

Econometric Analysis of Money Demand in Serbia

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ABSTRACT

The aim of the present paper is to assess stability of the money demand function in the Republic of Serbia and provide an empirical analysis of factors that influence money demand. The modeling was based on the standard approach that the money demand relative to the economic activity and opportunistic cost of the money stocking, whereas the industrial production index was applied as the parameter of economic activity. Economic analysis of the money demand function was facilitated by the Johanes' procedure and error-correction model with the main objective to determine the factors which, in both short- and long-term, influence its movements. The results show that money demand in the entire period under review showed signs of instability and could not be used for the purpose of targeting monetary aggregates.

Key words: money demand, error-correction model, Jonhanes' procedure.

CONTENTS

Introduction.....	3
1. Experience of transition economies with money demand analysis	5
2. Main characteristics of economic developments	7
in the Republic of Serbia in the transition process	7
3. Selection of variables and model construction	9
4. Empirical analysis results	12
5. Conclusion	20
References.....	22

INTRODUCTION

The demand for money function creates a background to review the effectiveness of monetary policies, as an important issue in terms of the overall macroeconomic stability. Money demand is an important indicator of growth of a particular economy. The increasing money demand mostly indicates a country's improved economic situation, as opposed to the falling demand which is normally a sign of deteriorating economic climate. This results from the fact that the rising money demand brings about the increase in production and/or causes the rate of money circulation to decline, while the falling money demand is the result of the contracted output in real terms. There are short-term and long-term aspects of money demand. The growing production relates to the long-term aspect of money demand or the need for money (transaction demand). This means that the increased issue of money which is consistent with price stability may solely be achieved in the long run if it follows the growth of output. In the short term, a decreasing rate of money circulation may cause the money demand to rise irrespective of the movements in real production. However, the ongoing increase in money supply regardless of the trends in production leads to the stronger inflationary pressures.

The measures of the central bank's monetary policy have indirect or direct effects on money demand. The increased discount rate and required reserve ratio result in rising interest rates which in turn causes money demand to decline. Money demand, on the other hand, gives effect to the economic activity, exchange rate stability, etc. thereby creating the background to apply a transmission mechanism used to bring the objectives in line with the instruments of monetary policy. This analysis is primarily needed because of the fact that the central bank uses its measures to influence the money demand and for the most part indirectly pursues its monetary policy.

When discussing the money demand, it is actually understood as money in real terms, i.e. money supply deflated by the general price level (retail price index, GDP deflator, etc.). It is the function of the overall economic activity and the set of variables reflecting the opportunity cost.

As defined by the economic theory, the demand for money is positively correlated to the overall economic activity, as earnings increase in parallel to its growth which in turn results in the rising number and volume of transactions and, consequently, a more pronounced need to hold money. On the other hand, money demand is negatively

correlated to the opportunity cost of holding money – the higher need to hold money, the higher opportunity cost of holding money. Opportunity cost is typically measured by the deposit interest rate which might be earned (own rate of money), inflation expectations, and fluctuations in exchange rate.

1. EXPERIENCE OF TRANSITION ECONOMIES WITH MONEY DEMAND ANALYSIS

Nearly all CEE countries involved in the process of transition since early nineties have faced similar problems: extensive external debt, high budget deficit and, above all, high rates of inflation in early years of transition.

The underlying objective of the Czech monetary policy was to reduce the inflation rate through more vigorous supervision by monetary authorities and to provide for the stable exchange rate. One of the key elements in controlling the domestic inflation was to ensure the stability of money demand. The research conducted by *J. Klacek and K. Smidkova*¹ for the period 1992-1995 using the error-correction model measured the money demand function in the long run. The real M1 and M2 were used as the real demand money indicators. The results showed that in this period the demand for money had mostly depended on the level of consumption (consumption being used in the model as the indicator of economic activity) and the inflation rate. The model has been criticized by *K. Cuthbertson and D. Brendin*² as it disregarded the level of dollarization of the economy as a factor affecting the real demand analysis (the issue of dollarization was highly pronounced in the Czech economy in this period). The latter authors applied the VECM methodology in analyzing the money demand in the period 1992-1997. As shown by the results, the money demand was affected by the level of GDP, inflation rate and degree of dollarization. The coefficients attached to these variables in the demand for money equation were found to be statistically significant and had the expected designations.

