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NELL'ECONOMIA EUROPEA
SECC. XIII-XVIII

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IN THE EUROPEAN ECONOMY
FROM THE 13TH TO THE 18TH CENTURIES

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Tine de Moor, Jan Luiten van Zanden, Jaco Zuijderduijn

Micro-Credit in Late Medieval Waterland.

*Households and the Efficiency of Capital Markets in Edam en De Zeevang,
1462-1563*

1. *Introduction: Households, the European marriage pattern, and the capital market*

One of the keys to economic development is a well functioning capital market. There are signs that in late medieval Western Europe capital market performance had already greatly improved, which led to a decline in interest rates to levels which are still considered quite low. A great deal is known about the development of interest rates on government annuities. In Holland, for example, interest rates on *losrenten* (redeemable annuities) declined from about 12 per cent in the first half of the 14th century, to about 6 per cent after c.1450. This was linked to the growth of public debt, in which the city governments often played a large role.¹ But much less is known about what the implications for this were at the micro level: did households, as a result of the rapid expansion of the capital market, obtain better access to capital markets, and if they did, at what cost? What was the premium the middle class or lower-class households paid on their debts, on top of the interest on more or less secure securities such as government bonds? Was this capital market able to supply low cost micro credit to households, and were households able to use the capital market to invest their savings? Or was this late medieval capital market restricted to the happy few among the urban and rural elites?

These are the questions we address in this paper. One of the reasons for we attach importance to the efficiency of capital markets at the micro level is that in an earlier paper two of the authors (De Moor and Van Zanden) formulated several ideas about the links between demographic behaviour and capital market development. We hypothesized that there was a link between the emergence of the European marriage pattern in northwestern Europe in the same period and the development of the capital market (and other factor markets). One of the features of this marriage pattern was neo-locality: sons and daughters left their parents' household when they married, and set up a household of their own. They could only do that after accumulating some savings; moreover, parents in this system were no longer sure of being taken care of in their old age by their children (who had left the parental household), and therefore the parents needed to save for their old age. Thus, inter-generational transfers became less important, and were to some extent replaced by intra-generational transfers made possible by a well-functioning capital market, which also helps to explain the popularity of *renten* in the new system, as they were typical instruments for saving for old age. But could households in this period use the capital market for this purpose? Another element of the European marriage pattern was that the position of married women – and linked to that, their position on the labour market – was relatively

¹ C.J. ZUIJDERDIJN, *Medieval Capital Markets. Markets for 'Renten' between State Formation and Private Investment in Holland (1330-1550)*, Utrecht 2007, pp. 10-153.

strong;² again, the question may be asked if this applied to capital markets as well: to what extent did women have access to micro credit under reasonable conditions?

There are a number of ways to approach the issue of the efficiency of the capital market. The most straightforward indicator of efficiency is the level of the (long-term) interest rate, which according to North and others can be seen as an index of the efficiency of the institutional framework of an economy.³ A related proxy for efficiency is the difference between the interest rate on credit on the private market and the interest on government bonds or other securities with low levels of risk – this may be a proxy for the degree to which institutions protecting property rights on the private market are working well. A third measure of institutional efficiency can be derived from the recent discussion about micro credit: is the capital market able to supply small-scale credit to households and absorb small-scale savings from households? Did women (as heads of households) have access to the capital market under similar conditions as men (who may have been more prosperous)? And when entering this capital market, did the female heads of households carry out similar savings and investment strategies?

Such a study of the depth of the capital market in the late medieval period may also help to explain the level of efficiency of that market. When markets are ‘thin’, and transactions only occur occasionally, transaction costs are probably high, as the capital market is to a large extent based on information acquired on the basis of past performance. The growth in the volume of transactions may lead to significant learning and scale effects, which lower transaction costs and thresholds for credits and debtors to participate in transactions. There may be multiple equilibria – a situation of high transaction costs, high interest rates, and a low turnover may be as stable as a market with high volumes and low interest rates.⁴ Analyzing the depth of the capital market can therefore also help explain why capital markets are (in)efficient.

2. Test case: Edam and De Zeevang

The small town of Edam lies about twenty kilometres to the northeast of Amsterdam, at the borders of what was then still known as the Zuiderzee. Recent calculations of population figures arrive at 2,398 inhabitants in 1462, 2,337 in 1514, and 3,752 in 1563. Together with the surrounding countryside – called ‘De Zeevang’ – it was a region very typical for Holland. De Zeevang was inhabited by 3,363 people in 1462, 3,655 in 1514, and in 5,765 in 1563.⁵ The entire region was highly urbanized (in 1462 more than 40 per cent of its population lived in Edam), and the population was dependent on a mix of activities: agriculture was still important, but a rapidly growing part of the work force was active in fisheries, industries, and trade.⁶ The economy was characterized by small holdings, another

² T. MOOR, J.L. VAN ZANDEN, *Girl Power. The European Marriage Pattern (EMP) and Labour Markets in the North Sea Region in the Late Medieval and Early Modern Period*, in “Economic History Review” (forthcoming) and IDEM, *Vrouwen en de geboorte van kapitalisme*, Boom 2006.

³ According to Douglass North, ‘the level of interest rates in capital markets is perhaps the most evident quantitative dimension of the efficiency of the institutional framework’ (D.C. NORTH, *Institutions, Institutional Change and Economic Performance*, Cambridge 1990, p. 69).

⁴ Western Europe seems to have been on a trajectory of high savings, well developed capital market institutions, and low interest rates from the late medieval period, other parts of the world, such as southeast Asia, have an equally long history of low savings, poor capital market institutions, and high interest rates. Cf. J.L. VAN ZANDEN, *The Road to the Industrial Revolution: Hypotheses and Conjectures about the Medieval Origins of the ‘European Miracle’*, in “Journal of Global History”, 3, 2008, 3, pp 337–359.

⁵ Cf. population figures: C. BOSCHMA-AARNOUDSE, *Tot verbeteringe van de neeringe deser stede. Edam en de Zeevang in de late Middeleeuwen en de 16e eeuw*, Hilversum 2003, pp. 421–426.

⁶ Cf. economic development: *Ibid.*, pp. 367–375 and *passim*.

typical feature of the Holland economy: most (rural) households owned small plots of land they often used to herd cattle. They sold cattle and dairy products on the market.⁷

The sources we used to analyze the Edam and De Zeevang capital market, the *schotkobieren* and *verpachtingskobieren*, are registers used by the Edam and De Zeevang government to levy taxes among the population.⁸ The *verpachtingskobieren* are estimates of household wealth, which were used to assess a distribution key for taxation that was drawn up in the *schotkobieren*. We know little about the incentives the government of Edam had to create the *verpachtingskobieren*.⁹ The source was drawn up to apportion the taxes rulers levied on the city of Edam and villages of De Zeevang. The local government apportioned payment for every household according to the *schot*, a division of taxes based on estimates of wealth. Usually local authorities based such assessments on landownership or rough estimates, but in 1462 the Edam government decided to take a large number of assets into consideration when it assessed the *schot*:

...goeden, huijsen, erven, landen, ewelicke renten, losrenten, lijffrenten, gelt, schult, schepen, waeren, comanscappen, beesten, bedden, ende alle andere goeden...¹⁰

...goods, houses, property, land, hereditary tenure, *losrenten*, *lijffrenten*, money, debts, ships, merchandise, *comanscappen*, animals, beds, and all other goods...

