Greek household indebtedness and financial stress: results from household survey data

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1. Introduction

During the three-year period 2003-2005, bank loans to households grew at a very high rate (almost 30%) and bank penetration into this sector of the economy increased significantly.[2] These developments have amplified the concern that Greek households may be borrowing excessively and that the credit risk taken by banks is high, although the outstanding balance of bank loans to households as a percentage of GDP remains lower in Greece than the euro area average, despite a significant increase in the above period (2005: Greece: 38.0%, including securitised loans or 36.3% excluding securitised loans; euro area: 52.6%).

Aggregate data provide an overview, but are not sufficient to assess the financial position of households, nor can they reveal how financial stress is distributed among them and which household groups face problems in meeting their loan obligations. Detailed data at household level are required for this purpose. In order to examine the degree of indebtedness of Greek households, especially the extent of their borrowing in relation to their income and wealth, as well as other important characteristics of their borrowing behaviour, the Bank of Greece repeated in 2005 the sampling survey conducted in 2002.[3]

2. Description of the survey

The survey was conducted in the fourth quarter of 2005 and covered 6,000 households in urban and semi-urban areas of Greece. A random sampling technique, stratified by geographical district, was used to ensure that the sample was representative of the surveyed population.

The questionnaire covered all household-borrowing categories and, for each type of loan, recorded the term, the initial amount and the outstanding balance of the loan, as well as the amount of the latest instalment paid. It then sought information about the household's income and wealth. In this survey, the questionnaire was enriched with questions about the difficulties encountered, in the respondents' opinion, in servicing properly their loan obligations, in conjunction with the payment of other regular fixed expenses, as well as with questions about whether the respondents had ease of access to bank lending.

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1 Bank of Greece, Statistics Department. This paper is a shorter version of a more extensive study by the same authors, published on the Bank of Greece website in March 2006.

2 In the three-year period from 2003 to 2005, the number of bank housing loan accounts grew at an average annual rate of 16%, the number of credit cards at 8% and the number of other bank loan accounts to households at 27%.

3 The survey was commissioned to TNS-ICAP, i.e. the market research company that had carried out the previous survey.

Full responses (i.e. from all adult members of the household) were received from 3,210 households, thus bringing the average rate of response to 52%, much higher than in 2002 (38.4%).[4]

The rate of response of the originally selected households varies significantly across geographical areas, as was the case in the 2002 survey too. Table 1 shows that the rate of response drops with the increase in the degree of urbanisation of the geographical area: it is relatively small in Athens and high in semi-urban areas, as was the case in the previous survey as well. These data show that, overall, people in major urban centres, especially Athens, are rather cautious of household surveys. In any event, differences in the response rate across geographical areas affect the representativeness of the sample. Therefore, appropriate weights were applied to the data in order to reflect the population structure by area and balance out the effects of this factor. Moreover, the distribution of the sample's household size was adjusted in order to correspond to the distribution of the population according to the 2001 census.

Table 1

Household response rate and urbanisation

(percentages)

	2005	**2002**
Athens	44.8	31.3
Thessaloniki	54.3	38.7
Other urban areas	55.4	44.3
Semi-urban areas	62.8	48.6
Total	**52.0**	**38.4**

These weights restore the representativeness of the sample to the extent that the borrowing behaviour of the originally selected households that did not respond is the same as that of the responding households. However, this cannot be verified and, therefore, the survey results should be interpreted with some caution.

The survey conducted by the Bank of Greece in 2002 had covered only household members aged 25 and over (25+). The new survey covered all household members aged 18 and over (18+). In order to compare the results of the two surveys, the main characteristics of household borrowing are assessed on the basis of both the responses of all household members that participated in the 2005 survey (i.e. the 18+ sample) and their members aged 25+.

Table 2 shows that 46.9% of households reported some outstanding loan. For households of which only the 25+ members have been taken into account, this percentage stands at 47.7%, i.e. a little lower than in 2002 (48.4%). This small difference is not statistically significant, but the fact that this percentage remained almost unchanged cannot be considered compatible with the high rate of increase of bank lending to households in 2003-2005.

[4] See Mitrakos, Simigiannis and Tzamourani (2005).

