,000 florins in all.<sup>28</sup> Parker may be right in positing that 'the contribution of the tiny county of Nassau to the Dutch cause may well have been worth more than the subsidies from France'.<sup>29</sup> Swart reports in his biography of William of Orange that France remitted 180,000 florins to Louis of Nassau in 1573 and makes no further mention of French subsidies in these early years.<sup>30</sup>

Perhaps the best testimony to the desperate financial need of Holland in 1573 is the fact that a decision was taken to devalue the currency in order to provide the government with funds. All coins were to be handed in to the mints, where they were marked in order to increase their token value by 15 per cent. Circulation of unmarked coinage was forbidden. Thus the States of Holland appropriated the 15 per cent 'surplus value' as a 'loan', which, however, was never paid. The measure probably yielded about 250,000 florins. In 1575, a similar decision was taken when 'leuwendaalders' were declared to have a value of 32 'stuivers' instead of the normal 29 'stuivers'. This measure is said to have yielded about 1 million florins from 1575 to 1579, when—for fear of damaging international trade—the practice was stopped, and never again introduced.<sup>31</sup>

The most important single source of funds for this stage of the revolt seems to have been 500,000 florins for which the Prince of Orange signed an acknowledgement of debt on 4 August 1572. This had enabled him to persuade his field marshal Ernst van Mandersloo and some other army officers to advance the money necessary to pay their troops. The amount was guaranteed explicitly by the States of Holland on the same date.<sup>32</sup> To Mandersloo alone the States of Holland issued a document acknowledging a debt of 185,016 florins on 19 December 1572.<sup>33</sup> The loans were used to finance the unsuccessful campaign led by the Prince of Orange to keep the city of Mons in Hainaut in Protestant hands. Interest rates were not mentioned.

As early as 1570 the Prince of Orange announced that those who supported him financially would be compensated by the sale of

<sup>28</sup> Parker, *Dutch Revolt*, p. 149, gives 0.1 million ecus. According to Posthumus, 1 ecu = 100 'grotten' and 1 'groot' = 0.025 florin, but the earliest rate mentioned was 125 'grotten' in 1619, and in 1648 the rate was 104 'grotten' per ecu: Posthumus, *History of prices*, I, pp. 583, 585, 590.

<sup>29</sup> Parker, *Dutch Revolt*, p. 298, n. 28.

<sup>30</sup> Swart, *Willem van Oranje*, p. 79; Glawischnig, *Niederlande*, p. 103, mentions a French promise of 0.27 million francs and a payment of 0.2 million francs (= 0.12 million florins) in Nov. 1573.

<sup>31</sup> Van Gelder, *De Nederlandse munten*, pp. 78-80, 83; I am obliged to drs. Arent Pol of the Royal Mint and Coin Cabinet in Leiden, who drew my attention to this book.

<sup>32</sup> Actually 142,320 'heerengulden' (elsewhere in the same source 144,000 'heerengulden'); 1 'heerengulden' = 1.30 florin.

<sup>33</sup> ARA Financie van Holland ((Finance Office of Holland; hereafter FH), inv. nos. 875-91. Tracy, ('Emigré and ecclesiastical property', p. 260), also mentions the 0.5 million florins 'to Mandersloo and his companions'; his source is ARA, Oldenbarnevelt, inv. no. 235. Mandersloo and his obligations are not mentioned by Parker.

ecclesiastical property in cities falling into his hands.<sup>34</sup> On 23 August 1572 an ordinance had been issued prohibiting the looting of Catholic churches and the houses of those loyal to the king of Spain.<sup>35</sup> Gold and silver chalices and other church treasures were sold in July 1572 by the States of Holland to finance payments to the prince's army,<sup>36</sup> but information is lacking as to the amounts realized in this way. In 1575 monastic property was sold, or given to the cities in Holland, as compensation for their financial sacrifices for the revolt.<sup>37</sup> High proportions of confiscated monastic property were, however, set aside as income for the newly established University of Leiden. Other monastic property was to be handed over to the nobility in Holland as endowments for unmarried daughters, who could no longer enter a convent. In the cities church property was to be used to secure an income for the newly appointed Calvinist ministers. The confiscated wealth of those who supported Spain and had fled Holland seems also to have been used to compensate the cities for loans to the States which could not be repaid from tax revenues.

Although the money borrowed from Mandersloo and the other army officers had clearly been intended as a short-term loan, or obligation (*obligatie*), Mandersloo's attorneys succeeded in 1579 in redeeming only about 10,000 florins from the States. They obtained promises that the rest of the sum would be repaid in four yearly instalments, which, again, were not forthcoming. After renewed pressure in 1583 they succeeded in forcing the States to redeem another part of the debt by handing over confiscated real estate belonging to supporters of the king of Spain.<sup>38</sup> In 1585 the Mandersloo family decided to accept an annuity of 6,240 florins as a settlement for 104,008 florins of still outstanding debt, which implies an interest rate of 6 per cent at a time when new obligations could only be sold at 12 per cent (see table 1). Repayment of the total amount to Mandersloo's heirs was only completed in 1599.<sup>39</sup>

The fact that a guarantee of the States was added to the signature of the prince may seem to show that the credit of the Dutch States played some role in the advances made by army commanders at the start of the revolt. Nevertheless, subsequent events showed how seriously the States disappointed one of their biggest creditors over many years. The same turned out to be true for the Nassau family. They also tried to recover money from the States of Holland. Repayment of 150,000 florins was made to them, but only in 1619 and only after they had promised that they would not trouble the States with further claims.<sup>40</sup> It is doubtful,

<sup>34</sup> Swart, *Willem van Oranje*, p. 44.

<sup>35</sup> Tracy, 'Emigré and ecclesiastical property', p. 255.

<sup>36</sup> Swart, *Willem van Oranje*, p. 44.

<sup>37</sup> *Ibid.*, p. 45.

<sup>38</sup> The estates of Vrijhoeven, Aarlanderveen, Oudshoorn, Gnephoek, and Rhijnburg, formerly belonging to Anna van Barnicourt Lathienloye, who had fled to Spain: ARA FH, inv. no. 884.

<sup>39</sup> ARA, FH, inv. no. 884; see also resolutie (resolution; hereafter res.) Staten van Holland (States of Holland; hereafter SH), 2 Nov. 1584.

<sup>40</sup> ARA, SH, inv. no. 1290, 'Remonstrantien en stukken betreffende de pretenties van het huis van Nassau wegens gelden gedurende de eerste jaren van de oorlog met Spanje voorgeschoten, 1608-1614, 1619'.

therefore, that the way in which Holland dealt with these old debts played an important role in a process by which the States of Holland were able to bring down the rate of interest for their unfunded *obligatiën*. How this was brought about will be examined in section IV. In any case, in the earliest stage of the Dutch Revolt finance seems to have been much more dependent on the eagerness of army leaders to participate in the war and the prince's promises of compensation from confiscated real estate than on the credit of Holland's States.

## II

In July 1572 the first 'free' assembly of the States of Holland was held in Dordrecht, which had recognized the Prince of Orange as its leader in the revolt. The assembly decided that to finance the war a sum of 45,000 florins per month would be levied on cities that supported the prince. Any attempt to reconstruct Holland's public finance since then is a hazardous undertaking because most of the accounts in the archives of Holland's Chamber of Audit were burned in 1725 due to a lack of storage space. In 1738, 13,000 lb. of Holland's financial archives were 'recycled' into *grauw papier* (dark wrapping paper).<sup>41</sup> Only some of the earliest copies of the accounts of Holland's receivers were spared. Many of the records which the tax collectors kept have also been destroyed.

Surprisingly, however, it has been possible to reconstruct plausible conjectures from scattered data from diverse contemporary sources by applying simple accounting procedures. The results are illustrated in figures 1 and 2 and given in full in tables A1 and A2. The tables show the years for which serial or incidental contemporary data have been preserved in contemporary sources, and these are listed in table A3. Details per year of the sources and the assumptions behind the italicized estimates and calculations in both tables will be published elsewhere.<sup>42</sup> For the reconstruction of the interest burden knowledge of interest rates as summarized in table 1 was imperative.

Figure 1 shows that the burden of interest payments grew noticeably only after 1600, and especially after 1621, at the end of the 'Twelve Year Truce' in the war against Spain. Given the high interest rates in the early decades of the Dutch Revolt, these data suggest that the part played by debt creation in financing the revolt must have been less than has been assumed. Figure 2 shows that from 1574 the 'common means' (*gemene middelen*; farmed taxes which consisted partly of excises) formed the most important part of revenues. These are discussed in more detail in section III. The 'real estate' tax (*verponding*) on land and housing was an important additional source of revenue. Loans were not significant

<sup>41</sup> ARA, FH and Rekenkamer ter Auditie (Accounting Chamber), typescript introductions to the inventories of Holland's accounting chamber and the Finance Office of Holland by J. Smit (1947).

<sup>42</sup> Fritschy and Liesker, *Gewestelijke financiën*. A spreadsheet specifying sources and procedures may be downloaded from the website of the Institute of Netherlands History ([www.inghist.nl](http://www.inghist.nl)). Volumes on public finance in the provinces of Overijssel, Drenthe, and Groningen have been published; volumes on Holland, Utrecht, and Friesland are in preparation.



