

INSTALMENT CREDIT AND MONETARY POLICY IN  
TRINIDAD AND TOBAGO: 1970-1979

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The main purpose of this study is to analyse and assess a particular dimension of the process of monetary control in Trinidad and Tobago over the period 1970-1979. The analysis concentrates on the effectiveness of the instruments of monetary policy in controlling the expansion of instalment credit over the review period. The choice of 1970 as the starting point of the study should be obvious for that year has the greatest political and economic significance. Since it was then that due to economic and subsequently political discontent an attempt was made to change the existing economic and political order. On the other hand, the choice of the terminal year is equally significant, for the economy had experienced an unprecedented economic <sup>/expansion</sup> as a result of the rapid increase in oil price initiated by the Arab-Israeli War of October 1973. This work could thus be regarded as an appraisal of transformations in the instalment credit market brought about by the oil boom.

Much has been written on financial developments within the Trinidad and Tobago economy during the Post-war period, but no serious assessment of the dynamics of the process of monetary control as it affects consumers aggregate demand for goods and services has yet been attempted. The present study arose out of our belief that an overall assessment of the impact of monetary policy on the demand and supply of instalment credit is much needed.

In order to reach an analytically meaningful characterisation of the complex monetary relations inherent in the control of instalment credit, and to identify the changes that have taken place in the credit

market, we need as an initial step, to focuss attention on the controversy in the literature surrounding such basic questions as (i) What is monetary policy? (ii) How does it work? (iii) How effective is monetary policy? (iv) How could its effectiveness be enhanced and at the same time minimize possible adverse side effects?

In the course of this study, several conceptual and methodological problems has been raised as a result of the general lack of relevant statistic. For data collection agencies have never troubled to establish systematic statistical series on some indicators of supply and demand in the instalment credit market. Nonetheless in recent years there has been a growing recognition of the need for more information to really assess the working of the financial system.

The present paper seeks to make a modest contribution to this area of research with special reference to the case of Trinidad and Tobago. It is hoped that more serious studies will be undertaken in the future as more disaggregated data on the instalment credit market become available.

The paper is arranged as follows:

Section I sets the scene by discussing some of the theoretical controversies surrounding questions (i) to (iv) above. We hope that this exercise will clear up some of the ambivalence surrounding these questions.

Section II examines, albeit briefly, the institutional framework of the instalment credit market in Trinidad and Tobago.

Section IM attempts to evaluate general evidence relating to the responsiveness of instalment credit to changes in monetary policy over the review period. The final section provides a summary of the findings as well as the conclusions.

## SECTION II

### The Theoretical Background to the Study

This section of the paper is divided into two (2) parts: the first is concerned with the definition of monetary policy; and the second, with the monetary mechanism.

#### (a) The Definition of Monetary Policy

The problem of defining monetary policy has plagued economists over a considerable period of time, and seemed to have originated with the currency banking school controversy of the 19th century. The problems revolves around whether the definition of monetary control should be confined to public control over the volume of money in commercial banks or broadened to include control over the entire financial system.

Harry Johnson, in his survey of monetary theory and policy, distinguishes four main schools of thought concerning the definition of monetary policy. The most common of these monetary definitions look upon monetary policy as public policy towards the volume of money. This definition is often rationalized on the ground that the objective of any Central Bank's policy is the control of money supply within any

economy. Early empiricists justified this definition of monetary policy because it avoids all the complexities of measuring the impact of monetary control in situations wherein money is not a final payment.

Another group of economists has rejected the preceding definition of "monetary policy". They have argued that because the manipulation of bank credit is the ultimate objective of monetary policy there is no legitimate a priori reason for defining "monetary control" as the control of the money supply (or the volume of money); instead they felt that the term 'monetary policy' should be replaced by that of 'credit policy', if only on operational grounds.

