March 27, 2009

# Further results from the Central Bank Working Group on household sector debt

The Working Group has continued analysing data on household debt since the publication of the first preliminary results on March 11. An application has been sent to the Data Protection Authority for permission to gather encrypted data on income with the approval of the tax authorities. The Working Group considers these data to be of vital importance, as international studies indicate that most critical debt situations occur when a household loses its income or its income is significantly reduced in a situation characterised by high debt and low/negative net wealth. Preparation for the compilation of data on unemployment and debt to pension funds has begun.

Further analysis of the current database has focused on including other types of assets and liabilities – e.g. overdrafts, loans backed by securities, and deposits – which allows the Group to assess the total equity position of households. Those results are not presented in this memorandum but will be made public in the near future.

The Group has also analysed two debt restructuring strategies that have been discussed in public in recent weeks. It has examined the effects of these strategies on different household groups based on their equity position. Those results are presented below. Also presented are further results on the distribution of mortgage debt held by different household groups according to their housing wealth and liabilities.

**Distribution of total mortgage debt according to housing wealth and liabilities**

Total mortgage debt in the database is roughly 1,260 b.kr. This includes mortgages from Nýi Kaupthing, NBI, Íslandsbanki, the Housing Financing Fund, saving banks, and other small financial institutions. Mortgage loans from pension funds are not yet included, but these could add roughly 170 b.kr., bringing the total amount of outstanding mortgage debt to approximately 1,430 b.kr. All loans in the database that are backed by housing collateral are defined as mortgage loans. The outstanding amount of foreign currency-denominated mortgages is 198 b.kr., including 78 b.kr. in Swiss francs (CHF) and 87 b.kr. in Japanese yen (JPY).

The total number of households with mortgage loans is around 80,000; therefore, the average mortgage is just under 16 m.kr. (excluding pension fund mortgages).

The Group has analysed the distribution of total mortgage debt over different categories of housing wealth and housing debt. The results indicate that households with significant housing wealth have a relatively high share of total mortgage debt. Slightly less than one-third of homeowners own housing assets valued at 30 m.kr. or more, yet these homeowners have almost half of total mortgage debt. On the other hand, 68% of homeowners have housing wealth below 30 m.kr. and have just over half of mortgage debt. The distribution of mortgage debt is therefore very uneven across wealth groups (see Chart 1 and Tables in the Appendix).

Another observation concerning households in negative equity is that just over 6% of these households have more than 5 m.kr. in negative equity, yet they have almost 20% of total mortgage debt. These approximately 5,000 households are therefore in an extremely vulnerable situation and are at great risk of defaulting if they lose their income and debt servicing capacity. On the other hand, approximately 60% of households have more than 5 m.kr. in positive equity but have 44% of mortgage debt. This group therefore has a better chance of withstanding any negative income shocks (see Chart 2 in the Appendix).

**Mortgage debt restructuring**

The Working Group has analysed two debt restructuring strategies that have recently been discussed in the public arena:

1. 20% write-off of all mortgage debt;
2. A 4 m.kr. write-off of each household's mortgage debt.

The Group has examined the cost of each strategy and how the benefits are distributed over various household groups as defined by their equity position.

It is clear that any across-the-board debt write-offs will have to be covered by the state or agreed on by foreign creditors. Any scheme that would involve unilateral transfer of additional costs to creditors is not an option. In this respect it is important to note that any across-the-board scheme would involve additional costs because they would entail write-offs on loans that would otherwise be repaid in full. Such schemes are therefore both more expensive and the benefits distributed differently than the expected write-offs due to future losses on loans. The lion's share of these additional costs will therefore ultimately be borne by the state.

The state of Government financing does not allow the Treasury to take on debt of this magnitude, either directly or through further capital injection to the State-owned banks. Hence measures of this size must be financed (largely) by tax increases or reduced Government spending. The impact of such measures is not included in the distribution analysis that follows.

The Group has not yet looked at the effects of the strategies on the debt service burden. Further analysis of the effects of various strategies will be performed when income data become available. With the additional income data, it will be possible to scrutinise the effects of these two strategies and others on different income groups. International studies indicate, however, that high-income households have the largest share of total debt.[1] The preliminary results reported here could therefore give an idea of the impact across different income groups.

