Squeezing the budget: households, life-cycles and investment strategies in 16th century Holland.

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Abstract

Life cycle analysis has been an important concept in the study of households in historical societies for quite some time now. Few sources allow historians to really test the effects of the life cycle on household portfolios though: it has proven difficult to identify the effects of squeezes on the wealth of households. This paper explores possibilities to test variation in the value and composure of household assets for families in a small town in the sixteenth century. Our sources allow us to test whether life cycle theory applies to these families by looking at portfolios in the course of the life cycle – rather than at the beginning and end. Results from our first sample indicate that wealthy and even poor households were quite active in asset management, restructuring their land property and capital market investments. Furthermore, we find evidence for a move from high-risk to low-risk investments in the course of the household life cycle.

Content of the paper:

1. Introduction: life cycles and the squeeze hypothesis ................................................................. 2
2. Households in 16th century Holland: the case of Edam and the Zeevang.................................. 7
   2.1 Our casus: Edam and Oorgat.................................................................................................. 8
   2.2 The rich .................................................................................................................................. 12
   2.3 The middle class .................................................................................................................... 17
   2.4 The poor .................................................................................................................................. 20
3. Beds and life cycle position .......................................................................................................... 26
4. Preliminary conclusions .................................................................................................................. 30

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1. Introduction: life cycles and the squeeze hypothesis

Life cycle analysis is at the heart of much research into the household as an economic unit: many historians have also adopted this concept to study the dynamics of households in history. According to life cycle theory households experience three ‘squeezes’ during which resources available to the household come under pressure. The ‘early adulthood squeeze’ occurs when the household has to be set up and raise children. The formation of a new household is costly because couples have to buy or rent a place to stay and purchase furniture etc., and childbirth temporarily makes the wife unavailable for the labour market, which may result in a loss of income. Another ‘middle adulthood squeeze’ is caused by expensive adolescent children, and finally a ‘retirement squeeze’ occurs when household members stop working. As a result, the wealth of households does not progress linearly or exponentially, but in ‘hump-shaped wealth-age profiles’.²

In his book on asset management in nineteenth-century England, R.J. Morris comes up with a ‘property cycle’ of middle class males. He distinguishes six stages:

1. Childhood – dependence on parents
2. Training (normally aged 14 to 21 years of age) – dependence on parents.
3. Adult – earned income and net payer of interest.
4. Adult – earned income and net receiver of interest.
5. Adult – unearned income.
6. Life after death (winding up of the estate and intergenerational transfers)³

Although Morris’ model is more concrete than the life-cycle model, we can still observe the latter’s early adulthood squeeze: in stage 3 the individual earns an income, but is also a net payer of interest on loans contracted to start up a household. In contrast, in stage 4 these debts are repaid, which allows the individual to invest and become a net receiver of interest. It may be worthwhile to note that this stage is likely to have coincided with children (if present) being in stage 2, and requiring parental support, which could be linked up with the middle-adulthood squeeze. In stage 5 the individual is no longer able to earn an income and came to depend on rents, dividends and interests.

In this article we try to retrieve to what extent these squeezes are “visible” in the life-cycle of households, via the data we have on the heads of households, and this for a case in 16th century Holland. The stages 1 and 2 in Morris’ model are however stages at which one is part of a household, as an individual, but does not lead a household. Considering the fact that we are interested in this article in the life cycle of households (not individuals) the stages 3 to 5 in Morris’ model are the ones we are concentrating on in this article, as these are the ones that would comprise periods when the squeezes –due to the having and leaving of children- would become apparent within a household. Considering that Holland has to be situated in an area where the so-called Western European Marriage Pattern (EMP) prevailed, we can assume that the “squeezes” which are in fact part of the life cycle of all households worldwide, would be particularly tight for these households due to the particular characteristics of the EMP which led to a serious gap between generations. The European marriage pattern is characterized by,

amongst others, high marriage ages for men and women, high percentages of singles amongst men and women and the formation of a new household upon marriage. This combination of elements leads to looser family (support) ties and a clear gap in between generations. In these areas the time at which those children were setting up their own households and started having children of their own, coincided with the time at which their parents were getting old and needy and are likely to become widowed. The EMP not only affects the physical presence of members of the household but does also have an impact on the economic lifecycles of parents and their children.

For any nuclear family household, the availability of security arrangements depends partly on the financial situation of ‘supporting households’, such as parental households. These should ideally give support during squeezes. When squeezes in a life cycle of parental households and that of the spouses coincide, support (or even mutual support) becomes difficult, and nuclear hardship may emerge. In extended families, where different generations share the same household, those squeezes do not coincide, and in-living grandparents are able to jump in when their children experience a squeeze. In turn, when they themselves experience the ‘retirement squeeze’ their children are able to support them.4

4 This part of the article is discussed more at length in Annemarie Bouman, Jaco Zuijderduijn and Tine De Moor, From hardship to benefits? The Nuclear Hardship revisited (working paper 2011).

Figure 1. The Squeeze Hypothesis: life cycles in EMP and non-EMP areas.
Figure 1 shows that the age at marriage determines to a large degree whether squeezes in households of parents and children coincide. Under EMP, late marriages increased the risk of parents becoming widows/widowers at the same time their children started parenting their own children. This may have reduced possibilities for assistance: both households might have struggled simultaneously with a lack of financial as well as physical support. When the age of marriage is lower (the non-EMP scenario in figure 1.) the squeezes in the households of parents and children are less likely to coincide.

These are general models. The bottom line, however, is clear. Late marriage increases the chance households are parenting children at a time when the grandparents no longer are able to lend their financial or physical support. This also works the other way around: when grandparents experience the 'retirement squeeze' and depend on support, their children go through the 'early adulthood squeeze'. And even if family ties didn’t wither away over time, this unfavourable timing of wealth cycles within nuclear family households made it virtually impossible for generations to give each other mutual support.

Another feature of the EMP that influences security for the elderly is the small age gap between spouses. In non-EMP areas, the age gap is on average larger. The ‘younger’ women in non-EMP areas are as such able to look after their ageing spouses. On the other hand, those women are more likely to be widowed at an early age, unlike women in the EMP areas. For this reason, societies in non-EMP areas are likely to have more widows than widowers. But since they are also likely to share their households with their children, widowhood might not be as problematic as it would be in EMP-areas. In addition, a premature death of a husband would present young widows with the possibility to remarry (provided they are allowed to do so) or become/remain active on the labour market. All in all, this would leave widowed women in EMP-areas in a potentially more vulnerable position, than women in areas with larger age gaps. But we should not jump to conclusions: De Moor and Van Zanden have elsewhere already demonstrated that the position of women within EMP-areas was, from the Late Middle Ages onwards, already substantially more advanced than elsewhere, leading to a higher labour and capital market participation of women. Moreover, inheritance rules concerning a deceased husband’s property or capital might also be decisive; making for rich widows at the expense of rich sons.

The age gap between spouses has yet another effect: in EMP areas we see a clear demarcation of generations, a generation gap, which is absent in non-EMP families. This generation gap adds to the difficult position of the elderly, and the impossibility for offspring to support them, whether those elderly parents would be in-living (which they are obviously not) or living apart. Figure 2 demonstrates why ties between parents and children do, in EMP areas, no longer provide security for elderly parents. The key to this enigma lies in the age-gap at marriage:

6 See also S. Carmichael, T. De Moor en J.L. van Zanden, JL., ”When the heart is baked, don’t try to knead it”; Huwelijksleeftijd en leeftijdverschil tussen partners als maatstaf van ‘agency’van vrouwen’, in: Theo Engelen, Onno Boonstra en Angélique Janssens (eds.), Levenslopen in transformatie; liber amicorum bij het afscheid van prof. dr. Paul M.M. Klep (Amsterdam 2011) 208-21
7 T. de Moor and JL van Zanden. ‘Girlpower. The European Marriage Pattern (EMP) and labour markets in the north sea region in the late medieval and early modern period’. Economic history review, 2010 63(1), 1-33.
Figure 2. The age-gap hypothesis
Let us take a closer look at the implications of this figure. For the purpose of our argument we have taken a mean age-gap of ten years (non-EMP spouses). Now, with the age gap of ten years, and girls marrying in their teens, both a girl as well as her mother, is (possibly) simultaneously at a childbearing age, which gives them the opportunity to share the care of children. Furthermore, her parents as well as the parents of her spouse will not age simultaneously, which diminishes the burden of care. In EMP areas, however, where spouses are of the same age, whereas their parents, in turn, would also have been of the same age at their marriage, all parents will age simultaneously. Apart from having four elderly parents that likely demand care, their children, being young, equally demand care.

