DEBT SERVICING RATIO AND HOUSEHOLD CHARACTERISTICS IN THE EURO AREA

Available macroeconomic data from sectoral accounts indicate that the debt servicing ratio of euro area households remained at a relatively stable level of around 9-10% between 1991 and 2005, before increasing slightly to 11% in 2007. Aggregated information is of limited value when trying to qualify the risk to financial stability stemming from household income. For example, risks would be rather high should the bulk of mortgages be concentrated on the lowest income or unemployed borrowers. As such, whenever possible, it is important to complement the aggregate developments with micro-level information, to assess how broadly or narrowly the debt servicing ratio is distributed across the population according to different characteristics, in particular income.

This box uses the microdata derived from the EU Statistics on Income and Living Conditions (EU-SILC) to present estimates of the debt servicing ratio across household characteristics. It is worth clarifying a few issues related to the information derived: (i) the debt servicing ratio is computed as the percentage of total housing costs of the household, which includes mortgage interest payments and the cost of utilities, among other costs, over total disposable income of the household; this means that this ratio is not directly comparable with the aggregate figure; (ii) the computations are made for households with mortgages outstanding, which is the main

component of household debt; (iii) figures refer to the median, as a way of controlling for extreme values; (iv) the data cover most euro area countries;[1] and (v) data refer to 2005, although, given the structural nature of these statistics and the duration of mortgage contracts, the information provided is of value for assessing the current risks to financial stability posed by the household sector.

The first two columns of the table below show the median of the debt servicing ratio and the percentage of households with an outstanding mortgage according to the level of income and other characteristics of the head of household, including age, work status, level of education and migration status – the respective weights are given in brackets. All in all, the survey results suggest that the assessment of risks stemming from euro area mortgage markets may be underestimated when looking only at aggregated statistics. This is because the most vulnerable households tend to be those with higher debt servicing ratios. In particular, the survey indicates that the debt servicing ratio is negatively correlated with the *level of income* of the household,

1 Euro area figures are defined as the weighted average (using GDP weights adjusted for purchasing power parity (PPP)) of the results for Belgium, Germany, Finland, France, Ireland, Italy, the Netherlands and Portugal, which represented around 80% of euro area GDP in 2005.

Debt servicing ratios for euro area households with mortgages outstanding, according to various characteristics

(2005; median value as a percentage of disposable income)

	Median for debtors		% Households with mortgage outstanding	% Debtors with ratio above 40%	% Debtors with arrears	Minimum income to make ends meet relative to income declared (%)
All households	15.3		20.9	6.5	3.3	79
Percentile of income						
<20	39.6	*(0.20)*	4.0	46.5	10.3	171
21-40	23.4	*(0.20)*	10.5	14.9	6.4	112
41-60	18.5	*(0.20)*	19.7	6.3	4.6	92
61-80	15.5	*(0.20)*	31.3	3.7	2.2	80
81-90	13.1	*(0.10)*	37.2	2.7	2.2	70
91-100	10.3	*(0.10)*	39.9	1.5	1.2	55
Age (head of household)						
<35	17.6	*(0.17)*	20.0	7.0	3.4	80
35-44	16.0	*(0.23)*	35.7	6.9	3.5	80
45-54	13.8	*(0.21)*	29.3	5.0	3.3	77
55-64	14.0	*(0.17)*	17.6	6.9	2.1	79
65-74	16.6	*(0.14)*	7.9	8.6	5.0	92
75+	18.1	*(0.08)*	2.1	7.1	2.2	96
Work status (head)						
Employee	14.8	*(0.47)*	31.3	4.9	2.5	77
Self-employed	16.5	*(0.09)*	28.0	12.5	4.9	83
Unemployed	17.9	*(0.05)*	12.6	12.4	10.8	91
Inactive	16.3	*(0.38)*	8.1	9.1	4.1	88
Level of education (head)						
Low	14.4	*(0.24)*	6.3	11.6	3.9	71
Medium	15.9	*(0.58)*	20.5	6.6	3.7	82
High	13.9	*(0.18)*	28.7	5.7	2.4	72
Migration status (head)						
Non-migrant	15.3	*(0.91)*	21.4	6.3	3.1	79
Migrant within EU	12.4	*(0.02)*	19.0	4.5	2.5	93
Migrant from outside EU	16.7	*(0.07)*	13.9	9.1	5.9	93

Sources: EU Statistics on Income and Living Conditions (EU-SILC) and ECB calculations.
Note: The first column includes the proportion of each sub-group in brackets.

i.e. the higher the level of income, the lower the ratio of debt service to income. Moreover, it also shows that, compared with the other characteristics considered, there is greater variation in the debt servicing ratio for income levels. Indeed, for the first income group (including households in the lowest 20 percentiles), the debt servicing ratio, at around 40%, is almost four times that of the fifth income group (households above the 90th percentile). It should be recognised, however, that the proportion of households with mortgages outstanding tends to grow with the level of income. As regards *work status*, the ratio is highest for those households in which the head is unemployed (17.9%) and lowest for those households in which the head of household is an employee (14.8%). Turning to the *level of education*, those households in which the head has a high-level education (tertiary education) have the lowest debt servicing ratio (13.9%), while the highest level appears to be linked to those households in which the head has an intermediate education level (15.9%). Finally, with respect to *migration status*, migrants from outside the EU have a higher ratio (16.7%), migrants from within the EU have a smaller ratio (12.4%), and the ratio for non-migrants is inbetween the other two.[2]

The table also shows another three measures of financial stress at the household level. The first is the proportion of households for which the debt servicing ratio is above 40% (column 3), the second is the percentage of households with arrears (column 4) and the third, which is more subjective, is derived from the ratio between the lowest monthly income to make ends meet declared by households and the level of income effectively obtained (column 5). All of these measures tend to confirm the link with household characteristics described for the debt servicing ratio, and, in some cases, to reinforce it. For instance, the link with the *level of income* tends to be much more marked, e.g. the percentage of households with a debt servicing ratio of above 40% in the lowest income group is 46.5%, while it is 1.5% for those with the highest income. Also, for *work status*, the situation for the unemployed seems much worse in relative terms than for the employees regarding the percentage of debtors with a debt servicing ratio above 40% and the percentage of debtors with arrears, while for the *level of education,* households with the highest level of education are in a better situation relative to those with the lowest level, for example the percentage of debtors with a debt servicing ratio above 40% is 5.7% and 11.6% respectively.

Looking forward, an intensification of the economic downturn could have a negative impact in the level of income and could result in an increase in the number of people unemployed. Therefore, all other things being equal, an increase in the proportion of households in the lowest income levels and in that with a head of household who is unemployed, should translate not only into a higher debt servicing ratio for those households with a mortgage outstanding, but also into an increase in the level of financial stress measured, for instance by debtors with arrears and households with a perceived level of income below that needed to make ends meet. It should be acknowledged, however, that euro area figures hide a great disparity of situations amongst euro area countries.[3]

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2 The results described are confirmed using a multivariate approach.
3 See Box 1 in Task Force of the Monetary Policy Committee of the European System of Cental Banks, "Housing finance in the euro area", *ECB Occasional Paper*, No 101, March 2009.