20% debt write-off

The cost of an across-the-board 20% mortgage debt write-off amounts to 252 b.kr. excluding mortgage debt owed to pension funds, and approximately 285 b.kr. including pension fund debt. This amounts to 20% of GDP, 45% of total public expenditure in 2008, or roughly double the amount spent on public health care in 2008. If a 20% write-off of corporate debt is added, the total cost could amount to approximately 900 b.kr. However, there will be considerable uncertainty regarding total corporate debt until the banks' final balance sheets are ready.[2]

[1] See, for example, Faruqui, Umar (2008). "Indebtedness and the Household Financial Health: An Examination of the Canadian Debt Service Ratio Distribution", *Bank of Canada Working Paper* 2008-46; and Vatne, Bjørn Helge, (2006). "How large are the financial margins of Norwegian households? An analysis of micro data for the period 1987-2004", *Norges Bank Economic Bulletin* 4/06, 173-180; and Kida, Mizuho, (2009). "Financial vulnerability of mortgage-indebted households in New Zealand – evidence from the Household Economic Survey", *Reserve Bank of New Zealand Bulletin*, Vol. 72, No. 1, March 2009, 5-12.

[2] The Central Bank has begun preparing an analysis of corporate indebtedness.

Housing wealth and housing debt are distributed very unevenly. Such a write-off of housing debt would thus affect different groups in very different ways. Given that the average mortgage is around 16 m.kr., the average household would have a write-off of 3.2 m.kr. However, around 73% of households in the database (57,000 households) have mortgage debt under 20 m.kr. and would therefore gain a maximum of 4 m.kr. if they received a 20% write-off. One of every six households (almost 13,000 households) would receive a 4-6 m.kr. debt reduction. Almost 6,000 households would have 6-10 m.kr. of their mortgages written off, and almost 2,500 households would receive a debt reduction of 10-30 m.kr. More than 100 households would have more than 30 m.kr. of their mortgages written off. For the majority of this group, even this would not suffice to bring them close to positive housing equity.

The group of households with the best relative housing equity position comprises 17,500 households with more than 20 m.kr. in positive housing equity. This group would receive a total debt write-off of 41 b.kr. (see Chart 3 in the Appendix).

The approximately 31,600 households in a vulnerable equity position (those with negative equity or up to 5 m.kr. in positive equity) would receive a total debt write-off of 139 b.kr., or roughly half of the total write-offs of the strategy. The 5,000 households with more than 5 m.kr. in negative equity would receive 48 b.kr., or 20% of total write-offs (see Chart 4 in the Appendix).

<u>4 m.kr. debt reduction for each household</u>

The total cost of reducing each household's mortgage by 4 m.kr. would be even higher than that of a 20% write-off, or roughly 320 b.kr. (4 m.kr. for 80,000 households).

According to this scheme, all households would receive the same amount of mortgage write-off. Even so, a larger share of the total debt reduction would be directed at the group of households with the best relative housing equity position than would be the case under the 20% strategy (see Chart 3 in the Appendix).

The households in the best position – those with more than 20 m.kr. in positive housing equity – would receive 70 b.kr. according to this strategy, instead of 41 b.kr. according to the 20% write-off strategy. The 31,600 households in a vulnerable equity position would receive 126 b.kr. instead of 139 b.kr. The group of households in the worst position – those with more than 5 m.kr. in negative equity – would receive 20 b.kr., far less than the high-wealth group (see Chart 3 in the Appendix).

## Concluding remarks

It is not the role of the Working Group to formulate specific views on the distribution effects of various schemes. The Group and its methodologies are available, however, to support analysis that could help identify appropriate measures for household debt restructuring. This will particularly be the case when income data are included in the database, an addition that the Central Bank considers extremely important. The Group hopes that, in a few weeks' time, it will be possible to analyse in greater detail the extent of households' payment difficulties based on information on income and unemployment.