On the other hand, the period before marriage, as well as the period in which their children have left the house, whereas their parents already might have died, the couple would have no-one relying on them for care or finances. This would provide them with the possibility to save for either household formation or invest and make provisions for old age. If we assume couples start having children right after marriage, the pattern for those first children reveals an even stricter pattern: this diminishes the possible ages of all parents by half. Parents in EMP areas would thus be between 50 and 65 years of age at the birth of their first grandchild, whereas in non-EMP areas, the pattern becomes:

F  - 40 – 65
M  - 30 - 55 (M would be able to take care of her husband F)
HF - 50 - 75
HM - 40 - 65 (HM would be able to take care of her husband HF)

Taken this into account, it is possible to see that the life-cycle patterns of the non-EMP family-members do not diverge as much. As we have already stated, this pattern shows an overlap in which both a daughter (Ego) as well as her mother (M) is having babies simultaneously, blurring the different generations somewhat more. Whereas we have taken a mean age gap for non-EMP areas of ten years, an age gap between spouses in for example Africa might be much larger. Since men can have multiple wives as well as divorce and remarry, they continuously produce offspring. An elderly man might thus have a new wife with a baby, whereas his son, as well as his grandson also has a baby. In that case it becomes very hard to discover a pattern of generations, such as can be found in EMP-areas. Neolocality might only partly have been responsible for the breakdown of family ties. A high marital age for women, and a small age gap between spouses, certainly attributes to a generation gap. In the next paragraphs we will demonstrate how this affected the position of the elderly in EMP and non EMP areas.

The above explanation shows that within an EMP-area the squeezes an individual household went through may have been tighter than elsewhere, as mutual support between parents and children may have less obvious than elsewhere. In the nineteenth century and certainly nowadays, households can deal with life-cycle-related 'hard times' by saving and also by making use of welfare programs that redistribute wealth on a national level to support parents with children and the elderly. As a result, few households experience relatively few major fluctuations in wealth during their life cycle. Although welfare programs that helped out households smoothing income over the life cycle were often absent, historical societies since the Middle Ages have shown a great concern with life-cycle related problems. In all of Europe households could rely on help, from family members, friends and neighbours, but also from charitable institutions that aimed at helping out the poor, the sick and the elderly. Since the
sixteenth century local governments also began to take more responsibilities in this respect, and in England this was even organized on a national level with the introduction of the Poor Laws. 8

Another way to cope with squeezes are intragenerational transfers: for instance, parents may have given financial support to their children. Furthermore, households could also try to survive squeezes by means of asset management. They could pawn their assets to get credit, or invest their savings in financial instruments. 9 The usefulness of a solution for the household's different problems at different points in the life cycle, depends on two aspects: the utility of the different "products" offered by the capital market – e.g. life annuities differ from redeemable annuities and the overall volatility of the capital market. Both aspects suggest that when using the capital market to deal with particular problems, a household might want to change its strategy over time, depending on the life cycle and on the situation of the capital market.

Considering the above, we want to link the asset management of those households to their life cycles and answer the questions: to what degree did squeezes force them to adjust portfolios, and cause wealth to fluctuate? To what extend is there a relationship between the use of particular forms of capital instruments (e.g. life annuities and redeemable annuities) to the life cycle a household is in? In the process towards linking the life cycle to household asset management, the first, more general question to be answered which is also central to this paper is: did households actively acquire and alienate assets in their attempts to cope with life cycle squeezes? Or did they passively receive assets that were passed on to them at the death of relatives? These questions are linked to some important issues in economic and social history, such as the emergence of a (proto-) capitalist mentality where assets could be used freely to satisfy the needs of property owners 11 and to the issue of agency as a motor for economic change. In this sense Sen's claim that 'freedom' is essential to realize one's potential and to create economic development, can also be related to the issue of being able to manage one's own life, without being dependent on top-down forms of help in times of need. 12

2. Households in 16th century Holland: the case of Edam and the Zeevang

Life cycle analysis that goes beyond the analysis of demographic changes within and over generations is not common practice, not within circles of historians, nor among demographers. If life cycle analysis is linked to asset management it usually does not deal with pre-1800 households either, as the sources usually don’t permit this. The sources for the period we’re looking at in this paper - the long sixteenth century, a turbulent time characterized by profound political, socio-economic and religious changes – however do permit us to go back in time much further. We focus on a small town in Holland, in the century before the Dutch Revolt. When our story begins in the fifteenth century, Holland was an upcoming economy in the northern part of the Low Countries. This county was governed by the dukes of Burgundy, who also ruled Brabant and Flanders, which were the true economic powers of the day. At the end of the long sixteenth century Holland had become the most important province of the Dutch Republic. This position

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9 A. McCants, ‘Goods at pawn’.
11 M.C. Howell, Commerce before capitalism.
12 Amartya Sen, 1999
was acquired shortly after the disastrous Dutch Revolt, and after a century that was further characterized by frequent visits by roving bands, major floods, outbreaks of plague that struck people and animals and soaring inflation due to the silver imports from the New World.

Throughout these 150 years the people of Holland continued their entrepreneurial activities (perhaps except for the first decade of the revolt, when trade came to a stop). To a large degree they had to do so to be able to purchase bread grains from the Baltic, which could not be produced in Holland because its soil was too wet. Growth is evident when we look at demography: the population of the Dutch Republic continued to expand until the third quarter of the seventeenth century; particularly strong growth was visible in Holland (from 275,000 in 1514, to 672,000 in 1622 and 883,000 around 1680) and also in Friesland, in the north of the Dutch Republic. Urbanization rates in Holland went from 44 per cent at the beginning of the sixteenth century to 61 per cent around 1675.

Population growth and urbanization went hand in hand with a loosening of family ties: the relatively tolerant Dutch Republic attracted many foreign minorities, such as Hugenots after the Edict of Nantes, and Portuguese Jews. Demand for labour in the maritime sector also attracted many labour migrants from all over Northwest Europe. Removed from friends and family, migrants had to figure out strategies to survive in large towns such as Amsterdam and Leiden.

In Holland itself, family ties were loosening as well. Historians have repeatedly stressed that households in Northwest Europe showed 'modern' (=nuclear) features: they were small, usually consisting of a couple and their children, typical for the European Marriage Pattern (see above). This was even the case in the countryside, where peasants stopped growing grains in the course of the late middle ages, and therefore no longer required a large labour reserve. Children were free to move out, for instance to Holland's booming towns, while their parents engaged in cattle farming. Another important occupation in the countryside, proto-industrial activities, did not require much manpower either. This rather called for a specialized workforce and further reduced incentives to tie children to the parental household.

2.1 Our casus: Edam and Oorgat

In this paper we study the small town of Edam which lies about 20 kilometers northeast of Amsterdam, at the borders of what was then still known as the Zuiderzee. The whole region was highly urbanized (already 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. The economy was characterized by smallholding, which is another typical feature of the Holland economy: most (rural) households owned small plots of land for herding cattle. They sold cattle and dairy products on the market.

13 A first, preliminary analysis of a early 17th century taxation source in which the members of the household were counted (Hoofdgelden) confirms the dominance of the nuclear household.
14 Van Zanden, Arbeid tijdens het handelskapitalisme, [p-p].
15 Van Bavel, 'Proto-industrialization in the Low Countries?'.
16 These population figures are based on Boschma-Aarnoudse,Tot Verbeteringe, pp. 421-6; cf. economic development pp. 367-75 and passim.
17 On the economic history of this region, see Van der Woude, Het Noorderkwartier I, pp. 362-3, 457-8, 511-3. On the development of the economy of Holland in this period, see Van Zanden, 'Taking the measure'; Hoppenbrouwers, 'Mapping an unexplored field', pp. 49-50; De Vries and Van der Woude, Nederland 1500-1850, pp. 236-8.
How does Edam compare to other towns in Holland? To answer this question, we have used a government inquiry from 1514, which was aimed at reviewing tax assessments of towns and villages in the county of Holland (table 1). Holland had six ‘large towns’ and 22 ‘small towns’ and clearly, when we look at inhabitants and taxation, Edam was a typical small town, although it may have been relatively wealthy. The villages in its surroundings, an area called De Zeevang, compare quite nicely to other rural settlements in this part of Holland as well, both with respect to population and wealth, although once again, they were relatively wealthy, but not by a large margin.

We believe our study to be representative for the province of Holland, and probably also for some other urbanized regions in the Low Countries, such as Brabant and Flanders, where households also had access to capital markets. However, since we identify investments in capital markets as an alternative to more traditional types of insurance, the situation elsewhere in Europe may well have differed from Edam.

