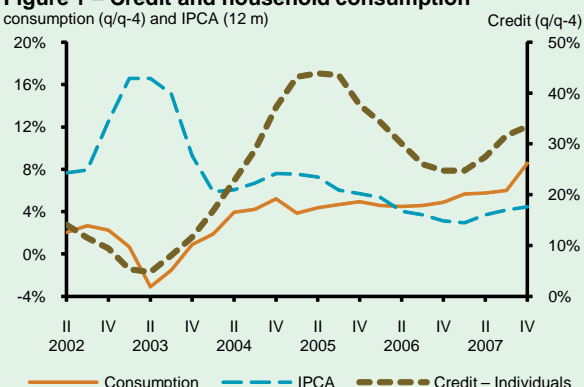
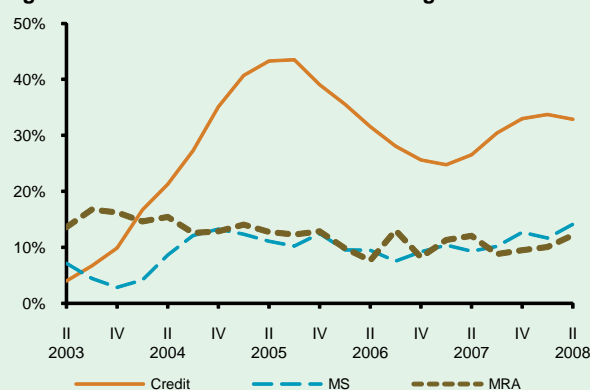


## Recent Growth of Household Credit, Default and Indebtedness

**Figure 1 – Credit and household consumption**  
consumption (q/q-4) and IPCA (12 m)



**Figure 2 – Credit and income – 12-month growth**



Over the last four years, the financial system credit operations have grown significantly, a trajectory evinced by the ratio between the total volume of loans and the Gross Domestic Product (GDP), which moved upward from 24% in December 2003 to 36.6% in July 2008. This performance was associated to the cycle of monetary policy easing that took place in a scenario of stable macroeconomic environment, in which the reduction of uncertainties favored a more positive business framework that led to the expansion of aggregate supply and demand. Emphasis should be given to the performance of loans targeted to individuals, which played an import role in sustaining the economic activity level by stimulating domestic demand through increased household consumption.

The growth of loans and financing operations targeted to individuals as well as of household consumption demonstrate the importance of the credit expansion in sustaining total consumption, as shown by Figure 1.

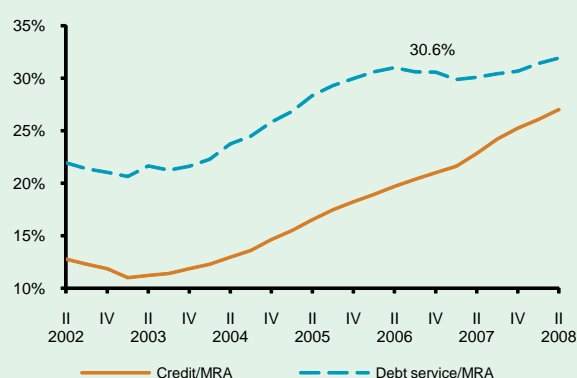
Credit operations have grown up at levels significantly higher than observed in household income, as shown by Figure 2. Apparently, this mismatch might suggest an increased degree of household indebtedness in credit operations contracted in the framework of the National Financial System.

In this scenario, against a backdrop of recently realigned monetary policy, this box aims to evaluate the growth of household default and indebtedness, both relevant factors that condition the sustainability of credit growth.

At first, the nominal evolution of household indebtedness was forecast by using as proxy the ratio between the credit volume – sum of the portfolio of

reference credit in the segment of individuals, leasing operations and credit operations carried out by credit cooperatives – and household income, which were analyzed through two alternative approaches. The first approach, of a national scope, is denominated Expanded Overall Income (MRA), in which the income consists of the sum of Employees' Income (RDE)<sup>1</sup> and the resources from retirement and pension payments from private companies (INSS) and the federal public administration (civil and military servants). This approach's weakness is the inexistence of available data for RDE in 2006, 2007 and 2008, which had to be estimated by multiplying the Available Gross Income (RDB) for each year<sup>2</sup> by the coefficient of the RDE's average participation in the RDB in the previous years (0.411). The second approach utilizes as proxy for the income the overall wages (MS) of the Monthly Employment Survey (PME) surveyed by the Brazilian Institute of Geography and Statistics (IBGE)<sup>3</sup>. The weakness of this approach lies on the different scopes of PME, which includes only the metropolitan regions of Recife, Belo Horizonte, Rio de Janeiro São Paulo and Porto Alegre, and the balance of credit operations, which is calculated for the country as a whole. To conciliate these discrepancies, a coefficient of 0.231 was applied to the credit variable, corresponding to the proportion calculated between the MS and MRA from 2002 up to the second quarter of 2008.

