Developments in household debt. An analysis of microdata for the period 1986-2003

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Household debt in Norway has increased substantially since the 1980s. This article uses microdata to describe developments in household debt, income and financial assets from 1986 to 2003. Our findings show that an increase in average debt, the number of households and the share of indebted households has contributed to the increase in debt since 1986. Most households have a moderate or low debt-to-income ratio. Debt among households with a high debt-to-income ratio was reduced as a percentage of total debt after the banking crisis in 1988-1992, but these developments have been reversed since 1998. This primarily reflects strong debt growth among young households. Our analysis shows that financial assets have primarily increased in households without debt or with a low debt-to-income ratio. The accumulation of financial wealth can therefore only to a limited extent be regarded as a buffer against increases in interest expenses.

1 Introduction

As in other countries, household debt in Norway has grown rapidly in the past few years and at a faster pace than household income.[2] This is related to developments in house prices.[3] Debt growth has resulted in an increase in the household debt burden (debt as a percentage of disposable income), which now exceeds the level prevailing at the end of the 1980s. In the same period, however, household financial assets have increased substantially. From a macroeconomic perspective, Norwegian households' financial position is still strong. However, a macroeconomic approach is not always the best way of identifying financial vulnerability, primarily because it does not take differences between the various types of households into account. Even though the situation seems sound at the aggregated level, some groups of households may be particularly exposed to disturbances to the economy. Analyses of microdata for households are therefore a supplement to the macroeconomic analysis. Since the mid-1990s, Norges Bank has employed micro-level data from Statistics Norway's Income and Property Statistics for Households in its analyses of the household sector. Since Norges Bank now has direct access to the underlying data, more specialised analyses can be conducted. Using the micro-level data as a basis, this article examines developments in household debt, income and assets from 1986 to 2003. This period includes the liberalisation of the credit market in the 1980s and disturbances such as the banking crisis in 1988-1992. It will therefore be possible to observe whether and how the structural changes that have occurred have affected household debt.

This article is organised as follows: Section 2 provides a brief overview of the underlying data. Section 3 deals with the shares of indebted households, while Section 4 analyses the effects on debt of demographic conditions and other factors. Section 5 focuses on skews in the distribution of household debt, income and assets. Debt and financial assets for groups of households, defined according to income, age and debt-to-income ratio, have been analysed to estimate each group's share of total debt and financial assets. Section 6 summarises our findings.

2 Underlying data

Income and property statistics for the period 1986-2003 provide information on households' average income, income composition and distribution, and similar information about financial assets. The statistics are mainly based on figures from the income and property distribution surveys, which are surveys of representative samples of households. Income and property information is based on tax returns for all members in the selected households in addition to information on tax-free income from a number of public registers.

Up to 1990, about 5000 households were included in the survey. The sample has been expanded since then. In 2003, which is the latest year for which figures are available, the sample comprises approximately 17 000 households. Because of the relatively low number of observations in the late 1980s, interpretation of the data in this period is more uncertain. Several definitions in the underlying data have been changed in the analysis period. The analysis in this article has been conducted using figures prepared by Statistics Norway to ensure that the time series are as consistent as possible throughout the period to 2003.

In the article, household debt is defined as total debt recorded in the tax return statistics. It includes both mortgage debt and non-mortgage debt. The term income refers to disposable income. It is calculated as income excluding tax and interest expenses, but including housing income. When ranking households by income, however, we use deciles for income after

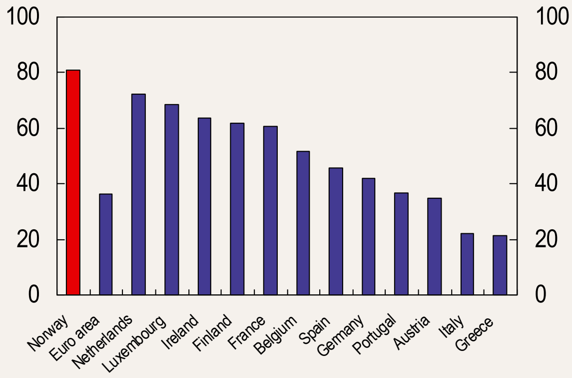
[1] We would like to thank Bent Vale, Birger Vikøren, Karsten Gerdrup and Snorre Evjen for their valuable comments.

[2] See Chart 1 in the summary in Norges Bank (2005) and the ECB (2005a), p. 53

[3] For the relationship between house prices and household debt, see Jacobsen and Naug (2004)

tax.[4] In our calculation of the debt-to-income ratio (debt burden), households without income or with negative income are excluded. With zero income, the debt burden is not defined. In addition, some households may be recorded with negative income because of various tax deductions. This applies in particular to the self-employed. Since negative income has little relevance in our analysis, these households have been excluded from the data in some contexts. In the calculation of average debt by age, extreme observations (households with a debt burden of more than 20 000 per cent) have been removed. These households only account for a small share of households and total debt, but would have had a considerable impact on the average figures. Figures for financial assets are taken directly from tax return statistics. This does not include group insurance claims, however. For a complete definition of the concepts in the income and property statistics, see Statistics Norway (2004).