Table 1. *Interest rates in Holland, 1569-1655 (%)*

	<i>Life annuities (lijfrenten)</i>		<i>(Heritable annuities (losrenten)</i>	<i>Obligations (obligaties)</i>	<i>Broker's commission</i>
	<i>one life</i> (1)	<i>two lives</i> (2)			
1569			6.25, 8.3		
1571			6.25		
1574				12	1
1575				30-40	
1576	16.7		8.3	20, 15 <sup>a</sup>	
1577	[12.5] <sup>b</sup>			18	
1578				10	
1579				12	1
1582-4				12	1
1585				10 <sup>c</sup> , 12	
1586					2
1590				12	1
1594			8.3		
1595	16.7	12.5	8.3		
1597				8	1
1598	14.3	11.1			
1599	16.7	12.5	8.3		
1601-4	14.3	11.1	8.3		
1605				8	1, 0.5
1606-7	14.3		7.1	7	0.5
1608	12.5	10	7.1		
1611			6.25 <sup>d</sup>		
1616-22	11.1		6.25	6.25	
1618					0.33
1623-35	11.1	9.1	6.25	6.25	
1629					0
1640			5	5 <sup>d</sup>	0
1647	11.1		5 <sup>d</sup>		0
1644					0.33
1652	9.1		5		0.33
1655			4 <sup>d</sup>	4 <sup>d</sup>	0.33

Notes: *a* in Delft

*b* forced conversion in Delft

*c* in Amsterdam

*d* voluntary conversion

Sources: ARA, res. SH, 27 June 1569; 30 June 1575; 14 April 1576; 7 May, 14 May, 15 June, 10 Aug. 1577; 22 Dec. 1578; 21 March 1579; 31 Jan., 26 Aug. 1586; 6 Nov. 1589; 25 July 1594; 5 May 1595; 7 March 1599; 28 Aug., 15 Sept. 1601; 3 Sept. 1603; 24 Feb. 1604; 7 June, 27 July 1605; 27 June, 8 July 1606; 11 April, 18 May 1607; 11 June 1608; 23 Feb., 5 May 1611; 11 April, 26 April 1616; 17 Aug. 1617; 3 May 1618; 20 Aug. 1620; 8 Sept. 1621; 22 April, 30 July 1622; 15 Sept. 1623; 22 March 1625; 7 April 1629; 20 May 1637; 28 April 1640; 7 Aug. 1655; ARA, FH 797, 'Memorie 1755', fo. 4r (1586); GAA, Thes. Extraord., inv. no. 81 (1585); van Dijk, 'De geldelijke druk' (1574, 1576a, 1577b); Tracy, 'Emigré and ecclesiastical property', p. 257 (1576, 1578, 1579); Dormans, *Het tekort*, pp. 26, 47 (1574, 1576, 1585, 1590, 1597, 1598, 1647, 1652)

before 1600. Until then, if more money was needed, the most important solution remained 'repartitions' across the cities as took place between 1572 and 1574. They often took the form of forced loans and are discussed in more detail in section IV.

Foreign loans and subsidies provided part of the funds for the Dutch Revolt up to 1610. They were, of course, part of the finances of the Republic as a whole. Since Holland had to pay at that time about 65 per cent of the war expenditure voted for in the States General, I have added 65 per cent from the subsidies to the figures for Holland to

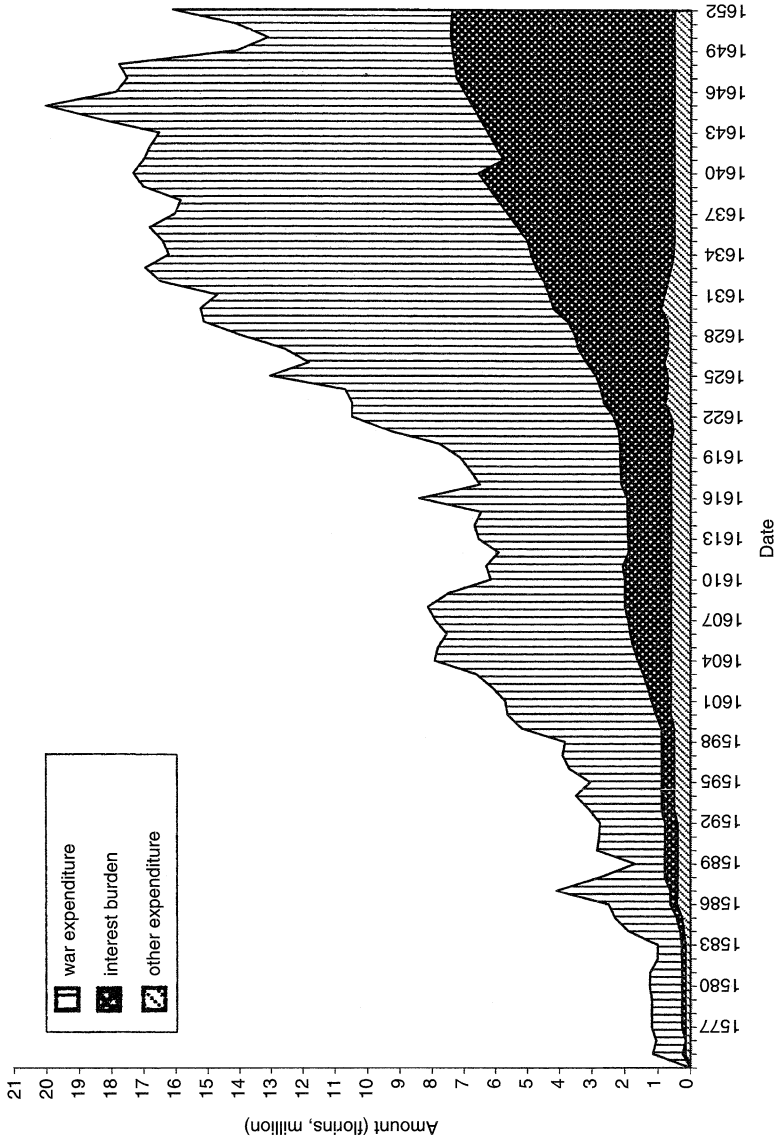


Figure 1. Reconstruction of Holland's public expenditure, 1574-1652  
Sources: tabs. A1, A2

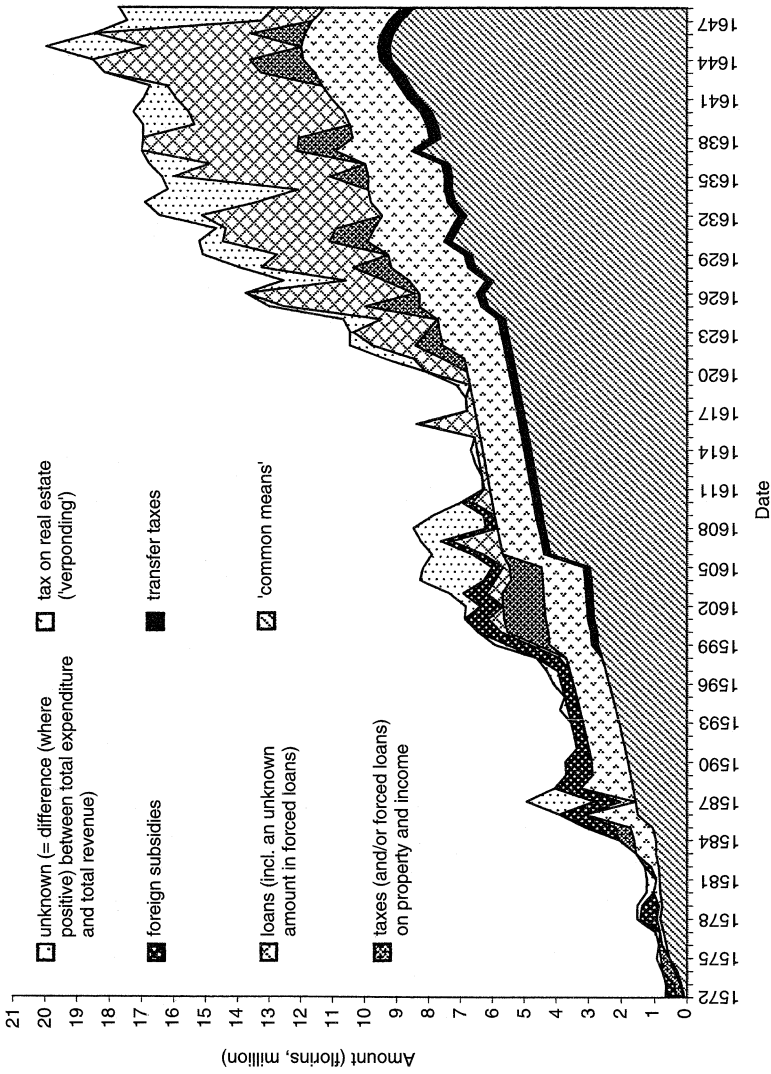


Figure 2. Reconstruction of Holland's public revenue, 1572-1648  
Sources: tabs. A1, A2

indicate their relative importance. Elizabeth I of England supplied the significant amount of about 1 million florins in 1578-9 and nearly 15 million florins in loans between 1585 and 1603, for which Vlissingen and two other port cities had to be given in pawn.<sup>43</sup> The rise in loans in the decade after 1603 shown in figure 2 was used mainly for repayment to England to redeem the cities.<sup>44</sup> Between 1598 and 1610, more than 10 million florins came from France to support the Dutch Revolt against the common enemy, Spain.<sup>45</sup> If a proportion of total customs revenue in the Dutch Republic had also been added to Holland's tax revenues these would have comprised about 18 per cent of the sum of the two in 1590 and about 13 per cent in 1648.<sup>46</sup>

Figure 2 includes Holland's total expenditure for those years in which expenditure exceeded income.<sup>47</sup> The figures for warfaring have been adjusted for amounts 'not paid' and 'overpaid' by Holland since 1585.<sup>48</sup> Thus the area between the two uppermost lines represents an estimate of what we do not yet know. This may have been additional revenue from land and house taxes (*verpondingen*), 'repartitions' over the cities, loans or subsidies, or expenditure not realized or unpaid debts.<sup>49</sup> Expenditure not realized is the most probable source after 1599, because lists of the number of extraordinary levies have been preserved since then and data on the interest burden and the composition of the debt preclude the possibility that much more was borrowed. However, even if the whole upper area of figure 2 in fact consisted of loans and unpaid debts, the conclusion would remain valid that the Dutch Revolt, especially in its early decades until about 1600, was financed mainly by a dramatic rise, not in borrowing, but in taxation.

### III

This section argues in more detail that the developments between 1572 and 1600 shown in figure 2 can be termed a 'tax revolution' and discusses

<sup>43</sup> Annual average, 1.2 million florins, 1585-90; 0.6 million florins, 1591-1603. See Parker, *Dutch Revolt*, p. 217; *idem*, 'Emergence of modern finance', p. 565; Van der Woude, 'De Staten, Leicester en Elizabeth', p. 71, n. 39; Shaw, *Manuscripts of De Lisle and Dudley*, p. xlv.

<sup>44</sup> Brielle, Vlissingen, and Rammekens, termed 'the cautionary towns' in de Jong, 'Dutch public finance', pp. 138, 144.

