WORKING HYPOTHESES ABOUT SHORT TERM INTEREST RATES

by

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The patterns of interest rate setting by commercial banks may suggest hypotheses about the way the banking system responds to changes in economic circumstances. This note makes observations on the behaviour of individual commercial banks in Barbados in the decade from 1986 to 1995. The propositions put forward may serve to guide researchers seeking to quantify bank responses to a variety of economic stimuli such as cash shortages, high public sector borrowing requirements etc. and may also be helpful to policy makers.

The treasury bill rate is governed by excess cash in the banking system. As treasury bills are sold by auction their yields may be expected to reflect market conditions. Banks try to avoid excess cash on which they earn nothing. They bid down treasury bill rates to ensure success at the auction when they have ample cash. Conversely, when the banking system as a whole has no excess cash, those banks that come into funds are able to demand high interest rates at the auction. The charts suggest that when banks have no excess cash the treasury bill rate rises, as it did from the middle of 1991 to the first quarter of 1992, in the third quarter of 1993 and in the fourth quarter of 1994. The

treasury bill rate falls a month or two after excess cash returns to the system (see Chart 1).

Trends in the treasury bill rate mimic trends in the U.S. (Chart 2). Short term fluctuations appear to be dictated by excess cash but the underlying trends follow the pattern of U.S. treasury bill rates. Barbados' rates remained above those on U.S. treasury bills, usually by 2 points or more. In 1991, when U.S. rates were falling the Barbados rate rose sharply but once policy measures were firmly in place to deal with the 1991 stabilisation crisis the Barbados rate fell dramatically in 1992. Thereafter, the pattern of U.S. and Barbados treasury bill rates is quite similar.

Although the Central Bank of Barbados sets the minimum deposit rate, it alters the rate in line with market conditions as revealed by the treasury bill rate (Chart 3). The savings rate is moved infrequently and therefore is less volatile than the treasury bill rate. The difference between the treasury bill and savings rates varies somewhat but the trend in the savings rate mirrors that of the treasury bill rate, rising in 1986-1989, accelerating in 1990 and 1991, falling sharply in 1992 and rising in 1993.

Banks were not constrained to offer the minimum savings deposit rate. They were at liberty to offer better rates but seldom did and never for any extended period. For six months in 1991-92 one bank offered a one percentage point premium over the minimum savings deposit rate but apart from that one incident, premiums on the savings rate did not shift from one month to the next. This behaviour is consistent with two hypotheses. Either (1) banks believed the minimum savings rate was too high for the entire decade or (2) banks keyed loan rates and margins to the deposit rate set by the Central Bank (which seems more plausible).

The trend in time deposit rates mirrors the savings rate faithfully but there is some variation among banks in the time deposit rates offered. Large depositors such as the National Insurance Scheme and other insurance companies often shop around in search of an interest rate premium on standard offer rates and banks that are short of cash may make generous offers. On several occasions (1988, 1989, 1992 and 1993) these banks reported rates 3-4 percentage points higher than those for other banks, for time deposits of comparable maturity (Chart 4a). Banks that were not cash strapped show much lower variation - usually about 1 percentage point, except for the period when the entire system was short of cash

in 1991-92 (Chart 4b).

The weighted average deposit rates for larger banks are very similar, ever since the liquidity crisis of 1991-92.. Differences between banks are of the order of one percentage point or less. Smaller banks pay a premium for funds with average deposit rates 1 - 1½ percentage points above the larger banks in 1993-94, narrowing to 1 percentage point above in 1995 (see Chart 5).

The trend in bank lending rates followed the trend in deposit rates step by step. Up to August 1991 the Central Bank stipulated a maximum for the average lending rate but about a quarter of all loans were exempt and the average achieved loan rates were usually higher than the stipulated rates. In any case, the Central Bank always moved that rate at the same time and by the same amount as the savings deposit rate. Since August 1991, banks have adjusted loan rates in line with deposit rates (see Chart 6).

The spreads between loan and deposit interest rates are the key to bank profitability. Chart 7 suggests there were not constrained by Central Bank interest rate stipulations. The typical spread during the period of Central Bank restriction was 5 percentage points or more, which is generous by any standard. The spread narrowed somewhat to 4 ½ percentage points in 1993 and the years since, after the removal of Central Bank lending rate stipulations effectively removed any control on interest rate spreads.

Paradoxically, interest rate spreads widened when interest rates rose sharply in 1991. This is the opposite of what might have been expected. Banks would have made a larger profit on the difference between a loan rate of 12% and a deposit rate of 7% than on the 5 point difference between the loan rate of 9% and the deposit rate of 4% in the late 1980s. But in 1991 when the savings rate went to 7% prime rates rose to 14% or more, a margin of 7-8 percentage points. Banks increased spreads and rates of return, probably to compensate for what was seen to be a riskier economic environment.