We study asset management before the establishment of a welfare state, and also at a time when local poor-relief institutions, such as orphanages and housing for the elderly, only first emerged. In Edam a first orphanage was founded by the priest Mathijs Matijszoon, in 1558, which is towards the end of the period our sources cover. A house where the elderly could purchase care was established a few years earlier, in 1555. To live in this proveniershuis, the elderly had to pay a principal sum; in return they were allowed to live in a small house and received food and clothing. Furthermore, since the fifteenth century Edam also had a hospital. Poor relief was provided for by the church, and later on also by the town of Edam. Thus, in 1581 86 people in Edam were handed out bread. These types of civic poor relief only emerged in the second half of the sixteenth century though – before, households had to rely on family, friends, the church and provisions they made themselves. The Edam-sources we use here thus provide us with a case whereby the variety of relief mechanisms we find in the 17th century throughout the whole country were just about to emerge. In many cases this meant that those who needed support would have to rely upon other forms of relief, other than family, and that agency was necessary in getting problems solved.

The analyses in this article are based on tax assessments of Edam and its surroundings. As far as we can judge this, the tax assessments that the government of Edam first recorded in 1462 are among the oldest in their kind – meaning: with such wealth of data – worldwide. Before, tax assessments were probably based on landed property or rough estimates, but in the wake of specialization and commercialization the town government felt the need to take other assets into consideration as well, or so it seems. To this end they recorded verpachtingskohieren: estimates of household wealth, which were made by a local official who went from door to door. These estimates were then used by the local government to assess a distribution key for taxation, which was drawn up in another source, the schotkohieren; every household was set at a share in taxation called schot.

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21 Driessen, ‘Edam voor de Hervorming’, 177.
22 Register brooduitdelingen.
23 In large parts of Europe town governments began to provide poor relief since the sixteenth century (P. Thane, *Old age in English history. Past experiences, present issues* (Oxford 2000) 98).
24 An older and more or less comparable source is the 1427 Catasto made for Florence (Herlihy and Klapish-Zuber, *Les Toscans et leurs familles*).
In 1462 the Edam government decided to take a large number of assets into consideration when it assessed the *schot*:

- goods, houses, premises, land, hereditary tenure, redeemable annuities, life annuities, money, debts, ships, merchandise, salesmanships, animals, beds, and all other goods.\(^{25}\)

Inhabitants were supposed to have their assets registered when the *verpachtingskohieren* were drawn up, every seven or eight years. The earliest of these sources, 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*) which the Holland Estates (*Staten van Holland*) had agreed to in 1462.\(^{26}\)

Of course, we should be careful when using tax registers based on interviews. These are likely to yield a biased picture, because the taxable community will have done anything possible to appear impoverished in order to escape high taxation. On the other hand, these were small communities, with strong social cohesion; citizenship was considered a virtue, which may have enhanced the willingness to pay for the community services.\(^{27}\)

Compared to other sources that are often used to reconstruct portfolio’s, such as probate inventories, our sources have a few advantages. Whereas probate inventories are usually compiled at the very beginning and end of the household life cycle – at the event of recording marriage contracts and dealing with the inheritance, our sources allow for a view of households at other points in the life cycle. They should thus allow for an improved view of the life cycle dynamics.

There are also some drawbacks. First of all, we usually do not know precisely at what point in the life cycle households that appear in our sources were. Only when households appear several times it is possible to make some ramifications. Thus, we may assume households appearing in 1530, 1546, 1553 and 1563 have been recorded during the largest part of the life cycle (at least 33 years). However, as we will explain, there is another way to establish this: by using number of beds as an indicator for position in the life cycle and thus reconstructing the evolution of the number of household members.

Our data allow us to track households over the years – or to be more precise: the heads of households. Of course this exercise is not without dangers: if a name of a head of household does appear in 1546, but is no longer listed in 1553, does this mean that the household had dissolved, for instance because it had moved away? Or does it mean that the head had passed away, but the household continued to exist under the name of a widow? In many cases it is impossible to exclude any of these possibilities, so we have to be careful in analyzing these data.

Another well-known complication of working with taxation sources is the lack of uniformity in the registration of names. One assessor may have used a surname or nick-name, while another may have referred to descendence. Also, in quite a few examples the spelling is inconsistent: the person we have labeled Hein Gert Oofs (which is the name standardized according to modern Dutch spelling) appears in our sources as Heyn Gert Oofs (1546 and 1553) but also as Heyn Gerts zoon Doof (1564). To give some other examples, Jan van Pil is also


\(^{27}\)Van Zanden and Prak, ‘Towards an economic interpretation’. Cf. a more detailed critique of our sources: De Moor, Van Zanden and Zuijderduijn, ‘Micro-credit’.
recorded as Jan Reijnersz. van Pil and Jan Reijnersz.; Pieter Jan Yds van Warder also appears as Pieter Jansz. van Warder and even Pieter van Warder. One way to check whether these are likely to have been the same people, was to take into account their place in the taxation list: thus, Jan Reijners is mentioned at the positions 31, 38 and 39; Pieter van Warder at 66, 68, 65. Furthermore, the detailed information our sources provide of the location of landed property also allows possibilities to identify matches: if heads of households have slightly similar names, but also report the same plot of land, it is possible to make a match. Combining data on names, position in the source and landed property, it is usually clear how to link one household to another, but even then in a few instances there is still reason for doubt.

In this paper we have sampled the households of one of the districts of Edam for 1546, 1553, and 1563. For practical purposes we have chosen several districts, first of all one called ‘Oorgat’, which consisted of a string of houses to the north of the canal between Edam and the sea (Zuiderzee). This was a suburb: the people lived outside the defensive town walls. However, since Edam’s jurisdiction was extended over the surrounding Zeevang area, the people of Oorgat were citizens who had to contribute to taxes. The reason to choose this district is that it is the only area that could be clearly identified in our sources: some of the verpachtingskohieren do not distinguish any other districts in Edam and to sample the whole town would be too time-consuming – at least for now. Furthermore, by focusing on Oorgat we are able to study life cycle effects on the asset management of the poor: research has indicated that the poor had recourse to a number of survival strategies, including asset management.

Edam c. 1560, map by Jacob van Deventer, with (from left to right) the districts Luckezijde and Oorgat.

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28 With the exception of Ariaen mit een hant, who moved from 51 to 14 to 22 all cross references only moved a couple of places up or down the list. With respect to Ariaen, the simplest explanation would be that he was not at home when assessments were taken in 1546, and was interviewed at a later stage (hence, rank 51). However, it is also possible that he moved from one house in Oorgat to another.

29 The 1563 verpachtingskohier seems to have been the final that was recorded.

Although our analyses are mainly focused on Oorgat, we have also include some households from two other districts, firstly one called Luckezijde. Like the Oorgat district, this was an area outside the town walls, but now to the south of the canal and much closer to town. Again, this was a poor neighbourhood. We have also sampled some households from the center of Edam, which was a much more wealthy area. For these households it is difficult to say where they lived exactly, except for within the town walls. Both for the town center and the Luckezijde district we have only sampled households we were able to follow over the years 1546, 1553 and 1563.

Table 1. Relative position of Edam in Holland, 1514*

<table>
<thead>
<tr>
<th></th>
<th>Inhabitants</th>
<th>Tax assessment</th>
<th>Taxation/capita</th>
</tr>
</thead>
<tbody>
<tr>
<td>Holland</td>
<td>288760</td>
<td>60000</td>
<td>0,21</td>
</tr>
<tr>
<td>Edam and De Zeevang</td>
<td>3259</td>
<td>770</td>
<td>0,24</td>
</tr>
<tr>
<td>Edam</td>
<td>(1929)</td>
<td>(454)</td>
<td>(0,24)</td>
</tr>
<tr>
<td>Six large towns (average)</td>
<td>11550</td>
<td>4248</td>
<td>0,38</td>
</tr>
<tr>
<td>22 small towns (average)</td>
<td>2128</td>
<td>486</td>
<td>0,23</td>
</tr>
<tr>
<td>De Zeevang</td>
<td>(1330)</td>
<td>(315)</td>
<td>(0,24)</td>
</tr>
<tr>
<td>Warder</td>
<td>266</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Middelie</td>
<td>(333)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kwadijk</td>
<td>399</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Haekswijk</td>
<td>(333)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Region (average)**</td>
<td>600</td>
<td>158</td>
<td>0,26</td>
</tr>
</tbody>
</table>

Estimates between parentheses.

Sources: Fruin, Informacie, 185-189; Fruin, Enqueste, 271; Naber, Een terugblik.