Chart 1 Indebted households as a percentage of total number of households in selected countries[1]



[1] Figures for European countries for 2001 and for Norway for 2003. Figures for the various European countries have been calculated by totalling the share of households with mortgage loans and the share with other debt. The figures for the individual European countries have not been adjusted for share of households with both types of debt.

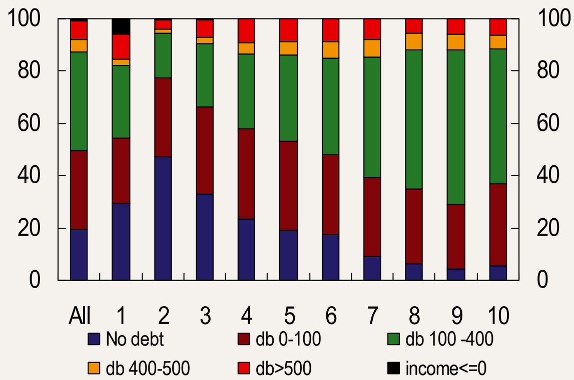
Sources: European Central Bank and Norges Bank

3 Share of indebted households

In macroeconomic analyses of the household debt situation, total household debt is usually assessed against total household income. However, this method overlooks differences between households with debt and households without debt, and may result in underestimation of financial institutions' credit risk[5]. Micro-level figures, on the other hand, enable us to distinguish between the two groups. According to the income and property statistics, 80 per cent of Norwegian households were indebted in 2003. This is a high percentage compared with other European countries. Chart 1 shows the share of mortgage-indebted households and the share with non-housing debt in a number of European countries.[6] National figures, with the exception of figures for Norway, have not been adjusted for households with both mortgage debt and non-housing debt and are therefore overestimated to a certain extent. The high share of indebted households in Norway may be related to the high share of owner-occupiers[7]. The differences may also be attributable to differing levels of precision in statistical sources. The income and property survey in Norway obtains data on debt from tax statistics, while the European survey is based on interviews, where the possibility of checking information on debt is limited. In particular, under-reporting of debt other than mortgage debt may occur in surveys of this kind.[8]

The share of indebted households increases with income and is close to 95 per cent in the highest income deciles [9] (see Chart 2). The share of indebted households in the lower income deciles is nonetheless fairly high.

Chart 2 Households grouped according to debt burden (db) and after-tax income deciles. Per cent. 2003



db = debt as a percentage of disposable income

Sources: Statistics Norway and Norges Bank

From a longer time perspective, the share of indebted households has increased somewhat since the end of the 1980s (see Chart 3). The increase is greatest in the low income deciles. In decile 1-3, there has been an increase of close to 25 percentage points, which is probably attributable to the liberalisation of the credit market in the 1980s and a change in attitudes to indebtedness. The low income groups were previously the most credit-rationed groups. The removal of credit regulation has thus made credit available to larger population groups.

[4] This is partly because Statistics Norway uses deciles for income after tax in its publications, and partly because deciles for income after tax have been used in previous Norges Bank analyses.

[5] Financial institutions' credit risk is defined as the risk of loss due to the inability of a counterparty to meet its obligations, for example when a borrower does not pay interest and/or instalments (see Norges Bank (2005)).

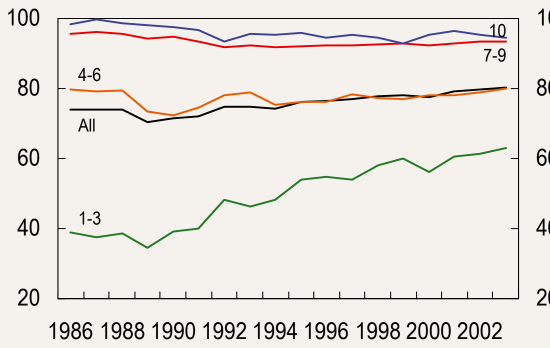
[6] Figures for the EU are published by the ECB (2005b)

[7] Statistics Norway estimates that about 80 per cent of Norwegian households are owner-occupiers (see article on housing construction on Statistics Norway's website www.ssb.no)*

[8] For a similar discussion on UK data, see Redwood and Tudela (2004)