The second definition has similarly been rejected on three major grounds. The first is that in any modern economy the total amount of credit exceeds the volume of bank credit, and, as such, movements in these two aggregates may not bear a close relationship with each other. The second ground is based on the argument that a given volume of bank credit may not be inconsistent with a variety of money supplies, in which case policies initiated by monetary authorities for the control of bank credit (and/or money supply) need not have an appreciable impact on the volume of credit or vice versa. The final ground is the view that 'credit policy' encompasses a wide variety of selective controls by the monetary authority(s) over a wide spectrum of credit terms as well as the structure of leaders portfolios, and as such the impact of such controls on money supply may be negligible.

The preceding alternative methods of defining monetary policy can readily be compared. Evidently, within a macro-economic framework the 'credit policy' definition of monetary policy implicitly assumes that the demand for money function is unstable. Or, to put it another way, this definition assumes that the duration of causality

of the impact of monetary policy is from money demand changes to changes in aggregate demand and supply. Conversely, the first definition, which basically is a literal definition of monetary policy, implicitly assumes that the demand for money function is basically stable, and this remains so even if there are variations in the volume of credit or changes in the terms with which credit is obtained.

It would seem then that the basic issue regarding the two definitions is whether or not the money demand function is stable. But, unfortunately, this issue still remains unresolved in the empirical literature. However, before proceeding to a discussion of a third definition of monetary policy it is useful to note that as long as a stable demand function for money exists, monetary policy (however defined) can in principle be an effective tool for the control of economic activity.

In recent years a third group of economists recognising the growing disenchantment over the unresolved 'credit' vs. 'money' debate highlighted above have sought to side-step the explicit problem of defining 'monetary policy', by defining it as "any action carried out by the central bank". In other words, according to this group of economists 'monetary policy' is synonymous with central bank policy. This definition is perceived as having two (2) major advantages over the other definitions, and these are; firstly, its simplicity, and secondly, the insights it provides into the actual day to day working of a Central Bank. The problem with this definition, however, is that by focussing solely on the operations of the Central Bank re. its day to day actions

in influencing the financial system, the very real possibility exists but one could ignore important dimensions of monetary and credit control which may be outside the purview of the Central Bank. Notwithstanding, the real possibility, in this study we accept the view of Selden (1971) and others that in measuring the impact of monetary policy on instalment credit or other crucial monetary variables within an economy one must look at the net result of instruments manipulated by the Central Bank.

Next, in order to isolate the impact of monetary policy on the instalment credit market, it is instructive to review the mechanisms by means of which monetary policy affects this target variable. It is to this task we shall now turn our attention.

#### The Monetary Mechanism

In the existing theoretical literature three views on the operations of the monetary mechanism hold sway, namely (a) the credit view (b) the monetary (or portfolio) view and (c) the availability doctrine.

Essentially, the credit view is based upon Keynesian liquidity preference theory, which postulates that changes in the supply of money directly effects 'the rate of interest' and thereby induce changes in the flow of instalment credit and the latter, in turn, affects the level of economic activity through the multiplier mechanism. Conversely, the monetary portfolio view highlights the entire spectrum of explicit and implicit interest rates and regards a change in monetary policy as affecting the entire spectrum of expenditures undertaken in an economy rather than influencing,

exclusively, one particular form of expenditure. The credit availability doctrine postulates that in many economies there exist a high degree of imperfection in the money and capital markets and as such a substantial amount of credit rationing by financial institutions take place.

The channels through which monetary policy 'impinges' on the instalment credit market can easily be traced in each of these theories. This is done below, taking each of them respectively.

Starting from an initial situation of equilibrium between actual and desired real cash balance, the assumption can be made that the monetary authority wishes to deflate the economy through a reduction in instalment credit. The 'credit' approach focuses attention on the changes in the rate of interest which results from an initial change in money supply. A fall in the supply of money presumably increases 'the rate of interest' (of course, this is not so if a liquidity trap exists) and this in turn stems the flow of instalment credit. The increase in the rate of interest can be predicted if the monetary authority with some degree of certainty, predict the demand for money. The final change in instalment credit can then be predicted if the interest elasticity of instalment credit as well as the multiplier are known. It may be noted, however, that if the fall in money supply brings about an offsetting increase in the demand for instalment credit, then in the 'credit' view the pressure exerted by monetary policy on instalment credit will be zero. In other words, in the theoretical framework of the 'credit view' monetary policy will be ineffectual if, in particular, the demand for instalment credit in an



unstable and unpredictable function and, more generally, if the demand for money is dependent on money supply. Nonetheless, if the monetary authorities are able to predict the relationship between instalment credit and money supply with some degree of certainty the proponents of the 'credit view' are of the opinion that effective monetary policy can still be instituted.