Inhabitants were supposed to have their assets registered when the *verpachtingskobieren* were drawn up, every seven or eight years. The earliest *verpachtingskobier*, from 1462, was probably drawn up to assess the taxes the Edam and De Zeevang inhabitants had to contribute to the ten-year subsidy (*bede*) the Holland Estates (*Staten van Holland*) agreed to in 1462.¹¹ An assessor walked through the city and villages and stopped by the houses to interrogate the inhabitants. He recorded hundreds of statements like the following:

*Item lijsbeth jan woutersdr. tverdeel van jan woutersz. huus, II deymt in die langveren after an vegers langveren, I Rijns gulden ter los, XV Rijns gulden an gelt, een bed*¹².

Lijsbeth, Jan Wouters' daughter [:] a quarter of Jan Woutersz.'s house, 2 *deimt* in the *langveren* behind Veger's *langveren*, 1 *Rijns gulden* redeemable, 15 *Rijns gulden* in cash, one *bed*.

Lijsbeth, the daughter of Jan Woutersz., owned a quarter of her father's house, some land (2 *deimt*, a square measure), and a *bed*. She either received or owed a *losrente* of 1

⁷ Cf. the economic history of this region: A.M. VAN DER WOUDE, *Het Noorderkwartier. Een regionaal historisch onderzoek in de demografische en economische geschiedenis van westelijk Nederland van de late middeleeuwen tot het begin van de negentiende eeuw*, I-III, Wageningen 1972, pp. 362-363, 457-458, 511-513. On the development of the Holland economy in this period, see: J.L. VAN ZANDEN, *Taking the Measure of the Early Modern Economy: Historical National Accounts for Holland in 1510-1514*, in "European Review of Economic History", 6, 2002, pp. 131-163; P.C.M. HOPPENBROUWERS, *Mapping an Unexplored Field. The Brenner Debate and the Case of Holland*, in IDEM, J.L. VAN ZANDEN, *Peasants into Farmers? The Transformation of Rural Economy and Society in the Low Countries (Middle Ages-19th Century) in the Light of the Brenner Debate*, Turnhout 2001, pp. 49-50; J. DE VRIES, A. VAN DER WOUDE, *Nederland 1500-1850. De eerste ronde van de moderne economische groei*, Amsterdam 1995, pp. 236-238.

⁸ The sources we used for Edam and Zeevang can be compared to the northwest European *Schöffebücher* (C.J. ZUIJDERDIJN, *Medieval Capital Markets*, cit., chapter 6.2).

⁹ It is likely the incentives were much like those of the Florentine government, which drew up a similar register in 1427, the famous *Catasto*. According to Anthony Molho, the Florentines did this because they wanted 'a more scientific and rational system of taxation' (A. MOLHO, *The State and Public Finance: a Hypothesis Based on the History of Late Medieval Florence*, in "Journal of modern history", 76, suppl., 1995, pp. 97-135, there 79)

¹⁰ C. BOSCHMA-AARNOUDSE, *Tot verbetering van de neeringe deser stede*, cit., p. 405.

¹¹ *Ibid.*, p. 403.

¹² WATERLANDS ARCHIEF (WA), *Stad Edam* (SE), inv. no. 237 f. 1v.

Rijns gulden (Rg.) and held 15 Rg. in cash. The source provides a very detailed report for every household in Edam and the surrounding De Zeevang.

The historian Sparreboom was the first to call attention to these unique sources¹³. In her introduction Boschma-Arnaoudse elaborated on the *schotkobieren* and *verpachtingskobieren*, and based part of her dissertation on the economic development of Edam and De Zeevang as illustrated in these sources; however, she left out *renten*, obligations, and cash, which are the most interesting aspects of the source for our work.¹⁴ It is unfortunate she did not deal with them, because these sources allow for a unique view of the distribution of financial assets in late medieval Holland, as well as the depth of the market for *renten*. The source lists hundreds of heads of households owing *lijfrenten* (life annuities) and *losrenten*, and hundreds receiving an annual *rente*. Thus, it allows us to see the socio-economic position of creditors and debtors.

There are a few problems with these sources, however: first, tax registers based on interviews are likely to yield a biased picture because the taxable community will have done everything possible to appear impoverished and escape high taxation. On the other hand, these were small communities in which everybody knew a great deal about everyone else, and citizenship was considered a virtue, which may have enhanced willingness to pay for community services.¹⁵

The *verpachtingskobieren* provide detailed overviews of the assets and debts of the households in Edam and De Zeevang for three years (1462, 1514, and 1563). The problem with this source is, as the example shows, the values of the properties – particularly the real estate – are not given in a systematic way: it indicates how many pieces of land or how many beds and houses a household possessed, but not their value, at least, not in a systematic way. Only for different kinds of debts and securities (*losrenten*, for example), and of course, for cash, we can establish the value, although in the case of *los-* and *lijfrenten* (see again the example of Liesbeth Wouters) we often only know the value of the annual sum paid out to the household, and therefore have to estimate the value of the underlying principal.¹⁶ The other sources that can be used are the *schotkobieren*, which give, for the same households in the same years, the amount of the capital tax (the *schot*), which is based on an assessment of the net value of the assets of the household, as registered in the *verpachtingskobier*. For 1514 and 1563 it is possible to link the two sources for many of the households. For 1514, 74 per cent, or 821 out of 1,110 households in the *verpachtingskobier*, can be linked to the information in the *schotkobier* of that same year. For 1563 we can even link 9 out of 10 of the households mentioned in the *verpachtingskobier* (1,559 out of 1,665, or 93.6 per cent). Because the data were collected in a less systematic way and there was less detail in the notation of the names in both sources for 1462, so far, we were unable to link more than 34 per cent (35 out of 1,025) persons in the *verpachtingskobieren* to the data in the *schotkobieren*, which is insufficient for further analysis.

Another problem in analyzing the data was the difficulty in whether to classify a head of household as a debtor or a creditor of an annuity. In the *verpachtingskobieren* it is not always clearly indicated whether households received or paid a *rente*. We encounter references such as

¹³ J. SPARREBOOM, *Twee fiscale bronnen uit het stadsarchief van Edam, circa 1462*, in “Holland Historisch Tijdschrift”, 13, 1981, pp. 146-164; IDEM, *Beroepsstructuur, vermogensstatistiek en taxatie van de schotplichtige bevolking van Edam*, unpublished manuscript, available at the Waterlands Archief.