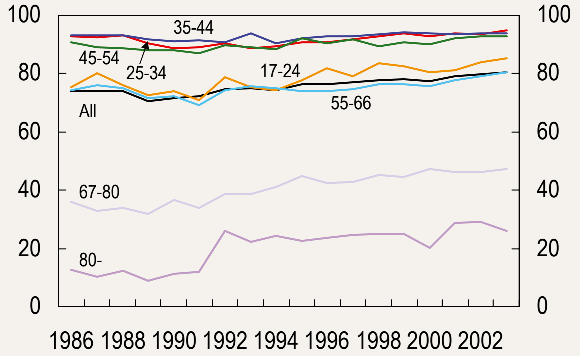
[9] Deciles are estimated by ranking households according to an indicator and dividing them into ten groups of equal size. Each decile therefore comprises 10 per cent of households. In this case, all households, with or without debt, have been ranked according to income after tax and divided into ten groups. Income decile 1 comprises the ten per cent of households with the lowest income after tax. Reference will be made to these income deciles in the article.

Chart 3 Indebted households as a percentage of total number of households in the individual income group. Grouping by after-tax income deciles. 1986-2003



Sources: Statistics Norway and Norges Bank

Chart 4 Households with debt as a percentage of total number of households in the individual age group. 1986-2003



Sources: Statistics Norway and Norges Bank

In addition, more students are taking out student loans, and students are usually well represented in the low income deciles. The share of indebted households, on the other hand, has decreased somewhat in the higher income deciles (7-9 and 10). This may be because it was profitable for high-income households to have a high level of debt in the 1980s due to considerable tax deductions for debt interest. Changes in the tax system in 1992 reduced this advantage.

The share of indebted households also varies considerably across age groups [10]. It has become more common for households in older age groups, such as those over 66, to be indebted (see Chart 4). Growth in household debt has been strong since 2000. In this period, the share of indebted households has particularly increased in the youngest age groups (17-24) and in groups older than first-time homebuyers yet below retirement age (45-54 and 55-66). Higher debt frequency for the 17-24 age group is due to an increase in young people on student loans. For those between 45 and 66, the increase may be due to a behavioural change whereby it has become more common to raise new loans later in life. Because of the sharp rise in house prices in recent years, some households prefer to take out some of their housing wealth today. This has fuelled an increase in mortgage-secured loans. Recently, new loan products that facilitate mortgage equity withdrawal have become available from banks. In addition, the share of single-person households increased from 28 to 38 per cent from 1980 to 2001 according to Statistics Norway's figures. Higher house prices, combined with an increase in the number of single-person households, may also have induced borrowers to carry debt for longer than previously and later in the life cycle.

4 Demographics and other factors

Household debt is affected by demographics and other factors in addition to debt frequency. Total household debt in a given year t, G_t, can be expressed as follows:

$$G_t = N_t \cdot \gamma_t \cdot g_t \,,$$

where Nt is the total number of households, γ_t is the share of indebted households and g_t is average debt for indebted households. Debt growth can be decomposed as follows:

$$\frac{G_{2003}}{G_{1986}} = \frac{N_{2003}}{N_{1986}} \cdot \frac{\gamma_{2003}}{\gamma_{1986}} \cdot \frac{g_{2003}}{g_{1986}}$$

The result of the decomposition is shown in Table 1. From 1986 to 2003, total debt expanded from NOK 372 billion to NOK 1146 billion. In other words, the level of debt in 2003 was three times the level in 1986. The increase in average debt per household since 1986 has the largest effect. Average debt increased by 127 per cent. The increase in average debt partly reflects general inflation and higher house prices. The effect of the increase in the number of households is also relatively strong. From 1986 to 2003, the number of households increased from 1.7 to 2.1 million, i.e. by 25 per cent. The rise in debt frequency has a smaller, but positive effect.

The impact on total debt of the increase in the share of indebted households in some groups will depend on their average debt and the size of the groups. In spite of

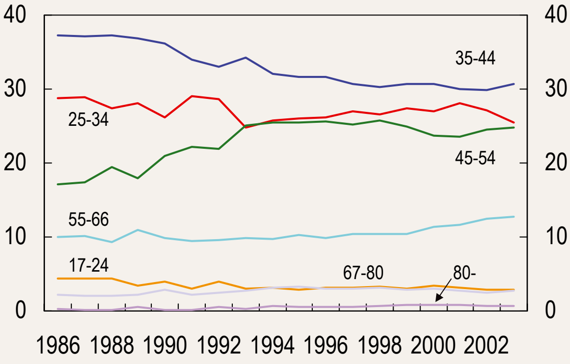
Table 1 Decomposition of developments in total debt 1986–2003

Year	Total debt G_t	Number of households N_t	Debt frequency γ_t	Average debt g_t
	Billions	1000	Per cent	NOK 1000
1986	372	1708	74.11	293.91
2003	1146	2137	80.39	666.95
2003/1986	3.08	1.25	1.08	2.271

[1] General inflation in the period was 70 per cent.
Sources: Statistics Norway and Norges Bank