As we indicated before implicit in the 'monetarists view' of monetary control is the idea that the demand for money in general (and instalment credit in particular) and the supply of money functions are not interdependent. Thus in the view of this school of thought any fall in the supply of money will cause individuals to readjust their asset portfolios in such a way as to maximize the use of their money balances. Such readjustments in asset portfolios are carried out by reducing non-essential acquisition of non-monetary wealth. As the latter is usually financed by instalment credit, a fall in monetary wealth will in effect lead to a fall in instalment credit. Note that if the money demand function is unstable, monetary policy will be ineffectual even in this theoretical framework, and the reason why this is so is simply because the authorities will be unable to predict the result of any monetary action they may take.

The most telling criticism of the sequence of events inherent in the two (2) mechanisms outlined above has been directed at the interest rate elements. The inconclusiveness of the empirical evidence as the effectiveness of variations of interest rates on the level of instalment credit has led to the emergence of the availability

doctrine. The sequence of the impact of a contractionary monetary policy under the doctrine is as follows: a reduction in monetary growth by the authorities leads to (a) an enhancement of liquidity pressures within the economy, and this in turn leads to (b) changes in both consumers and producers' expectations as well as (c) tight banking lending policies. Finally, the combined effect of (b) and (c) above, will lead to a fall in the supply of instalment credit.

It will be noted that although the chain of events postulated by theorists of the credit availability doctrine are likely to be more closely related to monetary policy mechanism in Trinidad and Tobago, we also feel that elements in the competing theories may also be of some importance in explaining the impact of monetary policy in instalment credit within the economy. Therefore in our subsequent discussion we implicitly assume that all three (3) processes have influenced instalment credit over the review period.

#### Identifying Periods of Tight Money

There are no generally accepted methodology for identifying periods of tight money. Thus, to delineate periods of tight money economists must use relatively abstract procedures to discern regularities or irregularities in specific macro-economic series such as money supply and GNP.

In this paper the identification of periods of tight money is undertaken in two (2) stages; in the first stage cross correlation analysis is used to see whether or not a number of instalment credit market series are closely related to money supply, since we feel that

money supply will most likely mirror any tight money policy imposed by the Central Bank. The method utilised in the second stage most resembles the work of Friedman (1956) which attempted an objective and exhaustive examination of money in the U.S.A. More specifically, in the second stage four major macro-economic aggregate: money narrowly defined ( $M_1$ ), money broadly defined ( $M_2$ ), bank credit and Finance House credit - are examined and periods of tight money are identified as those wherein the aforementioned series show a movement from peak to trough. Table 1 below summarizes the correlation coefficients that were obtained.

A casual inspection of Table 1 shows that, within each pair of named variables, the correlation coefficient is high, but there is no simple relationship between instalment credit in the two (2) strata - Commercial Banks and Finance Houses - the financial system; and money supply/ that the correlation coefficient between total bank credit and narrow money supply exceeds the coefficient between Finance Houses and the same money aggregate. Correspondingly, the correlation coefficients show that the relationship between Finances Houses and Commercial Banks is much closer than the relationship between each other.

Taking all the correlation coefficients together it would seem then that there is a close parallel between variations in money supply and instalment credit. Having established parallel movement in the series our next task is to examine the turning points not only of money supply but also of bank credit and the monetary base.