<sup>45</sup> An amount of 12,783,000 *livres tournois*: Buisseret, *Sully and central government*, pp. 82-3. Kernkamp, *Johan van der Veken*, p. 33, mentions an amount as high as 12,150,000 florins.

<sup>46</sup> See above, n. 25.

<sup>47</sup> There were also years in which income exceeded expenditure, either because payments were postponed or because actual expenditure exceeded that shown in tab. A1 (e.g. in the case of interest payments on short-term debt).

<sup>48</sup> ARA, archief Van der Hoop, inv. no. 93; for this reference I am obliged to John Stapleton, Univ. of Minnesota, who is preparing a doctoral dissertation on the Nine Years' War. For different figures for 1586-98, see Tracy, 'Keeping the wheels of war turning', p. 134. According to his source, Holland spent nothing at all on the war in 1587, which is difficult to credit; but, aside from that, the difference between our figures for this period is less than 2%.

<sup>49</sup> Tracy, 'Keeping the wheels of war turning', gives different estimates for the *verpondingen* calculated from the amount paid by Amsterdam. However, he assumed that the cities paid the same proportion of ordinary as of extraordinary *verpondingen*, although in the former case the figure was 22% and in the latter 50%. Hence, most of his estimates are too high.

the importance of these developments for understanding state formation in the Netherlands.

In the first two years of the revolt the States of Holland had had recourse only to the fiscal strength and credit of individual cities, as the revenues from the provincial excises introduced in the 1540s were very small until 1574.<sup>50</sup> In that year the Prince of Orange even suggested leaving all the details of tax policy to the discretion of individual cities. He hoped that 'by giving them a privilege they did not have before'<sup>51</sup> the cities might be the more willing to do their utmost to find the money for the war. Nevertheless the States preferred province-wide taxes levied on an equal footing, or 'common means', following precedents set during Habsburg rule since the 1540s. This was in fact one of the most important steps in the process of 'state' formation in the province of Holland in these years and illustrates the importance of strong participatory localities in successful state formation.<sup>52</sup>

It had not been an easy decision. In December 1572 the magistrates of Delft, at that time the most important and wealthy of the cities in revolt,<sup>53</sup> opposed the proposal for a massive expansion of taxes levied by the provincial government. In 1574 they felt forced to comply, although the new provincial taxation caused urban excise (levied mainly on beer) to decline considerably. The result was that payment of interest on urban annuities became almost impossible. In Delft new annuities were issued for accumulated arrears about four years later. There is no reason to suppose that the problem was very different in other cities.<sup>54</sup> Although the institutional foundations of the decision of 1574 had been laid in the 1540s, the scale on which the cities were now asked to submit to provincial taxation was unprecedented. (See table A2 and figure 3.)

There were further differences between the new provincial 'common means' of 1574 and those of the 1540s. First, as to function: the new taxes were not only used as a fund from which the interest on annuities could be paid but, more significantly, had to be spent directly on the war effort. Secondly, the number of commodities taxed was probably much larger than in the 1540s and 1550s: then only beer and wine (and sometimes peat) were taxed, but the list now included meat, milling of bread grains, woollen cloth, fish, soap, horned cattle (*hoornbeesten*) and

<sup>50</sup> ARA, Buys, inv. nos. 20-3; the accounts of Holland's receiver general Franchois van Valckesteijn give a figure of 66,268 florins for wine, beer, and peat in 1573: Tracy, 'Keeping the wheels of war turning', pp. 139, 147; ARA, FH 797, 'Memorie ... van het geene omtrent het stuk van de finatie van de provincie van Holland ... is voorgevallen ... 1755' (hereafter 'Memorie 1755'), fos. 16v-17v.

<sup>51</sup> ARA, FH 797, 'Memorie 1755', fos. 16v-17v, referring to a resolution of the States of Holland dated 13 Nov. 1574.

<sup>52</sup> Cf. Ertman, *Birth of the Leviathan*, p. 324.

<sup>53</sup> Delft contributed 11,200 of the 45,000 florins per month levied in 1572; Amsterdam did not enter the revolt before 1578.

<sup>54</sup> Van Dijk, 'De geldelijke druk'; according to 't Hart (pers. comm.), however, this effect was not observed in the city of Amsterdam after 1578.

land under cultivation, and was later widened further.<sup>55</sup> Thirdly, before 1572 the countryside had been taxed separately with a tax on land (*morgengeld*) instead of 'provincial' excises. After 1574 these duties were no longer restricted to the cities, but had to be paid in the countryside as well, and on exactly the same basis.<sup>56</sup> Consequently, it was only then that they became truly provincial.

Yet another difference was that the hugely increased receipts of the 'common means' no longer entered the coffers of Holland's receiver general, as had been the case before 1574; instead they went to 'district receivers' of the 'common means' in a number of different cities. These receivers were not appointed by the city governments. Neither did they get their instructions from the cities, nor were they allowed to inform their city government about what was going on in their offices.<sup>57</sup> They were appointed by the States of Holland, and obliged to send monthly reports to The Hague, the governmental heart of the province, while their accounts went to the provincial audit chamber.<sup>58</sup> The first receiver for Amsterdam and the surrounding area, Reinier van Neck, was not even a burgher of Amsterdam. Until 1578 he had been the receiver of the 'common means' for Dordrecht and its region. Later, admittedly, the practice was to ask city governments to report on candidates and to approve new appointments, and the receivers no doubt felt part of the local elite.<sup>59</sup> It should be noted, however, that the farming of all taxes of the 'common means', which had to be organized by each tax receiver for his own district, was always supervised by representatives from another city commissioned by the States Assembly. The purpose of the supervision was to prevent fraudulent practices serving local interests.<sup>60</sup> Only fiscal jurisdiction remained a local affair.

In their fiscal policy, therefore, the States of Holland showed their readiness not only to overcome established differences between cities and countryside,<sup>61</sup> but also to combat local 'particularism'. Despite the failure of the attempt of the provinces of Holland and Zeeland in 1579 to centralize the 'common means' as 'general means' for all the provinces at the national level, this 'centralization' was a remarkable success at the

<sup>55</sup> In fact, an increase in the number of taxes had already been decided on 19 June 1570, but obviously still at extremely modest rates: total revenue in 1571 was only 9,796 florins and in 1572 only 32,051 florins (ARA, FH, 'Memorie 1755', fo. 15r and v; ARA, Buys, inv. nos. 20-3, accounts of Holland's war treasurer Valckesteyn).

<sup>56</sup> ARA, FH 797, 'Memorie 1755', fos. 16v-17v.

<sup>57</sup> ARA, SH, inv. no. 1817, fo. 187, 'Naerder instructie voor de particuliere ontfangers van de gemeene middelen over Holland en Westfriesland' ('(Additional) instructions for the district receivers of the common means in Holland'), 25 May 1623, 22 Jan. 1650.

<sup>58</sup> ARA, res. SH, 28 May 1577; addressed, in fact, to the Audit Chamber of South Holland or of North Holland.

<sup>59</sup> This is evident, for instance, from ARA, SH, inv. no. 1796, fo. 225r: 'Register der politieke commissien van de Staten van Holland en Westvriesland, 1729-1736'.

<sup>60</sup> The commissioners were appointed regularly, at the meeting at which the decision had to be taken to farm out taxes: res. SH, 22 June 1575, p. 420; 19 Oct. 1575, p. 701; 12 March 1600, pp. 84-5; 11 July 1605, p. 170. ARA, FH, inv. no. 797, 'Memorie 1755', fo. 17r reports that this was done immediately from 1574 onwards. ARA, SH, inv. no. 655, Sept. 1699, shows that even then two commissioners from two different cities were appointed.

<sup>61</sup> Tracy, *Financial revolution*, p. 86.

provincial level. It counters the claim that the combination with a strong national centre is indispensable for successful state formation.<sup>62</sup> A federation of provinces was obviously a viable alternative if combined with a sufficient measure of fiscal centralization at the provincial level.<sup>63</sup>

The most important difference between the common means of 1574 and the 'novel expedients' of the 1540s and 1550s was, of course, that, in contrast to the latter, the introduction of truly provincial means in 1574 was accompanied by a dramatic rise in public revenue (see figure 3). This rise did not result from borrowing and therefore was obviously not a 'financial revolution' as defined by Tracy and by Dickson. It was rather a 'tax revolution'.

Of course the continuing increase in tax revenues was due not only to an expansion in the number and tariffs of the taxes, but also to population growth: from about 350,000 in 1544 to about 760,000 in 1648.<sup>64</sup> Nevertheless, the rise in revenue per head was also quite dramatic (see figure 3). Because most of the taxes were proportionate to weights instead of prices, little of the increase will have been due to price inflation. What happened to the tax burden during the revolt?

De Vries and Van der Woude have estimated the income of a day labourer who was fully employed and received wages sufficient to sustain a family of four.<sup>65</sup> In table 2 their estimates are refined by adding other years. These estimates are restricted to urban day-labourers, who will obviously not have contributed to taxes on horned cattle and land under cultivation or on wines, and who did not contribute to taxes on real estate and wealth either. Table 2 shows the rise in the tax burden for an urban day-labourer: from less than 5 per cent at the start of the revolt to a peak of nearly 16 per cent in 1630. The development of the tax burden for a typical member of the middle class, in this case a guild master, has been estimated in table 3. This shows that the average tax burden for someone from the middle classes must have been rising even more steeply: from about 6 per cent at the start of the revolt to a peak of perhaps almost 20 per cent in 1630. Tax developments turn out to have been 'revolutionary' especially during the first decades of the revolt, both as to the amount paid per head and also as a percentage of income earned.

Table 2 and table 3 show that, according to the estimates made by De Vries and Van der Woude, real incomes over these years increased for both categories until 1620, despite rising tax burdens.<sup>66</sup> This suggests that the revolutionary increase in taxation, though on the one hand the result of radical measures, was on the other hand also largely supported

<sup>62</sup> Epstein, *Freedom and growth*, p. 167.

<sup>63</sup> Cf. Van der Ent et al., 'Public finance in the Netherlands', pp. 291-2.

<sup>64</sup> More or less reliable estimates are available only for 1514 (275,000 florins), 1622 (672,000 florins), and c.1680 (883,000 florins).

<sup>65</sup> De Vries and Van der Woude, *First modern economy*, p. 104, tab. 4.6.

