NOTES ON AN INTEGRATED ANALYSIS OF INSTALMENT CREDIT FLOWS AND BALANCES

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When analysing credit extended by monetary institutions, attention is usually focused on the changes in items on the consolidated balance sheet of these institutions. Special attention is given to changes in the domestic private sector's indebtedness to the monetary sector and to the rate of growth over twelve-month periods in this balance-sheet total. Further analyses may relate to this credit aggregate's seasonally adjusted growth rates over periods of less than twelve months, as well as the separate movements displayed by each of the main types of credit, namely mortgage advances, bills discounted, investments, instalment sale credit, leasing finance, and other loans and advances.

Valuable information can also be obtained by studying the various *flows* underlying the credit balances, provided of course that the data are available. Such an integrated analysis of flows and balances is in conformity with the broad thrust of the 1993 *System of National Accounts* and the IMF's draft *Manual on Monetary and Financial Statistics*.

When applied to instalment credit, here defined as the sum of instalment sale credit and leasing finance, the following identity may be used in this analysis:

Beginning balance (B)

\+ amount paid out in respect of new business during period (N)

\+ finance charges accrued during period (F)

\- instalments received during period (I)

\- amounts written off and net other credits during period (W)

= end balance (E)

or algebraically:

$$B + N + F - I - W = E, (1)$$

which can be rewritten to statistically explain the change in the balance outstanding:

$$E - B = N + F - I - W. (2)$$

In analysing these magnitudes, special attention should be given to the amount paid out in respect of new business, N. It is this amount which is directly reflected in the national-accounts estimate of gross domestic expenditure - the cars, trucks and other durable consumer and capital goods financed by means of instalment credit. If the intention of monetary policy is to curtail the stimulatory effect of credit extension on expenditure, a deceleration or reduction in N would indicate policy success.

Finance charges accrued, F, can rise either because of an increased amount of credit extended, or because of a rise in the average interest rate. If F increases, instalments received, I, should increase correspondingly. Time lags due to administrative reasons, inability or unwillingness to pay higher instalments and consequent rescheduling or lengthening of the repayment period can, however, delay or dampen this increase somewhat. In effect, interest accrued can therefore be capitalised for a short while.

Amounts written off and net other credits, W, can originate from various kinds of developments. The write off of advances that cannot be collected represents the largest component within this category. The write off of indebtedness reduces the amount of advances outstanding which the banks recognise in their accounting systems. Apart from this, other credits and debits, such as the corrections made for previous errors in accounting for instalment credit, are also taken into consideration as part of "net other credits".

Banks started in 1994 to submit to the Reserve Bank the full set of information needed to conduct this kind of analysis. Although the information is subdivided into separate categories for instalment sale credit and leasing finance, banks and their clients can easily substitute the one type of finance for the other because of tax and other considerations. It is, therefore, more meaningful to concentrate on total instalment credit. Figure 1 shows the various flows in respect of the total of instalment sale credit and leasing finance, using identity (2).

Figure 1: Instalment credit: Underlying flows

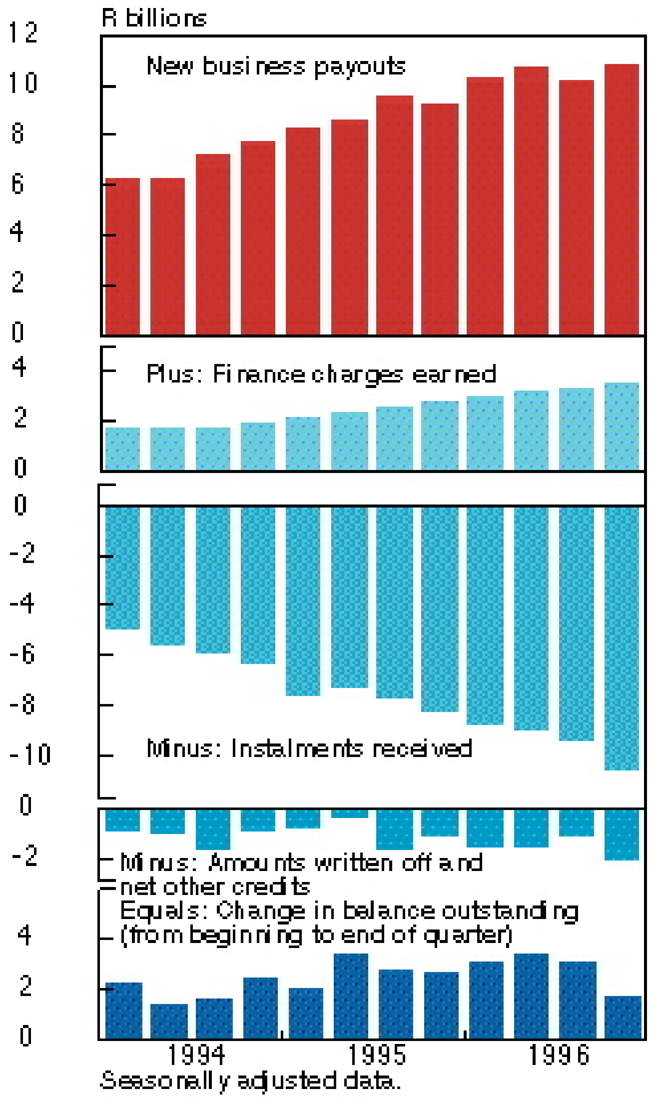


Figure 1 indicates that after the total *amount paid out in respect of new business* had increased consistently from the middle of 1994, it receded somewhat in the third quarter of 1996. In spite of a modest further increase in the fourth quarter of 1996, new business payouts have evidently levelled off during 1996.