¹ J. Klacek, K. Smidkova: *The Demand for Money Function, The Case of the Czech Economy*, Czech National Bank working paper, series 41, Prague

² K. Cuthbertson, D. Brendin: *Money Demand in the Czech Republic since Transition*, Journal of Policy Reform, January 2001

The empirical demand analysis in Romania³ for the period June 1997 - March 2003 showed that the main money demand determinants had been the industrial output index used in the analysis as the GDP approximation; rate of inflation; and the national currency depreciation rate. The long run model coefficient attached to the industrial output index was found to be statistically significant, but was considerably above the level of one, which speaks in favor of this indicator as the best approximation of economic activity. The statistical significance of the coefficient attached to the depreciation rate reflects the existing dollarization problem faced by the economy.

Poland launched its process of transition under the circumstances of high instability, extensive external debt, and considerable budget deficit. Therefore, the stabilization of economy accompanied by rigorously controlled prices and the suppression of high inflation were the logical key objectives to be pursued by Poland's monetary policy. *B. Klos* and *E. Wrobel*⁴ analyzed the effects of monetary shocks in Poland caused by the fluctuating exchange rate in terms of the GDP, lending, prices and money demand; the effect of these shocks was found to be statistically significant in all areas. The strongest effect of monetary shocks on prices followed 20 months after they had occurred.

In later years of transition in these economies, interest rates became increasingly important as the tool used within the transition mechanism meaning that monetary policymakers started using interest rates to a greater extent rather than the rate of exchange for the purpose of monetary targeting. *R. Golinelli* and *Rovelli*⁵ analyzed the effect of interest rate used as the transmission mechanism tool on the inflation and money demand in the Czech Republic, Poland and Hungary, and measured the effect of interest rates in the real money demand and prices in the domestic market for the period 1991-2000. The analysis also took into account the effect of exchange rate on inflation which appeared to be most significant in the Czech Republic. The effects of both interest rates and the exchange rate were found to be significant for policies aimed at controlling and suppressing the inflation, with the exception of the Czech Republic where the effect of

³ V. Lazea, B. Cozmanca: *Currency Substitution in Romania*, National Bank of Romania, May 2003.

⁴ B. Klos, E. Wrobel: *The Monetary Transmission Mechanism and the Structural Modelling of Inflation at the National Bank of Poland*, National Bank of Poland

interest rates on money demand was significant only after a larger number of lags had been included in the model. Stability tests showed that the early stage of transition had been marked by the instable money demand while its stability would be achieved at a later stage.

2. MAIN CHARACTERISTICS OF ECONOMIC DEVELOPMENTS IN THE REPUBLIC OF SERBIA IN THE TRANSITION PROCESS

In the nineties the economy of the Republic of Serbia was faced by many problems, radically declined GDP down to 50% relative to the level reported in 1989, price instability growing into hyperinflation in 1993, severe economic blockade by the western world, imposed sanctions, rising unemployment exceeding 30%, considerable extent of grey economy, the NATO bombing, etc. The overall macroeconomic developments were largely affected by these problems.

Under the circumstances, all functions of the weakened national currency were unofficially taken up by the German mark along with the currency substitution of substantial proportion. Households and the economy abandoned the national currency to avoid the inflation toll. The situation was made even worse by inadequate solutions of economic and monetary policies pursued at the time to mitigate the adverse effects caused by these problems.

Although by the economic reforms undertaken in 1994 and 1995 the hyperinflation had been suppressed, the economic activity strengthened to a certain extent, and transactions redirected to the legal payment system, the major economic changes occurred only after October, 2000.⁶ Since then the underlying objective defined by the monetary authorities has been to achieve the price and macroeconomic stability along with indirectly controlled inflation, increased foreign exchange reserves, and exchange rate liberalization, as one of the main tools of the transition mechanism. The fixed exchange rate of the dinar was replaced by the managed fluctuating rate regime.

⁵ R. Golinelli, R.Rovelli: *Monetary Policy Transmission, Interest Rate Rules and Inflation Targeting in Three Transition Countries*, Ezoneplus Working Paper, No.10, August 2002

The value of the dinar in the interbank market is effectively based on the foreign exchange supply and demand, while the interventions by the National Bank of Serbia were much more pronounced in early years. The rate of inflation decreased from 111.9% in 2000 to 7.8% in 2003, measured December to December. The inflation reported in 2004 exceeded the projected rate and reached 13.7%, partly as the result of the rising oil prices in the world market.