*Since our sources recorded the number of people who received the Holy Communion, we have corrected our figures for the people that did not, i.e. infants younger than 13-14 years. We follow Ad van der Woude’s approach, who calculated that c. 33 per cent of the population must have been younger than 13-14 years (Van der Woude, Het Noorderkwartier I, pp. 77-85). The differences between these estimates, a population of 3259 for Edam and De Zeevang in 1514, and the estimates Boschma-Aarnoudse based on the verpachtingskohieren (a population of 3655) seem reasonable – we have to accept a certain margin of error. Since Edam and De Zeevang were one jurisdiction and hence one taxation unit, we have had to estimate the tax assessment for the individual town and villages. We also had to estimate the number of inhabitants for Edam (indicated in the source as between 1400 and 1500), as well as Middelie and Haekswijk (both villages were taken together in our source).

**Region: 14 villages in the areas Amstelland, Gooiland, De Zeevang and Waterland of which we have data on population and taxation.

2.2 The rich

Before we discuss our findings, it may be useful to give the reader an impression of what asset management of households looked like in the not-so-distant past. A study by R.J. Morris into the middle class of Leeds in the eighteenth and nineteenth century shows how householders moved

31 In fact, our sources use a variety of descriptions, including ‘the southside inside the town gate’, ‘the southside the voorhaven’, ‘the southside of the harbour, outside the stone town gate’ and ‘die luckezijde’. Here, we follow Boschma-Aarnoudse terminology, and stick to Luckezijde.
from being net payers of interest (stage 3), to becoming net receivers of interest (stage 4). They borrowed at the initial stages of the household life cycle, repaid their debts and ultimately invested their savings in capital markets.32 A second characteristic of middle class asset management was the move from more to less risky investments. Risky investments could land the investor relatively high profits, but returns were uncertain. Furthermore, such investments required intricate knowledge of capital markets, and hence they came with high monitoring costs. Such investments were typical for early stages in the household life cycle: over time households switched to low-risk investments, such as railway shares. These provided returns that were much better predictable, and involved fewer monitoring costs. In this respect the increasing supply of lower-denomination railway shares allowed more households to make low-risk investments.33 Thirdly, whereas men were more likely to invest in real estate, women often invested in low-risk shares, such as government securities – again, their level of investment increased with age.

To what degree did asset management among the elite of a small town in sixteenth-century Holland differ from the characteristics above? To answer this question, we will first discuss the portfolio of Pieter Gael, who was the wealthiest man of Edam in 1563. His possessions were assessed at 32,75 lb – keeping the number two on the taxation list, assessed at 20,875 lb, at a considerable distance. Furthermore, it is important to realize that only a small minority of the population of Edam, six per cent, was assessed over four lb.34

We are able to follow this Pieter Gael’s investment portfolio between 1546 and 1563 (table 2). Not surprisingly, Pieter, the son of Pieter Gael the elder and Nies Pouwels, came from a wealthy family. This Pieter Gael the elder passed away before 1530, when Pieter’s mother Nies appears as a widow in our taxation sources.35 The first time we encounter her son Pieter, in 1546, he had probably already inherited part of his father’s assets, and was a wealthy man, assessed at 8,125 lb.36

36 Schotkohier f. 63.
Like everyone else, Pieter needed a house to live in. We first learn of his possession of a house in the tax records of 1563, when he reported a house and yet another house and yard – Pieter was only the co-owner of the latter, half was the property of a woman named Trijnen Jan [ ]. In the years before, Pieter did not report a house. The most likely explanation for this is that he lived with his mother, Nies, who was usually listed right above or below Pieter in the taxation sources, which hints at cohabitation. Their assets were recorded separately though, and the same happened in 1563, when the assets of both Pieter and his wife were recorded. By then Nies had probably passed away.

Like nearly everyone else in Edam, Pieter possessed livestock: in 1546 he reported a cow, and two young cows called calf and hockeling. In later years Pieter no longer reported livestock as he specialized in trade: in 1546 and 1553 he admitted to own quantities of grain (two and three last rye respectively). In 1563 he stated his merchandize (comanscip) to be worth 800 guilders.

Pieter’s main investments consisted of landed property and capital market investments (for detailed data see figure 3). Apparently, Pieter exploited most of this property himself: only a part of the many plots of land he owned were leased out. It is unlikely that Pieter, a merchant, actually worked the land: he probably had personnel to do this, but there are no sources available to confirm this. His total acreage increased from 17 morgen in 1546, to 38 in 1553 and 43 in 1563. However, although the number of plots initially increased, from 7 to 24, in 1563

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**Table 2. Pieter (Pouwels) Gael in verpachtingskohieren and schotkohieren**

<table>
<thead>
<tr>
<th></th>
<th>1546</th>
<th>1553</th>
<th>1563</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Verpachtingskohier</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Named</td>
<td>Pieter Gael</td>
<td>Pieter Pouwelsz</td>
<td>Pieter Gael</td>
</tr>
<tr>
<td>District</td>
<td>Die zuydzijde binnen die poort</td>
<td>Binnen die stenen poort</td>
<td>Binnen de stenen poort an zuytzijde</td>
</tr>
<tr>
<td>Below</td>
<td>Ael Manthijs</td>
<td>Claes Dircx</td>
<td>Claes Dircx Huich</td>
</tr>
<tr>
<td>Above</td>
<td>Nies Pieter Gaels</td>
<td>Cornelis Pietersz</td>
<td>Cornelis Pietersz tBeelt</td>
</tr>
<tr>
<td><strong>Schotkohier</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Named</td>
<td>Pieter Gael</td>
<td>Pieter Gael</td>
<td>Pieter Pouwels Gael</td>
</tr>
<tr>
<td>District</td>
<td>Binnen die stenen poort an die Zuydzhije</td>
<td>Binnen de stenen poort</td>
<td>Binnen die oosterpoort an zuydzijde</td>
</tr>
<tr>
<td>Below</td>
<td>Nies Pouwels Pieter Gaels weduwe</td>
<td>Nies Pouwels Pieter Gaels weduwe</td>
<td>Claes Dircxz Huijch</td>
</tr>
<tr>
<td>Above</td>
<td>Cornelis Duercoops</td>
<td>Cornelis Duercoops</td>
<td>Cornelis Duercoops</td>
</tr>
<tr>
<td>Assessed</td>
<td>8,125 lb</td>
<td>8,125 lb</td>
<td>32,75 lb</td>
</tr>
</tbody>
</table>

Note: Nies was probably Pieter Gael’s mother – she had been married to Pieter Gael’s father, called Pouwels Pieter Gael. In our source Nies is called Nies Pieter Gaels (referring to Nies as Pieter Gaels widow) and Nies Pouwels Pieter Gaels (referring to Nies as Pouwels Pieter Gaels widow). Pieter Gael was also called Pieter Pouwels and Pieter Pouwels Gael.
Pieter was back at 18. This seems to hint at active asset management, perhaps in the form of land consolidation – we see the same among other householders.37

One of the most surprising observations to be made looking at Pieter’s portfolio of real estate, is the high turnover of land. Pieter’s landed property did not only increase, but also change in composition over the life cycle of the household: several plots present in 1546 had disappeared in 1553. So apart from intergenerational transfers due to inheritance, which made an important contribution to the development of Pieter’s portfolio, he must also have more actively managed his assets. Perhaps he made intragenerational transfers, for instance to help children to set up their own households? And Pieter may also have engaged in land consolidation, exchanging to get rid of large numbers of scattered plots.38 Finally, we know that Edam had a quite lively land market, so it is very well possible that Pieter occasionally sold plots of land.39

Pieter also leased plots to tenants: rental income yielded between 34 (1546) and more than 84 guilders per annum in 1563. We do not know the total acreage of the land Pieter leased out – this was not reported in our sources. However, in one case the size is mentioned, namely of a parcel called Oudekerkerland (perhaps in the village of Ouderkerk, near Amsterdam): this was a large plot of no less than 18 morgen.40

With respect to Pieter’s capital market investments, we see two categories. Pieter invested quite heavily in the local market for shares in ships: in 1546 he had invested in the ships of 31 people, skippers living in Edam, but also in nearby Monnikendam and Amsterdam. These were all small shares: in sum they amounted to 40 (equal to 62.5 per cent of a whole ship). In 1553 Pieter’s involvement in this market had increased to 47 shares, in total amounting to 35.75 (56 per cent of a whole ship), and in 1563 he had again 31 shares, in total amounting to 38 (59 per cent of a whole ship).41

The shares in ships we encounter in Pieter’s portfolio were subject to change: of the 31 ships of which Pieter held shares in 1546, only ten were still to be found in his portfolio in 1553, and four also in 1563. And even then the size of shares could change over time: an investment of 0.5 part in the ship of a skipper named Jansen in 1546, had increased to one part in 1553 and 1563. It thus seems these shares were liquidated or renegotiated frequently – and thus they fit into the high risk/high profit/high monitoring costs investments Morris singled out for eighteenth and nineteenth century England.