TABLE 1  
 THE RELATIONSHIP BETWEEN MONEY SUPPLIES -  $M_1$   
 AND  $M_2$  - AND INSTALMENT CREDIT: CORRELATION MATRIX - LOWER TRIANGLE

VARIABLES	(a)	a.1	a2	Credit Outstanding			
	Total Credit	Commercial Banks	Finance Houses	b.1 Commercial Banks	b2 Finance Houses	(c) Narrow Money Supply	(d) Broad Money Supply
(a) Total Credit	1.000						
a.1 Commercial Banks	0.989	1.000					
a.2 Finance Houses	0.632	0.510	1.000				
(b) Credit Outstanding							
b.1 Commercial Banks	0.878	0.875	0.525	1.000			
b.2 Finance Houses	0.734	0.716	0.518	0.901	1.000		
(c) Narrow Money Supply	0.881	0.878	0.522	0.998	0.883	1.000	
(d) Broad Money Supply	0.879	0.878	0.509	0.995	0.873	0.998	1.000

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Source: Central Bank Statistical Digest. Various Issues.

TABLE II  
 PERCENTAGE CHANGES IN MONEY SUPPLIES  
 ( $M_1$  AND  $M_2$ , AND FINANCIAL INSTITUTIONS TOTAL CREDIT: 1970-1979)

YEAR	NARROW MONEY ( $M_1$ )	BROAD MONEY ( $M_2$ )	TOTAL CREDIT	TOTAL CREDIT COMMERCIAL BANKS	TOTAL CREDIT FINANCE HOUSES
1970					
1	-	-	-	-	-
2	9.151	6.150		3.529	7.906
3	0.270	2.374	4.912	7.045	0.862
4	4.653	4.149	3.588	7.855	-5.128
<u>1971</u>					
1	8.505	6.251	0.000	2.559	-5.405
2	1.544	6.364	-0.821	0.768	-5.238
3	0.117	3.561	5.655	8.571	-1.508
4	8.236	6.685	0.127	6.491	-8.163
<u>1972</u>					
1	2.428	4.745	11.436	15.815	-3.333
2	7.850	6.20	8.552	10.384	1.149
3	0.489	2.515	9.244	9.021	9.659
4	9.285	5.939	8.269	8.274	8.290
<u>1973</u>					
1	8.585	6.588	-5.616	5.786	6.699
2	0.655	4.807	-2.179	-4.141	7.623
3	-5.902	0.655	4.027	3.672	5.417
4	0.692	2.291	-0.494	-0.208	-1.581
<u>1974</u>					
1	0.692	2.290	-1.242	-1.148	-4.919
2	1.761	4.019	4.963	4.963	1.844
3	16.336	2.300	4.527	7.143	-6.787
4	6.013	6.925	5.276	6.751	-2.913

TABLE II  
 PERCENTAGE CHANGES IN MONEY SUPPLIES  
 ( $M_1$  AND  $M_2$ , AND FINANCIAL INSTITUTIONS TOTAL CREDIT: 1970-1979 - (Cont'd)

YEAR	NARROW MONEY ( $M_1$ )	BROAD MONEY ( $M_2$ )	TOTAL CREDIT	TOTAL CREDIT COMMERCIAL BANKS	TOTAL CREDIT FINANCE HOUSES
1975					
1	10.098	9.710	6.432	7.564	-
2	12.537	6.292	7.027	8.912	-2.500
3	10.611	9.892	11.911	23.123	0.513
4	11.100	9.096	9.266	4.146	8.673
<u>1976</u>					
1	12.748	5.249	9.266	9.251	9.390
2	12.433	10.232	10.862	9.218	11.159
3	5.877	6.112	9.540	11.335	7.722
4	4.444	4.576	8.239	9.387	5.376
<u>1977</u>					
1	1.260	3.207	8.596	8.421	3.061
2	21.905	10.385	7.749	6.986	12.987
3	-1.256	4.509	10.849	8.892	19.678
4	2.218	5.348	6.432	6.093	15.981
<u>1978</u>					
1	9.419	8.183	4.305	4.560	2.714
2	15.549	7.993	3.659	8.563	7.903
3	1.628	2.852	9.377	18.643	-
4	12.522	7.514	7.614	8.016	4.118
<u>1979</u>					
1	2.123	5.013	-7.689	12.162	270.057
2	7.381	7.405	57.106	4.973	1.527
3	2.978	5.557	5.029	5.588	3.960
4	8.269	8.303	4.215	4.954	2.218

Up to this point, our analysis have been confined to an interpretation of the cross correlations between the time series on money supply and credit aggregates. We shall now take our analysis a little further by using Friedman's approach to identify tight money periods in Trinidad and Tobago. In Table 2, the movements in the percentage changes in the various aggregates are shown, and their movements may be compared from the 2nd quarter 1970 through the 4th quarter 1979.