¹⁴ C. BOSCHMA-AARNOUDSE, *Tot verbetering van de neeringe deser stede*, cit.

¹⁵ Cf. M.R. PRAK, J.L. VAN ZANDEN, *Towards an Economic Interpretation of Citizenship: The Dutch Republic between Medieval Communes and Modern Nation-States*, in “European Review of Economic History”, 10, 2006, pp. 111-145.

¹⁶ For a more detailed discussion of these sources: C. BOSCHMA-AARNOUDSE, *Tot verbetering van de neeringe deser stede*, cit.; C.J. ZUIJDERDIJN, *Assessing a Late Medieval Capital Market. The Capacity of the Market for Renten in Edam and De Zeevang (1462-1563)*, to be published in “Jaarboek voor Middeleeuwse Geschiedenis”.

'25 guilders annual *losrenten*', without any further information; the 1563 register has especially many of these records. We have reason to believe that these must have been *renten* the household received. Often such unclear references to *renten* are found in the middle of a long list of household possessions, for example, Reijner Jan Coppertz., who declared he owned 'half a share in Pieter Jaep Claesz.'s [ship], half a share in Jan Geert Rengertz.'s [ship], another 54 guilders annual *losrenten*, furthermore in his business, cash and merchandise worth 2300 guilders¹⁷. Although the source does not explicitly state whether this Reijner received or paid the *losrente*, the way in which the record is structured suggests that it must have been a possession, like the shares in ships that precede the *losrente* and the cash and merchandise that follow. Thus, Reijner received this *losrente*, and has thus been considered a creditor in our dataset.

A final important source problem is related to the identity of the people mentioned in both sources. Some names could refer to either men or women, and in some cases it was difficult to distinguish surnames from occupations (which will not be further discussed in this paper, but did help us to identify the person). Here, linking both sources helped a great deal (at least for 1514 and 1563); often, identification of the same person in the two different sources confirmed our earlier assumptions about the sex, marital status, or occupation that had been made on the basis of the each source individually. The information used for this paper was based on a combination of both sources.

Before we proceed with the analysis of the dataset, we should discuss how representative these entries are and the position of the person in the *verpachtingskobieren* for wealth distribution by means of the taxes they paid (using the *schotkobieren*).¹⁸ The tables below show that at least for 1514 and 1563 we have a very representative sample of the total population for tax assessment. For 1462 the selection that could be linked is very small and clearly skewed towards the higher tax groups, and is hence less suitable for further analysis. Therefore, for 1462 only the data of the *verpachtingskobieren* will be used, and not those linked to the *schotkobieren*.

On the basis of Tab. 1, it becomes clear that the tax assessment hardly changed over a century: three-quarters of the population remained in the lowest segment, paying less than 1 guilder. (the distribution within the group who paid 0-0.99 guilders also hardly changed over the entire century).

Tab. 1. Percentage/number of households in *Schotkobieren* per tax group, in 1462, 1514, and 1563

Year	0-0.99*	1-1.99	2-2.99	3+	Total	0-0.99	1-1.99	2-2.99	3+	Total
1462	63.50%	22.65%	5.95%	7.90%	100%	715	255	67	89	1,126
1514	75.85%	16.05%	4.33%	3.76%	100%	1,068	226	61	53	1,408
1563	73.70%	15.76%	4.83%	5.71%	100%	1,342	287	88	104	1,821
Total	71.76%	17.63%	4.96%	5.65%	100%	3,125	768	216	246	4,355

*We have included people mentioned in the *schotkobieren* but for whom no *schot* was registered. These amount to only a very small percentage of the population (N= 56 for the three years in total).

Source: *schotkobieren* of 1462, 1514, and 1563

¹⁷ WA SE inv. no. 238 f. 25v.

¹⁸ Thus, here we use the sample of those heads of household of the *verpachtingskobieren* whose names can be linked to the *schotkobieren*.

Tab. 2. **Percentage/number of households mentioned in *verpachtingskohieren* that could be linked to the *schotkohieren*, per tax group**

Year	0-0.99*	1-1.99	2-2.99	3+	Total	0-0.99	1-1.99	2-2.99	3+	Total
1462	48.57%	8.57%	14.29%	28.57%	100%	17	3	5	10	35
1514	70.40%	20.22%	5.60%	3.78%	100%	578	166	46	31	821
1563	72.35%	16.36%	5.20%	6.09%	100%	1,128	255	81	95	1,559
Total	71.35%	17.56%	5.47%	5.63%	100%	1,723	424	132	136	2,415

*We have included people mentioned in the *schotkohieren* but for whom no *schot* was registered. These amount to only a very small percentage of the population (N=56 for the three years in total)

Source: *schotkohieren* and *verpachtingskohieren* of 1462, 1514, and 1563

For the further analyses presented here, it is also important to know to what extent our sample of the *verpachtingskohieren* correctly represents the sex division within the area and the years covered in the *schotkohieren*. Here again we see no reason to doubt that the population in the *verpachtingskohieren* correctly represents the distribution of sexes for all years, although we should mention that there are more women in the *verpachtingskohieren* sample (tables 3 and 4). 1462 is again (slightly) less accurate.¹⁹ Noteworthy here is that women were mentioned in a quarter of all cases as the heads of household. Further analysis shows that the *verpachtingskohieren* as a whole had a very similar sex distribution to the *schotkohieren*. This is in itself not really surprising, as the documents included most of the population, but on the other hand, together with table 3, it does provide the very first indication that households headed by women must have had a fairly good position within society.²⁰

Tab. 3. **Percentage of men and women in the *schotkohieren* per year for 1462, 1514, and 1463**

Year	Male households*	Female households*	All	Male households*	Female households*	Total
1462	84.01%	15.99%	100%	946	180	1,126
1514	74.57%	25.43%	100%	1,050	358	1,408
1563	73.82%	26.18%	100%	1,345	477	1,822
Total	76.70%	23.30%	100%	3,341	1,015	4,356

Source: *schotkohieren* of 1462, 1514, and 1563

*Please note: references to (fe)male households in the tables of this paper refer to households headed by a (fe)male.

¹⁹ To determine whether the person mentioned was a woman or man, indications in both datasets were brought together. In some cases the sex became clear on the basis of the *schotkohieren*, in other cases the *verpachtingskohieren* were helpful. Often one source confirmed the other. Where there was serious doubt, we chose to consider the person as a man. The same procedure was followed to determine marital status, although we could only distinguish whether a woman – not a man – was a widow or not.