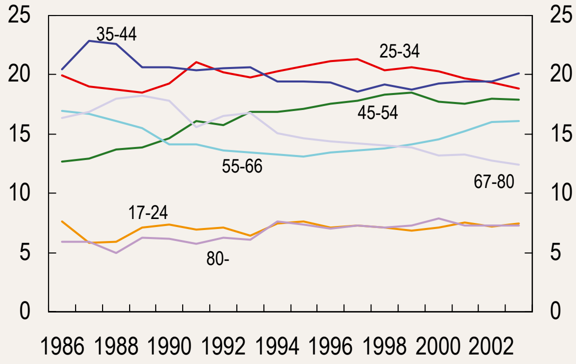
[10] Household age is defined as the age of the main earner, or, if the first criterion cannot be applied, the age of the oldest person in the household.

Chart 5 Debt in different age groups as a percentage of total debt. Per cent. 1985-2003



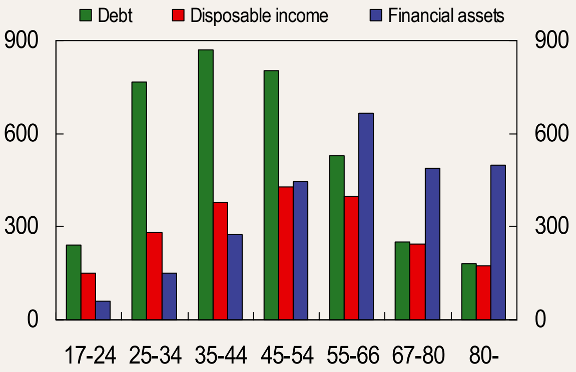
Sources: Statistics Norway and Norges Bank

Chart 7 Households in different age groups as a percentage of total number of households. 1986-2003



Sources: Statistics Norway and Norges Bank

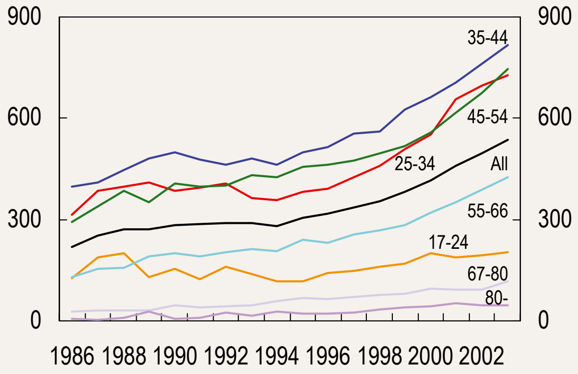
Chart 6 Average debt, income and financial assets[1] by age. Households with debt. In thousands of NOK. 2003



[1]Financial assets excluding group insurance claims

Sources: Statistics Norway and Norges Bank

Chart 8 Average debt per household in different age groups. Households with debt. In thousands of NOK. 1986-2003



Sources: Statistics Norway and Norges Bank

17-24, 67-80 and over 80 and in the income decile 1-3, the debt of these groups is still low as a percentage of total debt (see Chart 5). The explanation lies in the low level of average debt in these age groups (see Chart 6).

Debt in the age group 45-54 has increased considerably as a percentage of total debt because of a sharp rise in the number of households in this group (see Chart 7). Average debt in this group is relatively high (see Chart 6) and has increased at the same pace for all indebted households (see Chart 8). Although average debt in the age group 55-66 is lower than for young first-time homebuyers, it is still relatively high, and has increased more than average debt in the other age groups since 1986 (see Chart 8). In addition, the number of households in this age group has risen since 1995 (see Chart 7). All in all, this has contributed to an increase in debt in the age group 55-66 as a percentage of total debt.

As shown in Chart 7, there have been considerable changes in age composition in the period 1986-2003. These changes have influenced developments in total debt. The age groups with high average debt still account for a large share of the population (25-34 and 35-44) or an increasing share (45-54). The age group with relatively high average debt (55-66) has expanded since 1995. In addition, the number of households raising loans has increased in two of these groups (45-54 and 55-66), as shown in Chart 4. Thus, a number of factors, including demographics, affect household debt: an increase in the number of households, a shift towards age groups with high average debt and a higher number of indebted households.

5 Distribution of household debt, income and assets

5.1 Household debt burden

The debt burden (debt as a percentage of disposable income) provides information about households' debt-servicing capacity. The debt burden, as calculated on the basis of macro-level figures, has increased sharply since 1999 and in 2005 exceeded the level prevailing in the late 1980s.[11] However, the indicator is based on estimates of disposable income for all households,

[11] See Chart 2.12 in Norges Bank (2005)

not only indebted households. The debt burden based on macro-level figures therefore does not provide an entirely accurate picture of household financial vulnerability. Micro-level figures make it possible to calculate the debt burden for each indebted household. It is then possible to see whether the increase in the debt burden is the result of a higher debt-to-income ratio than previously in each household, or whether the number of indebted households has increased.