Foreign owned banks show remarkable uniformity for changes in lending rates. Variance among them is seldom more than half a percentage point (Chart 8a). Even while Central Bank loan stipulations were in effect, the spreads allowed were sufficiently generous that banks might have offered more competitive loan rates but none did. Since the removal of loan rate limits the dispersion of rates

Chart 3. Tresury Bill & Savings Deposit Rates

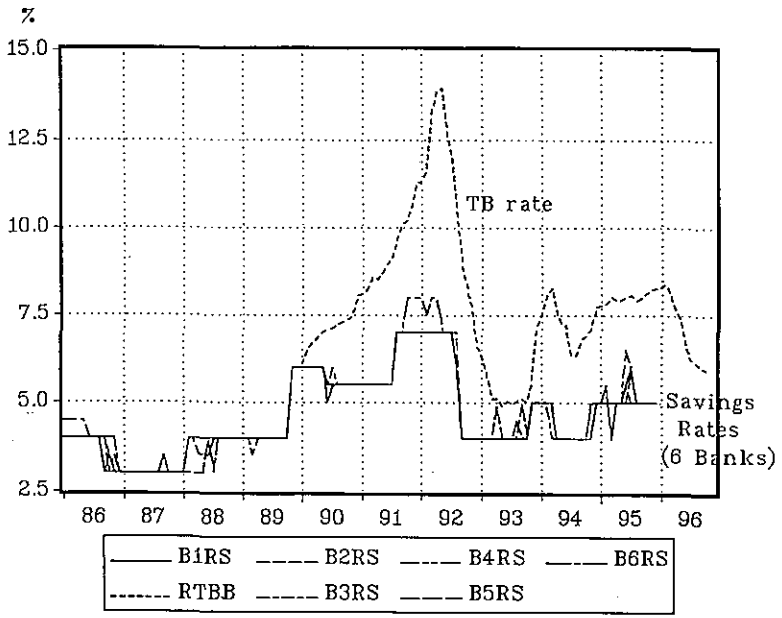

Chart 4a. Time Deposit Interest Rates, 6 Banks

