

IIb. Weighted Average Interest Rates on New Loans

Prepared by
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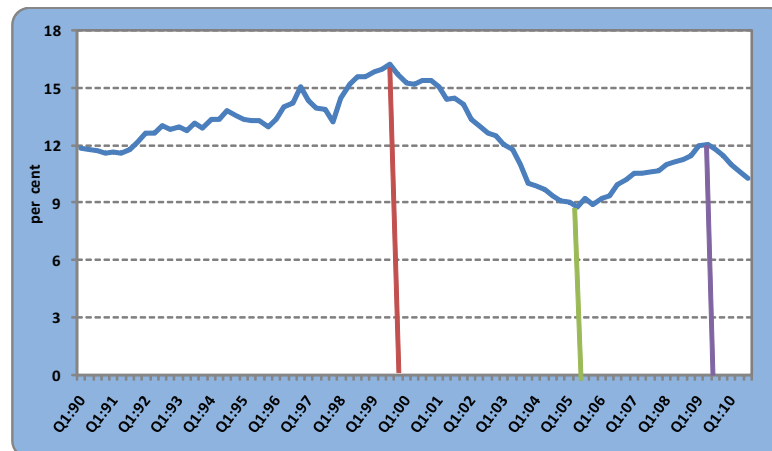
One of the characteristics of the current interest rate environment in Trinidad and Tobago, and indeed for many countries, is very low interest rates on deposits, as well as on loans. In Trinidad and Tobago, the typical measure of loan interest rates is based on a weighted average of rates on outstanding loans computed quarterly. This series, however, may understate recent interest rate movements given the potentially large value of fixed interest rate loans contracted in previous periods. Consequently a new series is being introduced that would focus on interest rates on new loans. The series also have the advantages of availability at a higher frequency (monthly as opposed to quarterly) and in several loan categories.

I. The Existing Series on Weighted Average Loan Rates

Along with other economic data, timely information on loan interest rates can provide a good indication of the state and prospects of the economy. For example, low real interest rates could encourage credit expansion, thereby stimulating economic growth; at the same time, steeply rising real loan rates could choke off credit expansion.² The Central Bank currently publishes a 'weighted average loan rate' (WALR) in its Economic Bulletin and Statistical Digests. The WALR is computed quarterly based on interest rates of all outstanding loans of commercial banks.³

Chart 1 presents the evolution of the series since 1990. It basically shows that loan interest rates have fluctuated within a band of 12 to 16 per cent between 1990 and 2003. After moving up gradually from just under 12 per cent in 1990, rates peaked around the beginning of 2000

Chart 1
Quarterly Weighted Average Loan Rates



Source: Central Bank of Trinidad and Tobago.

¹ The authors are Economists in the Research Department of the Central Bank of Trinidad and Tobago. The views expressed are those of the authors and not necessarily of the Central Bank.

² The gap, or spread, between loan and deposit rates could also give an indication of the profitability of financial intermediation. However in this article, we do not address this issue.

³ It is computed as the mid-point of the range of rates charged at the time the loans were granted multiplied by the loan balance outstanding at the end of the quarter being reported. The sum of the weighted total is then divided by the total loan balance outstanding.

at close to 16 per cent. Lending rates then trended downwards, hitting a low of 9 per cent in 2005/2006. Then followed another cycle with rates initially rising to reach 12 per cent in mid-2009 before slipping back to about 9.5 per cent in late 2010. This pattern of the WALR over the past two decades suggests that Trinidad and Tobago may still be on the downward path of the most recent interest rate cycle.

The existing WALR however may not give a good summary measure of how fast banks may be adjusting interest rates because of the inertia caused by pre-existing fixed rate loans. In other words, the effect of the latest interest rate movements may be swamped by the fact that there are a large amount of loans on which rates have not changed. Moreover, the WALR is computed quarterly with a lag of about 3 months and in a dynamic environment data at a higher frequency would be even more useful. Finally, the WALR is only available on an aggregate basis and not by loan categories. With these considerations in mind, this paper introduces series on weighted average rates on new loans that are computed monthly and are available for several major loan categories.⁴

II. Weighted Average Rate on New Loans

The Weighted Average Rate on New Loans (WARN) series is calculated as follows: Loans data are collected by type and by interest rate band on a monthly basis. There are twelve loan categories⁵ and each category has nine interest rate bands. The data are aggregated across all eight commercial banks.