The financing of budget deficit has been restricted since 2001, as recommended by the IMF. Thus the government borrowings from the central bank have been eliminated, except for bridging loans. The monetization of fiscal deficit used to be the major generator of inflation. Over the past four years short-term facilities provided by commercial banks have been made available to the government, however, to be repaid until the end of the budget year. With the issue of government securities launched in mid 2003, the monetary authorities intend to abandon the practice of direct facilities to the government provided by commercial banks as the financial market develops. In early 2005 repurchase auctions have started for bonds issued by the Republic of Serbia, as a modern instrument in pursuing the monetary policy accommodating the need for the central bank's effective and timely interventions to control the liquidity of the banking sector.

Value added tax was introduced as of the beginning of 2005, and it is expected to narrow the scope of grey economy and increase the budget revenue.

The economic growth varied in the observed period. Following the negative rates reported in early nineties and in 1999, positive growth rates have been recorded in the last five years, with the record level of 8% in 2004.

The consequences of these developments also included numerous structural shocks occurring in relevant time series, as proved by quite many econometric analyses conducted for the observed period. Since early eighties structural shocks had been identified in nearly all years: UN sanctions, May 1992 – November 1995; sale of the national telecommunications company Telecom in August 1997; crisis in Kosovo causing new tensions in international relationships that culminated in the NATO bombing of FRY

⁶ In late 2000, the IMF membership of Serbia and Montenegro was renewed. In 2002 the three-year Extended Fund Facility was made available which expires in May, 2005.

from March to June 1999. Political changes followed in late 2000, and resulted in economic and monetary reforms: general price liberalization (December 2000); for large banks liquidated (January 2002); payment system services shifted to commercial banks (January 2003). These structural shocks certainly make the econometric analysis more difficult.

3. SELECTION OF VARIABLES AND MODEL CONSTRUCTION

Published works contain extensive discussions as to the issue of whether it is better to use a narrow or broad definition of money supply in analyzing the demand for money function, and the question which one of the two is more stable. The studies devoted to developing countries have shown that an underdeveloped banking system and a low level of the banking sector development are better reflected with the narrow money supply concept.

The following factors were taken into account in measuring the demand for money function in Serbia:

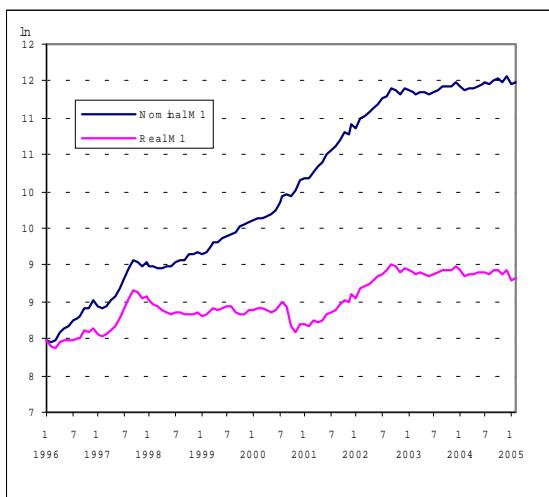
1. Degree of development and liquidity of money market;
2. The effect of the banking system rehabilitation (expressed as dummy variable given non-zero values as of January 2002);
3. Role of exchange rate and interest rates in the monetary policy transmission mechanism;
4. Existence of other value preserving assets.

We are of the opinion that at the current stage in the development of the banking and financial system in the Republic of Serbia, the money demand is better reflected by the M1 (as the narrower monetary aggregate). In the model the endogenous variable, i.e. the real demand for money, is the M1 deflated by retail price index (relative to Jan. 1996=100).

