

Note on the cost of servicing household debt

1. The views expressed are those of the author and do not necessarily reflect the views of the South African Reserve Bank.

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Introduction

Rising income and employment levels, and the broadening of access to banking products and services have allowed increasing numbers of households to borrow and increase their debt levels over time. Servicing such debt encumbers a significant proportion of household disposable income. Various approaches can be used to quantify the debt-service cost to households.

This note presents the tentative results of experimental work undertaken to include principal repayments in the calculation of household debt-service cost.

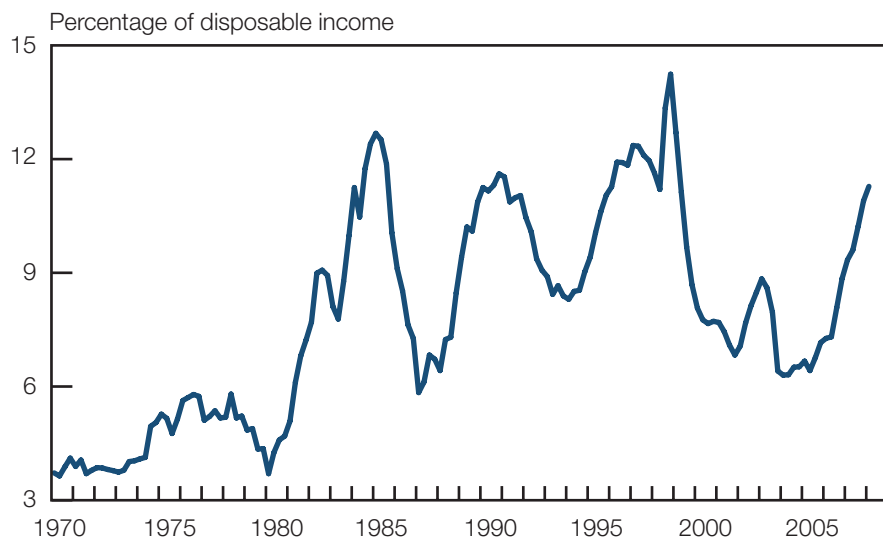
Conventional measure of household debt-service cost

The conventional measure of household debt-service cost used by the South African Reserve Bank considers interest payments on debt as the only cost to households of servicing such debt. An alternative approach is to include interest payments and principal repayments in debt-servicing costs.

The conventional measure recognises the flexibility of modern credit extension practices. Loans can easily be rolled over or refinanced and, as a consequence, the binding constraint is deemed to be the household's ability to afford the interest payable on the outstanding debt from the household's disposable income. In calculating the interest-only debt-service cost, it is assumed that contracts provide for adjustable interest rates, and a quarterly average interest rate (i.e., prime overdraft rate and predominant mortgage rate for dwellings) is applied to all outstanding amounts of different types of loans extended to the household sector. It should be noted that the household sector includes unincorporated businesses.

Figure 1 indicates developments in South Africa's household debt-service cost as a ratio of disposable income since 1970. This measure only considers interest burden and reflects interest payable by households relative to disposable income.

Figure 1 Debt-service cost: Conventional measure



Debt-service cost incorporating principal repayments

For certain types of loans such as instalment sale credit, punctual payment of each full instalment, including interest and principal repayment, may be a quite rigid requirement and refinancing may be impossible to obtain, not least because of the finite lifespan of the asset being financed, which also serves as security for the loan. In such instances it is appropriate to include required principal repayments together with interest when calculating debt-service cost.

To estimate the debt-service cost incorporating principal and interest payments, assumptions were made about initial and remaining time to maturity of different types of loans outstanding, as indicated in Table 1. Three types of loans were distinguished, namely (1) mortgage advances; (2) instalment sale and leasing finance; and (3) other loans and advances (which include overdraft facilities on current account, credit card advances, personal loans and the like).

Table 1 Average maturity of, and interest rate on, various types of loans

Loan type	Average initial maturity in months	Average remaining maturity in months	Average interest rate
Mortgage advances	244	202	Mortgage rate: dwellings
Instalment sale and leasing finance	54	38	Prime rate
Other loans and advances	Revolving	Revolving	Prime rate