**Figure 3 – Indebtedness and income commitment (MRA)**



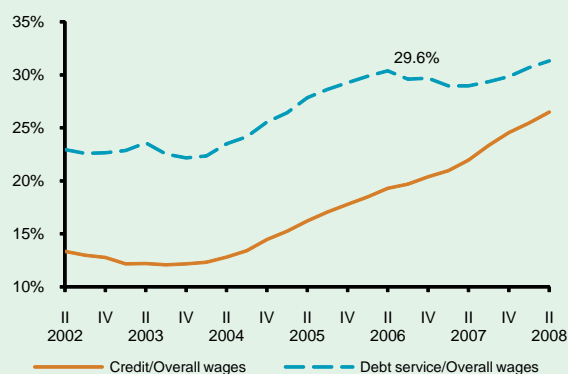
Household income commitment was estimated as the ratio between the payments of loans plus financing and available income. It was supposed that in each credit modality the balance of the operation is homogeneously distributed over time, so that the estimate of the principal amortization may be given by the ratio between the operation balance and its respective term. Multiplication of the modality interest rate by the operation balance provides an estimate for interest payment, which, added to the principal amortization, constitute a proxy for the debt service. Figures 3 and 4 show the evolution of indebtedness and income commitment, estimated on the basis of MRA and MS, respectively.

1/ IBGE National Accounts.

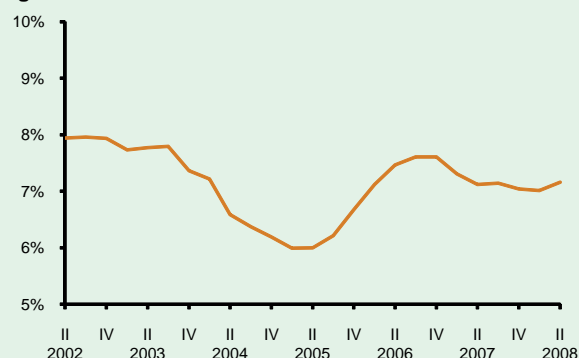
2/ The employees' income is released on a yearly basis only. In this work, data has been consolidated on a quarterly schedule based on the quarterly distributions of Gross Available Income for each year.

3/ Data in relation to the overall wages corresponds to the product of the nominal average income product of the work by the number of working population; both pieces of information are from the Monthly Employment Survey (PME).

**Figure 4 – Indebtedness and income commitment (MS)**

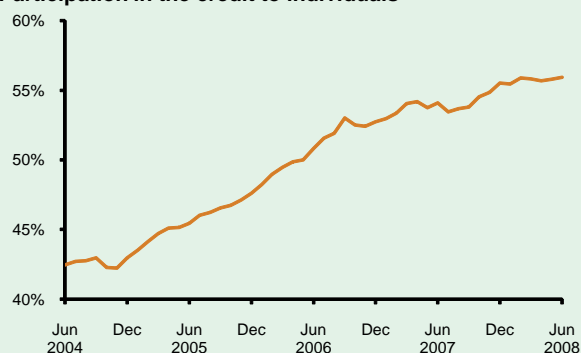


**Figure 5 – Credit to individuals<sup>1/</sup> – Default**

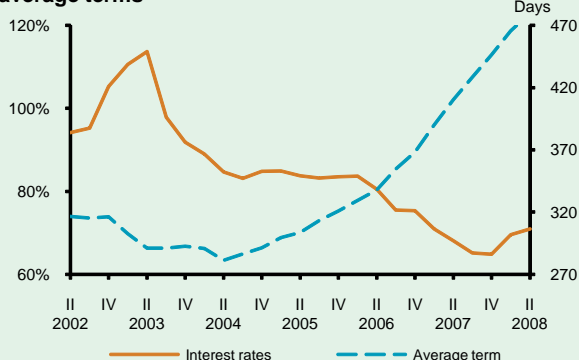


1/ Interest rate reference credit.