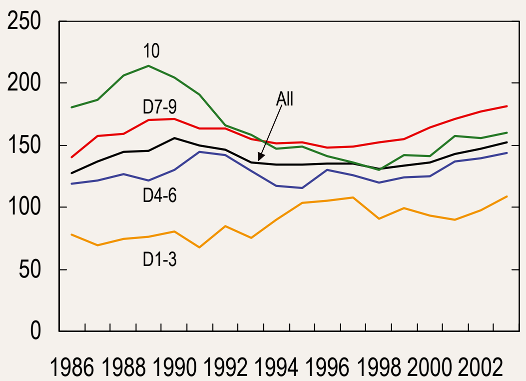
A rule-of-thumb often used by banks is that households should not borrow more than three times their pre-tax income. If we use disposable income instead, this is equivalent to a debt burden in the interval 400-500 per cent, depending on the time period applied and tax percentage. For 2003, the limit can be interpreted as a debt burden of more than 400 per cent. The debt burden for most indebted households in 2003 was well below this limit (Chart 2). A relatively small share of households had a debt burden of more than 400 per cent. This share will vary not only with households' willingness to borrow, but also with the age structure of the population, income developments, house prices etc. In order to be able to compare the share of households with a high debt burden over time, we apply a stricter definition of the term high debt burden in the remainder of this article: a debt burden of more than 500 per cent. Chart 2 shows that seven per cent of households had a higher debt burden than 500 per cent in 2003. The share of households with a high debt burden is largest in the low- and middle-income groups (deciles 1-6). In isolation, this may indicate a high level of vulnerability to reduced income or higher interest expenses in these groups.

The median for the debt burden in different income groups among indebted households is shown in Chart 9. The debt burden for the median household shows a similar path to the macro figures, with a peak in the late 1980s and an increase since 1998. The debt burden for those with the highest income (decile 10) has fallen considerably since the 1980s, probably as a result of changes in the tax system (see above). The households with the highest debt (decile 7-9 and decile 10) have the highest debt burden and have increased their debt burden most since 1998. For the high-income group (deciles 7-9), the debt burden has passed the peak reached in the late 1980s.

Since 2000, the average debt burden has increased in the age groups that have traditionally carried high debt (25-54) and relatively high debt (55-66). (See Chart 10.) The debt burden is highest in the younger age groups (25-34 and 35-44). This is because these households are first-time buyers. In the last few years up to 2002, the debt burden increased at a particularly rapid pace in the group 25-34, which comprises many first-time buyers. It is likely that house prices have contributed. The fact that it has become more common for households in higher age groups to incur debt is reflected in a higher debt burden for those over 55 than was usual in the 1980s.

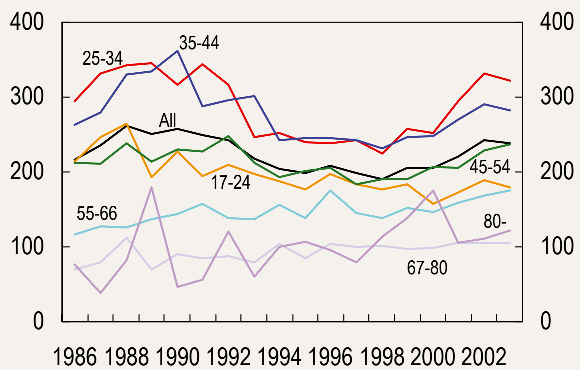
The planned introduction of tax on dividends has resulted in substantial payments of share dividends since 2000 (with the exception of 2001[12]). Dividend payments have boosted household income. Share dividends are concentrated on high-income households. Households in income decile 10 have since 1995 received over 90 per cent of total dividend payments. For indebted households in income decile 10, dividend payments increased from less than 4 to 10 per cent of disposable income from 1995 to 2003 (see Chart 11). A substantial share of the extraordinary dividend payments since 2000 have been reinvested in enterprises in the form of purchases of unlisted equities or lending from households to enterprises. To gain a more accurate picture of the household debt burden, household income should be stripped of reinvested extraordinary dividend payments. This has not been done here, however, because it is difficult to estimate how large a share of the dividend payments is

Chart 9 Debt burden in different household groups, grouped by after-tax income deciles. Households with debt. Median. 1986-2003