Table 2

Indebted households by loan category

Loan category	Percentage of households (%)						Average debt (in euro)		
	2005, 18+		2005, 25+		2002, 25+		2005, 18+	2005, 25+	2002, 25+
Without debt obligations	53.1		52.3		51.6				
With some debt obligations	46.9	100.0	47.7	100.0	48.4	100.0	19,665	19,637	15,532
Housing-related loans		37.3		38.0		37.2	42,366	41,701	29,557
- Loans for house purchase		28.4		28.7		27.5	48,789	48,156	33,187
- Loans for house repair		9.9		10.3		10.7	18,539	18,403	16,877
- Loans for land acquisition		0.9		1.0		1.0	28,224	27,401	7,430
Other loans		81.7		81.2		85.3	6,389	6,275	4,246
Bank loans other than housing-related		77.8		77.2		75.5	6,552	6,447	4,048
- Credit card debt		54.4		54.1		53.1	3,047	3,039	1,701
- Loans for car purchase		20.8		20.1		20.9	7,495	7,159	5,815
- Other bank loans (personal, consumer, etc)		28.9		28.9		29.4	6,552	6,570	2,979
Credit from retailers		9.0		8.9		16.3	1,256	1,254	1,294
Loans from other households		1.2		1.3		2.8	5,612	5,496	12,447

It seems that some of the responding households did not report any outstanding loans, because households are generally cautious when it comes to sampling surveys or because of the very personal character of the questions, the complexity of the questionnaire or the volume of information requested about household borrowing. To the extent that these reasons apply, the behaviour of non-responding households can be considered similar to that of responding ones and, therefore, valid conclusions may be drawn about the borrowing behaviour of all households with outstanding loans. If, however, because of a specific borrowing behaviour (e.g. large number or excessive amount of loans or similar reasons directly associated with borrowing behaviour), households refrained from stating their loans or even participating in the survey, the representativeness of the sample is affected and the survey results will be biased and will not accurately reflect the characteristics of the entire population. However, when the survey data are compared with data submitted by banks to the Bank of Greece, the following points come to light: the average outstanding balance of housing loans per household, as recorded by the 2005 and 2002 surveys, increased at an average annual rate of 12.1%, while the corresponding balance per account, as calculated from the relevant bank data, increased at an average annual rate of 11.3% over the same period.[5] In addition, the households' average outstanding balance of credit card loans, as shown by the sampling surveys, rose at an average annual rate of 21.3% during 2003-2005, while the corresponding balance, as recorded by banks, increased at an average annual rate of 19.4% over the same period.[6] Consequently, the annual growth rates of these two categories of loans, as calculated from bank and survey data, do not differ substantially. This corroborates the view that the borrowing behaviour of non-responding households is generally similar to that of responding households and, therefore, boosts the reliability of the survey results.

3. Analysis of the results

As shown in Table 2, the breakdown of households by category of loans remained almost unchanged in the period between the two surveys. The most common type is credit card loans, as 54.4% of households with outstanding loans in 2005 had debts to credit cards. The increased use of credit cards for payments[7] and the easy access to such type of loans, within the limits of each card, explain why they are so widespread, despite the fact that bank interest rates for these loans are the highest among all categories of loans.[8] The second most common category is housing loans (37.3%), followed by unsecured bank loans (28.9%, being mainly personal and hire-purchase loans).

The percentages of households by category of loan do not differ substantially if the sample is limited to household members aged 25+ (see Table 2). However, the comparison between the two distributions (2005: 18+ and 25+) shows that loans by household members aged 18 to 24 relate to, at a much higher percentage than loans to household members aged 25+, loans for car purchase rather than housing loans.[9]

Moreover, as shown in Table 2, the percentage of households with outstanding housing loans in 2005 is higher than in 2002. This is in line with the rapid increase in housing loans, since new housing loans are contracted, as a rule, by different households. The average

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5 The outstanding balance of housing loans per account (according to bank data) stood at €34.9 thousand at end-2005 (including securitised loans), from €25.3 thousand at end-2002. Respectively, the outstanding balance of housing loans per household (according to the 2002 and 2005 surveys) rose to €41.7 thousand in 2005, from €29.6 thousand in 2002 (see Table 2). Therefore, the outstanding balance of housing loans per account is lower than the average outstanding balance per household, indicating (as in the surveys) that a number of households have more than one housing loan. However, the relation between the two aggregates remained virtually unchanged, since the outstanding balance per account corresponded approximately to 85% of the outstanding balance per household, indicating that the number of accounts per household did not change substantially over this period.

6 Specifically, the outstanding balance of credit card loans, as recorded by banks, stood at €8,445.4 million at end-2005 (including securitised loans), compared with €4,957.2 million at end-2002. Respectively, the outstanding balance of credit card loans per household, as recorded by the sampling surveys, stood at €3,039 million in 2005, compared with €1,701 million in 2002. It should be noted that, if account is taken of the outstanding balance per household, the data are adjusted for the fact that the number of households is different in the two surveys, thus making the evolution of credit card loans comparable between banks and the surveys, given that the number of Greek households remained almost unchanged during 2003-2005.

7 At end-2005, two credit cards corresponded to every three persons aged 20 and over. Moreover, the data submitted by banks to the Bank of Greece show that in 2003-2004 the number of credit card transactions increased at an average annual rate of 15% and the value of these transactions at a rate of 37%, reaching €5.4 billion in 2004 (2002: €2.9 billion).

8 At end-2005, the average interest rate on credit card loans was 13.78%, compared with an average of 8.26% for all consumer loans and an average of 3.91% for housing loans.