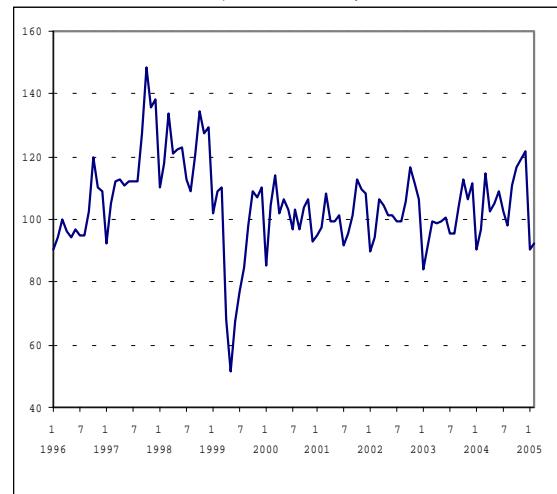
In the period starting with 1996, as illustrated by the graph, the real money demand rose taking into account that, following the implementation of the economic

reform program in 1995 and 1996, a certain part of transactions shifted back from the illegal zone to the legal payment system. In the observed period the monetary policy measures should have provided for the movements in money supply to follow those relating to the GDP. The highest growth of the real money supply M1 was reported in 1997 when a part of the national telecommunications company was sold and the money used to finance public consumption. Following the decrease in the real money supply reported in late 2000 and associated with the political changes on October 5, 2000, a considerable increase in money demand occurred at the early stage of macroeconomic stabilization in 2001. The growth of money supply in the first quarter of 2002 closely related to the current euro conversion of legacy currencies, all foreign exchange transactions of the National Bank of Serbia in the local interbank market, and interbank foreign exchange transactions, as the key remonetization factor. Money supply rose in late 2002 mostly due to the transferred payment system services to commercial banks. At the beginning of 2003, with respect to the restrictive monetary policy pursued by the National Bank of Serbia, the real money supply fell relative to December 2002. The graph shows that the real money demand was instable throughout the observed period although the stability was preserved to a certain extent in the last two years.

Graph 1: Nominal and Real M1



Graph 2: Industrial Production Index (2003=100)

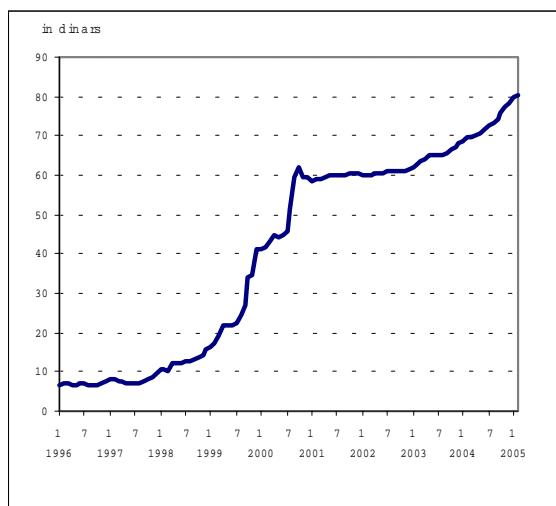


Since no monthly GDP figures are available, the industrial output index was used (2003=100) as the indicator of the real economic activity. The graph illustrating the

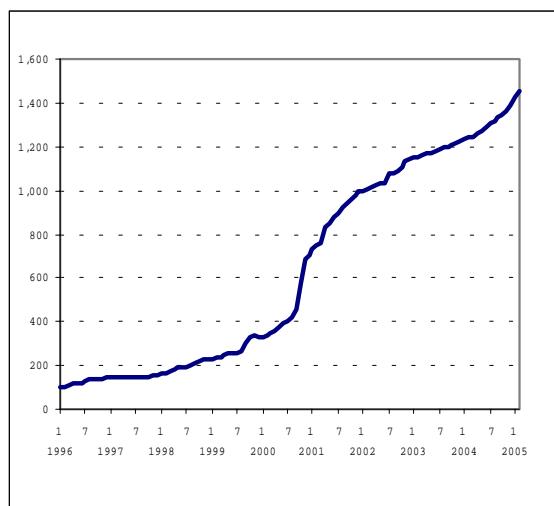
movements in the industrial output index shows that the industrial output was mostly stable over the given period, excluding the interval from March 1999 – June 1999 when a radical drop in production was reported caused by the NATO bombing.

Seasonally adjusted series of the industrial output index⁷ would not derive correct results with unit root testing and cointegration equation, and this was the reason why seasonally unadjusted data were used.