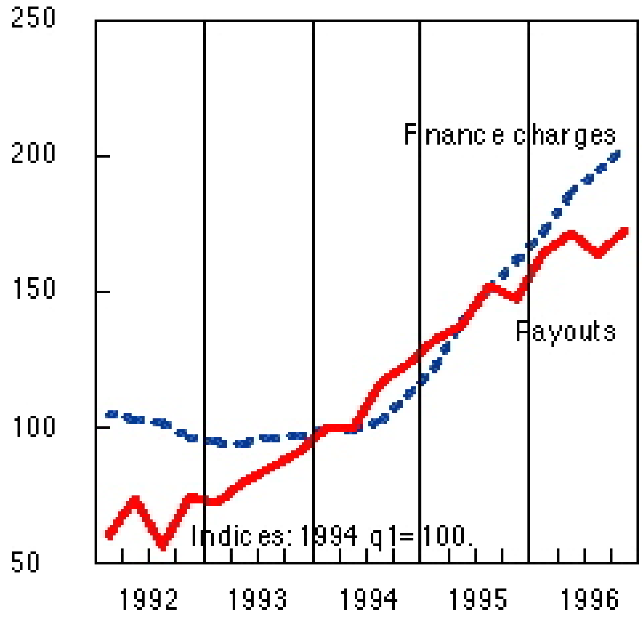
The graph shows that *finance charges* increased relatively smoothly over the period under review. Similarly, *instalments received* rose relatively smoothly, and had doubled by the final quarter of 1996 in comparison with its starting value in the first quarter of 1994. *Amounts written off and net other credits* fluctuated more than any of the other identified flows, as may have been expected of what is in effect a residual item.

Not surprisingly, the analysis clearly shows that the absolute magnitudes of the amounts paid out in respect of new business, and instalments received, dominate the changes in the outstanding balance of instalment credit.

Figure 2 indicates indices of amounts paid out in respect of new business and finance charges.

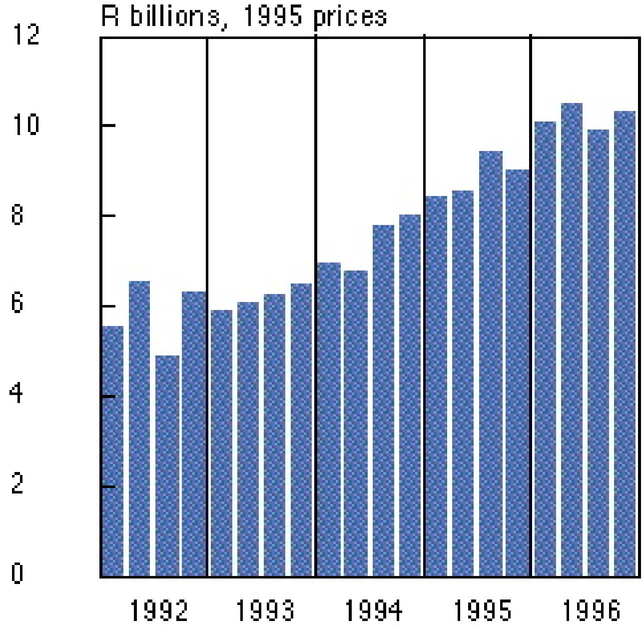
Reductions in interest rates and a relatively small amount of credit extension explain the downward and then very gradual upward movement in finance charges from 1992 to the third quarter of 1994. Owing to a growing amount of credit outstanding on which interest accrued and higher average interest rates, interest accruals have risen consistently since the fourth quarter of 1994. New business payouts have decelerated relative to finance charges since the fourth quarter of 1995.

Figure 2: Indices of new business payouts and finance charges



Data on amounts paid out in respect of new business have been collected since 1992 and are currently released in the table on page S-11 of the *Quarterly Bulletin*. Figure 3 depicts these payouts in real terms, i.e. nominal values adjusted for inflation by using the consumer price index of motor vehicles. The recessionary conditions of 1992, the subsequent economic recovery and the levelling off since the middle of 1996 are reflected in the movements of the real value of new business payouts.

Figure 3: Real amounts paid out in respect of new instalment credit business



Instalment credit is usually a reliable and cyclically sensitive economic indicator. This study provides some additional insights which may be gained by analysing credit flows and outstanding balances within an integrated framework. It illustrates the magnitudes of the various flows underlying instalment credit, shows that in recent quarters finance charges have risen more rapidly than new business payouts, and generally emphasises the importance of new business payouts in the analysis of credit developments.