Weighted average rates for each loan category are first calculated by multiplying the weight of each category by the midpoint of the interest rate band.⁶

$$WARN_{it} = \sum_{r=1}^{n=9} w_{irt} * MP_{rt}$$

where:

WARN is the weighted average rate

w_i is the weight of interest band r for category i

MP is the midpoint of the interest rate band

i is the respective loan category

t is the time period

r is the interest rate band

To calculate the overall weighted average rate (WARN_t), the weighted average rate for each category is multiplied by the proportion of the category's loans in total loans and then summed:

$$WARN_t = \sum_{i=1}^{n=12} NL_{it} / TNL_t * WARN_{it}$$

where:

NL_i is new loans in category i

TNL is total new loans in all categories

⁴ The series will be available in subsequent *Economic Bulletins*, the *Summary Economic Indicators Bulletin* and the *Monthly Statistical Digest*. A complete data set is included in Appendix I.

⁵ Weighted average rates will be reported for the 6 major categories (see Section III).

⁶ The weight is determined by dividing new loans in the particular interest rate band for category i by total new loans in category i. The midpoint of the interest rate band is calculated by summing the upper and lower limit of the interest rate band and then dividing by 2.

III. Results

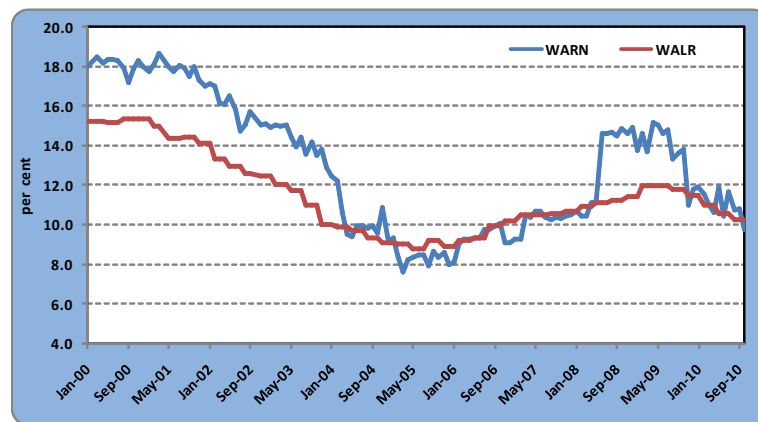
a. Comparison with Loan Rates on Outstanding Loans

Chart 2 provides the results of the computation from January 2000 to November 2010 (see Appendix I for the full data set).⁷ It shows as expected that average interest rates on new loans followed the pattern of average rates on all existing loans but with more pronounced movements. As noted earlier, a change in interest rates on new loans would not be fully reflected in the average rates on all outstanding loans. Over time, however, persistently higher (lower) interest rates on new loans would tend to pull up (down) the averages on outstanding loans.

A comparison of the two series also shows that (similar to the first half of the decade), the recent decline in loan interest rates since 2009 was much sharper than reflected in the data on weighted average interest rates on outstanding loans. The latter showed a decline in interest rates of about 2 per cent, whereas interest rates on new loans dropped by around 4 per cent.⁸

It should also be noted that there is an important difference in the weighting patterns in the two series that is related to the evolution of the pattern of loans (see Appendix II). In particular, loans via credit cards and use of overdraft facilities have become more popular over time, increasing their importance in new loans.

Chart 2
Quarterly Weighted Average Loan Rates &
Monthly Weighted Average Rate on New Loans



Source: Central Bank of Trinidad and Tobago.