**Figure 6 – Payroll-deducted loans and auto loans – Participation in the credit to individuals**



**Figure 7 – Credit to individuals – Interest rates and average terms**



At first, it should be noted the similarity between the results by utilizing the two approaches of income calculation. Considering the MS indicator (Figure 5)<sup>4</sup>, indebtedness increased from 12.2% (11%), in the first quarter of 2003, to 26.5% (27%) in the second quarter of 2008, whereas income commitment revealed a modest growth, from 22.9% (20.6%) to 31.3% (31.9%). It was also observed a relative accommodation in the debt service since the second quarter of 2006, when it reached 30.4% (31%). In line with this trajectory, default rates continue to have a positive performance in the period under analysis.

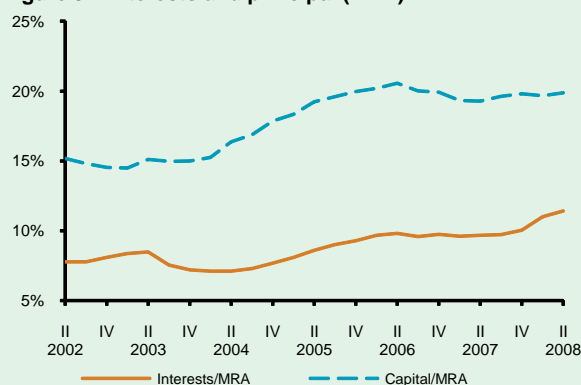
The behavior of the degree of default and income commitment, in contrast with the increasing trajectory observed for household indebtedness, may be basically justified by two factors. First, the growth in operations targeted to individuals was concentrated on personal payroll-deducted loans and on financing to purchase durable goods, especially vehicles, including leasing companies operations, credit modalities in which the quality of guarantee contributes to the non-defaulting behavior of the agents. However, it is necessary to have some precaution here, since indebtedness rate may be contained by the fast pace of credit expansion in credit operations with individuals.

The second factor refers to the combined effects of active cutback on interest rates, observed especially since the second quarter of 2003, and the significant increase of medium-term operations, registered with greater emphasis since the second quarter of 2004, as shown on Figure 7. Such effects reflect on the gradual decrease of monthly payment costs, the former for directly affecting the operating cost and the latter for diluting payments for an extended period. On Figures 8 and 9, the ratio between interest payment and income indicates the effect derived from reduction in interest rates, while the ratio between amortization and income shows the effect arisen out of extended terms.

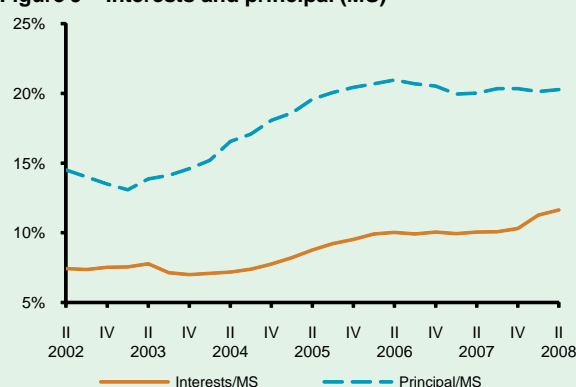
With regard to indebtedness behavior, it should also be highlighted its association to the recent effects of the credit securitization. Although this is still an incipient

4/ The numbers within parenthesis correspond to the results assessed with the utilization of the Expanded Overall Income (Figure 4)

**Figure 8 – Interests and principal (MRA)**



**Figure 9 – Interests and principal (MS)**



market, it is being consolidated into more frequent bad credit cessions out of SFN, which resulted, for example, in the recent expansion of the Receivables-backed Investment Funds (FIDC). Such practice contributes to the maintenance of healthy levels of financial institutions credit portfolio, as well as to the reduction of capital expenditure to be realized through provisioning for losses with credit operations.

One should highlight that indicators used to express indebtedness degrees and income commitment were based on proxies. Therefore, amidst the results presented, the trajectories shown by these indicators are more important than the estimated levels. From this viewpoint, it may be observed that there was significant growth of household indebtedness, mirroring credit expansion on a restricted basis. Up to now, this growth does not jeopardize financial stability, taking into account the concentration in operations with low risk of indebtedness. Moreover, the income commitment appears to be balanced and sustainable, due to positive effects of the cutback on interest rates, against the historic Brazilian pattern, and of the lengthening of term operations.