²⁰ In this respect it may be worthwhile to compare the percentage of female households in the area of our study with those in Tuscany in the 1427 *Catasto*: here the percentage of women ranged from 15-17% in the large towns, and 13% in smaller towns, to 9% in the countryside (D. HERLIHY, *Deaths, Marriages, Births and the Tuscan Economy (ca. 1300-1550)*, in *Population Patterns in the Past*, ed. R.D. LEE, New York 1977, pp. 135-164, 145; cf. similar findings IDEM, *The Population of Verona in the First Century of Venetian Rule*, in *Renaissance Venice, Venetian Studies*, ed. J.R. HALE, London 1973 (Faber & Faber), pp. 91-120, 109; D. HERLIHY, CH. KLAPISCH-ZUBER, *Les Toscans et leur familles. Une étude du catasto florentin de 1427*, Paris 1978, p. 273).

Tab. 4. Percentage of men and women in the sample of the *verpachtingskohieren* that could be linked to the *schotkohieren* per year, for 1462, 1514, and 1463

Year	Male households	Female households	All	Male households	Female households	Total
1462	80.00%	20.00%	100%	28	7	35
1514	71.38%	28.62%	100%	586	235	821
1563	72.35%	27.65%	100%	1,128	431	1,559
Total	72.13%	27.87%	100%	1,742	673	2,415

Source: schotkohieren and verpachtingskohieren of 1462, 1514, and 1563

3. *The flexibility and efficiency of the Holland/Zeevang capital market*

What is striking about these sources of the capital market in late medieval Holland is the extreme flexibility. To begin with, all kinds of properties were being traded and used as collateral: for example, households did not simply own houses, but shares in houses (which the example of Liesbeth Wouters demonstrates, who owned a quarter of her father's house); this may be related to the fact that family properties were divided up (as was probably the case with Liesbeth, who therefore owned one-fourth of the house). This led to a very mobile market in real estate in which some people owned shares in many houses. The division of property into shares was a general phenomenon, applying to land, wharves, mills, fishing nets, and ships. Most famous is perhaps the system of shares in ships that emerged in the 15th century to finance (and profit from) the rapidly growing shipping industry. People could easily buy such shares – which sometimes were as small as 1/256 parts of a ship. According to Boschma-Arnoudse, about 15 per cent of the households of Edam owned a share in a ship.²¹

Shares in real estate could be financed through various kinds of loans. Loans contracted for a few years – so-called *custingen* – were widely used to finance the purchase of real estate, as well as other goods.²² We frequently encounter *custingen* in Edam, where they were secured on real estate and ships, and ran for periods from two to twelve years.²³

In addition to these financial instruments, a system of *los-* and *lijffrenten* (annuities) had been developed which added to the flexibility of the capital market. Since the second half of the 14th century, public bodies and individuals traded *renten*, annual pensions which were in fact cleverly concealed usurious loans.²⁴ *Lijffrenten* were paid until the buyer (*rentenier*) (or the person on whose life the annuity was vested) died, and *losrenten* until the loan was redeemed. Both were long-term loans, often running for several decades. By selling a *rente*, the *rente* payer attracted funds, whereas the *rentenier* bought an annual pension. The capital market facilitated trade in *renten* and thus helped redistribution of savings. *Lijf* and *losrenten* were initially used to finance the long-term debts of cities and other public institutions – including, increasingly, states such as the province of Holland. But the system became so

²¹ C. BOSCHMA-AARNOUDSE, *Tot verbetering van de neeringe deser stede*, cit., pp. 156-157.

²² C.J. ZUIJDERDIJN, *Conjunctuur in laatmiddeleeuws Haarlem. Schepenregisters als bron voor de ontwikkeling van een Hollandse stad*, in "Holland Historisch Tijdschrift", 40, 2008, pp. 3-17.

²³ Especially for 1563. We will be considering these *custingen* (referred to in the source as *custingbrieven*) as a particular type of debt. Cf. *custingen* on real estate WA SE 237 f. 16, 187, 221v.; on ships WA SE inv. no. 237 f. 202, 204, 274v; WA SE inv. no. 238 f. 1v; cf. the time span WA SE f. 8, 34v, 35.

²⁴ C.J. ZUIJDERDIJN, *Medieval Capital Markets for 'Renten' between State Formation and Private Investment in Holland (1330-1550)*, Utrecht 2007, pp. 20-21, 48-50. See also J.H. MUNRO, *The Usury Doctrine and Urban Public Finances in Late-Medieval Flanders: Annuities, Excise Taxes, and Income Transfers from the Poor to the Rich*, Working Paper no. 288 [2007] <http://repec.economics.utoronto.ca/files/tecipa-288.pdf>.

popular that it trickled down rapidly: in the 15th and 16th centuries, it was also used for financing retirement and arranging income flows between generations. For example, when the son (or daughter) took over the family properties (the farm or workshop), a *lijffrente* could be vested on the father and/or mother who retired, with the properties of the family used as collateral to ensure the parent a permanent income for the rest of his/her life. Similarly, if, for example, a daughter decided to remain single and join a *begijnhof*, her share in the family property could be converted to a *lijffrente* for the same purpose.²⁵ In the *verpachtingskobieren* several references were found to the small group of beguines that lived in Edam during the 16th century. In 1563 'Die begijnen tot Betlehem Lijsbet ende Geert Lamberts dochteren' (the beguines of [the beguinage that was called Betlehem reported that they received a *lijffrente* of 12 guiders).²⁶ In the same folio we find the reference to Trijn Lamberts dr (daughter), who in 1563 was 'belast met lijffrenten opte begijnen haer lijff' (who was paying for the *lijffrente* on the life/body of the beguines), which probably refers to the *lijffrente* that the beguines of Betlehem received. In short, a family member (a sister of the beguines?) paid an annual sum to the beguines.²⁷

The *verpachtingskobieren* regularly mention these and similar examples of capital market transactions between private persons, sometimes from the same family and even from the same household, demonstrating the great flexibility of the market and the degree to which the capital market had penetrated the lives of the people of Waterland.

In a recent paper Jaime Reis has suggested a way to assess the efficiency of the local capital market, which he applied to the Portuguese rural capital market in the second half of the 19th century.²⁸ This method measures the interest rate margin between low-risk credits, such as government loans, and the rates usual for mortgages in the countryside, with the difference being a measure of the risk premium of lending to farmers and other rural inhabitants, and therefore the degree to which rural capital markets worked well and were able to protect the property rights of creditors successfully. The difference he found for Portugal was very significant; there is a gap of 3-4 per cent between risk-free loans of 4-6 per cent and the 7-10 per cent that farmers paid from 1870 to 1910 (he also found evidence that this was fairly usual for the region: in Spain the risk premium was at a similar level). Applying this idea to Holland in the 15th and 16th centuries is relatively straightforward. Several studies showed that interest rates on government annuities (*losrenten*) were from 5 to 6.25 per cent in this period;²⁹ similarly, the town of Edam in 1550 paid 5 to 5.6 per cent on a number of *losrenten*. The sources analyzed here also mention a number of interest rates on different loans to or by citizens of Edam and Zeevang; we present this information in the table below. It appears that there was in fact no interest gap between the (almost) risk-free capital market of government *losrenten* and the mostly private *losrenten*. The spread around the mean was also fairly small (in 1514, 61 per cent of the *losrenten* had an average interest

²⁵ Beguines often brought considerable amounts of capital with them. For a tentative analysis of the relationship between the European marriage pattern, the development of capital markets, and the emergence of beguinages, see T. MOOR, J.L. VAN ZANDEN, *Girl Power*, cit.