<sup>66</sup> Van Zanden, 'Revolt of the early modernists', does 'not find strong evidence for an increase in real wages during the golden age of the first half of the seventeenth century' (pp. 628-30). If this applies also to the first two decades of the century alone, it still reinforces my argument that the increase in taxation was dramatic.

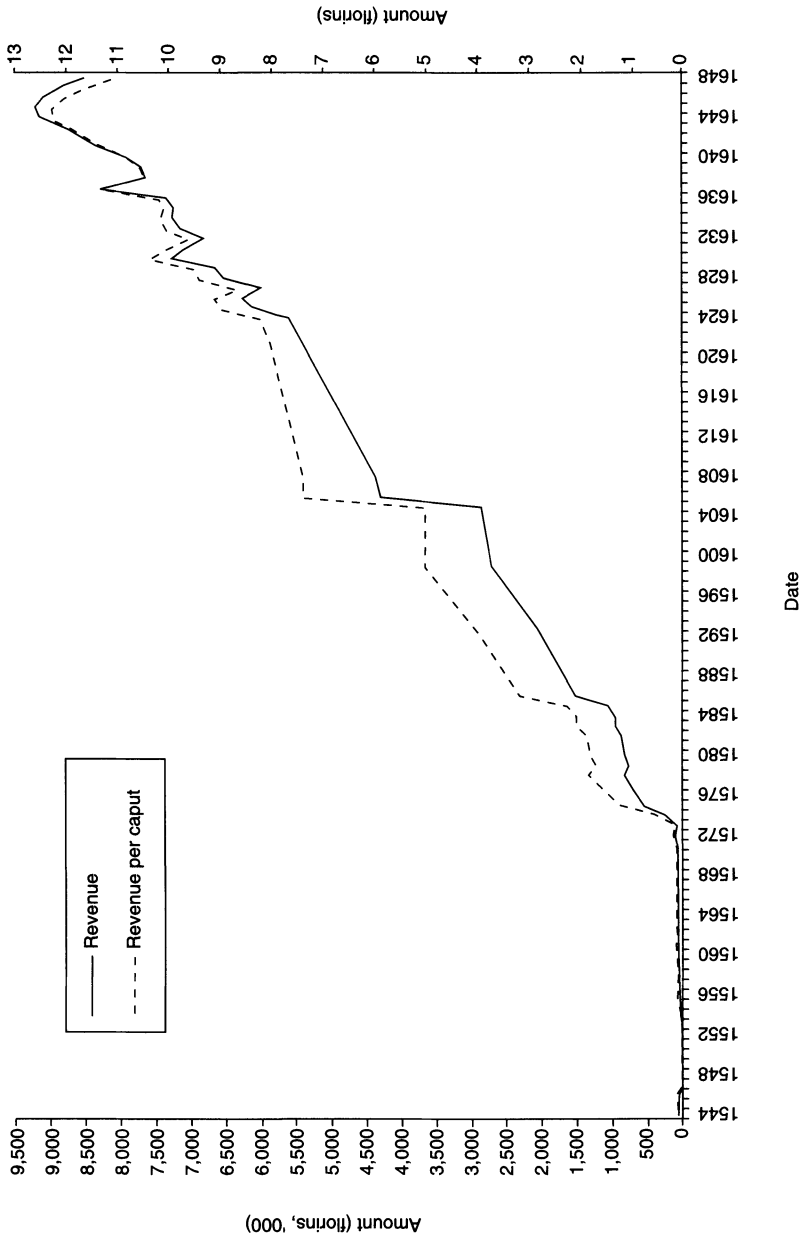


Figure 3. Revenue, and revenue per caput, generated by common means in Holland, 1544-1648

Note: The left-hand scale relates to revenue, the right-hand scale to revenue per caput. Figures for 1567-74, 1576-7, 1587-98, 1600-7, and 1609-23 are author's estimates.

Sources: tab. A3



Table 2. Tax burden on income of urban day-labourer in Holland, 1574-1648

	Total revenue (‘common means’ p.a. (florins)	% of col. (1) levied exclusively on more-well-to-do and farmers	Population <sup>a</sup>	Tax per head after deduction of taxes on well-to-do and farmers (florins)	Average nominal daily wage (florins)	No. of working days p.a.	Nominal yearly wage (florins)	Tax burden from provincial taxes (%) <sup>b</sup>	Index of real wages (1610=100)	Index of real wages before taxation (1610=100)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1514			275,000		0.20	265	53		105	
1575	540,000	>14	430,562	1.07	0.30	300	90	4.7	70	65
1580	817,617	15	450,305	1.58	0.35	300	105	6.0	75	71
1586	1,498,424	>15								
1590	1,797,180	15	491,925	3.18	0.50	300	150	8.5	90	87
1599	2,700,000									
1600	2,725,650	15	542,316	4.27	0.65	300	195	8.8	85	83
1610	4,484,367	14	597,869	6.45	0.70	307	215	12.0	100	100
1620	5,255,792	14	659,113	6.86	0.70	307	215	12.8	108	109
1622			672,000							
1624	5,591,169									
1630	7,266,361	13	697,687	9.06	0.75	307	230	15.7	85	88
1640	7,886,634	13	731,180	9.38	0.95	307	292	12.9	100	101
1650	8,404,529	13	766,282	9.54	0.95	307	292	13.1	95	96
1680			883,000							

Notes: italic: author's estimates

<sup>a</sup> estimated yearly growth (interpolated) 1514-84: 0.75%; 1585-1620: 0.99%; 1621-80: 0.47%

<sup>b</sup> assuming that labourer is employed throughout the year and that one wage feeds four people

Sources: cols. (1) and (2): Fritschy and Liesker, *Geestelijke financiën*; database accessible on [www.inghist.nl](http://www.inghist.nl)

col. (3): De Vries and Van der Woude, *First modern economy*, tab. 3.2

col. (4): col. (1) × (100 - col. (2)); col. (3)

col. (5): De Vries and Van der Woude, *First modern economy*, graph 12.1

col. (6): *ibid.*, p. 709

col. (7): col. (5) × col. (6)

col. (8): 4 × col. (4); col. (7)

col. (9): De Vries and Van der Woude, *First modern economy*, p. 720

col. (10): [col. (9) + col. (8) × col. (9)]: 1.12

Table 3. Tax burden on middle class income (guild master) in Holland, 1574-1648

	Total tax revenue (florins)		Population <sup>b</sup> (3)	Total tax revenue per head (florins)		Nominal daily wage (florins)	No. of working days p. a. (7)	Nominal yearly wage (florins) (8)	Tax burden from provincial taxes (%) <sup>c</sup>		Index of real wages before taxation (1610=100) (12)
	(min.) (1)	(max.) <sup>a</sup> (2)		(min.) (4)	(max.) (5)				(low) (9)	(high) (10)	
1514											
1575	800,000	1,133,842	275,000				265	150	5.0	7.0	71
1580	1,017,617	1,310,000	430,562	1.86	2.63	0.50	300	195	4.6	6.0	72
1586	2,097,764	2,170,831	473,105	4.59	4.43	0.70	300	210	8.7	8.4	
1590	2,397,180	2,365,450	491,925	4.87	4.81	0.80	300	240	8.1	8.0	86
1599	4,400,000	4,810,331	537,053	8.19	8.96	0.90	300	270	12.1	13.3	
1600	4,625,650	4,788,012	542,316	8.53	8.83	0.90	300	270	12.6	13.1	90
1610	6,004,367	6,070,884	597,869	10.04	10.15	1.00	307	307	13.1	13.2	100
1620	6,775,792	7,451,852	660,462	10.26	11.28	1.05	307	322	12.7	14.0	101
1621	7,788,779	7,788,779	665,572	11.70	11.70	1.05	307	322	14.5	14.5	
1622	8,133,268	8,133,268	672,000	12.10	12.10	1.10	307	338	14.3	14.3	
1630	10,034,779	12,169,572	697,687	14.38	17.44	1.15	307	353	16.3	19.8	88
1640	10,650,774	12,820,882	731,180	14.57	17.53	1.20	307	368	15.8	19.0	98
1650	11,248,414	12,707,692	766,282	14.68	16.58	1.25	307	384	15.3	17.3	88
1680			883,000								

Notes: Italic: author's estimates or partly resulting from author's estimates

<sup>a</sup> total expenditure minus (estimated) loans

<sup>b</sup> estimated yearly growth (interpolated) 1514-84: 0.75%; 1585-1620: 0.99%; 1621-80: 0.47%  
<sup>c</sup> assuming that guild master is employed throughout the year and that one wage feeds four people

Sources: cols. (1) and (2): Fritschy and Liesker, *Geestelijke financiën*; database accessible on [www.inghist.nl](http://www.inghist.nl)

col. (3): De Vries and Van der Woude, *First modern economy*, tab. 3.2

col. (4): col. (1): col. (3)

col. (5): col. (2): col. (3)

col. 6: De Vries and Van der Woude, *First modern economy*, p. 705

col. (7): *ibid.*, p. 709

col. (8): col. (6) × col. (7)

col. (9): 4 × col. (4): col. (8)

col. (10): 4 × col. (5): col. (8)

col. (11): De Vries and Van der Woude, *First modern economy*, graph 12.7.1

col. (12): [col. (11) + col. (10) × col. (11)]: 1.13

by a burgeoning economy. It is only after the end of the twelve-year truce (1609-21) that rising tax burdens seem to have affected the real incomes of both categories, and especially those of the middle classes.

#### IV

Two questions remain. First, what happened to Dutch credit in the period between 1572 and 1600? And secondly, was the 'dramatic rise' in public borrowing in Holland after 1600 caused by a development similar to Tracy's 'financial revolution' in the 1540s or to Dickson's in 1688-1756? The first question is considered next.

For many years after 1572 no sales of provincial annuities (*renten*) on the free market occurred, although Holland soon began to attempt to restore its creditworthiness. Between 1572 and 1575 there had been a moratorium on interest payments. In 1575 tax receivers were instructed to pay one year of interest 'if possible'. In 1577 interest arrears were added to the debt and further arrears accumulated subsequently. In January 1586, however, Holland's receiver general was instructed to pay all interest arrears up to 1583. In November 1586 he had to pay the interest for 1584.<sup>67</sup> When tax revenues were insufficient the only solution was 'repartitions', either across the cities or across the provincial receivers, and sometimes in exchange for 'obligations' at high interest rates.