9 Specifically, 35.4% of household members aged 18-24 reported a car purchase loan and 9.2% a housing loan.

outstanding balance of household housing loans amounts to €42,366. Specifically, for the 25+ sample, this balance comes to €41,701, increased by 41% compared with the corresponding figure of 2002. The amount of housing loans, as recorded in the 2005 survey, leads to the estimate that the total outstanding balance of this category of loans came to €26.2 billion, corresponding to about 70% of the outstanding balance of housing loans, as reported by banks.[10] However, available information is not sufficient to examine whether this significant deviation between the survey-estimated total indebtedness and the bank-recorded outstanding balance of housing loans is due to the fact that a relatively small percentage of households has reported some loan or whether it reflects the possibility that borrowing is more concentrated among households that refused to take part in the survey.

By contrast, the percentage of households reporting 'other', non-housing, loans (perhaps in addition to housing loans), declined in 2005 (81.2%) compared with 2002 (85.3%). This drop concerns all categories of loans and is particularly marked in the case of retail store credit. The sole exception is credit card loans, as the percentage of households with loans of this category has picked up slightly. The rising trend of the percentage of households with credit card loans, as established by both surveys, is in line with the fact that both the number of credit cards and the amount of credit card loans increased at high rates in the period between the two surveys (at an average annual rate of 8% and 19.4%, respectively). The increased use of credit cards and bank competition in this sector of retail banking seem to be directly associated with the significant decrease in the percentage of households with retail store loans between 2002 and 2005. Moreover, it is very likely that part of household loans from retail stores, especially those for purchases by instalments paid by credit card, was not properly recorded by the survey, since households perceive the amounts of this type of credit as loans from banks rather than retail stores or consider that they have no outstanding debt to the extent that they pay the entire balance of their credit card each month. Apart from housing loans, the average of other bank loans to households amounts to €6,552, or €6,447 for households with members aged 25+, i.e. it stands about 60% higher than in 2002. The total outstanding balance of this category of bank loans to households, estimated on the basis of survey data, amounts to €9 billion and corresponds to 40% of the outstanding balance of these loans, as recorded by banks. Therefore, the deviation between the two amounts is significantly higher for this category of loans than for housing loans. This result may reflect the fact that, apart from regular information sent to households by banks on the outstanding balance of their debt, the outstanding balance of housing loans changes less over time than in other categories of loans. As with housing loans, available information does not help to examine whether this significant deviation between the survey-estimated and bank-recorded outstanding balance of loans is due to the fact that the percentage of households reporting a loan is relatively small or whether it reflects the possibility that borrowing is more concentrated among households that refused to take part in the survey.[11]

The borrowing level per household is increased in all geographical areas and, as established by the 2002 survey, there are differences between geographical areas as to both the borrowing level per household and the types of loans (see Table 3). However, it is observed that the borrowing level per household is more evenly distributed among areas in 2005 than in 2002.

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[10] As a rule, housing loans are paid in biannual instalments. In the period March-August 2005, i.e. six months before the survey, the average outstanding balance of housing loans, as recorded by banks (including securitised loans), amounted to €38.1 billion.

[11] The deviation between the survey-estimated amount of loans and the amount recorded in the macroeconomic figures is a common phenomenon. For instance, in a similar survey conducted in 2004 in the UK by the Bank of England, the estimated outstanding balance on the basis of survey data corresponded to 80% of the effectively recorded balance for housing loans and 32% for unsecured bank loans (mainly consumer loans). See May, Tudela and Young (2004).

Table 3

Distribution of indebted households (25+)
per type of loan and degree of urbanisation

(Percentage of households)

	Athens		Thessaloniki		Other urban areas		Semi-urban areas		Total	
Types of loan	2005	2002	2005	2002	2005	2002	2005	2002	2005	2002
Housing-related loans	36.1	35.2	42.6	34.9	39.7	41.8	38.5	37.2	38.0	37.2
Other loans	83.7	87.9	77.2	82.5	81.7	82.5	76.3	83.1	81.2	85.3
Bank loans other than housing-related	79.5	80.0	74.3	72.2	76.3	75.0	73.0	67.6	77.2	75.5
- Credit cards	64.2	62.5	48.5	44.4	48.9	45.5	39.5	38.7	54.1	53.1
- Loans for car purchase	14.7	20.4	21.8	26.4	26.0	19.9	24.9	19.9	20.1	20.9
- Other bank loans (personal, consumer, etc)	27.7	28.4	32.7	30.2	27.6	32.2	32.0	26.5	28.9	29.4
Credit from retailers	9.4	16.3	6.9	14.3	11.7	15.0	4.7	21.3	8.9	16.3
Loans from other households	1.5	2.7	1.9	4.0	0.9	2.1	1.7	3.6	1.3	2.8
Average outstanding debt (in euro)	20,020	14,596	18,118	16,250	18,834	15,615	20,346	18,506	19,637	15,532

Note: Percentages do not add up to 100% because some households may have more than one kind of loan (e.g. a housing and a consumer loan).