However, Pieter’s portfolio also reveals investments at low risk/low profit/low monitoring costs. Over time, a considerable proportion of Pieter’s capital market investments went to redeemable annuities: in 1546 he did not report any of these financial instruments, but in 1553 he owned two annuities worth c. 600 guilders – he shared one of these with a relative

37 Cf. the case of Hein Gert Oofs in section 2.4.
39 Zuijderduijn, Van Zanden and De Moor, ‘Small is beautiful’ (working paper 2010).
40 It should be noted, however, that the rental value of this land was low: 0.6 guilders per annum, whereas prices in the range of four to six guilders were more common (J. Kuys and J.T. Schoenmakers, Landpachten in Holland, 1500-1650 (Amsterdam 1981) 66).
41 In 1546 Pieter also reported 100 guilders ‘to Romein’ and 25 guilders ‘to Dirck’ – these may have been direct investments in businesses of these two men.
named Jan Jansz. Finally, in 1563 Pieter reported c. 2600 guilders worth of redeemable annuities, yielding 130 guilders per annum – more than 500 day wages of an urban craftsman.

It is difficult to ascertain what these investments in redeemable annuities looked like exactly: our source only seems to mention an aggregate sum.\textsuperscript{42} To get a better idea, it is useful to look at the redeemable annuities of Pieter’s mother, Nies. In 1530 she received 15 guilders per annum from the provincial debt of the province of Holland (\textit{op t gemeen lant}), 19.5 guilders from the town of Edam, 12.5 guilders per annum from the village of Broeck, and 16 guilders from the church of Warder. Nies’ investments in redeemable annuities thus already yielded 63 guilders per annum, and furthermore, she reported another eight annual sums (totalling 10 guilders), which may well have been annuities. Apart from the fact that Pieter may have inherited some of these annuities, it is feasible that his further capital market investments showed strong similarities with those of Nies.

Finally, Pieter also reported cash savings: 250 guilders in 1546, 600 guilders in 1553, and none in 1563. He may have used these savings for purposes of liquidity, and may occasionnally have decided to use part of the savings for investments in shares or annuities.

To conclude: the development of Pieter Gael’s portfolio shows some similarities with the practice in eighteenth and nineteenth-century England. The wealthiest man in Edam pulled out of high-risk investments, and moved towards low risk investments. On the other hand, there is no evidence that Pieter moved from being a net-payer of interest to being a net-receiver of interest – presumably the starting capital he inherited from his father sufficed to start up a business of his own - or to continue the family business.

\textbf{Figure 3. Evolution of Pieter Gaels’s land and capital market investments, 1546, 1553, 1563 (in guilders)*}

\* That is to say: it is very unlikely that Pieter managed to purchase a single redeemable annuity worth c. 2600 guilders.
Land prices are based on average lease prices x average returns to land. Lease prices estimated at 5 guilders per morgen, based on data from Kays and Schoenmakers, indicating a rental value of four to six guilders per morgen (J. Kays and J.T. Schoenmakers, *Landpachten in Holland, 1500-1650* (Amsterdam 1981) 66).

- Returns to land (lease/land prices ratio) estimated at five per cent, based on on Fruin, *Informacie* and Van der Woude, *Het Noorderkwartier*, 525. The average rent/purchase price ratio is 4.8 per cent when the somewhat unclear figures of Schermer, Bakum and Alkmaar are excluded, and 5.0 per cent when these are included.

- Value of ships estimated at 2000 guilders, based on Kole’s data (Kole, ‘Ondernemen en beleggen’).

- Interest rates estimated at 5.5 per cent per annum (Zuijderduijn, Van Zanden and De Moor, ‘Small is beautiful’).

### 2.3 The middle class

To study middle class households we have selected households assessed at 5-12 *verndel*. Households were randomly selected – as of yet we only worked on a small number of cases so there is little room for selection. Again, we focus on those householders that appear in our sources in 1546, 1553 and 1563.

**Hein Jacobsz**

This householder lived in the Luckzijde area, which was in general a poor area. It was part of the larger district of Oorgat, outside the town alongside a canal (further details are presented below). Hein’s household first appears in 1546, and is referred to as ‘Hein Jacobsz and his wife’s sisters’. Apparently Hein, his wife and her siblings formed one household, which was an unusual type of household formation. This Hein was apparently a shipbuilder: he owned (part of) a carpenters yard and had extended credit to customers who had bought ships, or had them repaired.

First of all, the householder reported a house and four beds. They also held cattle: two cows and one young cow. The household also had nine small plots of land, including half a yard, a small meadow to graze cattle and some *rietland* – combined the acreage was at least 11 morgen. In 1553 and 1563 the landed property declined to more than c. 9 morgen. Hein furthermore reported a carpenters yard (*timmerwerf*) in 1546 and 1553 – in 1563 he only reported half a carpenters yard though. Furthermore, he leased out *rietland* for 0,6 guilders per annum (see also figure 4).

With respect to capital market investments Hein reported ¼ of a *part* in a ship owned by Jan Mieusz van Broeck. This is a bit atypical: whereas most investors in ships owned large numbers of shares, Hein only reported one small share – perhaps he had inherited this share? Hein also reported a redeemable annuity worth a handsome 24,3 guilders per annum. He furthermore expected 178 guilders from Jan Claessis Hoornen. However, Hein was also indebted: he had to pay 1,5 guilders annually on ¼ of his father’s house – which he had apparently inherited from his mother. He furthermore reported assets he inherited from his mother, but had not received yet: 1 bed and its *toebehoren* and 25 [guilders] cash ‘which he will receive from his father’ who presumably was allowed to hold these assets for the remainder of his life. Hein was assessed at 7,5 *verndel*.

Over time, Hein’s portfolio was repeatedly adjusted. He continued to invest in the capital market, but the value of his redeemable annuity first increased to 38,3 guilders in 1553, but decreased again to 32,8 guilders in 1563. Hein also continued to extend credit to his customers:

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43 Here we follow the categories Boschma-Aermoudse uses in her book on Edam: 0-4 *verndel* (poor) 5-12 *verndel* (middle class), > 12 *verndel* (rich).

44 Verpachtingskohier 1546 f. 43v; schotkohier 1546 f. 57.
in 1553 he was entitled to 600 guilders for ships credit (an scheeps custen brieven). In 1563 Hein was even entitled to 1000 guilders scheeps custen. That year he also mentioned another share in a ship (again worth 0.25), now in a ship owned by Claes Cornelis, as well as 200 guilders cash savings. By then, his tax assessment had increased to 13 verndel.\footnote{Verpachtungs interessiert 1553; schotkohier 1553 f. 26v.; verpachtungs kohier 1563 f. 59v.; schotkohier 1563 f. 52.}

Judging on the increasing credit he extended, Hein’s ship building business expanded between 1546 and 1563. It is a bit curious to see that this household also had a lot of money in low-risk investments, already in 1546 when Hein was probably still a long way from retiring. He may have used the capital market to safely put away excess capital, and may occasionally have restructured or resold the annuity when he was in demand of ready money.\footnote{This type of investment behaviour was quite usual among late-medieval men of business (cf. H.P. Baum, \textit{Hochkonjunktur und Wirtschaftskrise im spätmittelalterlichen Hamburg. Hamburger Rentengeschäfte 1371-1410} (Hamburg 1976).} Of course, there is also a possibility that Hein had inherited this annuity, and therefore had relatively large investments in the capital market at an early stage of the household life cycle – but even then there is clear evidence of frequent restructuring of capital market investments.

**Figure 4. Evolution of Hein Jacob’s land and capital market investments, 1546, 1553, 1563 (in guilders)**

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\textit{Griet Pieter Wenkis}

This female householder lived in Edam. She first appears in 1546, reporting a house, one cow and three beds. She also had some landed property (4,125 morgen) and some capital market investments: she reported 11 guilders worth of annuities (figure 5). Of these annuities, 3.5 guilders were deemed ‘bad annuities’ (quade renten), which probably means Griet had trouble receiving the annual interest. She was assessed at 4 verndel.\footnote{Verpachtungs kohier 1546 f. 11.; schotkohier 1546 f. 13.} In 1553 and 1563 her situation...
remained the same, except for her capital market investments increased, first to 23 guilders, and then to 34 guilders. In 1563 Griet was assessed 6 verndel in taxation.  