²⁶ WA SE inv. no. 238 f. 41v, 65; cf. *renten* the Beguines received, idem, f. 15, 41v, 42v, 66v.

²⁷ Recently Jord Hanus arrived at a similar conclusion for Den Bosch, where many *renten* were contracted between family members as well (J. HANUS, *Tussen stad en eigen gewin. Stadsfinanciën, renteniers en kredietmarkten in 's-Hertogenbosch (begin zestiende eeuw)*, Amsterdam 2007, p. 76).

²⁸ J. REIS, *Institutions and Economic Growth in the Atlantic Periphery: The Efficiency of the Portuguese Machinery of Justice, 1870-1910*, paper for the conference *Law and Economic Development*, Utrecht 2007.

²⁹ C.J. ZUIJDERDIJN, *Medieval Capital Markets*, cit., pp. 175-179; J.D. TRACY, *A Financial Revolution in the Habsburg Netherlands. Renten and renteniers in the County of Holland 1515-1565*, Berkeley-Los Angeles-London 1985, pp. 204-214; M. VAN DER HEIJDEN, *Geldschieters van de stad. Financiële relaties tussen stad, burgers en overheden 1550-1650*, Amsterdam 2006, pp. 121-123, 280-298; J. HANUS, *Tussen stad en eigen gewin*, cit., p. 38.

rate of 5,6 per cent – or 18 penning – and this share was 81 per cent in 1563).³⁰ This points to an extremely efficient capital market in which rural households – both men and women – could borrow at very low interest rates and were considered (almost) as reliable as the state.

Tab. 5. **Average interest rates (%) for the Edam and De Zeevang (*Iosrenten*) (N)**³¹

	1462	1514	1563
Edam	6.1 (9)	5.7 (103)	5.6 (109)
Zeevang	-	5.3 (11)	5.8 (3)
All	6.1 (9)	5.7 (114)	5.6 (112)

4. *Women and men in the capital market*

One of the striking features in the sources studied is the large number of households headed by women and their strong economic position. The table below shows that during the 16th century nearly 30 per cent of the households was headed by a woman.³² In about 20 per cent of the cases these were widows.³³

Tab. 6. **Distribution of households in Edam and De Zeevang per sex, per year, including the number of widows, in 1462, 1514, and 1563**

Year	Male households	Female households	Of whom widows	All	Year	Male households	Female households	Of whom widows	All
1462	84.39%	15.61%	4.2%	100%	1462	865	160	43	1025
1514	70.81%	29.19%	6.2%	100%	1514	786	324	49	1110
1563	72.37%	27.63%	6.1%	100%	1563	1205	460	74	1665
Total	75.16%	24.84%	4.4%	100%	total	2856	944	166	3800

Source: Verpachtingskohieren 1462, 1514, and 1563

That these women effectively headed a household consisting of more than just themselves can be shown from the number of beds counted for each household. On average, women had nearly as many beds in their houses as men, indicating that they must have been in charge of households of a similar size.

³⁰ The coefficient of variation is also very small, declining from .11 in 1462 to .09 in 1514 to .07 in 1563; by contrast, Reis found coefficients of variation from .16 to .31

³¹ C.J. ZUIJDERDIJN, *Medieval Capital Markets*, cit., p. 177, and a few additions based on a more detailed analysis of the sources.

³² The percentage of women for 1462 is only about half of that in the 16th century. This might have been a consequence of the fact that the information mentioned in the sources was less detailed and often insufficient to decide on the sex of a person. Whenever this was unclear – also for 1514 and 1563 – we chose to consider the person as a man. In this way the number of women may have been underestimated for all years (and for both sources), but especially for 1462.

³³ It is possible that this number was underestimated, as there may have been cases where widowhood was not mentioned.

Tab. 7. Number of beds on average per female and male household, for 1462, 1514, and 1563

Year	Average N of beds per female household	Average N of beds per male household	Total
1462	2.33	2.43	2.42
1514	2.02	2.30	2.22
1563	2.05	2.23	2.18
Year	Average N of beds per female household	Average N of beds per male household	Total
1462	2.33	2.43	2.42
1514	2.02	2.30	2.22
1563	2.05	2.23	2.18
Total	2.08	2.30	2.25

Source: Verpachtingskohieren 1462, 151, and 1563

The large number of female heads of households cannot be attributed to the season in which the tax registers were made, because, as far as we know, this was done in winter, when the fishing and shipping season was closed and they would be expected to be at home.³⁴ The high proportion of women heading households appears to have been a general feature of Holland society in the late medieval and early modern periods. We encountered an equally high proportion of female households in the town of Hoorn: in 1478 there were 112 widows and 63 unmarried women among the 618 heads of households listed in a tax assessment record; respectively, 18.1 per cent and 10.2 per cent of all households.³⁵ Van der Woude found a similarly high percentage for the Noorderkwartier in the 17th-18th centuries: 21 per cent of the households was headed by single people, and the very high percentage – three times higher than in England in that period – of unmarried women as heads of household is striking.³⁶

The evolving position of women in the society of Edam and Zeevang, judged from the tax category they belonged to, shows that in 1462 a large proportion of the female households (over three-quarters) paid less than 1 guilder in tax. This remained the same in the second and third quarter of the 16th century, when the proportion of male households in that category rose to the same level. By 1563 they were on a par. Around 1462 men figured more in the higher tax categories, but they seem to have had difficulties maintaining their position. By 1563 the distribution of households across tax categories is nearly identical, and men and women seem to have become equal in this respect, which is quite remarkable.

³⁴ Especially the dates that could be retrieved for the *verpachtingskohieren* were in the middle of the winter season, as on the 22nd of January in 1563. For the *schootboek* of 1462 we were able to determine that the information was collected on the 7th of January, and for the *schootboek* of 1514 on the 28th of March (WA SE inv. no. 237 f. 164; WA SE inv. no. 238 f. 1; WA SE inv. no. 239 [1462] f. 1; WA SE inv. no. 239 [1514] f. 1).

³⁵ Also the province of North Holland, located on the IJsselmeer north of Edam (Koster, *Hoorn in de middeleeuwen*, 92). For 1483 we see 915 heads of households, 115 headed by widows and 33 by single women (P. KOSTER, *Hoorn in de middeleeuwen. De economische ontwikkelingsgang van een Westfriesche stad*, Amsterdam 1929, p. 95).