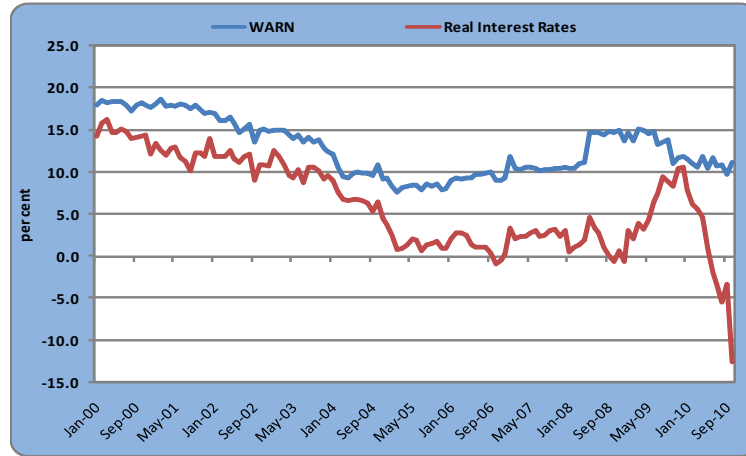
b. Real Interest Rates

The availability of the new monthly series allows for more timely tracking of real interest rates on loans. In Chart 3 we estimate this as the difference between the WARN and the year-on-year inflation rate. It shows that since 2004 real interest rates have been generally between zero and +5 per cent. However, the dramatic fall and then escalation in headline inflation between mid-2009 and the end of 2010 resulted in an initial sizeable jump followed by a marked drop in real interest rates into negative territory.

⁷ In 2008 there was a modification of reporting procedures to improve the information provided by banks on new loans so that the post-2008 data would be more reliable.

⁸ Between 2000 and 2005, weighted average rates on outstanding loans declined by around 6 per cent while rates on new loans dropped by about 10 per cent.

Chart 3
Nominal and Real Interest Rates on New Loans



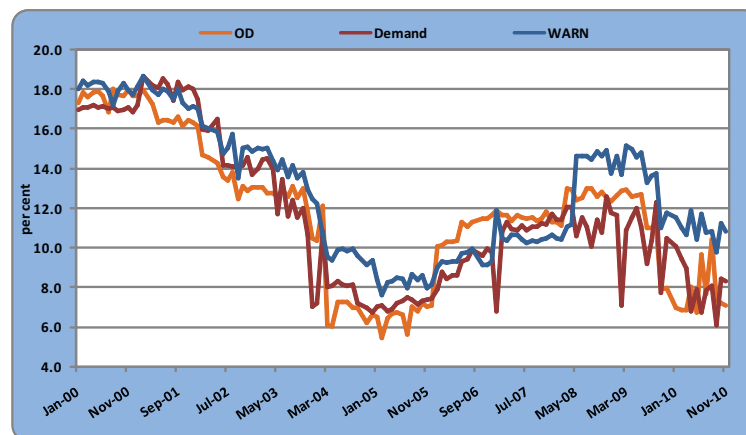
Source: Central Bank of Trinidad and Tobago.

c. New Loan Rates by Category

As discussed earlier, information on weighted average rates will be made available by major loan categories: these are (i) overdraft; (ii) demand loans; (iii) installment loans; (iv) credit cards; (v) residential mortgages; and (vi) commercial mortgages. Appendix I provides the series and Charts 4 to 6 some comparisons with the overall weighted average rates on new loans.