The breakdown of indebted households by category of loans shows that the percentage of households with a housing loan picked up in 2005, compared with 2002. To a large extent, this reflects the increased number of indebted households in the major urban areas of Athens and Thessaloniki, namely in areas where, according to National Statistical Service of Greece (NSSG) data, the owner-occupation percentage was lower than the country average,[12] and therefore (at least potentially) there was higher demand for housing loans. At the same time, the degree of penetration of the banking system into these areas is higher. Unlike housing loans, the percentage of households reporting loans other than housing loans declined significantly in all areas, except "other urban areas", where the decline is very small. As already mentioned, this reflects the fact that households borrow mainly from retail stores and, to a lesser extent, from friends. By contrast, the percentage of households that, in the 2005 survey, used the banking system to finance their needs increased or remained unchanged compared with 2002.[13]

[12] According to NSSG data, the owner-occupation percentage stands at 80.1% throughout the country and is distributed as follows: Athens: 70.9%, Thessaloniki: 78%, other urban areas: 76%, semi-urban areas: 87.6% and rural areas: 97%. See NSSG, "Household Budget Survey 2004/2005".

[13] Specifically, the percentage of households with credit card loans increased in all areas. In Athens, approximately two-thirds of indebted households reported credit card debts, while in Thessaloniki and the "other urban areas", this percentage came close to 50%. On the other hand, the percentage of households with other bank loans (except housing and credit card loans) stands around 30%, with small deviations by geographical area and fluctuations between the two surveys. Specifically, the percentage of households with loans for car purchase declined in Athens and Thessaloniki in 2005 and increased significantly in "other urban" and semi-urban areas, where 25% of indebted households reported a loan of this category in 2005, i.e. a much higher percentage than in Athens (14.7%) or Thessaloniki (21.8%).

4. Distribution of debt in relation to household income and wealth

Households' borrowing level seems to be correlated with their income,[14] since, as shown in Table 4, the average debt per income group increases as income increases, although this correlation is less marked in 2005 than in 2002.[15] [16] At the same time, the income distribution of households that reported some type of debt obligation in the 2005 survey is different from the respective 2002 distribution. In 2005 there has been a significant decrease in the percentage of households in the first income group[17] (from 8.3% in 2002 to 5.4% in 2005) and a smaller decrease in the last income group, while percentages increased in other income groups, especially the fourth highest income group (from 16.3% in 2002 to 19% in 2005). For this reason, the distribution of the contributions of each income group to total household debt in 2005 is substantially different from that in 2002. The contribution of the first income group remained very small in 2005 (2005: 3.4%, 2002: 3.5%), while the contributions of other income groups are more evenly distributed in 2005, since the contribution of the third highest income group decreased significantly in 2005 (from 32.8% in 2002 to 26.9% in 2005), mainly to the benefit of the fourth highest income group (from 19.6% in 2002 to 27.1% in 2005). These figures show that the access of low-income households to the banking system remains limited, while it seems that, in the framework of a more effective credit risk management, competition between banks for attracting customers is more focused now than in the past on households of the fourth highest income group, since not only the percentage of households of this level has increased, but also the outstanding balance of their loans recorded the highest average absolute increase. In any event, the vast acceleration of credit expansion to households in 2003-2005 resulted in a substantial increase in the overall burden of indebtedness, as measured by the debt-to-income ratio. The median[18] of the debt-income ratio for all households rose to 33.5% in 2005, from 22.8% in 2002, mainly reflecting the growth of housing debt. It should be noted, however, that the debt-income ratio of households in the first income group increased substantially compared with 2002 (2005: 61.2%, 2002: 25.7%) and is much higher than the average debt-income ratio of all households.

The distribution of debt in relation to household wealth (household financial and real assets) is similar to that of debt in relation to income. On average, the level of households' debt increases with the increase of wealth and households in the higher wealth groups have generally higher outstanding loan balances. Indeed, this positive correlation between the level of loans and wealth became more pronounced in 2005 (see Table 5). It should be noted that, despite the increase in the percentage of participation in the sample of households of the first wealth group in 2005 (2005: 17.4%, 2002: 16.8%), their contribution to total household debt dropped to 4.7% in 2005 from 5.2% in 2002. It should also be noted that, as in 2002, the contribution of households of the higher wealth groups to the total debt is much bigger than their participation in the sample, indicating that these groups have generally larger debts. Indeed, the contribution of households in the top two wealth groups to total

[14] The net disposable income of each household member was reported in the questionnaire.

[15] On average, the income of households with loans (€22,600) is higher than the average income of all households that took part in the survey (€18,100). It should also be noted that the average income of all households in the survey approaches, to a satisfactory extent, the average income of households in the country as a whole (€20,500), as recorded by the NSSG Household Budget Survey 2004/2005.