Was credit still an important component of the way in which cities provided for their part in the 'repartitions' and their defence? Detailed information is available for the important city of Delft. Delft had to spend more than 200,000 florins 'for the common interest' between 1572 and 1576 above what could be paid from provincial and standard urban taxation. The amounts were accurately administered in separate accounts.<sup>68</sup> One-third consisted of levies for which no reimbursement was promised. Two-thirds had been collected from the burghers as forced loans in exchange for which city annuities were sometimes issued. On the forced loan of 42,000 florins which made up Delft's contribution to the 120,000 florins voted by the States in 1573 for the relief of the besieged city of Leiden an interest rate of 12 per cent was promised. Only one loan was reimbursed from the sale of émigré property, which had yielded nearly 22,000 florins. In 1576 when Delft tried to get a short-term loan on the free market at 15 per cent interest, this yielded not much more than 8,000 florins and a forced loan had to follow.<sup>69</sup> It is not very likely that 'repartitions' could be paid from the sale of urban *renten* on the free market anywhere, as urban interest payments probably came to a halt in all cities as they did in Delft. Recent research has shown that in Amsterdam also the sale of *renten* on the free market

<sup>67</sup> Houtzager, *Hollands lijf- en losrentelingen*, pp. 45-51; on p. 51, Houtzager also mentions that until 1598 Holland's public debt was 'still small'.

<sup>68</sup> This was also the case in the city of Haarlem, which was repaid about 200,000 florins afterwards: information kindly supplied by dr M. P. C. van der Heyden, who is researching urban public finance in Haarlem, Dordrecht, and Zwolle between 1500 and 1700.

<sup>69</sup> Van Dijk, 'De geldelijke druk', pp. 178-85.

dropped steeply after the city at last entered the revolt in 1578 and that credit started to recover only after 1585.<sup>70</sup>

In August 1586 the States of Holland allowed the cities the 'repartition' of an amount of 100,000 florins by means of the sale of annuities on the free market, either on their own credit or on that of the province. Amsterdam and Delft still preferred the first option, although Delft asked permission from the States to raise the requested amount 'by apportionment over its burghers' in case the loan failed. In 1587 Holland decided to recognize city debt as provincial debt and from 1588 an amount of 1.5 million florins of what had been city debt was serviced by provincial taxation.<sup>71</sup> In July 1594 the States decided that *renten* for the common interest would again be sold on the credit of the province of Holland and no longer on that of the individual cities. The first public sale of provincial annuities since 1568 was announced, when the Duke of Alva permitted the States of Holland to sell 150,000 florins in *renten* at 8.3 per cent. It is not known whether this was successful, but as late as September 1598 the States were forced to conclude that it was very difficult to raise by way of 8.3 per cent *renten* the sum of 200,000 florins agreed upon in December 1597. They still felt forced to allow part of the sum to be negotiated in 'obligations' at 12 per cent by their tax receivers, if this turned out to be necessary.<sup>72</sup>

It should be emphasized that in this period the word 'obligation' was still used in a very general sense for any kind of short-term debt paper (or at least any intended to be short term). Confusingly, in the eighteenth century the *Hollandse obligatie* would become the term used for what was by far the most widespread form of Dutch long-term debt paper. Antwerp had been the main source for this form of short-term credit in the first decades of the sixteenth century. After the start of the revolt Holland's tax receivers were gradually able to persuade people in their own cities to accept short-term interest-bearing 'obligations'. But the debt paper granted in the case of forced loans was also called an *obligatie*.<sup>73</sup>

Obligation loans could be 'repartitioned' either across the provincial receivers or across the cities. One of the few extant accounts of Holland's receiver general, covering the years 1581-3, mentions that it was 'deemed necessary to raise on interest [i.e. by means of obligations] an amount of 35,000 florins', which 'had to be produced by the receivers of the common means each in proportion to the amount of his receipt'.<sup>74</sup> Evidently this loan was hypothecated on their tax receipts. They received a broker's commission of 1 per cent for their efforts to have these short-term loans placed and administrated. Although 'repartitions' across the receivers of the 'common means' would become common in Holland in

<sup>70</sup> Van den Burg and 't Hart, 'Renteniers and recovery'.

<sup>71</sup> Tracy, 'Keeping the wheels of war turning', tab. II, col. D.

<sup>72</sup> Houtzager, *Hollands lijf- en losrenteleningen*, p. 124.

<sup>73</sup> The 'capital imposition' of 1599, for instance, was to be paid by all those with property worth more than 3,000 florins; they were promised 'by means of an obligation ("obligatie") that the money would be reimbursed to them or their heirs' (ARA, FH, 'Memorie 1755'), fo. 20r.

<sup>74</sup> ARA, Rekenkamer ter Auditie (Auditing Chamber), inv. no. 352.

the seventeenth century, it is probable that repartitions across the cities were initially more substantial. For the years 1584-5, for instance, an amount of no less than 900,000 florins 'raised on interest by the cities' is mentioned.<sup>75</sup>

In the accounts of the 'extraordinary treasurers' in Amsterdam there are recorded short-term loans (of three to 12 months) by burghers to the city, and also by the city to the States of Holland.<sup>76</sup> In 1585 nearly 70 per cent of the expenditure of almost 275,000 florins consisted of short-term loans to the States, and more than 50 per cent of their revenue consisted of repayments by Holland of former loans plus interest. The States had to pay interest of 12 per cent plus a broker's commission of 1 per cent to anticipate what the city had to pay in any case for its 'quota' in the 'repartitions' or in the real estate tax. As the loans from the burghers to the city were not only often at a lower rate of interest, but were also much smaller in amount, these 'anticipations' seem to have enabled cities to recover a considerable part of what they had to pay. Arrogant Amsterdam<sup>77</sup> had had to submit to the provincial 'common means' like the other cities, when it had entered the revolt in 1578, but the 'repartitions over the cities' obviously gave city governments an opportunity to give rein to particularistic tendencies to serve local interests first. No wonder the States preferred a restoration of provincial credit to a continuation of this dependency on individual cities. Increasingly Holland seems also to have been able to use the alternative of loans repartitioned across the receivers of the common means. As in the case of the repartitions across the cities, these could be either loans on the free market or forced loans according to wealth. In the latter case the receivers were again dependent on city magistrates in some measure, because they had to draw up the ledgers.

What exactly caused the restoration of provincial public credit to come about? Of course, the concerted attempts by the States to regain credit were important. Probably more important, however, was the fact that it cannot have been a secret at the time that the provincial tax receivers obtained continuously growing amounts from the 'common means' (see table A2). Although loans were incidentally hypothecated on specific taxes they were generally financed by the total receipt of the provincial receivers. As the 'common means' were publicly farmed out three times per year, it cannot have been difficult for potential buyers to perceive that the risk that these receivers would not be able to pay the interest on short-term loans became increasingly small. The core of the Dutch 'financial revolution' around 1600 must have been, however, that holders of obligations increasingly attached importance to interest payments only, and decreasingly to redemption.

That this must have been the case can be deduced from information

<sup>75</sup> ARA, Oldenbarnevelt, inv. no. 99B: summary of expenditure and revenue, 1577-87.

<sup>76</sup> Gemeente Archief (Municipal Archive) Amsterdam, Extraordinary Treasurers' accounts, inv. no. 81.

<sup>77</sup> This qualification is made also in Van den Burg and 't Hart, 'Renteniers and recovery'.

Table 4. *Composition of interest payments by Holland's provincial tax receivers, 1586-1794*

Date	Total interest paid (florins)	% of total			
		on heritable annuities	on life annuities	on urban annuities	on obligations
1586	>228,000	<13 (±30,000)	<39 (±90,000)		>47
1588	±362,500?	8?	25?	34? (124,500)	33?
1604	±1,000,000				
1609	±1,400,000				
1618	±1,500,000?	6 (86,265)	11 (169,781)	8? (124,500?)	75?
1620	1,550,622				
1632	3,930,061		25		
1651	6,894,557				
1651					
North Holland	1,206,415				
Provincial receiver in Amsterdam	828,800	2	12	—	86
Holland's general receiver	2,243,576	18	10	20	52
Other provincial receivers	2,615,766	37	14	—	49
				on other annuities	
South Holland					
1651	5,688,142	26	14	—	60
1701	6,655,745	22	11	—	67
1750	12,539,684	12	9	15	64
1794	15,163,552	10	2	19	69

Sources: 1586: Koopmans, *De Staten van Holland*, pp. 288-91; ARA, Oldenbarnevelt, inv. no. 99B, 'Estat sommier', fo. 4r. 1588: Tracy, 'Keeping the wheels of war turning', p. 143; Houtzager, *Hollands lijf- en losrenteleningen*, p. 123. 1604: ARA, FH, 'Memorie 1755', fo. 19v. 1609: Dormans, *Het tekort*, p. 64. 1618: ARA, FH, inv. no. 852, 'Staet van alle de los ende lijfrenten'. 1620: Dormans, *Het tekort*, p. 46. 1632: 'Opreeckeninge', in Houtzager, *Hollands lijf- en losrenteleningen*, pp. 39-41. 1651: ARA, Van der Hoop, inv. no. 24, 'Staet van het incomen ende lasten vande naervolgende Comptoiren'. 1701, 1750, 1794: database; Dormans, *Het tekort*, pp. 81, 111 (amounts before taxation)

on developments in the composition of the Dutch debt as summarized in table 4. Although the sale of annuities had been resumed after 1600 a considerable part of Holland's debt continued to consist of obligations.

Unfortunately, detailed information is available only for 1651. During the early years of the seventeenth century Holland's government is known to have been concerned about the growing amount of obligations issued and still outstanding. After the signing of the Twelve-Year Truce in 1609 the States decided that a massive conversion of 7.1 per cent obligations to 6.25 per cent *renten* was desirable. They urged the tax receivers, at whose offices the interest to holders of obligations and *renten* was paid, to do their utmost to make the conversion a success.<sup>78</sup> In a letter of 3 October 1609 the receivers were told to warn holders accepting the interest rate reduction, but not the conversion to annuities, that the government intended to prolong obligations for no longer than six months

<sup>78</sup> Houtzager, *Hollands lijf- en losrenteleningen*, p. 132.

thereafter. The holdings of those who would not accept the interest rate reduction would have to be redeemed immediately.