Overdraft and demand loans are extended largely to business, and tend to be lower than the overall WALR on new loans (Chart 4).⁹ The marked decline in these rates since late 2009 suggests that banks actively attempted to foster business borrowing in a climate of sluggish economic activity (although with limited success).¹⁰

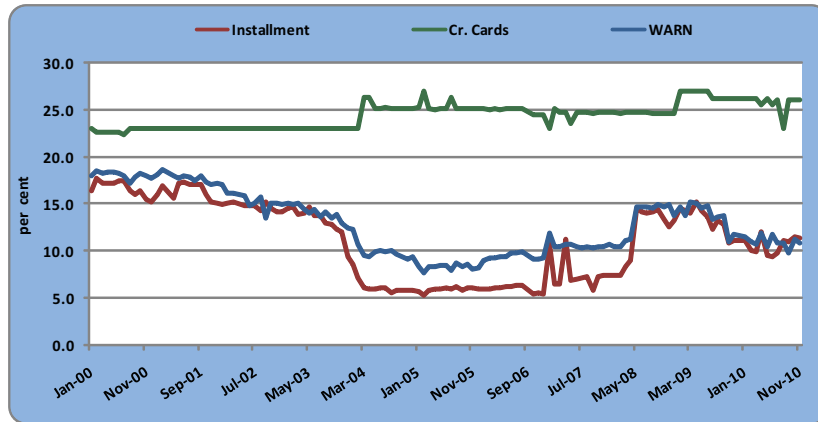
Chart 4
Weighted Average Rates on Overdraft, Demand and Total Loans



Source: Central Bank of Trinidad and Tobago.

⁹ Over the 10 year period, the interest rates on overdrafts averaged 11.8 per cent , demand loans averaged 11.6 per cent while the overall weighted rate on new loans averaged 12.9 per cent.
¹⁰ See the analysis of business credit in the Money, Credit and Interest Rates Section of this Economic Bulletin.

Chart 5
Weighted Average Rates on Installment and Credit Cards

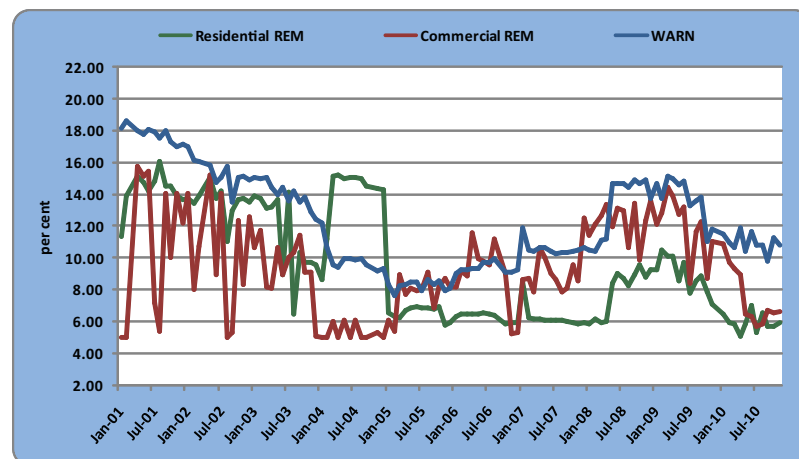


Source: Central Bank of Trinidad and Tobago.

Chart 5 shows that while interest rates on installments loans tend to follow the trend on new loans, rates on credit card loans remain high and sticky. The latter suggests that domestic banks do not consider modification of interest rates on credit cards as a viable way of gaining new business.

Rates on new residential and commercial mortgages have generally been lower than the average rates on new loans as a whole (Chart 6). They also appear to have a lower bound of about 5-6 per cent which they may be approximating at the end of 2010.

Chart 6
Weighted Average Rates on Commercial and Real Estate Residential Mortgages



Source: Central Bank of Trinidad and Tobago.

¹¹ Interest rates on credit cards are substantially higher than on other loans. Credit card loans are likely inelastic to small changes in rates. It is more likely that banks would adjust credit card limits for selected customers to increase profits from this activity.

IV. Conclusion

The economic slowdown in Trinidad and Tobago in 2009-2010 has seen loan interest rates on a downward trajectory as evidenced by quarterly data on weighted average lending rates on outstanding loans. The new monthly series presented in this paper shows the decline in rates on new loans was even more pronounced, with banks dropping rates on most categories of loans, save for credit card facilities. Publication of this higher frequency series that is available across several loan types is intended to contribute to a closer understanding of the dynamics of financial markets in Trinidad and Tobago.