Sources: Statistics Norway and Norges Bank

Chart 10 Debt burden by age. Indebted households[1]. Average. 1986-2003

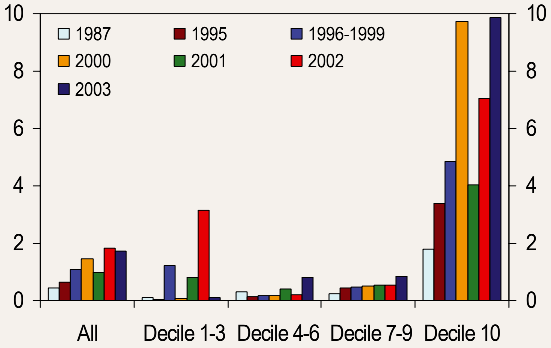


[1]Households without income, with negative income and/or with a debt burden over 20 000 per cent are excluded

Sources: Statistics Norway and Norges Bank

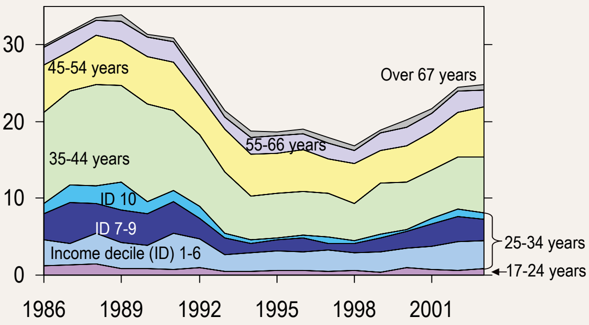
[12] Tax on dividends was introduced in September 2000, but was discontinued as from 2002. It was subsequently announced that a tax would be introduced on dividends received in 2006 (the 2005 accounting year).

Chart 11 Dividend payments as a percentage of disposable income. Indebted households, grouped by after-tax income deciles



Sources: Statistics Norway and Norges Bank

Chart 12 Debt as a percentage of total debt. Households with a debt burden of over 500 per cent, by age. In the group 25-34, also by after-tax income deciles. 1986-2003



Sources: Statistics Norway and Norges Bank

motivated by enterprises' tax-related adjustments and therefore reinvested.[13] Against the background of the increase in dividend payments to households in income deciles 4-10, the conclusion can be drawn that the debt burden in these groups (Chart 9) in the past few years has been underestimated to some extent.

5.2 Distribution of debt between different groups of households

Most of the debt is held by households with a debt burden lower than 500 per cent (see Table 2). The share of debt among households with a debt burden of over 500 per cent fell after the banking crisis in 1988-1992, which is favourable with regard to financial institutions' exposure to credit risk and hence to financial stability. Developments have reversed since 1998, however, although the share of debt held by households with a debt burden of more than 500 per cent was still lower in 2003 than in the 1980s. The changes appear to have been driven by high-income groups (deciles 7-9), but the share of debt in middle-income households (deciles 1-6) has also increased and is substantial.

Since 1998, the share of households with a high debt burden (over 500 per cent) has increased, although it is still lower than in the 1980s. Households in the age group 25-34 account for most of the increase. Chart 12 shows debt for households with a debt burden of more than 500 per cent as a percentage of total debt in the sample as a whole. Households are grouped by age, and the age group 25-34 is in turn divided into income deciles. These households' share of total debt has increased since 1998 in most age groups, but the increase is greatest for those between 25 and 34, whose share has almost doubled. The entry of these groups into

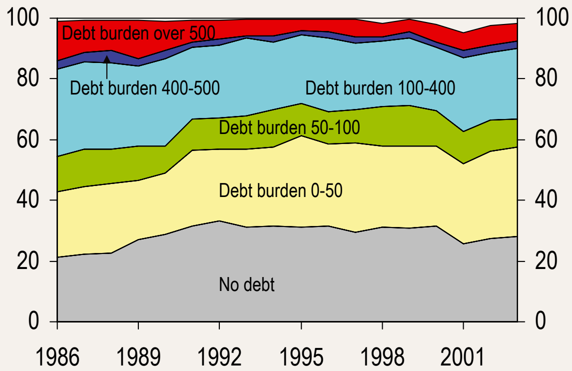
Table 2 Debt as a percentage of total debt by debt burden and income[1]. Income deciles for income after tax. 1986-2003