From a survey of annuities made in 1618 we know that an amount of only 982,955 florins 'formerly raised on obligations' had been converted into annuities as a result of this resolution of 1609, although the reduction in the interest rate had been accepted generally.<sup>79</sup> Table 4 suggests that the total interest burden on Holland's annuities in 1609 was about 0.4 million florins. The interest burden on obligations may therefore have been about 1 million florins.<sup>80</sup> At an interest rate of 7.1 per cent this would point to a debt burden in obligations of more than 14 million florins. Apparently the conversion had for the most part been a failure. Holders obviously did not want to part with their obligations in exchange for long-term annuities, even if they were ready to accept the interest rate reduction. The government had to resign itself to the fact that holders were more interested in the indefinite extension of obligations. In this way what had originally been short-term obligations changed imperceptibly into a long-term debt.

The way in which Holland's debt expanded after 1600 is therefore different from the developments in the 1540s and from those in England between 1688 and 1756. For Tracy the shift from 'obligations' to *renten* was a crucial element in his 'financial revolution'. A central element of the English 'financial revolution' had been the awareness on the part of the government (Godolphin) that the amounts in short-term 'tallies' should not become too large in relation to long-term annuities.<sup>81</sup> After the disaster of the South Sea Company in the 1720s the ingenuity of the English system lay in the dependence of government on the Bank of England (founded in 1694) for short-term credit in the form of Exchequer Bills. The Bank also became the government's cashier and its broker for long-term debt, but remained independent and was trusted by the merchants in the City.

What was the ingenuity of the Dutch system, where a decentralized network of tax receivers fulfilled the function of government cashier and broker for loans? One element was, of course, that the broker's commission was a stimulus for the receivers to make the loans a success. A second element was that the obligation loans were apportioned across the receivers more or less in proportion to the amounts they received in the 'common means'. A third element was the fact that the receivers were automatically 'discharged' for interest payments, while other pay-

<sup>79</sup> ARA, FH, inv. no. 852, 'Staet van alle de los- ende lijfrenten mitsgaders van de interessen met welke die provincie van Hollandt ende Westvrieslandt [...] bevonden is belast te sijn, begrepen in seven registers'; 5th list 'van penningen int eerst op Interesse gelicht sijn ende anno 1609 geconverteert in los- ende lijfrenten'.

<sup>80</sup> Tracy, 'Keeping the wheels of war turning', p. 147, n. 32, and p. 143, assumes a capital sum in annuities of nearly 17 million florins in 1616 because he interprets an amount of 1,204,906 florins in 'losrenten geconstitueerd sedert den Jare 1578' as the interest paid on *renten* by the receiver general; this was actually the capital sum charged to this receiver. Houtzager, *Hollands lijfen losrentelingen*, p. 53, mentions that in 1609 the debt raised in interest-bearing obligations (from an unspecified start-date) was 4,356,000 florins and that in 1618 the amount was 5,276,159 florins.

<sup>81</sup> Dickson, *Financial revolution*, pp. 342, 348, 358, 360.

ments were allowed only on written 'ordnances' issued by the States. This enabled them always to grant first priority to interest payments. However, these elements explain only why obligations were acceptable and not why they were preferred.

The resolution of 1609 suggests reasons for this preference for obligations in Holland. The resolution allowed receivers to promise those holders of obligations who were willing to cooperate that they would not have to pay the usual transfer tax the first time they might want to sell their new annuities. Since 22 December 1598 a transfer tax had applied to heritable and life annuities when the name of the annuity holder was changed.<sup>82</sup> Aside from the term, a further important difference between annuities and obligations was that obligations were often made out to the bearer and could be transferred tax-free. An important reason for the attempts of the States of Holland to convert obligations to *renten* must therefore have been that obligations were exempt from tax. As late as 21 December 1650 and 5 July 1657 the States tried once more to subject obligations to the transfer tax by making ascription obligatory. On both occasions the resolution collapsed due to the opposition of the tax receivers, who would have had to implement it, and who not only cherished their broker's commission but also knew their clientele.<sup>83</sup>

As the exemption from the transfer tax for the first transfer does not seem to have been sufficient to overcome the reluctance of obligation holders, it is clear that they attached importance to a continuing easy tax-free transferability of obligations. An explanation for this might be a demand for a temporary store of value in the form of interest-bearing paper. Some years ago Mathias drew attention to the fact that access to cash was a key to survival in the early modern commercial world. The holding of cash then involved both security risks and commercial costs and the supreme asset of the public debt was that it was readily marketable.<sup>84</sup> It seems plausible that the growth of the money supply did not keep pace with the very rapid growth of population and of the economy in Holland at the time. Interest-bearing obligations could fulfil a useful function in trade by keeping in circulation coins that would otherwise have been kept in coffers for liquidity purposes.<sup>85</sup> The plausibility of this explanation is confirmed by the fact that the preference for obligations over annuities was especially strong in Amsterdam (see table 4).

Institutional characteristics on the demand side as analysed by Tracy were no doubt important for the restoration of Holland's credit after about 1600. The format of debt financing at that time—in other words, the character of the Dutch financial revolution after about 1600—was obviously more determined, however, by conditions and wishes on the

<sup>82</sup> *Groot Placaet Boek Holland*, I (The Hague, 1658), fo. 1953.

<sup>83</sup> In 1606 the brokers' commission was reduced from 1% to  $\frac{1}{2}$ % and in 1618 to  $\frac{1}{3}$ %; in 1629 it was abolished, but in 1644 the commission of  $\frac{1}{3}$ % was re-introduced and this was still the rate in 1764: J. Smit, 'De ontvangers-particulier der gemenelandsmiddelen' (MS. kept in ARA).

<sup>84</sup> Mathias, 'Strategies for reducing risk', p. 8.

<sup>85</sup> Pinto, *Traité de la circulation*, pp. 44-9, reports that obligations fulfilled this function in the eighteenth century.



supply side of the market. Holland's 'post-revolt' public credit and the Amsterdam stock market were apparently born around 1600 as Siamese twins!

## V

The most important source of finance not only in the first decades, but also throughout the entire 80 years of the Dutch Revolt, was taxation. Although the introduction of provincial excises in Holland in the 1540s and 1550s had been an important institutional revolution, its effect became financially significant especially through the huge expansion after 1574. In fact the new 'common means' became truly provincial, being levied in the non-urban areas also, only after 1574. In the 1540s and 1550s these taxes had still been restricted to the cities. The 'financial revolution' of the 1540s and 1550s turned out to have been in fact mainly the first step in a 'tax' revolution. A really dramatic rise in revenues, as presupposed by the term 'financial revolution', started only after 1574, and the information in tables A1 and A2 leaves no doubt that until about 1600 the dramatic part of this rise was not in public borrowing, but in taxation. This was true not only as regards its total amount, but also per head and as a percentage of revenue per head.

A market for provincial *renten* did not exist in the first decades of the Dutch Revolt. A compelling motive for the Prince of Orange and his brothers to invest heavily in the revolt must have been the wish to recover their family's most valuable assets, its domains in the Netherlands.<sup>86</sup> Commanders-in-chief likewise invested in the Dutch Revolt expecting in return to be endowed with real estate. Until the end of the sixteenth century, foreign subsidies and foreign loans were more important than the domestic capital market as a source of finance for the army. In the meantime the total amount in (originally short-term) obligations increased in comparison with the amount outstanding in annuities, partly (perhaps mainly) as the result of forced loans.

Although the States' attempts to restore and maintain creditworthiness were relevant in explaining the rise in loan finance since the beginning of the seventeenth century, the widening of the tax base as a result of population expansion and economic growth, in combination with better prospects for the revolt, may have been at least as decisive in the decline of the interest rate since 1606. As the income of the provincial receivers grew, the dependence of the province on the credit of the individual cities decreased. A vigorous attempt by the States to convert all obligations to *renten* in 1609 proved a failure. In the early as well as the later years of the Dutch Revolt, conditions on the supply side seem to have been more important for the availability of loans than institutional characteristics on the demand side.

In England a financial revolution had greatly enhanced the credit of the government by enabling it to limit the amount of short-term debt

<sup>86</sup> Swart, *William the Silent*.

through the Bank of England, but in the Dutch Republic we witness the peculiar phenomenon of a financial revolution built on an ever-expanding short-term debt. Merchants in Holland were obviously more interested in the availability of an easily transferable interest-bearing paper than in formal long-term investments in the form of annuities, the transfer of which was subject to taxation. On the one hand, the 'loan component' of Holland's financial revolution materialized only after 1600. On the other hand, it was built on obligations rather than on *renten*, and on merchants rather than on *rentiers*.

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## APPENDIX

Table A1. *Reconstruction of Holland's public expenditure, 1575-1652 (florins)*

<i>Year</i>	<i>War expenditure</i>	<i>Interest burden</i>	<i>Other expenditure</i>	<i>Total expenditure</i>
1575	889,800	<b>94,042</b>	150,000	1,133,842
1576	900,000		150,000	1,050,000
1577	900,000	117,553	150,000	1,167,553
1578	900,000	117,553	150,000	1,167,553
1579	900,000	117,553	150,000	1,167,553
1580	<b>960,000</b>	117,553	150,000	1,227,553
1581	<b>947,133</b>	117,553	150,000	1,214,686
1582	<b>726,282</b>	117,553	150,000	993,835
1583	<b>733,146</b>	121,753	150,000	1,004,899
1584	<b>1,561,810</b>	121,753	200,000	1,883,563
1585	<b>1,866,822</b>	175,753	<b>250,000</b>	2,292,575
1586	<b>1,863,739</b>	<b>214,753</b>	<b>412,728</b>	2,491,220
1587	<b>3,490,956</b>	214,753	400,000	4,105,709
1588	<b>1,944,141</b>	393,253	400,000	2,737,394
1589	<b>890,504</b>	392,853	400,000	1,683,357
1590	<b>2,048,531</b>	392,453	400,000	2,840,984
1591	<b>1,992,497</b>	392,053	400,000	2,784,550
1592	<b>1,963,984</b>	391,653	400,000	2,755,637
1593	<b>2,195,719</b>	391,253	500,000	3,086,972
1594	<b>2,605,852</b>	390,853	500,000	3,496,705
1595	<b>2,167,610</b>	390,453	500,000	3,058,063
1596	<b>2,810,299</b>	390,053	500,000	3,700,352
1597	<b>3,018,830</b>	389,653	500,000	3,908,483
1598	<b>2,939,941</b>	389,253	500,000	3,829,194
1599	<b>4,285,079</b>	<b>400,000</b>	500,000	5,185,079
1600	<b>4,572,792</b>	454,600	600,000	5,627,392
1601	<b>4,520,614</b>	575,200	600,000	5,695,814
1602	<b>4,803,463</b>	694,100	600,000	6,097,563