Appendix I
Weighted Average Rate on New Loans (WARN) by Type

	Overall WARN	Overdraft	Demand	Installment	Credit Cards	Real Estate Mortgage Residential	Real Estate Mortgage Commercial
2000							
January	18.0	17.3	17.0	16.5	23.0	7.4	n.a.
February	18.5	17.9	17.1	17.8	22.6	13.8	n.a.
March	18.2	17.6	17.1	17.2	22.6	8.8	n.a.
April	18.4	17.9	17.2	17.2	22.6	13.5	n.a.
May	18.4	17.9	17.1	17.3	22.6	10.8	n.a.
June	18.3	17.7	17.1	17.5	22.6	12.3	n.a.
July	17.9	16.9	17.0	17.6	22.4	13.4	n.a.
August	17.2	18.0	17.1	16.4	23.1	10.4	n.a.
September	17.9	17.8	16.9	16.0	23.1	10.4	n.a.
October	18.3	17.7	17.0	16.5	23.0	13.7	n.a.
November	18.0	18.0	17.1	15.6	23.1	9.9	n.a.
December	17.7	17.7	16.9	15.3	23.1	8.0	n.a.
2001							
January	18.1	17.7	17.2	16.1	23.0	11.3	5.0
February	18.7	17.9	18.7	16.9	23.0	13.9	5.0
March	17.9	16.8	16.7	18.8	23.0	n.a.	n.a.
April	18.0	17.2	18.2	15.6	23.0	15.2	15.8
May	17.8	16.3	18.1	17.3	23.0	14.7	15.1
June	18.0	16.5	18.5	17.4	23.0	14.2	15.5
July	17.9	16.4	18.3	17.1	23.0	14.8	7.2
August	17.5	16.3	17.4	17.1	23.0	16.1	5.4
September	18.0	16.6	18.4	17.2	23.0	14.5	14.1
October	17.3	16.1	18.0	16.0	23.0	14.5	10.1
November	17.0	16.4	18.2	15.2	23.0	13.9	14.1
December	17.1	16.4	18.0	15.1	23.0	13.7	12.2
2002							
January	17.0	16.2	17.5	14.9	23.0	13.8	14.1
February	16.2	14.7	16.0	15.1	23.0	13.5	8.0
March	16.1	14.6	15.9	15.3	23.0	13.9	10.7
April	16.5	14.7	16.3	15.4	23.0	14.4	14.1
May	15.8	14.3	16.5	14.9	23.0	15.1	15.2
June	14.7	13.6	14.2	14.9	23.0	13.7	9.0
July	15.1	13.4	14.2	14.8	23.0	14.2	14.1
August	15.8	13.8	14.1	14.4	23.0	11.0	5.0
September	13.5	12.5	14.1	15.3	23.0	13.0	5.3
October	15.1	13.1	14.2	14.6	23.0	13.6	12.3
November	15.1	12.9	14.6	14.2	23.0	13.7	8.3
December	14.9	13.1	13.7	14.3	23.0	13.5	12.6
2003							
January	15.0	13.1	14.0	14.6	23.0	13.9	10.6
February	15.0	13.1	14.4	14.7	23.0	13.7	11.7
March	15.0	12.8	14.5	14.0	23.0	13.2	8.2
April	14.4	12.8	14.0	14.1	23.0	13.2	8.1
May	14.0	12.6	11.7	14.8	23.0	13.7	10.7
June	14.4	13.0	13.4	13.8	23.0	9.0	9.0
July	13.6	12.6	11.6	13.9	23.0	14.2	10.0
August	14.2	13.1	12.4	13.0	23.0	6.5	10.3
September	13.5	12.6	11.5	12.8	23.0	10.3	11.5
October	13.8	13.0	12.0	12.4	23.0	9.7	9.1
November	12.9	11.8	10.6	12.2	23.0	9.7	9.1
December	12.5	10.5	7.0	9.5	23.0	9.5	5.1