Figure 5. Evolution of Griet Pieter Wenkis’ land and capital market investments, 1546, 1553, 1563 (in guilders)

Claes Remmetsz

This man lived in Edam. He reported no house, one bed and three plots of land (6,75 morgen) and 3,5 gl briefrenten. He also owned a ship, assessed at 12 guilders. Furthermore, he was indebted 15 guilders (figure 6).  

In 1553 he reported two beds and two cows. He leased out two plots of land (3,1875 morgen) for resp. 8 and 10 guilders per annum. His capital maket investments had increased to 5 guilders annually, and he also reported a scheepsconsten of 100 guilders. He also owned a ship (crabschuyt) worth 40 guilders.  

In 1563 Claes reported a house for the first time, three beds and five calfs. His landed property consisted of 3,625 morgen. His capital market investments had increased considerably to eight annuities worth 34,75 guilders. He still reported a scheepsconsten worth 100 guilders, as well as 50 guilders he ’lend to a man’.  

Of the portfolio’s we have studied thus far, that of Claes Remmets’ is most complex. It shows a drop in overall wealth between 1546 and 1553 due to the loss of landed property (these years were also characterized by a shift towards leasing land). The recovery of overall wealth between 1553 and 1563 was largely due to capital market investments.

48 Verpachtingskohier 1553 f.401; schotkohier 1553 f. 7; Verpachtingskohier 1563 f. 10v; schotkohier 1563 f. 10v  
49 Verpachtingskohier 1546 f. 5v.  
50 Verpachtingskohier 1553 f. 5v.  
51 Verpachtingskohier 1563 f. 3.
2.4 The poor

We can begin this section with a straightforward observation: the vast majority of the poor had little to no possibilities for asset management. Indeed, a part of the households in Edam did not possess much more than a house and a couple of beds. For the c. 80 per cent of the households of Edam that can be labelled ‘poor’ (table 3), life cycle effects were therefore not reflected in their ‘portfolios’, nor were life cycle effects dealt with by clever asset management.

On the other hand, we also know that a large part of the population consisted of landowners (46 per cent in 1563) and homeowners (54 per cent in 1563) – which means householders had at least some angle for asset management. They had to decide how and when to transfer property to their children, and possessing real property, they also had ample collaterals for loans – in 1563 38 per cent of all male householders had a monetary debt, and 18 per cent of female householders. Furthermore, in 1563 16 per cent of male householders had invested in financial instruments, and 21 per cent of female householders. This indicates that at least part of the poor households participated in capital markets.

To research asset management among poor households, we have selected a district called Oorgat, which was the poorest district in Edam. Before we discuss some case studies, we will introduce this poor neighbourhood and some of its characteristics. Table 2 shows the average tax assessment in the districts of Edam and in the surrounding villages. The averages of Oorgat, ranging from 1,3 to 1,5 were the lowest observed in all other districts, and also compared to villages in the surroundings. Oorgat was also the district where the largest part of

53 Zuijderduijn, Van Zanden and De Moor, ‘Small is beautiful’.
the population was poor: more than 95 per cent of the population was assessed at four verndel or below. At the same time the district was one of the largest of Edam, with between 178 and 191 households in these years. This slight increase in number of households between 1546 and 1563 may reflect a larger number of houses built in Oorgat, but it could also reflect a larger number of household units living in this area: it is very well possible that assessors distinguished several households living in one house.

Our taxation sources show some characteristics of household formation in Oorgat. First of all, in some instances we discover non-conjugal or non-nuclear families consisting of siblings. Thus, in 1563 we see Jan Pil who lived together with his sister, Liesbeth, or, to give another example, Simon Heinsz. with his brother and sister. Co-residence of siblings thus existed, and in other instances siblings perhaps did not live under one roof, but did stick together: sources frequently list successive family members, which suggests these must have been neighbours.

Our analysis also shows that few households could be traced for more than two of our sample years. Table 4 indicates that of 79 heads of households mentioned in 1546, 29 were still around in 1553, another five were still around in 1553 and 1563, and two do not appear in 1553, but do so in 1563—so altogether we may assume that at least 36 heads of households were still around in 1553 (45,6 per cent). This still hints at a considerable turnover: apparently more than half of the heads of households had passed away or moved. Only seven heads of households were present in 1546 and 1563—again, two of these seem to have disappeared in 1553, perhaps because they had temporarily migrated?

The consistency between 1553 and 1563 was even lower: only 14 households were still present in 1563, and if we include the aforementioned two ‘lost’ households, we arrive at 16 out of 102 households that made it to 1563 (15,7 per cent). Surely, this cannot be attributed to the larger time-gap in the latter years (seven years separate 1546-1553, ten years 1553-1563). Although we can only guess at the reasons for this, it would seem that either higher mortality or emigration between 1553-1563 would offer an explanation. There is evidence for both: our scanty data suggest an outbreak of Plague in the region of Edam in these years, and since the number of households in Oorgat increased from 79 in 1546 to 102 in 1553 and then declined to 78 in 1563, it is possible that people simply had moved away by the latter year – in this respect it may be useful to point out that 1552 was characterized by dearth, which may have attracted the poor, who would indeed end up in a suburb such as Oorgat.

This high ‘turnover’ of heads of households can furthermore be explained by referring to life expectancy, which was probably 50-60 years when most households were first formed. When we assume most people who started a household would not have grown older than c. 50, it follows that many male heads of households would not have been present in our sources for

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54 WAP SE inv. nr. 238 f. 52v.
55 ****
56 Jan Pieter Claesz van Warder does not appear in 1553, but does so in 1546 and 1563. The same goes for Jan Willemsz.
57 Noordegraaf and Valk mention Plague in nearby Amsterdam in 1557-1559, as well as in several other towns of Holland (({34 NoordegraafLeo 1988}), 226).
58 (({35 NoordegraafLeo 1985}), 28-41.
Female heads of households may have ‘disappeared’ due to remarriage, on which occasion the new husband would get in command.

The latter should draw our attention to the possibility that some households may have disappeared from our sources due to relatively minor changes: since we use the head of household as indicator of households, we lose track of them once the head was replaced. This did not only happen at death, but could also happen when the composition of ‘complex’ households changed. For instance, in quite a few cases our sources mention cohabitation of siblings. When we assume these were all singles, it is easy to see that any member of this household may have left as soon as a partner was to be found, including the head, which was then to be replaced.

Table 3. Taxed households in Edam

<table>
<thead>
<tr>
<th>Location</th>
<th>Av. tax (verndel)</th>
<th>Per cent ‘poor’</th>
<th>Households</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1546</td>
<td>1553</td>
<td>1569</td>
</tr>
<tr>
<td>Edam</td>
<td>2.7</td>
<td>2.7</td>
<td>3.8</td>
</tr>
<tr>
<td>Lingerzijde</td>
<td>2.2</td>
<td>2.2</td>
<td>3.1</td>
</tr>
<tr>
<td>Halich</td>
<td>2.2</td>
<td>2.4</td>
<td>2.8</td>
</tr>
<tr>
<td>Grote Kerstraat</td>
<td>2.3</td>
<td>2.2</td>
<td>3.3</td>
</tr>
<tr>
<td>Voorhaven Noord</td>
<td>5.0</td>
<td>5.2</td>
<td>8.1</td>
</tr>
<tr>
<td>Voorhaven Noord</td>
<td>2.2</td>
<td>2.4</td>
<td>4.0</td>
</tr>
<tr>
<td><strong>Oorgat</strong></td>
<td><strong>1.3</strong></td>
<td><strong>1.3</strong></td>
<td><strong>1.5</strong></td>
</tr>
<tr>
<td>Voorhaven Zuid</td>
<td>1.6</td>
<td>1.7</td>
<td>2.3</td>
</tr>
<tr>
<td>Voorhaven Zuid</td>
<td>6.8</td>
<td>6.8</td>
<td>11.6</td>
</tr>
<tr>
<td>Schepenmakersdijk</td>
<td>2.6</td>
<td>2.9</td>
<td>3.3</td>
</tr>
<tr>
<td><strong>Villages</strong></td>
<td><strong>2.6</strong></td>
<td><strong>2.9</strong></td>
<td><strong>3.2</strong></td>
</tr>
</tbody>
</table>

Source: Boschma-Aarnoudse, *Tot verbeteringe*, 466-467. ‘Poor’ consist of households within *schot* categories of 0-4 *verndel*.