Table A1. *Continued*

Year	War expenditure	Interest burden	Other expenditure	Total expenditure
1603	<i>5,184,947</i>	<i>833,100</i>	<i>600,000</i>	<i>6,618,047</i>
1604	<i>6,312,741</i>	<b>1,000,000</b>	<b>600,000</b>	<i>7,912,741</i>
1605	<i>6,070,428</i>	<i>1,136,500</i>	<i>600,000</i>	<i>7,806,928</i>
1606	<i>5,700,335</i>	<i>1,236,100</i>	<i>600,000</i>	<i>7,536,435</i>
1607	<i>5,992,860</i>	<i>1,293,100</i>	<i>600,000</i>	<i>7,885,960</i>
1608	<i>6,116,957</i>	<i>1,399,600</i>	<i>600,000</i>	<i>8,116,557</i>
1609	<i>5,486,796</i>	<b>1,400,000</b>	<b>600,000</b>	<i>7,486,796</i>
1610	<i>4,153,012</i>	<i>1,400,000</i>	<i>600,000</i>	<i>6,153,012</i>
1611	<i>4,230,039</i>	<i>1,465,625</i>	<i>600,000</i>	<i>6,295,664</i>
1612	<i>4,026,523</i>	<i>1,286,375</i>	<i>600,000</i>	<i>5,912,898</i>
1613	<i>4,644,245</i>	<i>1,297,125</i>	<i>600,000</i>	<i>6,541,370</i>
1614	<i>4,762,272</i>	<i>1,307,875</i>	<i>600,000</i>	<i>6,670,147</i>
1615	<i>4,542,290</i>	<i>1,318,625</i>	<i>600,000</i>	<i>6,460,915</i>
1616	<i>6,451,474</i>	<i>1,329,375</i>	<i>600,000</i>	<i>8,380,849</i>
1617	<i>4,396,475</i>	<i>1,509,775</i>	<i>600,000</i>	<i>6,506,250</i>
1618	<i>4,652,234</i>	<i>1,533,151</i>	<i>600,000</i>	<i>6,785,385</i>
1619	<i>4,971,249</i>	<i>1,552,926</i>	<i>600,000</i>	<i>7,124,175</i>
1620	<i>5,617,118</i>	<b>1,550,622</b>	<i>600,000</i>	<i>7,767,740</i>
1621	<i>7,207,076</i>	<i>1,661,700</i>	<b>530,371</b>	<i>9,399,146</i>
1622	<i>8,122,950</i>	<i>1,748,899</i>	<b>598,755</b>	<i>10,470,604</i>
1623	<i>7,816,060</i>	<i>1,862,539</i>	<b>777,980</b>	<i>10,456,579</i>
1624	<i>7,936,403</i>	<i>2,035,843</i>	<i>700,000</i>	<i>10,672,246</i>
1625	<b>10,138,198</b>	<i>2,175,459</i>	<b>710,741</b>	<i>13,024,398</i>
1626	<i>8,626,284</i>	<i>2,366,922</i>	<i>800,000</i>	<i>11,793,206</i>
1627	<i>9,120,561</i>	<i>2,729,255</i>	<i>700,000</i>	<i>12,549,816</i>
1628	<b>10,423,268</b>	<i>2,836,575</i>	<i>700,000</i>	<i>13,959,842</i>
1629	<i>11,353,583</i>	<i>3,047,407</i>	<i>700,000</i>	<i>15,100,989</i>
1630	<b>11,005,421</b>	<i>3,295,675</i>	<b>904,325</b>	<i>15,205,421</i>
1631	<b>10,342,914</b>	<i>3,536,155</i>	<i>800,000</i>	<i>14,679,069</i>
1632	<b>11,967,900</b>	<b>3,786,199</b>	<i>700,000</i>	<i>16,454,099</i>
1633	<i>12,172,786</i>	<i>4,142,896</i>	<i>600,000</i>	<i>16,915,683</i>
1634	<b>11,296,068</b>	<i>4,371,150</i>	<b>523,965</b>	<i>16,191,183</i>
1635	<i>11,371,871</i>	<i>4,509,620</i>	<i>500,000</i>	<i>16,381,491</i>
1636	<i>11,464,508</i>	<i>4,816,840</i>	<i>500,000</i>	<i>16,781,349</i>
1637	<b>10,380,143</b>	<i>5,124,060</i>	<i>500,000</i>	<i>16,004,203</i>
1638	<i>9,887,194</i>	<i>5,431,280</i>	<i>500,000</i>	<i>15,818,474</i>
1639	<b>10,732,959</b>	<i>5,738,500</i>	<i>500,000</i>	<i>16,971,459</i>
1640	<b>10,733,002</b>	<i>6,045,720</i>	<i>500,000</i>	<i>17,278,722</i>
1641	<b>11,201,569</b>	<i>5,256,507</i>	<i>500,000</i>	<i>16,958,076</i>
1642	<b>10,755,753</b>	<i>5,502,727</i>	<i>500,000</i>	<i>16,758,480</i>
1643	<b>10,229,151</b>	<i>5,748,947</i>	<i>500,000</i>	<i>16,478,097</i>
1644	<b>11,836,896</b>	<i>5,995,167</i>	<i>500,000</i>	<i>18,332,063</i>
1645	<b>13,219,108</b>	<i>6,241,387</i>	<i>500,000</i>	<i>19,960,495</i>
1646	<b>10,798,474</b>	<i>6,487,607</i>	<i>500,000</i>	<i>17,786,080</i>
1647	<b>10,224,068</b>	<b>6,734,225</b>	<i>500,000</i>	<i>17,458,293</i>
1648	<b>10,407,827</b>	<i>6,795,073</i>	<i>500,000</i>	<i>17,702,901</i>
1649	<b>6,700,846</b>	<i>6,855,921</i>	<i>500,000</i>	<i>14,056,767</i>
1650	<b>5,653,656</b>	<i>6,916,769</i>	<i>500,000</i>	<i>13,070,426</i>
1651	<b>6,679,377</b>	<b>6,897,996</b>	<b>512,295</b>	<i>14,089,668</i>
1652	<b>8,654,710</b>	<b>6,883,884</b>	<b>489,311</b>	<i>16,027,905</i>

Note: light italic: author's estimates or partly resulting from author's estimates  
bold italic: estimate in (or heavily based on) primary source  
bold roman: primary source  
Sources: see tab. A3

Table A2. Reconstruction of Holland's public revenue, 1572-1648 (florins)

Year	'Common means'	Transfer taxes	Tax on real estate (overponing)	Taxes (and/or loans) on property and income	Loans (incl. an unknown amount in forced loans)	Debasement	Total revenue (excl. foreign subsidies)	Unknown (= difference between total expenditure and total revenue)	Difference (where negative) between total expenditure and total revenue	3-yearly average of cols. (8)+(9)	Col. 10 as % of col. (7)	(65% of) foreign subsidies averaged per year
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1572	71,000		43,000	200,000			314,000					350,000
1573	166,000		43,000	190,000		250,000	649,000					250,000
1574	294,000		86,000	380,000			760,000					
1575	540,000		140,000	260,000		200,000	1,000,000	133,842	-120,000	52,132	4	
1576	630,000		105,000	100,000		300,000	1,170,000			38,903	4	
1577	720,000		105,000			200,000	1,025,000	142,553		129,125	12	500,000
1578	818,397		105,000			150,000	1,073,397	94,156		148,253	15	500,000
1579	761,886		105,000			150,000	1,016,886	150,667		204,316	20	
1580	817,617		210,000				1,027,617	199,936		56,215	6	
1581	834,270		118,072		35,000		952,342	262,344		-194,395	-15	
1582	867,693		236,144				1,287,470		-293,635	-340,624	-22	
1583	956,793		600,000				1,556,793		-551,894	-203,757	-10	
1584	959,907		650,000	450,000			2,059,907		-176,344	-218,695	-10	
1585	1,058,571		667,036	450,000			2,175,607	116,968	-596,709	535,956	17	804,931
1586	1,498,424		1,589,505		450,000		3,087,929	2,087,608		332,590	16	804,931
1587	1,568,101						2,018,101			134,120	4	804,931
1588	1,641,017		1,589,505				3,230,522		-493,128	-580,481	-20	804,931
1589	1,717,325		1,158,151				2,875,476		-1,192,119	-481,505	-17	804,931
1590	1,797,180		1,100,000				2,897,180		-56,196	-188,321	-6	371,506
1591	1,880,749		1,100,000				2,980,749		-196,199	-193,840	-6	371,506
1592	1,968,204		1,100,000				3,068,204		-312,567	-48,039	-2	371,506
1593	2,059,726		1,100,000				3,159,726		-72,754	-43,074	-1	371,506
1594	2,155,503		1,100,000				3,255,503	241,202	-297,671	61,086	2	371,506
1595	2,255,734		1,100,000				3,355,734			93,382	3	371,506
1596	2,360,625		1,100,000				3,460,625	239,727		173,914	5	371,506
1597	2,470,394		1,100,000				3,570,394	338,089				