Appendix I (Cont'd)
Weighted Average Rate on New Loans (WARN) by Type

	Overall WARN	Overdraft	Demand	Installment	Credit Cards	Real Estate Mortgage Residential	Real Estate Mortgage Commercial
2004							
January	12.2	10.4	7.2	8.7	23.0	8.7	5.0
February	10.6	12.1	10.9	7.2	23.1	11.2	n.a.
March	9.5	6.1	8.0	6.1	26.4	15.2	6.0
April	9.4	6.1	8.1	6.1	26.4	15.2	5.0
May	9.9	7.3	8.3	6.0	25.1	15.0	6.1
June	10.0	7.2	8.2	6.1	25.2	15.0	5.0
July	9.8	7.2	8.1	6.1	25.4	15.1	6.1
August	10.0	7.0	8.2	5.6	25.2	15.0	5.0
September	9.6	7.0	7.2	5.9	25.1	14.5	5.0
October	10.9	7.7	5.6	7.4	23.0	5.0	n.a.
November	9.1	6.2	7.0	5.9	25.2	14.4	5.3
December	9.4	6.6	6.7	5.8	25.1	14.3	5.0
2005							
January	8.4	6.5	7.1	5.8	25.4	6.5	6.1
February	7.6	5.5	7.1	5.3	27.1	6.3	5.4
March	8.3	6.5	6.8	5.9	25.1	6.2	8.9
April	8.3	6.7	6.9	6.0	25.1	6.7	7.7
May	8.5	6.7	7.2	6.0	25.2	6.9	8.1
June	8.5	6.6	7.4	6.1	25.1	6.9	7.9
July	8.0	5.7	7.5	6.0	26.4	6.8	8.0
August	8.7	7.0	7.4	6.2	25.2	6.9	9.1
September	8.4	6.8	7.2	5.8	25.2	6.8	6.9
October	8.6	7.2	7.3	6.2	25.2	7.0	8.1
November	8.0	7.0	7.4	6.1	25.2	5.8	8.7
December	8.1	7.1	7.5	6.0	25.2	5.9	8.2
2006							
January	9.0	10.1	7.9	6.0	25.1	6.4	8.2
February	9.3	10.1	8.8	6.0	25.1	6.5	9.2
March	9.3	10.3	8.5	6.1	25.2	6.4	8.9
April	9.3	10.3	8.6	6.2	25.1	6.5	11.6
May	9.3	10.4	8.6	6.3	25.2	6.5	9.9
June	9.7	11.3	9.3	6.3	25.2	6.6	9.8
July	9.8	11.1	9.4	6.4	25.2	6.4	9.6
August	10.0	11.3	9.9	6.4	25.2	6.4	11.2
September	10.1	11.4	10.0	6.4	25.1	6.5	8.5
October	9.1	11.5	9.6	5.5	24.5	5.9	9.1
November	9.1	11.5	9.9	5.5	24.5	5.9	5.2
December	9.3	11.6	9.8	5.5	24.6	5.9	5.3
2007							
January	11.9	11.9	6.8	10.8	23.1	8.5	8.7
February	10.5	11.6	10.9	6.6	25.1	6.2	8.7
March	10.4	11.7	11.3	6.6	24.8	6.1	7.9
April	10.7	11.4	10.9	11.3	24.8	6.1	10.7
May	10.7	11.6	10.9	6.9	23.5	6.1	10.0
June	10.4	11.6	11.1	7.0	24.7	6.1	9.0
July	10.3	11.5	10.9	7.2	24.8	6.1	8.6
August	10.4	11.5	11.0	7.3	24.8	6.1	7.8
September	10.3	11.4	11.1	5.9	24.7	6.0	8.1
October	10.5	11.5	11.3	7.4	24.7	6.0	9.6
November	10.5	11.9	11.2	7.5	24.7	5.9	8.5
December	10.7	11.3	11.7	7.4	24.8	6.0	12.5