Table 4. Households appearing in schot and pacht kohieren 1546 (N=79), 1553 (N=102) and 1563 (N=78)

<table>
<thead>
<tr>
<th>Grand total different households mentioned = 209</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
</tr>
<tr>
<td>1x (1546)</td>
</tr>
<tr>
<td>1x (1553)</td>
</tr>
<tr>
<td>1x (1563)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
<tr>
<td>2x (1546-1553)</td>
</tr>
<tr>
<td>2x (1553-1563)</td>
</tr>
<tr>
<td>2x (1546 and 1563)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
<tr>
<td>3x</td>
</tr>
<tr>
<td><strong>Grand total</strong></td>
</tr>
</tbody>
</table>

Source: dataset Edam

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60 That is, assuming people in Oorgat married late, as was usual in Holland at the time, see De Moor and Van Zanden, *Girlpower*, Economic History Review, 2010, p. 19.
Hein Gert Oofs

We will proceed with the households we were able to follow in 1546, 1553 and 1563. To begin with, were able to track Hein Gert Oofs from 1546 to 1563 and even to the registers of a real estate tax in 1569. Judging on his tax assessments (ranging from 1 to 1,5 *verndel*) Hein ranked among the poor. He probably established a household (with his wife?) between 1530 and 1546 – and considering the presence of two beds in 1546, Hein had children by then, which means he had probably started a household at least a few years before.

In 1563 the number of beds reported had declined from two to one, which seems to indicate that Hein's children had moved out by then. Perhaps one of them had taken the spare bed, or perhaps it had been sold. The fact that Hein's tax- assesment had increased by then suggests that it is unlikely he had sold this bed out of poverty. Another interesting feat we encounter in 1563 is the fact that Hein is now mentioned together with his brother-in-law, who owned three beds.

Hein was a homeowner: in 1546 'the house he lived in' was taxed, and in 1569 he still contributed to the tax on houses and yards. In 1546 he also owned five plots of land, including two *calfsgras* (the quantity of land required to feed one calf).\(^{61}\) In 1553 the number of plots had declined to four and in 1563 to two. Hein's total acreage increased though, from 3,33 mrg, to 4,5 *morgen* and finally 8,25 mrg in 1563 (figure 7).

Apart from real estate, Hein's monetary situation also improved in the course of his life cycle. Initially we do not hear anything about credits or debts, but in in 1553 he had three guilders of annual revenues (of which we do not know that much: were they rents for land he had leased to others?), he was entitled to 40 guilders for *landkusten* (probably a purchase price for land he had sold) and had 40 guilders ready cash. This is already considerable, and in 1563 he had apparently invested much of his monetary and other assets in the capital market: by then he received an annual pension of 10 guilders – which is likely to have cost 200 guilders to purchase.

Figure 7. Evolution of Hein Gert Oofs' land and capital market investments, 1546, 1553, 1563

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Ariaen mit een hant

Literally ‘Adrian with one hand’; there is a strong possibility this head of a household was disabled. This Ariaen first emerges in our sources in 1546, when he was assessed at a schot tax of 1 verndel – his tax assessments did not change in the later years. In the tenth penny taxes of 1557 Ariaen is labeled ‘poor’, he is not mentioned in 1561, and in 1569 he was assessed at 1.

Of 1546 year no records of his material possessions are available: we only know of Ariaen’s presence as a household head through the schotkohieren. In 1553 the verpachtingskohieren record one small house and one bed, and 1563 one house and three beds. It is worthwhile to point out that our records indicate that Ariaen lived in a small house (thuysgen), which was not an observation the assessors frequently made.

There are a few scenario’s imaginable with respect to the life cycle of Ariaen’s household. In 1546 he may have been a ‘starter’, who had rented a small house or a room, and did not have any taxable possessions. In 1553 he had bought or built a small house and had acquired a bed. Whether he was already married by then is hard to tell (by then he probably was at least 25). It is very likely this was the case in 1563 however, when Ariaen had three beds. Furthermore, we also encounter Adriaen in another taxation source, from 1569, which seems to hint that he may well have been a starter 23 years earlier, in 1546.\(^{62}\)

Of our five cases, Ariaen’s households was evidently worst off. The material possessions – a house in the Oorgat district and three beds – suggest that the household members depended on wage labour. In 1569, Ariaen is indeed called stierdrijver, which was someone who handled bulls that were moved around Edam and De Zeevang to inseminate cows.\(^{63}\) In contrast, many other households in Edam were to a certain degree self-sufficient (for instance because they had a garden or cattle).

\(^{62}\) 10de penning 1569, f. 35.
\(^{63}\) 10de penningkohier 1569 f, 35.
Bastiaen Hermsz

Bastiaen Hermsz's household was assessed at 1 verndel in 1546, 1553 and 1563 – just like the aforementioned Ariaen. He is no longer mentioned in 1569 though.

Bastiaen is not recorded in the verpachtingskohier of 1546, but is featured in 1553 (one house, two beds, one cow) and 1563, when his cow had disappeared. Interestingly, this Bastiaen was active in the capital market. In 1563 he owed three annuities, one redeemable annuity (losrente) of 2 guilders, 1 guilder (per annum?) to one Nies Bellerts, and 1 guilder annually to a beguine. It is most likely that these annuities were mortgaged on Bastiaen's house. In 1563 he owed only 1 Rhenish guilder per annum to a creditor named Claes.

Despite his poverty, Bastiaen's household had creditworthiness. It is important to point out that three of four debts mentioned were certainly no small, short-term debts – the one guilder owed to Nies Bellerts may have been though. The other were annuities that should have yielded Bastiaen at least c. 10-20 guilders (1553) and c. 30-60 guilders. This was the equivalent of resp. 33-66 day wages of an urban craftsman, and 100-200 day wages.

Bastiaen's case also makes clear even this poor household engaged in asset management. The annuities mentioned in 1553 may have come to Bastiaen when he bought the house (in Holland annuities were tied to the mortgage, so people who bought a house also took over the obligation to pay any existing annuities). However, unless Bastiaen had moved (which our sources do not indicate), in 1563 he had apparently redeemed some of these debts, which hints at refinancing.

Why would Bastiaen have created debts? We have seen that he owned a cow in 1553, which indicates Bastiaen was a small-scale cattle holder, like a great many people at the time. Perhaps he had used the attracted funds to acquire cows, which were no longer mentioned in our source for 1563 because they had again been sold? Another possibility is, of course, that poverty had forced Bastiaen to borrow at several moments in the life cycle, and that several short-term debts had been refinanced into long-term debts.

Claes Bing

We were also able to trace this householder in our sources. Claes is mentioned in the verpachtingskohieren of 1546, 1553 and 1563, but appears less in the schotkohieren (only in 1553, when he was assessed at 1 verndel). Claes is no longer mentioned in 1569.

Claes was a homeowner, although this was probably a small house: this dwelling was referred to as the house east of Hard Jans (thuys bij oosten hard jans), one of the more wealthy inhabitants of Oorgat. Did Claes live in a small house on the yard of this Hard Jans?

Initially Claes did not report any beds, but in 1553 and 1563 he had two. This would suggest Claes was at the very beginning of the life cycle in 1546 – when he was possibly still

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64 For broad access to capital markets, see: Zuijderduijn, De Moor and Van Zanden, ‘Small is’.
65 Calculations based on day wages of an urban craftsman, see: Noordegraaf.
66 81.9 per cent of the population of Edam owned at least one cow in 1563 (Boschma-Aarnou'dse, Tot verbeteringe van de neeringe deser stede, 474-477).
saving for a bed. He was probably in the middle adulthood phase in 1553 and 1563 – the two beds suggest the household consisted of a couple and several children (we will further pursue this line of reasoning in section 4).

In 1546 Claes owed 2 Rhenish guilders per annum, which again hints at involvement in the capital market. In 1553 his debts were 1 guilder per annum to Hein Claes, and 1 guilder to ‘St. Catherine’ – probably the altar of St. Catharine in the Church of Edam. The founders of such altars usually provided a starting capital, which was managed by ‘directors’ who often decided to invest in the capital market. Indeed, we know that many altars from Edam received annuities.67

Janke van Warder

Janke van Warder appears to have been disabled, at least in 1563 when he reportedly had a bad leg (mit t quaet been). In spite of this, his wealth had increased: his tax assessments went from 1 verndel in 1546 and 1553, to two in 1563. In 1569 he was no longer mentioned.

At that time, Janke probably was in the middle adulthood phase. He does not feature in the verpachtungs Kohier of 1546, but does so in 1553 and 1563, when he reported two beds.

Janke was a homeowner – at least in 1553 and 1563. He also had two yards, one of which probably in front of his house (thuis daer hij in woont mit die tuin voor thuis; 1563). Furthermore, he also reported several plots of land (table 6). He is likely to have used these yards for grazing cows: in 1553 he reported one cow and two young cows (vaarzen), in 1563 none.