Source: Selected South African banks

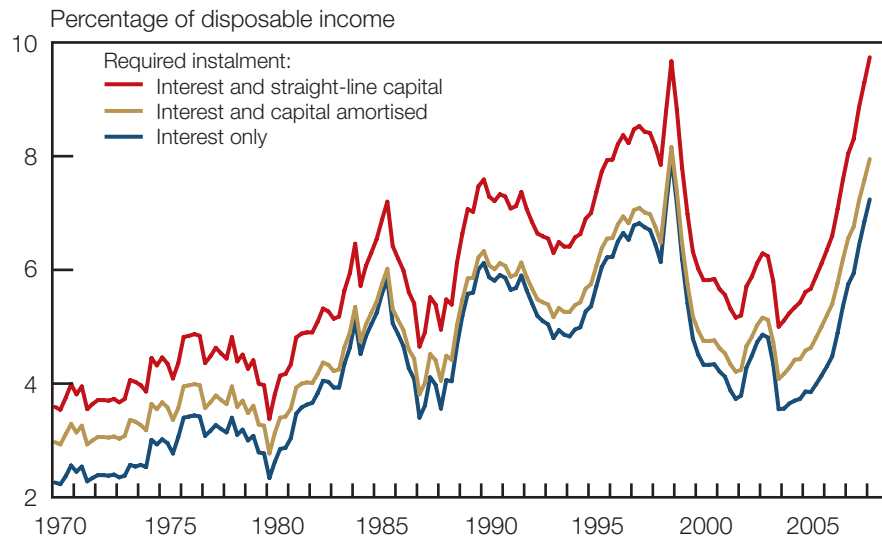
Quarterly principal repayments and interest payments on the first two types of loans were estimated in two ways. First, the outstanding amounts of the loans were amortised. In calculating the required instalment, the current interest rate was applied and the instalment per unit borrowed was calculated for a loan of average initial maturity. At the point in the repayment schedule corresponding to a loan of average remaining maturity, the ratio of the total instalment to the interest component of the instalment was established. This ratio was applied to the amount of interest only on the outstanding amount of loans, to obtain an aggregate instalment amount. Second, the capital repayment per unit borrowed was approximated by assuming a straight-line capital repayment schedule. For instalment sale and leasing finance, for instance, the capital repayment per month was set at 1/54 multiplied by the outstanding amount of such finance. To this was added the monthly interest on such outstanding amount, to obtain the total instalment.

Estimated debt-service cost of the household sector

Mortgage advances

The accumulation of mortgage debt over the years has translated into higher debt-service cost of households, as illustrated in Figure 2. As a percentage of disposable income, in recent quarters all measures of debt-service cost have approached or exceeded the record levels established in the late 1990s, reflecting significant pressure on household disposable income because of rising interest rates. More than 50 per cent of the banks' mortgage portfolios were originated in the past three to four years, largely driven by the boom in the property market. As a result, the bulk of households' payments towards servicing their mortgage debt consists of the interest component.

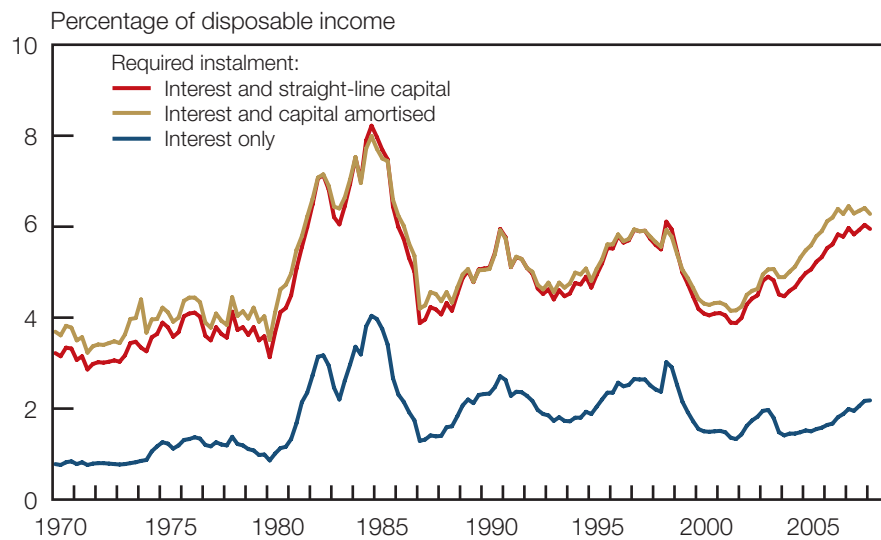
Figure 2 Debt-service cost: Mortgage advances



Instalment sale and leasing finance

Instalment sale and leasing finance is used extensively by the household sector to finance its expenditure on motor vehicles and other durable goods. The bulk of the required instalments (including capital and interest) that households have to meet is in the form of principal repayments because of shorter maturities embedded in this type of credit, as indicated in Figure 3.