[16] A positive relationship between income and levels of debt was also found in Cox, Whitley and Brierely (2002).

[17] Income groups range from lowest to highest, the first group corresponding to the lowest income etc.

[18] The median was chosen over the average on the basis of the observation that the distribution of the loan burden is characterised by a significant positive asymmetry, since there are few but important extreme values that affect the average disproportionately.

household debt was 65.3% in 2005, compared with 70.9% in 2002.[19] For 50% of households, the ratio of their outstanding debt to their wealth, i.e. the median of this ratio, does not exceed the very low level of 10.7%, despite its increase from 5.1% in 2002. The median of the debt to wealth ratio is relatively high (75.8%) only for households in the first wealth group and there is a number of households whose outstanding debt -attributed to non-housing loans- exceeds their total wealth. Certainly, this does not necessarily mean that these households are or will be insolvent, since the level of their income may provide adequate security that they will be able to service their loans properly.

Table 4

Distribution of indebted households per income group (25+)

Income groups	**Distribution of indebted households (% of households)**		**Contribution to total outstanding debt of sample (%)**		**Average outstanding debt (in euro)**		**Median of debt to income ratio (%)**	
	2005	**2002**	**2005**	**2002**	**2005**	**2002**	**2005**	**2002**
up to 7,500	5.4	8.3	3.4	3.5	12,637	5,684	61.2	25.7
7,501-15,000	28.2	27.8	22.5	19.0	15,655	10,238	37.7	29.2
15,001-25,000	34.5	33.5	26.9	32.8	15,325	14,783	29.4	22.8
25,001-35,000	19.0	16.3	27.1	19.6	27,976	18,182	34.2	15.4
35,001+	12.9	14.1	20.1	25.1	30,597	25,898	28.1	11.0
Total[1]	**1.215**	**1.063**			**19,637**	**15,532**	**33.5**	**22.8**

[1] Amounts refer to all the households that have some type of loan, and they present the number of these households, the average amount of outstanding debt and the median of debt to income ratio accordingly.

5. Debt-service costs and income

Table 6 and Chart 1 show the distribution of the debt service cost ratio, which is defined as the ratio of monthly instalments to monthly income and constitutes a generally accepted indicator of the direct financial stress on a household. These figures show that, for 80% of households, debt-service costs do not exceed 32% of their income, while for 88% of households, they do not exceed 40% of their income. Therefore, for the vast majority of indebted households, the direct financial stress lies within limits that are not thought to impose difficulties in the regular servicing of loans,[20] although, for households with very low income and precisely because of this very low income, low debt-service ratios are not necessarily an adequate criterion of their difficulty to repay their loans regularly. Households with relatively low debt-service ratios are not evenly distributed across income groups, but

[19] Data per loan category show that this mainly reflects the distribution of housing loans, since taking a housing loan means that property is acquired. By contrast, the contributions of the wealth groups to the aggregate of other, non-housing debt are relatively uniform, indicating that households do not need to own property to have access to ‘other’ loans (non-housing loans).

[20] See, for example, Garman and Forgue (1991) or Lytton, Garman and Porter (1991).

their percentage increases in higher income groups and, for this reason, the percentage of households with high financial costs is higher in lower income groups, as might be expected. In the lowest income group (households with income up to €7,500), only 53% of households has debt-service costs up to 32%, while in the highest income group, this percentage rises to 92% of households.

Table 5

Distribution of indebted households per wealth group (25+)

Wealth groups	Distribution of indebted households (% of households)		Contribution to total outstanding debt of sample (%)		Average outstanding debt (in euro)		Median of debt to wealth ratio (%)	
	2005	**2002**	**2005**	**2002**	**2005**	**2002**	**2005**	**2002**
up to 10,000	17.4	16.8	4.7	5.2	4,696	4,127	75.8	30.3
10,001-50,000	18.6	11.6	8.5	5.2	8,060	5,977	16.5	9.4
50,001-100,000	23.5	22.4	21.4	18.7	15,923	11,070	8.0	6.1
100,001-200,000	25.3	26.8	30.5	35.3	21,163	17,479	7.4	4.2
200,001+	15.3	22	34.8	35.6	39,899	21,078	5.0	1.4
Total[1]	**1131**	**978**			**19,637**	**15,532**	**10.7**	**5.1**

[1] Amounts refer to all the households that have some type of loan, and they present the number of these households, the average amount of outstanding debt and the median of debt to wealth ratio accordingly.