Several differences between money supply and instalment credit are bought out in the Table. These are interesting since they probably bear on the general question of the impact of monetary policy on instalment credit; also, the contrast help to throw light on the trend influences that have been at work on the instalment credit market.

The Table 2 pictures, in the first place a downward trends in narrow money between the 4th quarter 1972 and 3rd quarter 1973 as well as between 3rd quarter 1976 and 1st quarter 1977. A pronounce drop in the series is also evident between 2nd quarter 1977 to the 4th quarter of the same year. In the second place, the major fluctuations in  $M_1$  the drop from the peak in the 2nd quarter 1972, the rise from the 3rd quarter 1973, the short but marked drop in mid 1977, and the fluctuations thereafter, appear clearly in both broad money supply and total instalment credit of commercial banks.

Finally, major fluctuations are apparent in Finance Houses' credit. The figures also suggest that Finance Houses were in a net deficit position over a considerable part of the review period. Additionally, there appears to be a systematic difference in the timing of this series and that of the others.

THE INSTITUTIONAL FRAMEWORK OF THE INSTALMENT  
CREDIT MARKET IN TRINIDAD AND TOBAGO

Since we do not wish to bore the reader with fine details, our discussion of the institutional framework of the instalment credit market in Trinidad and Tobago will be as brief as possible.

With the above consideration in mind, we may note, firstly, that consumer's instalment credit within Trinidad and Tobago is mainly made up of motor car loans, durable goods loans, home repairs, and personal consumption loans. Secondly, that major supplier of such credit are commercial banks, finance houses credit unions, and other financial and non financial organizations. Thirdly, that the official figure on the volume of instalment credit at given points in time - as well as its distribution - may be understated. In fact, it is quite a surprise that despite the fact that credit unions grant substantial loans to their members within Trinidad and Tobago, this source of credit is virtually ignored in the official financial statistical publications. Another source of weakness in the statistical data base on instalment credit seems to be the treatment of Finance Houses - since a few of the Finance Houses in Trinidad and Tobago are subsidiaries of large construction firms/and/or large retailer establishments and in real they may not be finance companies.

In other words, in Trinidad and Tobago a few of the finance subsidiaries simply serve as capital collection centers for their parent companies.



The Measurement of Tight Money and Instalment Credit

With this brief review of the institutional framework let us now focuss some attention to a part of the empirical evidence of the responsiveness of instalment credit to 'tight' money policies. Basically, the procedure we adopted here was quite similiar to that used in the identification of periods of tight money and here we implicitly assume that if a 'tight money' situation exist (or existed) then this would be reflected in the relationship between specific instalment credit series and money supply. In this study we focus our attention on the relationship between new instalment credit business and money supply. If the objective of monetary policy is the shifting of funds from consumption to consumption, as it is, generally believed to be, then we feel that if monetary policy has been tight, then over a period of time the relationship between money supply and certain types of instalment credit will be close. In particular, the relationship between non-consumption forms of new instalment credit and money supply changes will be close.

In Table 3 we present cross correlation between monthly series of new instalment credit and money supply. As the Table shows the correlation coefficient between total new credit and car and motor cycle credit is quite high, and so is the correlation between total new credit and furniture and furnishing, home improvements and travel - all being essentially, unproductive forms of expenditures. It can be observed that only exception to the general tendency is credit on industrial building. In case of the correlation of new credit with the money supply series, we see that the higher correlation is between total

TABLE 3

## GROSS CORRELATION MATRIX OF NEW INSTALMENT CREDIT ON MONEY SUPPLIES

(M<sub>1</sub> AND M<sub>2</sub> - LOWER TRIANGLE)