## APPENDIX

Chart 1

Households with large housing wealth have a relatively high share of total mortgage debt

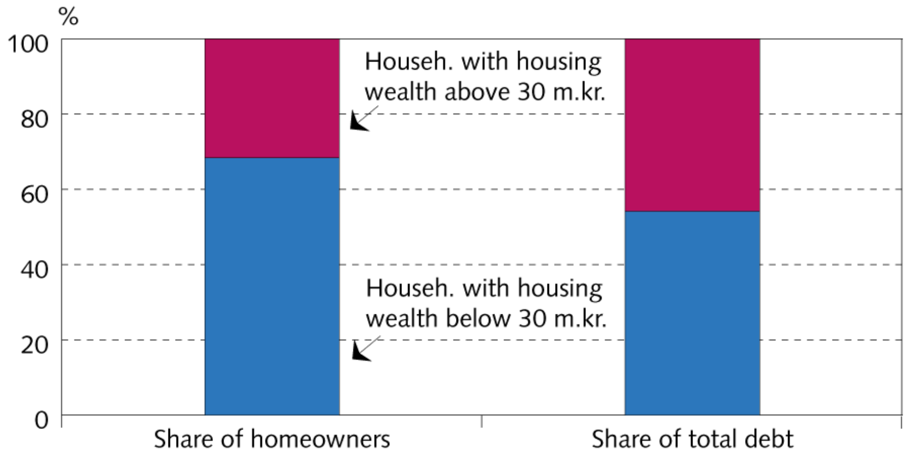


Chart 2

Households in negative equity have a relatively large share of debt

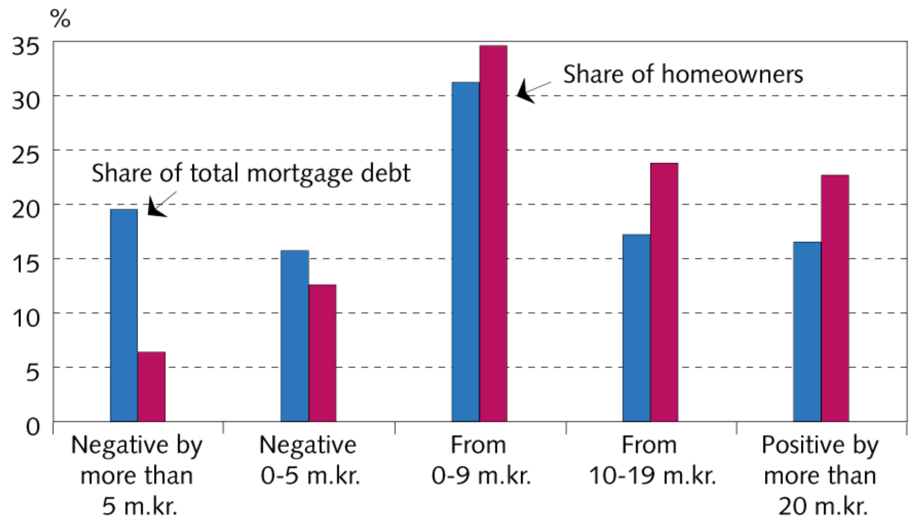

Chart 3

## Distribution of debt write-offs to different groups of households with regard to the equity position for two debt restructuring strategies