For the remaining 12% of households, this ratio is over 40%, while for a small percentage of households (1.6%) the debt service cost ratio exceeds the household's monthly income, indicating that, at least in the short term, these households are under strong financial stress. The distribution of the debt service cost ratio in 2002 shows that it did not exceed 32% for 75% of households and 40% for 83% of households, while it exceeded 100% for 4% of households. These figures indicate that the rapid increase in bank loans to households in the three-year period between the two surveys does not seem to be associated with an increase in financial stress. By contrast, households' financial stress eased considerably for all households in the upper half of the debt service ratio distribution and more precisely for those whose the debt service cost ratio is larger than 13,5%, ie for those households for which the financial stress is indeed more pressing. This result is undoubtedly associated with the decrease in bank lending rates to households. It should be noted that bank interest rates on the outstanding balances of the main categories of consumer and housing loans declined in 2003-2005 by 122 and 81 basis points, respectively.[21] To some extent, however, this improvement should also be attributed to the fact that banks manage credit risk more effectively, especially as regards the process for the approval/granting of new loans and risk

[21] These refer to consumer loans with a maturity of up to 1 year and housing loans with a maturity of over 5 years. For a €100,000 housing loan maturing in 15 years, the decrease in interest rates by 81 basis points has reduced the debt payment by €42.4 monthly.

taking. It should also be mentioned in this regard the guidelines of the Bank of Greece[22] on the implementation of a longer-term and more forward-looking policy in this field than what competition forces banks to apply in order to preserve or increase their share in retail banking. It should be noted, however, that the share of debt of the households with a debt service ratio over 40% in the total debt of the sample is relatively high and stands at 29.9% (the share of debt of those with a debt service ratio over 100% is 6.1%). Although, a large percentage (over 80%) of the debt of households with a debt service ratio over 40% concerns housing loans, their relatively high share in the total sample debt indicates that there is significant room for further improvement in credit risk management by banks.

Table 6

Debt service to income ratio (%), 25+

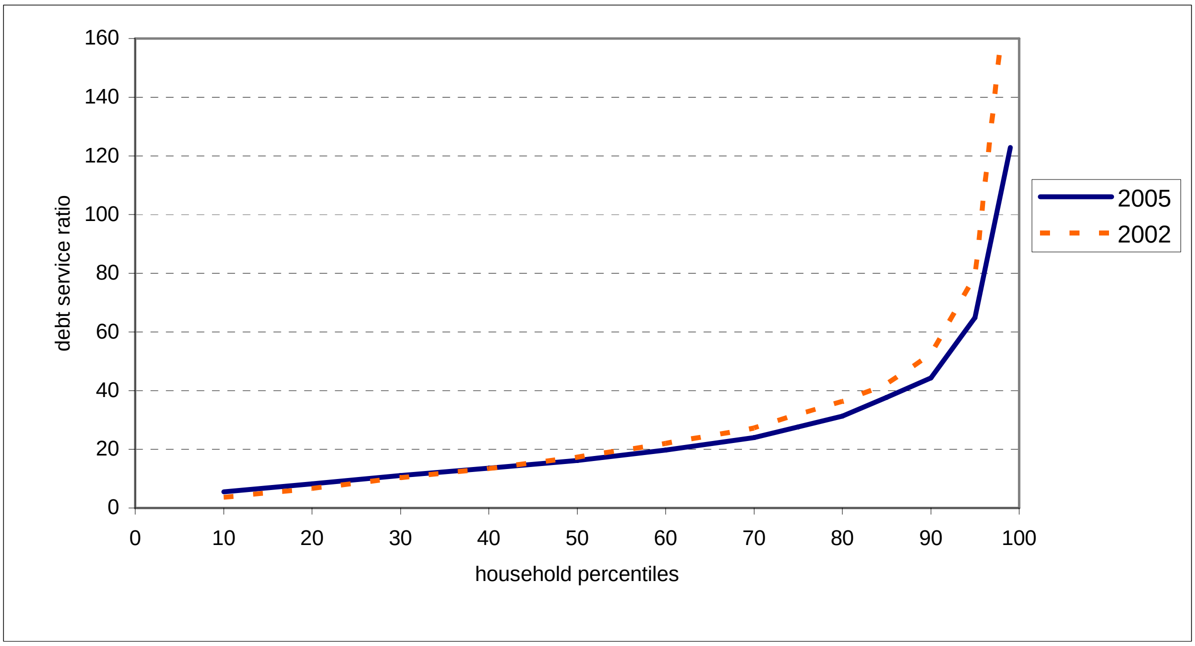
Household percentiles[1]	**2005**	**2002**
10	5.6	3.7
20	8.3	6.7
30	11.0	10.4
40	13.6	13.4
50	16.2	17.3
60	19.7	22.1
70	24.0	27.3
75	27.6	32.0
80	31.3	36.3
85	37.6	42.1
90	44.3	52.4
95	64.9	79.3
99	122.8	189.1

[1] Percentage of households with debt service to income ratio less or equal to the corresponding value presented in the table, e.g. for 20% of households the service to income ratio did not exceed 8.3% of their income in 2005.