VARIATIONS	Total New Credit	Cars and Motor Cycles	Commercial vehicles	Credit on Agricultural Planters	Industrial Building	Furniture and Furnishing	Travel	Medical Expenses	Home Improvements	M <sub>1</sub>	Money Supply M <sub>2</sub>
Total New Credit	1.000										
New Credit on:											
Cars & Motor Cycle	0.991	1.000									
Commercial Vehicles	0.689	0.708	1.000								
Agricultural Plant & Machinery	0.518	0.541	0.305	1.000							
Industrial Building	0.933	0.917	0.614	0.369	1.000						
Furniture and Furnishing	0.914	0.891	0.629	0.428	0.819	1.000					
Travel	0.810	0.811	0.514	0.462	0.739	0.668	1.000				
Medical Expenses	0.654	0.636	0.450	0.313	0.588	0.567	0.507	1.000			
Home Improvement	0.987	0.979	0.686	0.499	0.928	0.897	0.813	0.575	1.000		
Money Suppliers											
M <sub>1</sub> Narrow	0.991	0.987	0.681	0.516	0.917	0.893	0.801	0.608	0.983	1.000	0.992
M <sub>2</sub> Broad	0.989	0.984	0.681	0.518	0.912	0.888	0.793	0.667	0.973	0.992	1.000

new credit and narrow money. On a disaggregated level we also see that the correlations between money supply and luxury expenditures - for want of a better word is higher than those of other types of on new instalment credit. The relationship between narrow money and new credit is further substantiated by the regressions in Appendix three (3). Together, the preceding findings seems to indicate that the impact of 'tight' money policies on the instalment credit market has been marginal over the review period.

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APPENDIX 1

Regressions of Instalment Credit on Narrow  
Money Supply ( $M_1$ )

$$\begin{aligned} \text{TCO} &= - 0.166 + 0.010 M_1 \\ & \quad 0.505 \quad (0.001) \\ R^2 &= 0.753 \quad \text{RE} = 3.321 \\ \text{DW} &= 1.846 \end{aligned}$$

$$\begin{aligned} \text{CBCO} &= - 0.076 + 0.008 M_1 \\ & \quad (0.460) \quad (0.001) \\ R^2 &= 0.737 \quad \text{RE} = 3.027 \quad \text{DW} = 1.718 \end{aligned}$$

$$\begin{aligned} \text{FHCO} &= - 0.211 + 0.001 M_1 \\ & \quad (0.156) \quad .010003) \\ R^2 &= 0.425 \quad \text{RE} = 1.024 \quad \text{DW} = 1.771 \end{aligned}$$

$$\begin{aligned} \text{TFHC} &= - 13.732 + 0.116 M_1 \\ & \quad (5.072) \quad (0.008) \\ R^2 &= 0.806 \quad \text{RE} = 33.341 \quad \text{DW} = 0.197 \end{aligned}$$

Where TCO = total credit outstanding  
 CBCO = Commercial Banks credit out standing  
 FHCO = Finance (houses credit outstanding)  
 TBC = Total Banks Credit  
 TFHC = Total Finance (house credit)

## APPENDIX 2

Regressions of Instalment Credit onBroad Money Supply ( $M_2$ )