Appendix I (Cont'd)
Weighted Average Rate on New Loans (WARN) by Type

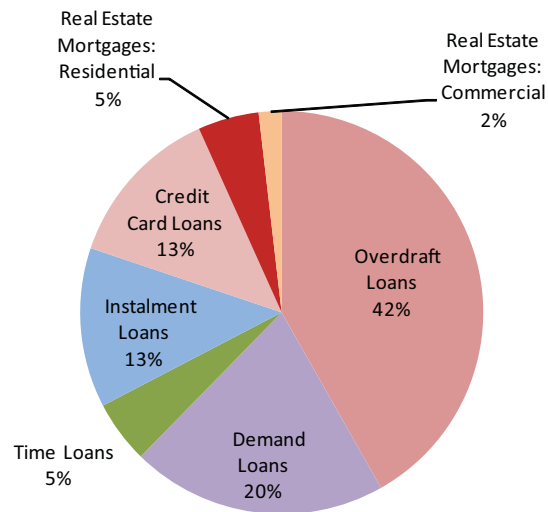
	Overall WARN	Overdraft	Demand	Installment	Credit Cards	Real Estate Mortgage Residential	Real Estate Mortgage Commercial
2008							
January	10.5	11.3	11.4	7.5	24.8	5.9	11.4
February	10.4	11.1	11.4	7.5	24.7	6.1	12.1
March	11.1	13.0	12.1	8.3	24.8	6.0	12.6
April	11.2	12.9	12.1	9.0	24.7	6.0	13.3
May	14.6	12.4	10.6	14.7	24.7	8.4	11.9
June	14.6	12.6	11.5	14.2	24.7	9.1	13.1
July	14.7	13.0	11.1	14.1	24.7	8.7	13.0
August	14.5	13.0	10.1	14.2	24.7	8.3	10.7
September	14.9	12.6	11.4	14.5	24.7	8.9	13.5
October	14.6	12.8	10.8	13.4	24.7	9.5	9.9
November	14.9	12.5	12.6	12.6	24.6	8.8	12.3
December	13.8	12.3	11.8	13.3	24.7	9.2	13.6
2009							
January	14.6	12.7	11.6	14.6	27.0	9.3	12.1
February	13.7	12.9	7.1	14.3	27.0	10.5	12.8
March	15.2	12.9	10.9	14.0	27.0	10.1	14.5
April	15.0	12.6	11.5	15.3	27.0	10.1	13.9
May	14.6	12.7	12.0	14.3	27.0	8.6	12.7
June	14.8	12.7	11.1	13.6	27.0	9.7	13.2
July	13.3	11.0	9.2	12.4	26.2	7.8	8.4
August	13.6	11.0	10.4	13.3	26.2	8.5	11.7
September	13.8	10.9	12.3	12.9	26.2	8.9	12.3
October	11.0	7.9	7.7	10.9	26.2	7.8	8.7
November	11.8	8.0	10.5	11.2	26.2	7.1	11.0
December	11.9	8.3	10.6	11.0	26.2	6.8	10.4
2010							
January	11.5	7.0	10.1	11.2	26.2	6.5	10.9
February	11.0	6.9	9.4	10.1	26.2	6.0	9.8
March	10.6	6.8	9.0	9.9	26.2	5.8	9.4
April	11.9	8.1	6.8	12.0	25.6	5.1	9.0
May	10.5	6.7	7.9	9.6	26.2	5.9	6.5
June	11.7	9.7	6.8	9.4	25.6	7.0	6.3
July	10.8	7.7	7.8	9.9	26.2	5.3	5.7
August	10.8	10.5	8.1	11.1	23.1	6.5	5.9
September	9.8	7.4	6.1	11.0	26.1	5.7	6.7
October	11.2	7.3	8.4	11.6	26.1	5.7	6.7
November	10.8	7.1	8.3	11.4	26.1	5.9	6.6

SOURCE: Central Bank of Trinidad and Tobago.

Appendix II

Weights for New Loans and Outstanding Loans
in per cent (September 2010)

New Loans



Outstanding loans