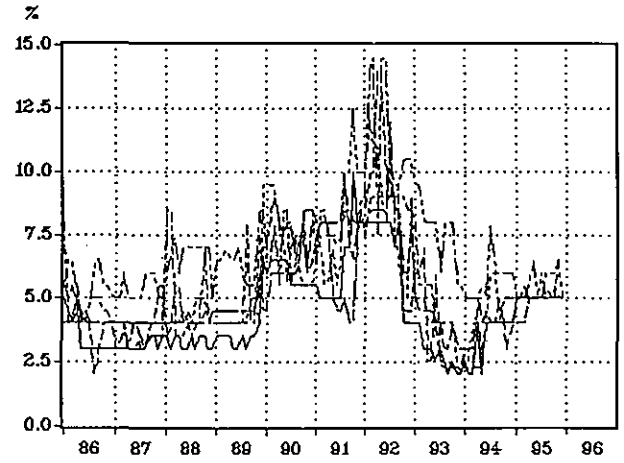

Chart 4b. Time Deposit Interest Rates, 4 Banks

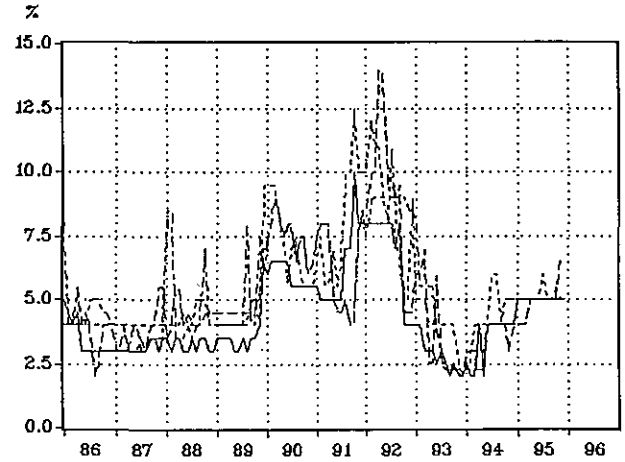

Chart 5. Weighted Average Deposit Rates

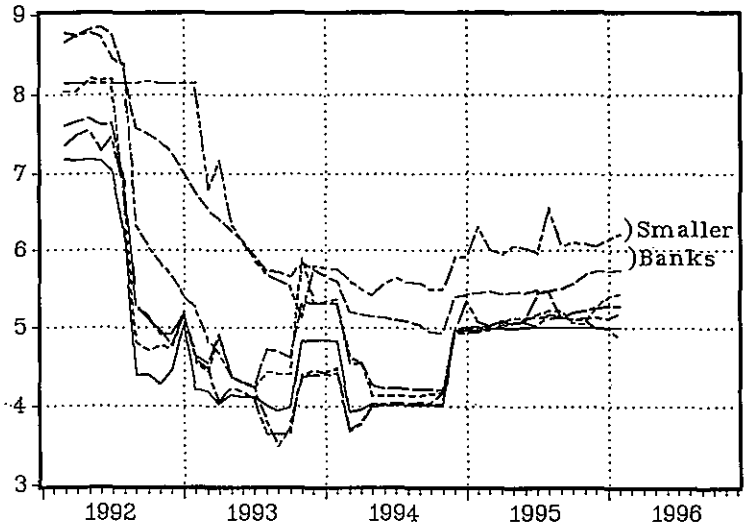

Chart 6. Savings Rate & Average Loan Rates

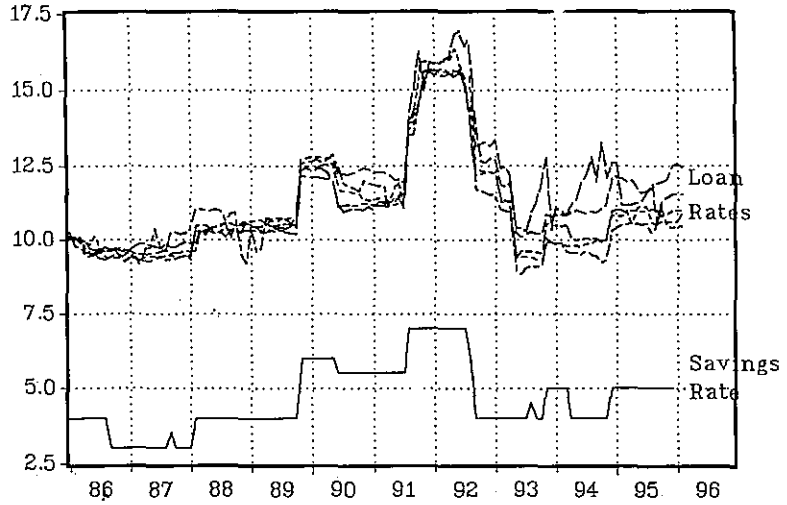

Chart 7. Prime Minus Savings Rates, 6 Banks

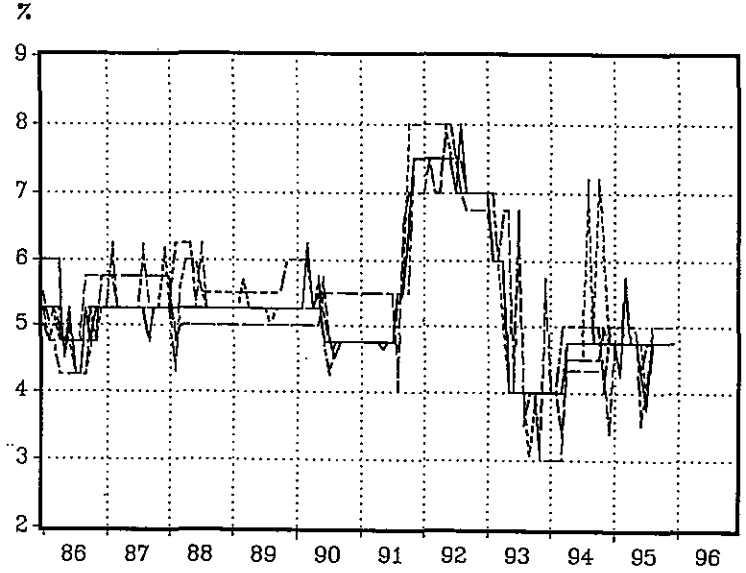

Chart 8a. Averge Lending Rates, Foreign Banks

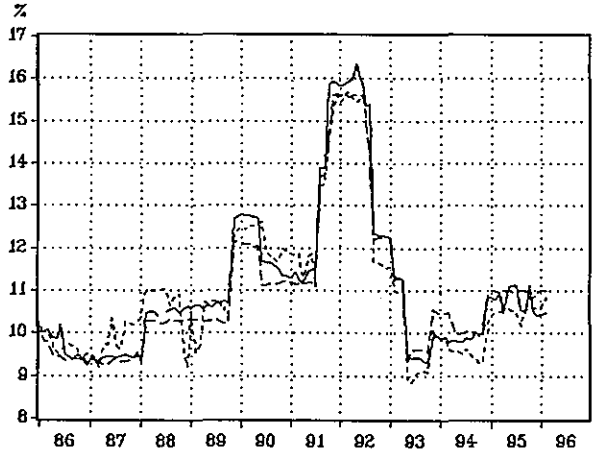

Chart 8b. Average Lending Rates, 5 Banks