³⁶ A.M. VAN DER WOUDE, *De omvang en samenstelling van huishouding in Nederland in het verleden*, in “AAG bijdragen”, 15, 1970, pp. 202-241, 227-228.

Tab. 8. **Percentage of female and male households in different tax categories according to the *schotkohieren* for 1462, 1514, and 1463**

Female households	0-0.99	1-1.99	2-2.99	3+	Total
Year					
1462	77.78%	15.00%	2.78%	4.44%	100%
1514	77.93%	15.92%	3.91%	2.23%	100%
1563	73.17%	16.14%	5.45%	5.24%	100%
Total	75.67%	15.86%	4.43%	4.04%	100%

Sources: Schotkohieren of 1462, 1514, and 1563

Male households	0-0.99	1-1.99	2-2.99	3+	Total
Year					
1462	60.78%	24.10%	6.55%	8.56%	100%
1514	75.14%	16.10%	4.48%	4.29%	100%
1563	73.88%	15.63%	4.61%	5.88%	100%
Total	70.57%	18.17%	5.12%	6.14%	100%

Sources: Schotkohieren of 1462, 1514, and 1563

To what extent did these men and women have access to the capital market, and how did they invest their savings? First, it is important to explain how female households acquired significant capital assets. Holland women were relatively independent in judicial and financial matters, thus allowing them to be active in that capital market. Most were under the custody of their fathers or husbands, but widows, women of men who were abroad, and women having express or tacit power of attorney could engage in judicial actions aimed at the acquisition of property.³⁷ We know from a number of studies that women in Holland and elsewhere in the Low Countries participated in the capital market, and that they had ample opportunity to decide how to manage savings.³⁸

The following two tables demonstrate,³⁹ first, that there is a tendency to change from cash to financial assets over time: the number of households that invested in *los-* or *lijfrenten* or in other forms of debts increased with time (from only a few per cent in 1462 to about 20 per cent in 1563), which is a sign of the growing efficiency of the capital market. The amounts invested also increased much more than did the sums held as cash, especially *losrenten* and other forms of debts (including *custingbrieven*, which started to appear in 1563) were increasingly popular as a means to invest savings. These trends are clearly apparent

³⁷ M. VAN DER HEIJDEN, *Geldschieters van de stad*, cit., pp. 161-162; W. NIESSEN, *De Nijmeegse onroerend goedmarkt 1570-1630. Een onderzoek naar de bewegingen op en de deelnemers aan de Nijmeegse onroerend goed- en kredietmarkt*, Nijmegen 2005, pp. 52-53.

³⁸ J. HANUS, *Bosche renteniersters. Een zestiende-eeuwse rentemarkt als spiegel van vrouwelijk investeringsgedrag*, in "Historica" 29, 2006, 3, pp. 18-20, 19; J.D. TRACY, *A Financial Revolution*, cit., pp. 144-145; M. VAN DER HEIJDEN, *Geldschieters van de stad*, cit., pp. 161-165.

³⁹ In order to compare all capital assets and debts, for the *renten* we used the principal sum. In many cases the principal (*hoofdsom*) was given, but for the most part, we knew only the *rentesom*. On the basis of the studies by Jaco Zuijderdijn about the interest rates in these periods and a sporadic mention of interest rates in these sources, we were able to convert all *rentesommen* into main sums and used these for the further calculations. Unless there were indications in the source to use other interest rates, we used the following rates for the three different years:

1462: *Losrenten*: 6%; *Lijfrenten*: 10%

1514: *Losrenten*: 5.6%; *Lijfrenten*: 10%

1563: *Losrenten*: 5.6%; *Lijfrenten*: 10%

among men and women, and the differences between them are very small and quite insignificant. In fact, men tended to stick to cash slightly more than women (in 1462 and 1514); moreover, there is no strong preference for conservative investments such as *lijfrenten* among women from Edam and Zeevang, which is known from other studies. A similar story unfolds with respect to their access to credit - how many households (men/women) were debtors on the capital market – the capital market was already highly developed in 1462, when 28 per cent of women and 32 per cent of men had some kind of financial debt. *Losrenten* were clearly the most popular debt. As explained before, they were often linked to possession of certain capital goods, such as houses, land, shares in a ship, etc. Women become somewhat less dependent on debt (in 1563 only 18 per cent of women have a *losrente* or another kind of debt vested on them or their properties), whereas the indebtedness of men is increasing (to 38 per cent in 1563), a divergence we find difficult to interpret. Were women becoming more cautious, was their access to credit restricted, or were they just doing better than men, and therefore able to redeem their debts? The fact that, on average, in 1563, for the first time their cash holdings were larger than those of men, which means that a pessimistic scenario is unlikely.

Tab. 9. Overview of the position of women as creditors and debtors for different categories of capital, 1462, 1514, and 1563

Female households		Cash	<i>Lijfrente</i>		<i>Losrente</i>		Debt		<i>Custingbrief</i>		
Year		Creditor	Creditor	Debtor	Creditor	Debtor	Creditor	Debtor	Creditor	Debtor	
1462	Total value in guilders.	3,367	77	325	371	1178	4	290			
	N	59	1	5	6	23	1	17			
	Average guilders.	57	77	65	62	51	4	17			
(N=160)	% of total no. of women	37%	1%	3%	4%	14%	1%	11%	0%	0%	
	1514	Total value in guilders.	4,815	447	179	3,573	833	621	705		
	N	63	5	6	54	20	10	21			
	Average guilders.	76	89	30	66	42	62	34			
	(N=324)	% of total no. of women	19%	2%	2%	17%	6%	3%	6%	0%	0%
	1563	Total value in guilders.	15,602	1590	840	29,808	5,029	2,370	3,676	1,549	533
	N	41	13	10	67	42	15	28	10	3	
	Average guilders.	381	122	84	445	120	158	131	155	178	
	(N=460)	% of total no. of women	9%	3%	2%	15%	9%	3%	6%	2%	1%
total		23,784	2,114	1,343	33,751	7,040	2,994	4,671	1,549	533	

Source: verpachtingskohieren 1462, 1514, and 1563

Tab. 10. **Overview of the position of men as creditors and debtors for different categories of capital, 1462, 1514, and 1563**