Graph 3: Nominal Exchange Rate of the Dinar against the Euro



Graph 4: Retail Price Index (Jan. 1996=100)



A number of variables were used to reflect the opportunity cost of holding money expressed as the return on alternative forms of assets: expected inflation rate (measured by retail price index); nominal exchange rate of the dinar to the euro (where the higher index values indicate the depreciation); and the short-term interest rate paid on dinar time deposits of households. As the economy of the Republic of Serbia was marked by the process of euroization in the observed period accompanied by the strengthened role of the national currency since 2000, the inflation and the changes in exchange rate make the important measure of opportunity cost. Money market interest was not included in the analysis as the opportunity cost relating to the money demand, as since August 2004 these interest rates (on the Belgrade Stock Exchange) have been no longer reported. The Republic of Serbia started issuing government bills in national currency in April 2003

⁷ ARIMA X-12 method was used for seasonal adjustments.

and, therefore, it was impossible to include this indicator in the analysis either. Short-term interest rates payable on transaction deposits, which would reflect the own rate of money for these purposes, so far have not been found to be statistically significant. For this reason, in terms of opportunity costs, the interest rate payable on dinar time deposits up to one and three months was taken into consideration. A set of dummy variables was also used in the analysis. The impulse dummy variable D1 has a non-zero value in August 1997 when a part of the telecommunications company was sold; D2 is also a non-zero impulse dummy variable in October 2000 following the political and economic changes.; D3 is a non-zero impulse dummy variable as of the beginning of 2002 when four large insolvent banks were liquidated. Seasonal dummy variables were also used.

4. EMPIRICAL ANALYSIS RESULTS

In measuring the demand for money function, we have opted for the error-correction model (ECM) to identify the factors affecting its movements both in the long and short term. All data series used in the analysis, other than interest rates, were logarithmically transformed. The econometric analysis includes 111 monthly observations in the period January 1996 – March 2005. The following symbols were used for the variables included in the analysis:

rm1 – Real money supply M1

inf – Retail price index

exr – Dinar/euro nominal exchange rate

ind – Industrial output index

ir_1 – Interest rate payable on dinar time deposits up to one month

ir_3 – Interest rate payable on dinar time deposits up to three months

D1 – Impulse dummy variable (August 1997)

D2 – Impulse dummy variable (October 2000)

D3 – Impulse dummy variable with non-zero values as of January 2002

S1, S2, ... , S12 – Seasonal dummy variables.

The stationariness of the series used in the analysis was measured by the augmented Dickey-Fuller unit root test (ADF). The ADF test results are given in the table below:

Table 1: Results of Augmented Dickey-Fuller Unit Root Test

PERIOD: 1996:01-2005:03	MODEL WITH INTERCEPT		MODEL WITH INTERCEPT AND TREND		LAG LENGTH
	TEST STATISTICS	CRITICAL VALUES 5%	TEST STATISTICS	CRITICAL VALUES 5%	
rm1	-1.8551	-2.8887	-2.422	-3.4548	1
Δrm1	-6.2443	-2.8889	-6.0787	-3.4552	1
inf	-0.9997	-2.8887	-1.1658	-3.4523	1
Δinf	-5.5310	-2.8889	-5.5775	-3.4528	1
exr	-1.3148	-2.8887	-0.3778	-3.4523	1
Δexr	-5.3526	-2.8889	-5.5896	-3.4528	1
ir_1	-1.1729	-2.8884	-2.5386	-3.4516	1
Δir_1	-18.6810	-2.8881	-18.5439	-3.4516	1
ir_3	-1.6373	-2.8877	-6.5691	-3.4508	1
Δir_3	-11.6222	-2.8879	-9.9783	-3.4520	1
ind	-4.3696	-2.8884	-4.6717	-3.4523	1

The results pointed to the first degree integration of all series, except for the overall economic activity indicator. Although the industrial output series was stationary, it should not be excluded from the cointegration vector (Dickey and Rossana (1994), Harris (1995)). The autocorrelation and autovariation function correlogram, as well as the Box-Ljung Q-statistics also showed that these non-stationary series should be differentiated in order to achieve stationariness.

The VAR model was constructed in the next step to identify the optimum number of lags by using the LR, FPE, AIC, SC and HQ criteria. All these criteria, except SC, suggested that two lags should be used, and we opted for two lags to be included in the model. The Johansen procedure was applied to test whether the observed variables were correlated in the long run. The existing cointegration means that money and its determinants are correlated in the long run which verifies the validity of the tested model. The existing cointegration allows for short-term movements in the real money demand growth rate to be measured. The result has pointed to the existing cointegration between the real money supply, prices, overall economic activity, and interest rates on dinar time

deposits up to three months. Dummy variables D2 and D3 were used as the exogenous variable. The Johansen procedure results are shown in the table below.