Table A2. *Continued*

Year	'Common means'	Transfer taxes	Tax on real estate (overriding)	Taxes (and/or forced loans) on property and income	Loans (incl. an unknown amount in forced loans)	Debasement	Total revenue (excl. foreign subsidies)	Unknown (= difference between total expenditure and total revenue)	Difference (where negative) between total expenditure and total revenue	3-yearly average of cols. (8)+(9)	Col. 10 as % of col. (7)	(65% of) foreign subsidies averaged per year
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1598	2,585,268		1,100,000		200,000		3,885,268		-56,074	222,365	6	721,306
1599	<b>2,700,000</b>	<b>200,000</b>	<b>1,300,000</b>	<b>400,000</b>	200,000		4,800,000	385,079		76,466	2	721,306
1600	2,727,000	200,000	1,300,000	1,300,000	200,000		5,727,000		-99,608	-47,662	-1	721,306
1601	2,824,270	200,000	1,300,000	1,300,000	500,000		6,124,270		-428,456	-27,671	0	721,306
1602	2,852,513	200,000	1,300,000	1,300,000	1,300,000		5,652,513	445,050		151,201	3	721,306
1603	2,881,038	200,000	1,300,000	1,300,000	500,000		6,181,038	437,009		961,651	16	721,306
1604	2,909,848	200,000	1,300,000	1,000,000	500,000		5,909,848	2,002,893		1,530,943	26	349,800
1605	2,954,002	200,000	1,300,000	1,000,000	200,000		5,654,002	2,152,926		1,807,213	32	349,800
1606	4,170,615	200,000	1,300,000	1,000,000	600,000		6,270,615	1,265,820		1,350,226	22	349,800
1607	4,254,027	200,000	1,300,000		1,500,000		7,254,027	631,933		1,390,036	19	349,800
1608	<b>4,344,201</b>	200,000	1,300,000				5,844,201	2,272,356		1,484,113	25	349,800
1609	4,413,747	225,000	1,300,000				5,938,747	1,548,049		1,121,350	19	349,800
1610	4,484,367	225,000	1,300,000		600,000		6,609,367		-456,354	378,081	6	349,800
1611	4,556,117	225,000	1,300,000		172,000		6,253,117	42,548		-275,641	-4	
1612	4,629,015	225,000	1,300,000		172,000		6,326,015		-413,117	-76,426	-1	
1613	4,703,079	225,000	1,300,000		172,000		6,400,079	141,292		-25,669	0	
1614	4,778,328	225,000	1,300,000		172,000		6,475,328	194,819		81,748	1	
1615	4,854,781	225,000	1,300,000		172,000		6,551,781		-90,867	-75,781	1	
1616	4,932,458	225,000	1,300,000		<b>1,800,000</b>		8,257,458	123,391		-85,071	-1	
1617	5,011,377	225,000	1,300,000		257,612		6,793,989		-287,739	-65,174	-1	
1618	5,091,559	225,000	1,300,000		200,000		6,816,559		-31,174	35,746	1	
1619	5,173,024	225,000	1,300,000				6,698,024	426,151		27,308	0	
1620	5,255,792	225,000	1,300,000		1,300,000		8,080,792		-313,052	347,162	4	
1621	5,339,885	225,000	<b>1,300,000</b>	<b>687,922</b>	917,951		8,470,758	928,388		443,332	5	
1622	5,425,323	225,000	1,900,000	<b>864,620</b>	<b>1,341,000</b>		9,755,943	714,661		583,869	6	
1623	5,512,128	225,000	1,900,000	<b>415,268</b>	<b>2,295,624</b>		10,348,020	108,559		674,224	7	

1624	5,591,169	225,000	1,900,000	1,756,624	9,472,793	1,199,453	593,083	6
1625	6,123,429	225,000	1,936,571	2,586,161	12,553,161	471,237	-97,214	-1
1626	6,255,168	225,000	1,805,282	150,000	13,755,538	1,962,332	156,499	1
1627	5,972,101	227,250	2,400,000	750,000	10,589,223	1,960,593	235,740	2
1628	6,525,286	229,523	2,400,000	1,200,000	13,250,883	708,960	1,671,104	13
1629	6,630,350	231,818	2,400,000	3,495,061	12,757,229	2,343,761	1,262,406	10
1630	7,266,361	234,136	2,400,000	1,200,000	14,470,923	734,498	1,125,378	8
1631	7,052,424	236,477	2,400,000	1,200,000	14,381,193	297,876	784,858	5
1632	6,801,421	238,842	2,400,000	5,691,635	15,131,898	1,322,201	1,703,811	11
1633	7,146,550	241,230	2,400,000	3,636,545	13,424,325	3,491,357	2,969,842	22
1634	7,251,572	243,643	2,400,000	2,200,000	12,095,215	4,095,968	2,662,665	22
1635	7,234,741	246,079	2,400,000	1,200,000	15,980,820	400,671	2,132,458	13
1636	7,332,074	248,540	2,400,000	4,900,000	14,880,614	1,900,735	429,897	3
1637	8,264,892	251,025	2,400,000	1,200,000	17,015,917	-1,011,714	-86,673	-1
1638	7,617,514	350,000	2,400,000	1,700,000	16,967,514	-1,149,040	-182,536	-1
1639	7,704,462	353,850	2,400,000	4,900,000	15,358,312	1,613,147	732,818	5
1640	7,886,634	357,742	2,400,000	4,900,000	15,544,376	1,734,346	1,458,142	9
1641	8,269,465	361,678	2,400,000	4,900,000	15,931,143	1,026,934	1,101,177	7
1642	8,550,572	365,656	2,400,000	4,900,000	16,216,228	542,252	-38,757	0
1643	8,793,875	369,678	2,400,000	1,700,000	18,163,553	-1,685,456	-442,692	-2
1644	9,143,189	373,745	2,400,000	1,700,000	18,516,934	-184,871	401,778	2
1645	9,206,979	377,856	2,400,000	4,900,000	16,884,835	3,075,660	735,153	4
1646	9,089,398	382,012	2,400,000	1,700,000	18,471,410	-685,330	2,204,056	12
1647	8,850,242	386,214	2,400,000	1,600,000	13,236,456	4,221,837	2,797,686	21
1648	8,455,887	390,463	2,400,000	1,600,000	12,846,350	4,856,551	3,026,129	24

Note: light italic: author's estimates or partly resulting from author's estimates

bold italic: estimate in (or heavily based on) primary source

bold roman: primary source

Sources: see tab. A3

Table A3. *List of archival sources*

<i>Location</i>	<i>Archive</i>	<i>Inventory no.</i>	<i>Title</i>	<i>Year(s) covered</i>
ARA	Aitzema	55	Borderel van de rekening van de ontvanger-generaal	1630
ARA	Buyts	20-3	(Borderellen van) rekeningen van Valckesteyn, Van der Laen en Muys	1571-5
ARA	Cats	18	Penningen op Intrest tot Laste van Holland genegotieert in de naevolgende jaeren	1621-34
ARA	Cats	22	1. Staet vande Lasten in ZuytHolland daer tegens t'Incomen; 2. Staet vande lasten en Incomsten in Noortholland	1634
ARA	Cats	84	Inkomsten en uitgaven van deontvanger-generaal van Holland	1636
ARA	Cats	23	Lasten en Incomen anno 1630. Lasten en Incomen voor anno 1634	1630; 1634
ARA	Cats	32	Rapport van de Heeren gecommiteert bij HEGM opt stuck van de mesnage waervan de besogne is begommende 11 October 1635	1635
ARA	FH	797	Memorie van het finiewezen van Holland	1599
ARA	FH	799	Incomen vant Suijderquarter. Lasten daervan	1626
ARA	FH	852	Staet van alle die los en de lijfrenten mitsgaders van die interessen met welcke die provincie van Hollandt ende Westvrieslandt int gemeen en dit quartier int particulier bevonden is belast te zijn, begrepen in seven registers	1598-1618
ARA	FH	799	Incomen vant Suijderquarter en Lasten daervan	1626
ARA	GR	3986	Staet van den incomen ende lasten van de domeynen van Hollant en Westvrieslandt	1642
ARA	GR	3987	Staet sommier van de penningen op interest geligt ende tegenwoordig loopende ten comptoite van de Ontfanger Generaal, over de jaren 1596-1648	1596-1648
ARA	GR	3987	Recueil iz de financien van Holland vnl. Generalitreit	1621-8
ARA	GR	3987	Staet van de incomsten en lasten van 1626	1626
ARA	GR	3987	Recueil iz de financien van Holland	1621-47
ARA	GR	3996	Huijslasten van Holland	1640
ARA	GR	3996	Huijslasten van Holland	1650

ARA	Hoop	24	24	Extract uijtte Sommiere Staet vant Incoomen ende lasten van West-Vrieslandt ende t'Noorder-quartier	1648
ARA	Hoop	24	24	Staet vant Incomen ende lasten van t'Landt	1651
ARA	Hoop	24	24	Staet vant Incomen ende lasten van t'Landt	1652
ARA	Hoop	24	24	Balancen innecomsten ende lasten van Hollandt en West-Vrieslandt	1651
ARA	Hoop	24(E36)	24(E36)	Extract uijtte Sommiere Staet vant Incoomen ende Lasten van Westvrieslandt ende t'Noorder-quartier	1648
ARA	Hoop	24(E36)	24(E36)	Staten van inkomsten en lasten	1651
ARA	Hoop	29(E42)	29(E42)	Staet van 't incoomen ende lasten van 'tLandt	1650
ARA	Oldenbarnevelt	110	110	Staet int corte van t'geen de gemeene middelen over Hollandt ende Westvrieslant verpacht inden jare 1608 voor een geheel jaer elcx in specie syn bedragende	1608
ARA	Oldenbarnevelt	99B	99B	Estat sommier tant des charges de la guerre par terre, que du revenu des moyens generales (...) depuis l'an 1577 jusques l'an 1586 incluz	1577-86
ARA	RtA	352	352	De rekening van de ontvanger-generaal van het Zuiderkwartier over 1581-1583	1581-3
ARA	SH	2601a	2601a	Staet van ontvang van de ontvanger-generaal	1602
ARA	SH	2601a	2601a	Borderel van de rekening van de Ontfanger-Generaal van Hollandt en West-Vrieslandt van de verpondinge en ander extraordinaris ontfang van den jare 1601	1601
ARA	StadhSecr	732	732	Staeten van de Provintie van Hollandt ende West Vrieslandt' voor 1621, 1622 en 1623	1621-3
ARA	Vredemburch	357	357	Staten van de gewone en buitengewone lasten van de provincie Holland	1650
ARA	Vredemburch	65	65	Rantsoenen van een halve stuiver op het pond op de verpachting van de gemene middelen van de ontvangers in het Zuiderkwartier, 1606-1613	1606-13
GARot	Oud stadsarchief	2969	2969	Staet sommier vande lasten van Hollandt, zoe vander oirloge mette andere provintien gemeen, als andere particuliere lopende lasten vande voorsege landen en de gemeene middelen van contribucie tot betalinge vandien voordien lopenden jaren 1586 geeijgent ende gedestineert	1586



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