With respect to debts, in 1553 he owed a sum of 15 guilders. This was probably a short-term debt (there is no mention of annual payments), and in 1563 this debt is no longer mentioned.

These case studies demonstrate a few things. First of all, among the poor households of Oorgat, there was a rather large differentiation with respect to asset management. Some households could not use assets in any strategic way, such as that of Ariaen met een hant. Others could, such as Hein Gert Oofs, who ended up in possession of a redeemable annuity that yielded 10 guilders annually, which may have supported his household during the retirement squeeze. Second, this Hein Gert Oofs could provide others with credit, while another householder, Janke van Warder, could borrow. Again this hints at possibilities for poor households to use capital markets to cope with squeezes. Third, some households were quite active in portfolio management, such as Hein Gert Oofs, who rearranged his portfolio between 1546 and 1563. Starting with five small plots of scattered holdings, he ended with two, larger plots.

3. Beds and life cycle position

To arrive at a life cycle approach to our data, we require an indicator for the number of household members: except for the head of household, our source only rarely mentions other

members. And even when a spouse or relative of the household head is mentioned, there is no way to tell whether there were any others present.

To overcome this problem we use data on the number of beds reported – which is a somewhat odd asset recorded in our sources. Indeed, the government of Edam had clearly stipulated that households had to report the number of beds, in the bylaw we mentioned earlier. As far as we can tell, there the reasons to do so was because beds represented a considerable value, and should therefore be included to allow for fair tax assessments. The value of a single bed is difficult to estimate, but a few 16th-century probate inventories mention values of four to five guilders a piece. The value of a single bed was considerable, but did not exceed a month’s wages of an urban craftsman, which was c. 6 guilders.

Here we use beds to estimate the household size. This is a method comparable to using hearths: in both cases we have to guess what kind of multiplier to use to come as close as possible to the real population, and as with houses we assume that in beds several people could sleep. We do not know a great deal about how people acquired beds, nor how they parted with beds. We know that the number of beds in households could vary across the life cycle: for fifteen households we were able to link, six reported different numbers of beds in our sample years. This indicates that beds were bought, built or received once the household expanded, and sold or given away once the number of members declined. We assume that few people would have held on to spare beds after their children had moved out; in such an event they would rather have given superfluous beds to children establishing a household of their own.

There are two ways to use these data on beds to arrive at the reconstruction of the life cycle of households. The first starts with the assumption that households would have started out with one bed (which would have sufficed for a couple and one or two children), and only required one or more additional beds once they had more children or children grew up. In Holland, where neolocality was common, couples could end up with one bed again after their own children had moved out. The number of beds in the course of the life cycle thus goes from one, to more than one, and then back to one.

Whether nuclear households were really omnipresent doesn't become clear on the basis of our data, but it can be used to estimate what their actual size was. From the underneath figure 3, which shows the number of beds per household in the various years we have data on the Oorgat, it becomes clear that households in the Oorgat were small. In particular for the smaller households parts of beds were often reported, making it possible that e.g. 1.5 bed per household was mentioned. The figure shows that most of the households had a maximum of 2 beds, which would probably have fit a household consisting of a household of parents and children.

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68 Data from Schoorl, 1568 and Haarlem, 1568. See: Van Gelder, Gegevens betreffende roerend en onroerend bezit I, pp. 353, 592-3.
69 Noordegraaf, Holland’s welvaren?, ****. We do not think that the government of Edam used beds as proxy for household size: if they would have been interested in this, they would simply have required householders to state the number of household members – like the Florentines did in the 1427 catasto (Herlihy and Klapisch-Zuber, Les Toscaens).
70 See e.g. Dickson and O’Gráda, Hearth tax, household size and Irish population change 1672-1821, Proceedings of the Royal Irish Academy, 1982.
71 We expect that only a minority of the households included other family members or non-members (lodgers, servants) who might have required separate beds.
Households with more than 4 beds—which would have been more typical for an extended household—were rare.

Now the fact that households are likely to have begun and ended with one bed presents us with a problem: it means that it is impossible to tell whether households reporting one bed were at the very beginning or end of the life cycle—below we will explain how we can get around this problem. For the households with more than one bed we can assume they had children around and were therefore somewhere halfway the life cycle.

Figure 8: Percentage of households with a particular number of beds, per year, for the Oorgat.

The second way to explore data on beds is to link households and look at the evolution of the number of beds. If we start with an example: we have already seen that Hein Gert Oofs reported two beds in 1546, two in 1553 and one in 1563—he is the only one of whom we can trace the number of beds in all sample years. In this case to link the number of beds to the life cycle seems pretty straightforward: in 1546-1553 Hein’s household was so large he required two beds, most likely one for himself and his spouse (and possibly a child) and another one for (other) children. The two beds in 1546 seem to hint that Hein’s household already existed for at least a couple of years by then: newlyweds would have sufficed with one bed, and probably only acquired an extra bed when they could no longer take their children in the spousal bed. This situation pertained in 1553 (two beds). Perhaps we should add that it seems Hein did not have all that many children—households with four to five beds were not unheard of. In 1563 Hein reported one bed, which seems to indicate his children had left by then—and gives us a crude indication of his position in the life cycle at that point.

What do we see when we use the evolution of the number of beds (over a period of nearly 20 years) as a proxy for life cycle position of the household? Table 5 demonstrates the evolution of the number of beds of the households we discussed above. As a next step in our analysis we use the number of beds households report to estimate the position of the household in the life cycle (cfr. The Morris’ model discussed above):

a early adulthood = increase in the number of beds (stage 3 in Morris’ model)
b middle adulthood = stability (at more than one bed) (stage 4 in Morris’ model)
c retirement = stability at one bed or decline to one bed (stage 5 in Morris’ model)

Even though this is a rather crude method, it allows us to label some of our households as being in a certain life cycle stage. We have refrained from labeling those household of which we know they were not nuclear (Pieter Gael’s and Hein Jacobs’). Of three we can be quite sure they were in the early adulthood phase (Ariaen mit een hant’s, Claes Remmets’ and Claes Bing’s). The latter two households are among the very few reporting to be indebted – which could point at a ‘net payer of interest’ phase as described by Morris. Both the middle adulthood household (Griet Pieter Wenkis’) and the retirement household (Hein Gert Oofs’) show increased investments in capital markets, which could be linked to a shift to a ‘net receiver of interest’ phase. Obviously, with the limited number of observation was have in this stage of our research we cannot but give some very tentative indications of the link between life cycle position and asset management. We are however confident that future research will greatly enhance our number of observations.

Table 5. Evolution of nr. of beds per household

<table>
<thead>
<tr>
<th>Life cycle position</th>
<th>Nr. of beds 1546</th>
<th>Nr. of beds 1553</th>
<th>Nr. of beds 1563</th>
</tr>
</thead>
<tbody>
<tr>
<td>The rich</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pieter Gael*</td>
<td>0</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>The middle class</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hein Jacobsz**</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Griet Pieter Wenkis</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Claes Remmetsz</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>The poor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hein Gert Oofs</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Ariaen mit een hant</td>
<td>NA</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Bastiaen Hermsz</td>
<td>NA</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Claes Bing</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Janke van Warder</td>
<td>NA</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

* Probably lived with his mother in 1546 and 1553
** Lived with his wife’s sisters in 1546
4. Preliminary conclusions

What do our taxation sources tell us about asset management in the sixteenth century? First, asset management was a rather dynamic process: householders did not suffice with receiving bequests, holding on to these and eventually bequeathing these again to their own heirs. We observe shifts in portfolios that suggest strong activity in land markets (and perhaps even attempts at land consolidation) and with respect to capital market investments quite a few households adjusted their portfolios as well.

Second, our observations reflect some elements that are to be found in the literature on asset management in England in the eighteenth and nineteenth century. The move to low-risk investments, particularly in annuities, is visible among many rich, middle class and even some poor households. In the course of the life cycle these households invested savings in capital markets, which – except for several forms of government debt – should also have returned to other households. Among the few households in earlier stages of the household life cycle we do observe some debtors – which may be linked to a ‘net payers of interest’ phase (Morris’ stage 3).

Finally, among the poor we see a lot of differentiation with respect to material possessions, and also with respect to how households made use of these. Some households that were classified poor did invest in capital markets, whereas others borrowed on collateral of real estate. Poor households apparently used whatever assets they had to improve their situation.

Of course there is still much work to be done: in the near future we hope to increase our number of observations by including earlier years (1506, 1514 and 1530), by including the whole town of Edam, as well as five villages in its surroundings. Thus we can increase the number of linked households substantially, and also include more middle class and elite households.