Debt burden	<400			400-500			>500			
Income decile	**1-6**	**7-9**	**10**	**1-6**	**7-9**	**10**	**1-6**	**7-9**	**10**	**Sum db>500**
1986	15.2	28.7	15.4	2.3	3.6	2.6	7.4	8.6	14.1	30.0
1987	14.5	28.2	14.7	2.2	3.9	2.9	7.5	10.4	13.9	31.8
1988	13.5	26.7	13.8	2.4	5.0	2.1	9.0	9.2	15.3	33.5
1989	12.1	27.0	15.4	1.8	4.0	2.5	8.3	11.2	14.5	34.0
1990	12.6	26.7	14.8	2.9	5.4	3.0	7.9	10.6	12.9	31.3
1991	13.9	27.3	16.5	2.3	4.7	2.2	9.0	10.2	11.7	30.8
1992	15.6	29.6	16.1	2.6	5.0	2.8	9.8	8.2	8.1	26.1
1993	17.6	32.9	18.5	2.5	3.6	2.2	8.3	6.5	6.6	21.4
1994	16.9	35.0	19.4	2.6	3.7	2.3	7.3	4.8	6.7	18.7
1995	17.1	35.0	19.7	3.2	3.1	1.3	8.6	5.2	4.8	18.6
1996	18.2	33.8	19.1	3.1	3.6	2.3	7.9	6.3	4.8	19.0
1997	18.8	34.7	18.8	3.1	3.6	1.9	7.6	5.1	5.3	17.9
1998	18.8	35.5	18.7	3.0	3.6	1.9	7.5	5.3	4.1	16.9
1999	18.4	34.3	17.9	3.1	4.3	2.3	8.1	5.2	5.6	18.9
2000	17.2	33.5	18.8	3.4	4.2	2.2	8.3	6.6	5.3	20.2
2001	16.5	31.4	17.8	3.4	5.0	2.5	8.8	7.7	5.2	21.6
2002	15.9	30.0	17.0	3.3	5.6	2.5	9.5	9.0	5.9	24.4
2003	15.3	29.9	16.8	3.5	5.6	2.5	10.2	8.3	6.3	24.8

[1] The shares do not add up to 100 because debt in zero-income households and in households with negative income has been removed.
Sources: Statistics Norway and Norges Bank

[13] Norges Bank (2005), p. 19, uses estimates for reinvested extraordinary share dividends for the total household sector in order to assess developments in household balance sheets. These cannot, however, simply be transferred to the micro level.

Chart 13 Financial assets[1] as a percentage of total financial assets[2]. Households grouped by debt burden. 1986-2003



[1]Financial assets excluding group insurance claims
[2] The shares do not add up to 100 because debt in zero-income households and in households with negative income has been excluded

Sources: Statistics Norway and Norges Bank

the housing market in a period of sharply rising house prices is probably the main reason for the current developments. When selling a house and purchasing another, the other age groups benefit from the increase in the value of their home, which means that their debt rises somewhat less than for the youngest age groups.

We also see that in the age group 25-34, the high-income deciles (7-9) account for the largest increase. Even though the increase in debt has to a certain extent been driven by young people with high incomes, others have joined them in acquiring more debt. Young low and middle-income households have followed their lead. The fall in interest rates by more than 4 percentage point in 2003 has enabled households to service larger debts than previously. At the same time, these households' are more vulnerable to an interest rate increase or a reduction in income.

A substantial portion of total debt is held by low- and middle-income households (deciles 1-6, see Table 2), edging up since the 1980s to approximately 30 per cent in 2003. A characteristic trait of Norwegian households seems to be that debt is not restricted to high-income households. This is related to the high share of owner-occupier households. Analyses for European countries and the US find that mortgage debt is most common among high-income households.[14] This contributes in isolation to moderating credit risk, since these households have good prospects of meeting their debt-servicing obligations. Comparisons across countries are difficult, however, because debt is categorised differently. Non-mortgage debt also appears to be more evenly spread among income groups in Europe and the US. However, it is not possible to distinguish between mortgage debt and other debt in Norwegian data.

So far, we have seen that debt burdens can be high not only for high-income households but also for low- and middle-income households. Whether a high debt burden is the result of a low income or high debt may have implications for financial institutions' exposure to credit risk. In Table 3, indebted households are ranked by size of debt and divided into 10 deciles. The 10 per cent of households with the highest debt (debt decile 10) account for over 40 per cent of total debt. As we see, all income deciles are represented in debt decile 10. This means that some low- or middle-income households hold debt that is very high in nominal kroner. Higher interest rates and hence increased interest expenses may dispose of a relatively large share of their income.

Table 3 Debt as a percentage of total debt by debt and income deciles. Income deciles for income after tax. 1986-2003