Male households		Cash	<i>Lijfrente</i>		<i>Losrente</i>		Debt		<i>Custingbrief</i>	
Year		Creditor	Creditor	Debtor	Creditor	Debtor	Creditor	Debtor	Creditor	Debtor
1462	Total value in guilders	31,639	375	747	2,845	2,792	590	3,132		
	N	348	5	25	25	128	9	124		
	Average guilders	91	75	30	114	22	66	25		
(N=865)	% of total nr. of men	40%	1%	3%	3%	15%	1%	14%	0%	0%
1514	Total value in guilders.	26,181	1,666	642	4,046	3,309	2,608	5,049		
	N	185	15	66	67	60	33	127		
	Average guilders.	142	111	10	60	55	79	40		
(N=786)	% of total no. of men	24%	2%	8%	9%	8%	4%	16%	0%	0%
1563	Total value in guilders.	46,455	1,140	4,180	38,214	14,328	7,485	28,752	13,129	983
	N	131	9	128	127	151	48	160	49	7
	Average guilders.	355	127	33	301	95	156	180	268	140
(N=1205)	% of total no. of men	11%	1%	11%	11%	13%	4%	13%	4%	1%
total		104,275	3,181	5,569	45,105	20,429	10,683	36,932	13,129	983

Source: Verpachtingskohieren 1462, 1514, and 1563

Did men and women in different wealth classes have different investment strategies? By combining the evidence of the two sources studied here, we can try to answer this question for 1514 and 1563 (table 10). It appears that in 1563 the differences were very minor; in fact, it is striking how similar the strategies were: men and women in different wealth groups invested almost the same amount of money in cash, *lijf*- and *losrenten* and in different kinds of debt, and there is nothing to indicate a more pronounced 'saving' (more risk averse) investment strategy for women than men. The only really significant difference relates to holding cash in 1514: men in the higher wealth classes tended to be much more active than women, but this only points to a slightly greater financial conservatism for those men. In all other aspects, we find a high degree of similarity between the investment profiles.

Tab. 11. **Average investment per creditor in different wealth classes, for 1514 and 1563 (in guilders.)**

Type of investment		Tax categories (in guilders)				Total
		0-0.99	1-1.99	2-2.99	3+	
1514						
Cash	Women	44	50	85	53	53
	Men	55	131	155	463	135
	All	53	104	131	402	112
<i>Lijfrente</i>	Women	58				58

	Men	126	20	18		76
	All	92	20	18		69
<i>Losrente</i>	Women	40	53	54	23	42
	Men	30	37	37	27	32
	All	35	42	42	26	36
Debt	Women	23	115			75
	Men	39	56	41	52	44
	All	37	73	41	52	48
1563						
Cash	Women	135	333	448	685	386
	Men	142	289	568	889	318
	All	141	301	531	806	334
<i>Lijfrente</i>	Women	147	260		120	174
	Men	147	353	145	87	174
	All	147	294	145	95	174
<i>Losrente</i>	Women	162	414	583	659	311
	Men	178	227	290	490	245
	All	172	277	397	538	267
Debt	Women	139	78	65	24	112
	Men	110	177	214	198	143
	All	118	160	150	163	136
Custingbrief	Women	134	189		149	153
	Men	130	295	548	530	222
	All	131	279	548	421	213

Source: verpachtingskohieren and schotkohieren of 1514 and 1563

A last analysis, see the table below, will tell us more about the position of women and men in town and countryside. To what extent did women follow the same trends in terms of average investment as men did (here in cash and *losrenten*) in their rural or urban setting? The first surprise relates to the position of women on the countryside: women have roughly equal amounts of cash, on average, for all three years. The average amounts of cash increases over the years, but definitely not as sharply as the averages within the city; which is clearly a consequence of economic development. In the town of Edam female households lag behind in the first two years, but overtake men's in the last benchmark year. The same happens with respect to the average amount invested in *losrenten* in both town and countryside. This is remarkable, to say the least.

Tab. 12. Average amount of guilders in cash and *losrenten* (creditors only) among female and male households in the town of Edam and the surrounding countryside, De Zeevang, in 1462, 1514, and 1563

CASH	Female households						Male households					
	EDAM			DE ZEEVANG			EDAM			DE ZEEVANG		
Year	Total amount in guilders.	N with cash	Average in guilders	Total amount in guilders	N with cash	Average in guilders	Total amount in guilders	N with cash	Average in guilders	Total amount in guilders	N with cash	Average in glds
1462	2,607	45	58	760	14	54	27,017	267	101	4,622	85	54
1514	3,877	43	90	939	20	46	23,433	140	167	2,723	44	61,88
1563	14,698	31	474	904	10	90	44,984	111	405	1,472	20	73,58
Average/total	21182	119	178	2,602	44	59	95,434	518	184	8,816	149	59,17

LOS RENTEN	Female households						Male households					
	EDAM			DE ZEEVANG			EDAM			DE ZEEVANG		
Year	Total amount in glds.	N with <i>losrente</i>	Average in guilders	Total amount in guilders	N with <i>losrente</i>	Average in guilders	Total amount in guilders	N with <i>losrente</i>	Average in guilders	Total amount in guilders	N with <i>losrente</i>	Average in glds
1462	330	7	47	98	1	98	3,131	31	101	118	4	29
1514	4,478	66	68	942	12	78	6,522	89	73	497	21	23
1563	44,214	128	345	3,419	21	162	76,500	258	297	4,546	39	116
Total	49,022	201	244	4,459	34	131	86,152	378	228	5,160	64	80

To give these findings a broader perspective, we will compare them with Tuscany. We are aware of the political and socio-economic differences between Tuscany and Holland, as well as problems related to scale: in size, Edam is perhaps best comparable with small Tuscan towns such as Volterra, Arezzo, or Cortona.⁴⁰ Since there is not a great deal of literature available to study the access women had to credit facilities in such small towns and in the Tuscan countryside, our comparison can only be tentative.

Judging from the 1427 *Catasto*, people in Tuscany probably had a number of ways they could borrow money. Herlihy and Klapisch-Zuber discovered that indebtedness was common, even among the lower classes.⁴¹ But the conditions of such loans may not always

⁴⁰ M. DELLA PINA, *L'evoluzione demografica delle ville toscane a l'epoca de la naissance et de l'affirmation de l'Etat regional, 15-17^e siecle*, in "Annales de Démographie Historique: Études et Chronique", 18, 1982, pp.43-53, 51-52.

⁴¹ D.J. HERLIHY, CH. KLAPISCH-ZUBER, *Les toscans et leur familles*, cit., pp. 258-259. Cf. various types of credit the articles in F. MENANT, O. REDON (dir.), *Notaires et crédit dans l'Occident Méditerranéen medieval*, Rome 2004.

have been very favourable: for instance, professional moneylenders offering short-term credit at high interest rates were still quite prominent in the 15th century.

In the 15th century the *Monte di Pietà* was created in Tuscan towns, which offered small loans free of interest.⁴² Women living in large towns may have borrowed there, but whether this institution did more than help people who were on the brink of starvation is doubtful. According to Pullan the *Monte di Pietà* ‘did not... lend to small artisans or shopkeepers to help them start up in business’.⁴³ Borrowing from the *Monte di Pietà* also required women to provide securities in the form of objects left in pawn. This means they may have received money but lost capital goods; in contrast the capital market of Edam and De Zeevang allowed women to use mortgages as securities and to borrow considerable amounts for longer periods of time.