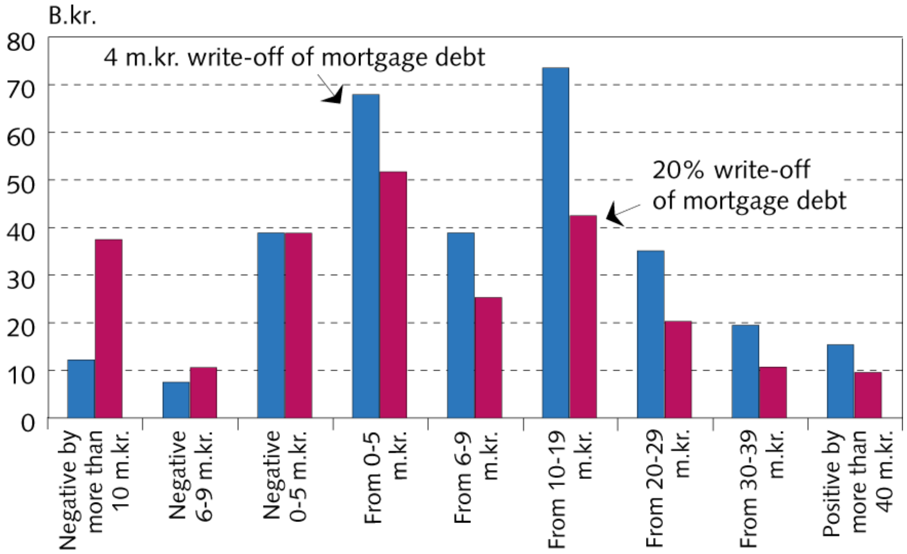


Chart 4

## Distribution of benefits of debt write-off schemes to household groups with regard to equity

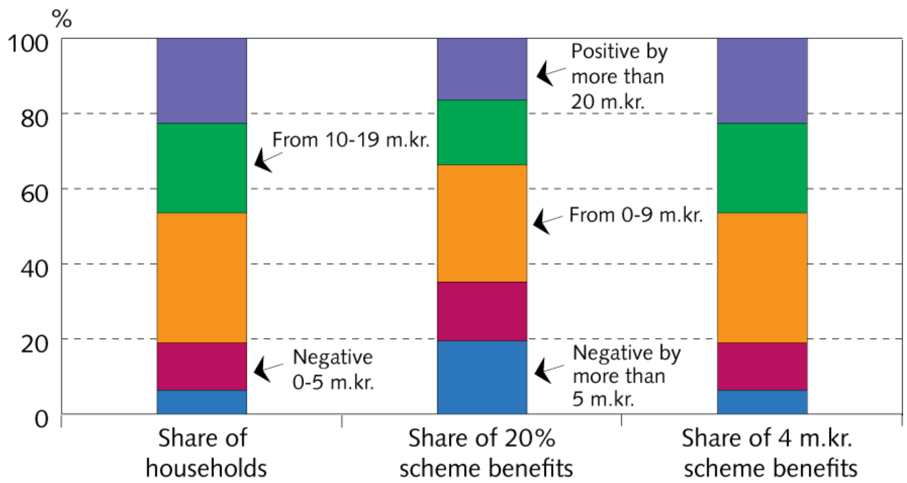

Table 1 Share of homeowners in different groups with regard to housing wealth and debt

| | Housing debt | | | | | |
|---|---|---|---|---|---|---|
| *Housing wealth* | *0-9 m.kr.* | *10-19 m.kr.* | *20-29 m.kr.* | *30-39 m.kr.* | *40-49 m.kr.* | *50 m.kr. or more* |
| 0-9 m.kr. | 5.1 | 1.5 | 0.1 | 0.0 | 0.0 | 0.0 |
| 10-19 m.kr. | 13.6 | 15.8 | 2.9 | 0.3 | 0.1 | 0.1 |
| 20-29 m.kr. | 9.3 | 11.4 | 6.5 | 1.2 | 0.3 | 0.2 |
| 30-39 m.kr. | 4.2 | 4.3 | 3.3 | 1.2 | 0.4 | 0.4 |
| 40-49 m.kr. | 3.1 | 2.3 | 2.1 | 1.0 | 0.5 | 0.6 |
| 50 m.kr. or more | 1.5 | 1.5 | 1.6 | 1.2 | 0.7 | 1.5 |

Table 2 Share of total mortgage debt held by different household groups with regard to housing wealth and debt

| | Housing debt | | | | | |
|---|---|---|---|---|---|---|
| *Housing wealth* | *0-9 m.kr.* | *10-19 m.kr.* | *20-29 m.kr.* | *30-39 m.kr.* | *40-49 m.kr.* | *50 m.kr. or more* |
| 0-9 m.kr. | 1.5 | 1.2 | 0.2 | 0.1 | 0.0 | 0.1 |
| 10-19 m.kr. | 4.6 | 14.0 | 4.1 | 0.7 | 0.3 | 0.5 |
| 20-29 m.kr. | 3.0 | 10.4 | 9.3 | 2.4 | 0.8 | 1.0 |
| 30-39 m.kr. | 1.3 | 3.9 | 4.9 | 2.6 | 1.1 | 2.0 |
| 40-49 m.kr. | 1.0 | 2.1 | 3.1 | 2.2 | 1.5 | 2.7 |
| 50 m.kr. or more | 0.5 | 1.3 | 2.4 | 2.5 | 2.0 | 8.8 |

Table 3 Share of homeowners and share of total debt by housing wealth groups

| *Housing wealth* | *Share of homeowners* | *Share of total debt* |
|---|---|---|
| 0-9 m.kr. | 6.7 | 3.2 |
| 10-19 m.kr. | 32.9 | 24.1 |
| 20-29 m.kr. | 28.8 | 27.0 |
| 30-39 m.kr. | 13.9 | 15.9 |
| 40-49 m.kr. | 9.7 | 12.5 |
| 50 m.kr. or more | 8.0 | 17.4 |