Debt decile	**1-6**				**7-9**				**10**			
Income decile	**1-3**	**4-6**	**7-9**	**10**	**1-3**	**4-6**	**7-9**	**10**	**1-3**	**4-6**	**7-9**	**10**
1986	2.0	3.9	3.7	0.5	2.2	13.0	22.5	6.5	1.0	4.4	14.8	25.5
1987	2.1	4.0	3.4	0.6	1.5	12.4	23.3	6.6	1.0	4.7	16.2	24.2
1988	2.2	3.9	3.5	0.6	1.9	13.0	22.8	6.6	0.9	4.6	14.9	25.2
1989	1.8	3.4	2.9	0.5	1.9	12.4	24.7	6.3	1.4	3.1	15.2	26.5
1990	2.1	3.5	3.2	0.5	2.1	12.6	23.9	6.7	1.9	2.9	15.7	25.0
1991	2.3	3.4	3.1	0.6	2.2	14.0	22.7	6.9	0.8	3.5	17.1	23.6
1992	3.0	4.0	3.2	0.7	2.7	14.2	23.9	6.0	1.2	4.1	16.5	20.6
1993	2.7	4.4	3.4	0.7	2.4	13.1	24.5	6.5	1.6	4.9	15.1	20.8
1994	2.8	3.9	3.1	0.6	3.0	12.8	24.0	6.9	1.8	3.9	16.4	20.8
1995	3.3	4.0	3.1	0.7	3.2	12.2	23.9	6.7	1.5	5.6	16.4	19.4
1996	3.4	4.2	3.3	0.8	3.4	13.1	22.9	6.7	1.8	4.2	17.5	18.8
1997	3.3	4.4	3.3	0.7	3.5	13.0	22.8	6.5	1.7	4.1	17.3	19.4
1998	3.6	4.3	3.2	0.7	3.4	12.8	23.5	6.7	1.8	4.3	17.7	18.1
1999	4.0	4.0	3.4	0.8	3.4	13.5	23.2	6.1	1.6	3.9	17.3	19.0
2000	3.3	4.1	3.2	0.7	3.1	13.5	23.5	6.5	1.6	3.7	17.7	19.1
2001	3.4	4.3	3.4	0.8	3.3	13.1	23.7	6.5	1.6	4.4	17.2	18.3
2002	3.7	4.1	3.3	0.7	3.2	13.6	23.6	6.5	1.8	3.6	17.7	18.3
2003	3.7	4.1	3.3	0.7	3.2	13.5	23.9	6.2	2.4	3.8	16.7	18.7

Sources: Statistics Norway and Norges Bank

[14] European Central Bank (2005b) and Aizcorbe, Kennickell and Moore (2003)

5.3 Financial assets

Income is the first buffer if households' interest expenses rise. Financial assets are the next buffer. Macroeconomic figures show that households accumulate not only debt, but also financial assets.[15] Naturally, debt and assets are unevenly distributed across households. Indebted households are not necessarily those with increasing financial assets. In order to examine this, microdata is required. The income and property statistics do not include group insurance claims, which are the largest single component of household financial assets and where the increase has been greatest over the past three years.[16] Insurance claims are illiquid, however, and cannot be used if payment problems should arise. For this reason, the financial asset figures in the income and property statistics are suitable for determining household vulnerability in the event of an interest rate increase or a reduction in income.

Over half of financial assets in 2003 were held by households without debt or with a very low debt burden (below 50 per cent, see Chart 13). This type of household's share of total financial assets has increased considerably since the 1980s. Households with a high debt burden (over 500 per cent) have a very low share. The share of total financial assets held by the most vulnerable households has been halved since the 1980s. Microdata therefore indicate therefore that financial assets have primarily been accumulated in households without debt or with a low debt burden, and that the increase in financial assets cannot to any great extent be regarded as a buffer against higher interest expenses or a reduction in income.

The rise in debt has its corollary in an increase in household housing wealth. Housing wealth is less liquid than financial wealth. If debt-servicing problems force large groups of households to sell their houses at the same time, house prices and housing wealth could decline. Housing wealth is a relatively volatile component of total household assets because of the possibility of changes in house prices. A complete analysis of household vulnerability should include both financial assets and housing wealth. The income and property statistics, however, only contain the value of a house as assessed for tax purposes, which is considerably below market value. The data are therefore not suitable for an analysis of households' financial position where housing wealth is included.

6 Conclusion

Household debt has risen considerably since the end of the 1980s. Empirical analyses show that debt growth is related to developments in house prices. Microdata for households show that the increase in debt reflects higher average debt per household, a larger number of households and a larger number of indebted households.

Most households have a moderate or low debt-to-income ratio. However, a limited number of households have incurred a high level of risk by having a high debt burden (above 500 per cent). Households with a high debt burden held a smaller share of total debt in 2003 than in the late 1980s. The increase in debt in recent years for households with a high debt burden is related to strong debt growth among young households (25-34), who are often first-time home buyers. Among these, high-income households have probably contributed most, although low- and middle-income households have also contributed to the rise in debt.

Households' financial adjustment in the 1980s, in the years following the liberalisation of the credit market, was not sustainable. After the banking crisis in 1988-1992, debt among households with a high debt burden was reduced as a percentage of total debt. These developments have been reversed since 1998.

The accumulation of financial assets cannot to any great extent be regarded as a buffer against an increase in debt. Financial assets have increased primarily among households without debt or with a low debt burden.

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[15] See Norges Bank's Financial Stability reports since 2003, section 2.2

[16] See Norges Bank (2005), Chart 2.6