In the countryside there were few possibilities to borrow under reasonable conditions. Hopcroft and Emigh believe that Tuscan peasants could borrow from pawnshops in Florence, rural moneylenders, Jews, and notaries, who often charged 20 per cent interest or even more.⁴⁴ According to Botticini, ‘Tuscan credit markets were local and isolated, especially for peasant households’; ‘peasants lacked access to a regional or larger credit market’.⁴⁵ As a result, peasants often had to contract debts with their landlords, thus increasing personal bonds and risking expropriation: according to Emigh, ‘the usual practice... was for landlords to provide either loans, or livestock, or both’.⁴⁶ As elsewhere in southern Europe, in Tuscany the problem of peasant indebtedness was acute. In this respect Ackerberg and Botticini point out that a lack of access to credit contributed to the rise of sharecropping in the countryside.⁴⁷

While men and women in Tuscany may have been able to borrow, they often did so under unfavourable conditions – for a short time, at high interest rates, using securities left in pawn – and thus were at risk for expropriation.

Looking more closely at women who were creditors, we see that important types of investment, such as the forced loans by the Florentine *Monte*, were generally restricted to the Florentine elite, meaning that few women had opportunities to invest.⁴⁸ In this respect it is also important to note that several studies indicate that such forced loans were not real investment opportunities for lenders: towns such as Siena often managed to renege on interest payments.⁴⁹

⁴² C.B. MENNING, *Charity and State in Late Renaissance Italy: the Monte di Pietà of Florence*, Ithaca NY 1993, pp. XI, 13-15, 28, 77-78; B.S. PULLAN, *Rich and Poor in Renaissance Florence. The Social Institutions of a Catholic State, to 1620*, Oxford 1971, p. 470.

⁴³ *Ibid.*, p. 471.

⁴⁴ R.L. HOPCROFT, R.J. EMIGH, *Divergent Paths of Agrarian Change: Eastern England and Tuscany Compared*, in ‘The Journal of European Economic History’, 60, 2000, 1, pp. 9-51, 15-16.

⁴⁵ M. BOTTICINI, *A Tale of Benevolent Governments: Private Credit Markets, Public Finance, and the Role of Jewish Lenders in Medieval and Renaissance Italy*, in ‘The Journal of European Economic History’, 60, 2000, pp. 164-189, 170.

⁴⁶ R.J. EMIGH, *Loans and Livestock: Comparing Landlords’ and Tenants’ Declarations from the Catasto of 1427*, in ‘The Journal of European Economic History’, 25, 1996, 3, pp. 705-723, 714.

⁴⁷ D.A. ACKERBERG, M. BOTTICINI, *The Choice of Agrarian Contracts in Early Renaissance Tuscany: Risk Sharing, Moral Hazard or Capital Market Imperfections?*, in ‘Explorations in economic history’, 37, 2000, 3, pp. 241-247, 242; D.J. HERLIHY, CH. KLAPISCH-ZUBER, *Les toscans et leur familles*, cit., pp. 261, 277-279.

⁴⁸ *Ibid.*, pp. 251-254. It seems that Siena imposed forced loans in the countryside more often (W. CAFERRO, *City and Countryside in Siena in Second Half of the Fourteenth Century*, in ‘The journal of economic history’, 54, 1994, 1, pp. 85-103, 93-94).

⁴⁹ *Ibid.*, p. 95.

Other financial institutions, such as the *Monte Commune*, founded around 1340, did offer women the possibility to deposit money at an annual interest of 5 per cent.⁵⁰ The *Monte di Pietà* of Florence (founded in 1496) allowed women to deposit savings as well; after 1530 they received an interest of 5 per cent on their investments. Among these were rich and 'middle class' widows.⁵¹ Perhaps such financial institutions allowed women to save for old age as well.

It is doubtful, however, that many Tuscan women had opportunities to invest their savings. Urban financial institutions may have allowed some to do so, but the situation in small towns and the countryside seems to have been less favourable. Participation in capital markets, both as creditors and debtors, was easier in Holland, at least for the women of Edam and De Zeevang. This may help to explain some other differences between Tuscany and Holland which may well have been a consequence of imperfect capital markets in smaller towns and countryside. This was true of the unequal distribution of wealth among Florence and the smaller towns and countryside, the gradual disappearance of small holdings, and the relatively few households headed by women in Tuscany.⁵²

5. Conclusion

We have demonstrated that capital market institutions in Holland were already fairly efficient in the 15th century, with (very) low interest rates (in fact, not higher than they are today), and they offered access to micro credit at low cost to both men and women. We started by pointing out the somewhat exceptional position of women in Dutch society from the late Middle Ages on with respect to the typical marriage pattern in northwestern Europe. This marriage pattern explains the high percentage of households headed by (single) women, which were nearly as large (the number of beds they owned) as households headed by men. Moreover, only a minority of these women were widows. One of the key elements in their 'survival' was their position in the capital market: it is clear from the *verpachtings-* and *schotkobieren* for the town of Edam and the surrounding area, the Zeevang, that women held positions equal to men with respect to capital assets. As a group they participated less in the capital market in the total amount of capital they owned, but at the household level they were not only in charge of similar budgets but they did not shun risk. In fact, contrary to our expectations, we found that the wealthier the men, the more conservatively they behaved with respect to capital investments. Over the course of the century from 1462 to 1563, women's per capita (/household) capital investments became even more equal to those of men.

This paper did not extensively discuss the relationship between the European marriage pattern and the capital market since that was not its subject. Although we concentrated on one area, we believe that even here the mechanisms of such an interaction were clearly evident: the capital market was necessary to support the new forms of household organization in which parents needed to set aside capital to support themselves in their old age. This was in part owing to increasing neolocality in the region. New financial instruments such as *los-* and *lijffrenten* enabled people mobility with their capital according to newly developing needs,

⁵⁰ J. HEERS, *Montes*, in *Lexicon des Mittelalters*, VI, pp. 795-797; A. MOLHO, *Public Finances in the Early Renaissance*, Cambridge, 1971, p. 64.

⁵¹ C.B. MENNING, *Charity and State*, cit., pp. XI, 13-15, 28, 77-78.

⁵² Cf. distribution of wealth, D.J. HERLIHY, CH. KLAPISCH-ZUBER, *Les toscans et leur familles*, cit., pp. 241-244; cf. small holding, D. HERLIHY, *Santa Maria Impruneta, A Rural Commune in the Late Middle Ages in Florentine Studies: Politics and Society in Renaissance Florence*, N. RUBINSTEIN (ed.) Evanston 1968, pp. 242-276, pp. 259-260; cf. female households, D. HERLIHY, *Deaths, Marriages*, cit., p. 145.

independent of the vested forms of intergenerational transfers, but increasingly focusing on the exchange of capital within one and the same generation.