[22] It is noted that in order to contain the credit risk and prevent phenomena of excessive household borrowing, by relatively recent Governor's Acts, the Bank of Greece increased the provisioning ratios for all types of consumer loans in arrears for over one year or in permanent delay (Bank of Greece Governor's Act 2557/26 January 2005). It also stipulated that the reduced capital requirements ratio (4%) for credit risk shall henceforth be applicable only for the part of the housing loan not exceeding 75% of the market value of mortgaged property, while an 8% ratio shall be applicable for the remaining 25% (Bank of Greece Governor's Acts 2564/11 October 2005 and 2565/11 October 2005). At the same time, a circular stipulated that debt payments should not exceed 30-40% of the income of indebted households, depending on the absolute level of the applicant's disposable income.

Chart 1

Debt service to income ratio (25+)



6. Loan servicing by households

As was mentioned above, the 2005 questionnaire included a number of questions about households' behaviour in relation to the regular servicing of their loans, as well as any difficulties encountered, in their opinion, in meeting their various financial obligations. The relevant responses show that 11.2% of households do not pay their loan instalments regularly, but this percentage varies significantly across loan categories. The highest percentage is observed in consumer loans, where 14.9% of households reported that they do not pay the instalments for servicing these loans regularly, while the corresponding percentage for housing loans is reduced almost to half (8.6%). These percentages, though not entirely comparable with the percentages of corresponding bank loans that, according to data submitted by banks to the Bank of Greece, are not serviced for at least three months,[23] lead to exactly the same conclusion, i.e. that consumer loans have an overall higher credit risk for banks than housing loans.

Table 7 shows the percentages of households per income group reporting "difficulties in regularly servicing their obligations",[24] which are high. Overall, these percentages, although generally lower than those reported in the NSSG Household Budget Survey 2004/2005, seem to confirm the result of the latter, where 77.3% of households reported difficulties in meeting their needs.[25] A general conclusion (see Table 7) is that a very high percentage of

[23] See below.

[24] Households responding to the relevant question that it is "difficult" or "rather difficult" to meet their financial obligations.

[25] This percentage is the sum of the percentages of households that responded to the question of the NSSG Household Budget Survey 2004/2005 "how do you meet your needs?": with great difficulty (18.2%), with difficulty (23.8%) or with some difficulty (35.3%).

households (over 50%), especially in low-income groups, has difficulties in servicing their obligations. To a large extent, this reflects the low level of income of these households and, therefore, the relatively high marginal utility they attribute to each unit of their income, given that the average costs of servicing their loans is relatively low, with the exception of households in the first income group. However, the high percentage of households reporting difficulties in servicing their loans gives rise to questions as to whether the information available to banks is adequate to assess properly the solvency of their customers, all the more so since these households mainly belong to low-income groups and, therefore, their financial position is more vulnerable to any rise in interest rates or change in economic conditions. It should be noted that the percentage of households in the two lowest income groups (84.4%) with non-housing loans (i.e. unsecured loans) is higher than for total households (81.2%). It is possible that the decision of banks to grant loans to this category of borrowers is based on the fact that they have regularly paid their obligations in the past. However, it cannot be ruled out that banks granted loans on the basis of inadequate information concerning the exact characteristics of these borrowers. In any event, increased competition between banks and the high availability of bank funds, indicated by the rapid increase in non-housing loans during the past four years, seem to be directly associated with the relatively high percentage of consumer loans not serviced for at least three months, which, according to data submitted by banks to the Bank of Greece, stood at 7.8% of total loans in this category at end-2005, from 8.5% at end-2002. By contrast, in the case of housing loans, where banks usually have better information as to the borrowers' characteristics, the decline in the corresponding percentage was more pronounced (almost reduced to half) over the same period and it now stands at much lower levels (2005: 3.6%, 2002: 6.9%).

Table 7

Qualitative assessment of households regarding the degree of difficulty[1] in servicing their obligations per income group, 25+

(percentage of households)

They faced difficulties in:	Total	Income groups (in euro)				
		<7500	**7501-15000**	**15001-25000**	**25001-35000**	**>35000**
Meeting repayments of their housing loan	53.8	83.3	61.3	58.7	48.9	32,8
Paying the instalments of their credit card	54.2	75.8	64.6	51.7	51.6	36.0
Meeting repayments of other bank loans	67.0	87.5	78.7	63.6	66.7	50.0
Meeting repayments of loans from retailers	53.5	85.7	47.6	50.0	-[2]	-[2]
Paying their rent	61.6	84.1	66.9	54.3	33.8	25.0
Paying their utility bills	50.0	71.0	56.1	45.2	35.5	22.7
Median of debt service ratio	**16.0**	**28.3**	**21.6**	**15.8**	**14.2**	**10.7**

[1] The table presents the households that in the relevant questions answered that they found 'difficult' or 'somewhat difficult' to meet their financial commitments. [2] The number of households in these income groups is too small.