Figure 3 Debt-service cost: Instalment sale and leasing finance

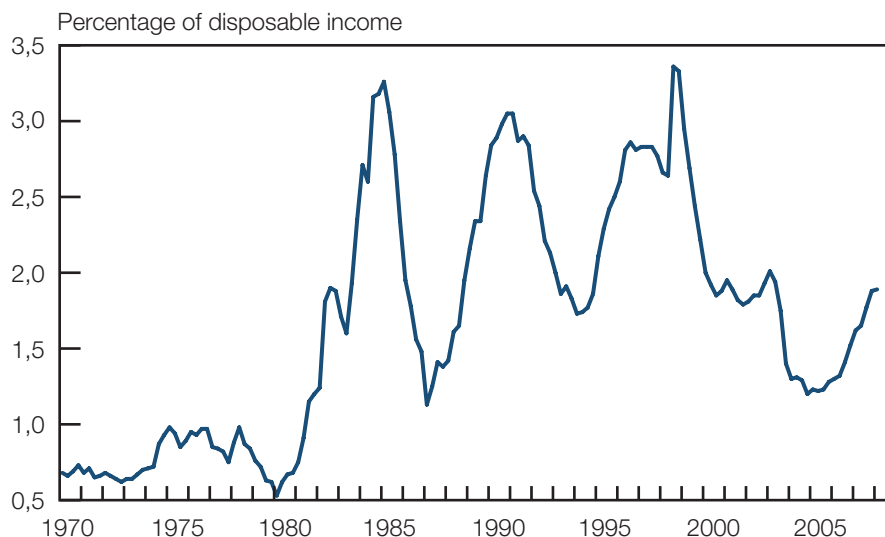


Other loans and advances

An interest-only approach was considered in respect of other loans and advances because a significant amount of this credit category is in the form of credit card advances and bank overdrafts, which are routinely rolled over or are of a revolving nature and often do not have a fixed number of payments. As a percentage of disposable income, this element of debt-service cost has picked up in recent years, but nevertheless remained at

relatively low levels, as reflected in Figure 4. Banks' other loans and advances are mainly used by the corporate sector; hence they carry less weight in household-sector debt.

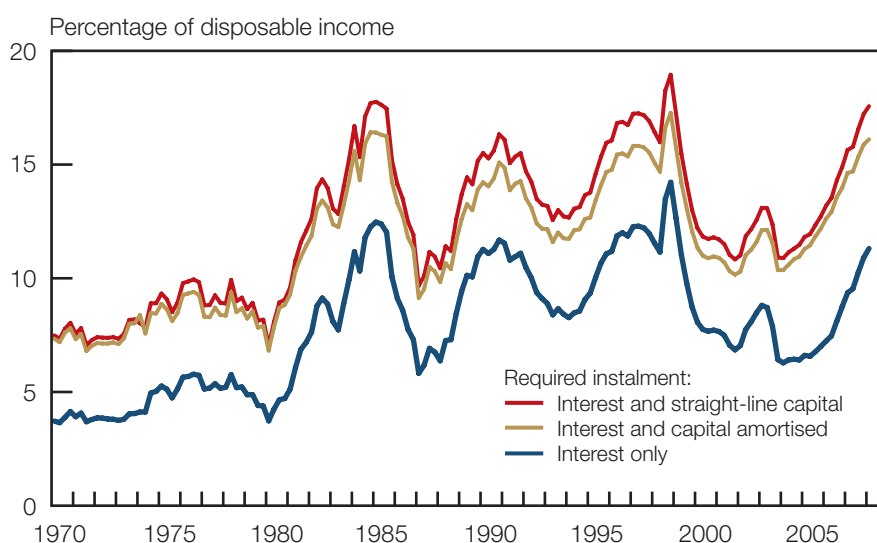
Figure 4 Debt-service cost: Other loans and advances



Total loans and advances

Figure 5 indicates developments in debt-service cost of households calculated by adding the estimated debt-service payments on mortgage advances, instalment sale and leasing finance, and other loans and advances, relative to disposable income. If capital repayments are included in the debt-service cost of the first two types of finance, the cost of servicing the household debt increases considerably, to almost 18 per cent of disposable income most recently if the straight-line capital approach is used. This may be compared with 11,6 per cent if interest only is considered.

Figure 5 Debt-service cost: Total loans and advances



Conclusion

Additional approaches to estimating the debt-service cost of households are introduced in this note. The existing measure, which incorporates the interest cost only, is broadened by incorporating principal repayments together with interest. This results in a substantial increase in the estimated household debt-service ratio.

Owing to innovative, flexible credit products, which make refinancing debt comparatively easy, these elevated debt-service ratios may, however, overstate the true cash-flow impairment faced by households arising from the need to service their indebtedness. There are numerous avenues that may be used to effectively postpone the repayment of capital on amounts borrowed. The capital-and-interest measures of debt-service cost should therefore be used with caution.

References

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