$$TCO = 0.735 + 0.004 M_2$$

$$(0.544) \quad (0.0003)$$

$$R^2 = 0.751 \quad RE = 3.329 \quad DW = 1.832$$

$$CBCO = -0.437 + 0.003 M_2$$

$$(0.494) \quad (0.0002)$$

$$R^2 = 0.739 \quad RE = 3.019 \quad DW = 1.701$$

$$FHCO = -0.262 + 0.000 M_2$$

$$(0.0009)$$

$$R^2 = 0.412 \quad RE = 1.031 \quad DW = 1.772$$

$$TBC = -38.305 + 0.154 M_2$$

$$(2.662) \quad (0.001)$$

$$R^2 = 0.995 \quad RE = 16.272 \quad DW = 0.225$$

$$TFHC = -20.155 + 0.042 M_2$$

$$(5.528) \quad (0.003)$$

$$R^2 = 0.800 \quad RE = 33.797 \quad DW = 0.162$$

## APPENDIX 3

ESTIMATED EQUATIONS OF NEW INSTALMENT CREDIT  
ON NARROW MONEY SUPPLY

$$(1) \text{ Troct} = 0.871 + 0.053 M_1$$

$$(0.708) \quad (0.001)$$

$$R^2 = 0.975 \quad RE = 4.678 \quad DW = 2.061$$

$$(2) \text{ Cur} = 0.586 + 0.014 M_1$$

$$(0.221) \quad (0.0003)$$

$$R^2 = 0.964 \quad RE = 1.461 \quad DW = 1.583$$

$$\text{CVE} = -0.807 + 0.006 M_1$$

$$(0.512) \quad (0.001)$$

$$R^2 = 0.559 \quad RE = 3.641 \quad DW = 2.076$$

$$(3) \text{ Agr} = 0.025 + 0.0004 M_1$$

$$(0.062) \quad (0.0001)$$

$$R^2 = 0.317 \quad RE = 0.041 \quad DW = 2.206$$

$$(4) \text{ IND} = -0.314 + 0.004 M_1$$

$$(0.153) \quad (0.0003)$$

$$R^2 = 0.844 \quad RE = 1.008 \quad DW = 1.691$$

$$(5) \text{ FUR} = 0.151 + 0.0008 M_1$$

$$(0.385) \quad (0.001)$$

$$R^2 = 0.761 \quad RE = 2.542 \quad DW = 1.211$$

$$(6) \text{ Trav.} = - 0.034 + 0.001 M_1$$

$$(0.093) \quad (0.0001)$$

$$R^2 = 0.640 \quad RE = 0.613 \quad DW = 0.811$$

$$\text{Med} = 0.126 + 0.0004 M_1$$

$$(0.069) \quad (0.0001)$$

$$R^2 = 0.318 \quad RE = 0.458 \quad DW = 2.102$$

$$\text{Hom} = - 0.063 + 0.007 M_1$$

$$(0.130) \quad (0.002)$$

$$R^2 = 0.957 \quad RE = 0.855 \quad DW = 1.622$$

ESTIMATED EQUATIONS OF NEW INSTALMENT CREDIT ON BROAD MONEY SUPPLY ( $M_2$ )

$$(1) \text{ TOT} = - 1.269 + 0.019 M_2$$

$$(0.843) \quad (0.0004)$$

$$R^2 = 0.969 \quad RE = 5.275 \quad DW = 1.502$$

$$(2) \text{ CAR} = 0.077 + 0.005 M_2$$

$$(0.268) \quad (0.0001)$$

$$R^2 = 0.952 \quad RE = 1.676 \quad DW = 1.445$$

$$(3) \text{ Cve} = - 1.138 + 0.002 M_2$$

$$(0.578) \quad (0.0003)$$

$$R^2 = 0.567 \quad RE = 3.616 \quad DW = 2.039$$

$$(4) \text{ Agr} = - 0.009 + 0.0001 M_2$$

$$(0.007) \quad (0.0004)$$

$$R^2 = 0.319 \quad \text{Re} = 0.408 \quad \text{DW} = 2.198$$

$$(5) \text{ Ind} = - 0.476 + 0.002 M_2$$

$$(0.164) \quad (0.0001)$$

$$R^2 = 0.837 \quad \text{RE} = 1.026 \quad \text{DW} = 1.668$$

$$(6) \text{ Fur} = - 0.105 + 0.003 M_2$$

$$(0.417) \quad (0.0002)$$

$$R^2 = 0.747 \quad \text{RE} = 2.608 \quad \text{DW} = 1.311$$

$$(7) \text{ Trav} = - 0.075 + 0.0005 M_2$$

$$(0.094) \quad (0.0001)$$

$$R^2 = 0.626 \quad \text{RE} = 0.622 \quad \text{DW} = 0.766$$

$$(8) \text{ Med} = 0.030 + 0.0002 M_2$$

$$(0.070) \quad (0.0001)$$

$$R^2 = 0.431 \quad \text{Re} = 0.436 \quad \text{DW} = 2.144$$

$$\text{Hom} = - 0.271 + 0.003 M_2$$

$$(0.173) \quad (0.0001)$$

$$R^2 = 0.930 \quad \text{RE} = 1.080 \quad \text{DW} = 1.410$$



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