7. Access to bank lending

According to the survey data, almost all (96%) households without any loans reported that they had no reason to borrow. A very small percentage (a mere 3%) reported that the borrowing process was not completed because the bank rejected the relevant application, a finding indicating that bank lending is very easy. However, the small percentage of rejections is in complete contrast with the data submitted by banks to the Bank of Greece, according to which the percentage of rejection at the final stage of customer assessment varies between 35% and 40% of loan applications.

Moreover, the responses of households concerning the transfer of outstanding loan balances from one bank to another show that a rather limited percentage of households changes credit institutions, despite intense competition between banks to attract customers and shape their share in these segments of the retail banking market. The highest percentage (6.4% of households with such a loan) concerns consumer loans, where the most attractive benefits are offered from gathering all the accounts in one bank with significantly lower interest rates.[26] A very small percentage of households (1.6%) reported the transfer of car purchase loan balances, while the percentage of households that reported a transfer of a housing loan balance is somewhat higher (3.2%).

8. Conclusions

Certain basic conclusions are drawn from the above analysis concerning household borrowing, as reported in the 2005 and 2002 surveys.

1. Despite the large increase in bank loans to households in the three-year period between the two surveys and despite the significantly increased response of households to the 2005 survey, the percentage of indebted households remained virtually unchanged. All the same, the comparison of the results of the two surveys with the developments, as recorded by aggregate bank data, gives valid indications corroborating the view that a number of general conclusions may be drawn, especially concerning the trends established by the results of the two surveys.

2. The most common category of loans is credit card loans, followed by housing loans. In both cases, the percentage of indebted households that reported such type of loans was increased in the 2005 survey, but not to the extent indicated by aggregate bank data. However, the average debt, both for cards and housing loans, of the households that took part in both surveys increased in the period 2003-2005 at an average annual rate almost equal to that of bank data. This provides a significant indication that the borrowing behaviour of non-responding households is generally similar to that of households that took part in the survey and, at least concerning this point, increases the reliability of its results.

3. As in 2002, the 2005 survey shows that the average household debt grows together with income and wealth. This relationship is particularly strong for housing debt and much weaker for ‘other’ loans (as a whole). Specifically, the results of both surveys indicate that access of low-income households to the banking system remains limited, while the percentage of indebted households in the fourth highest income group increased, as did their contribution to the total debt of the sample. This seems

[26] For transfers of credit card loan balances from one bank to another, certain banks offer zero interest rate for an initial six-month period.

to indicate a significant qualitative change in competition between banks, which, in the framework of more effective credit risk management, seem to concentrate more now than in the past on attracting customers from upper income groups. At the same time, rapid credit expansion has led to a higher debt-to-income ratio, i.e. the debt burden of households, in all income groups.

4. The analysis of the results of both surveys shows that, for the vast majority (88%) of indebted households, the direct financial stress, as calculated by the debt-service ratio, i.e. the instalment to income ratio, does not exceed 40% of their income, i.e. it lies within limits considered acceptable, in the sense that this debt-service ratio should not result in difficulties in the regular servicing of household loans. At the same time, in the period between the two surveys, financial stress declined significantly for the households in the upper half of the debt service ratio distribution, i.e. for those households for which the financial stress was more pressing. This improvement is associated with the decrease in bank interest rates but, to some extent, it should also be attributed to more effective credit risk management by banks, in compliance with the guidelines of the Bank of Greece calling for the implementation of a longer-term and more forward-looking policy in this sector than what competition may force banks to implement in order to preserve or increase their share in retail banking. It should be noted, however, that the share in total household debt of the remaining 12% of households, i.e. those with debt-service costs over 40%, is substantial (29.9%), though, to a large extent, it concerns housing loans. The high share in total debt suggests that households themselves should assess more carefully their ability to service their loans regularly. At the same time, there seems to be considerable scope for further improvement in credit risk management and the selection of bank customers, so that the extreme household financial stress values can be gradually reduced or/and eliminated. The banks' policy seems to be geared to this direction, also in line with the rules imposed by the Bank of Greece. However, apart from the caution exhibited by households themselves in undertaking loan obligations, the information available to banks about the solvency of their customers must be improved, especially for credit card loans, as they represent a higher credit risk for banks. However, any one bank cannot satisfactorily measure or approach these customer characteristics if borrowers have relations with many other banks, as in the case of credit card loans. The expansion of the Greek Credit Bureau "Tiresias S.A." database and the access of banks to a more adequate information system[27] should lead to fewer bad debts and should make a significant contribution towards further improving the stability of the financial system, reduce the cost of capital, lay the foundations for more effective bank intermediation and support a higher rate of economic growth.

[27] It should be noted that, for credit card loans, the relevant information system of "Tiresias" had recorded 1,960,021 credit cards at end-2005, corresponding to loans totalling €1,792 million, compared with 5,771,585 cards which, according to banks' data, were in circulation at end-2005 and a total outstanding balance of loans of €8,445 million (including securitised loans).

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