Table 2: Johansen Cointegration Test

Hypothesized No. of CE(s)	Trace Statistic	5 Percent Critical Value	1 Percent Critical Value
None **	62.19806	39.89	45.58
At most 1**	31.12093	24.31	29.75
At most 2	7.034671	12.53	16.31
At most 3	0.574355	3.84	6.51

*(**) denotes rejection of the hypothesis at the 5%(1%) level
Trace test indicates 1 cointegrating equation(s) at the 5% level

The analysis showed that there was one cointegrating equation between the observed variables. The long-term equation derived is as follows:

Table 3: Unrestricted Cointegration Equation

1 Cointegrating Equation(s):	Log likelihood	365.7481
Normalized cointegrating coefficients (std.err. in parentheses)		
rm1	ind	inf
1.000000	-1.372744	0.218041
se	(0.22889)	(0.23632)
		0.003688
		(0.00343)

The described long-term correlation has logical designations attached to the respective variables. The long-term earning elasticity is positive and slightly above one which may be explained by the absence of a significant variable from the money demand equation⁸, as well as by the fact that the industrial output series is not the best approximation for the GDP movements. Therefore, we tested the VEC in order to include the restriction $B(1,1)= 1$ and $B(1,2)= -1$ whereby we normalized the equation against RM1 and restricted the earning elasticity making it equal to one. The derived result is shown in the table below:

⁸ Taking into account the unavailability of data referring to some categories for the previous period, frequent methodological and structural changes in calculating some categories, the observed analysis period is shorter and it was, therefore, impossible to include additional variables.

Table 4: Restricted Cointegration Equation

Chi-square(1)	1.814944			
Probability	0.177916			
Cointegrating Eq:				
rm1(-1)	ind(-1)	inf(-1)	ir_3(-1)	C
1.000000	-1.000000	0.133985 (0.09341) [1.43438]	0.005022 (0.00127) [3.93877]	-2.404568
se				
t-statistic				

The included restriction based on χ^2 value proves that the hypothesized equal-to-one earning elasticity should not be rejected. The ECM was tested in the next step including the residuals from the described long-term correlation. The derived short-term model would be as follows:

Table 5: Error-Correction Model

Dependent Variable: $\Delta rm1$

Method: Least Squares

Sample(adjusted): 1996:06 2005:03

Included observations: 106 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.044484	0.005311	8.375861	0.0000
Δinf	-1.077859	0.127092	-8.480960	0.0000
$\Delta exr(-1)$	-0.187157	0.086939	-2.152750	0.0338
$\Delta ir_1(-4)$	-0.000567	0.000201	-2.817268	0.0059
error(-1)	-0.084828	0.016366	-5.183286	0.0000
D1	0.093359	0.037507	2.489099	0.0145
S1	-0.072104	0.013588	-5.306443	0.0000
S11	-0.039978	0.013351	2.994264	0.0035
S12	0.028938	0.013324	2.171945	0.0323
R-squared	0.638252	Akaike info criterion		-3.667928
Adjusted R-squared	0.608417	Schwarz criterion		-3.441787
S.E. of regression	0.037126	F-statistic		21.39284
Sum squared resid	0.133697	Prob(F-statistic)		0.000000
Log likelihood	203.4002	Durbin-Watson stat		2.074002

In the short term, the movements in money demand are most strongly affected by the expected inflation. If the inflation expectations rise by 1%, money demand will fall by 1.08% in the same period, other variables remaining unchanged. The growing inflation

will result in the increasing return on alternative forms of nonmoney assets which will in turn reduce the demand for money.

The depreciation of the nominal exchange rate of the dinar against the euro also proved to be significant on the first lag. This is interpreted to the extent that if the exchange rate depreciates by 1%, the money demand will fall by 0.19%, other variables remaining unchanged. The depreciated exchange rate will cause the expected yield from held foreign currency to decrease which will in turn reduce the demand for money (national currency). The significance of the exchange rate variable in terms of the demand for money function also speaks for the existing currency substitution in Serbia. Measured by the traditional dollarization index⁹, the degree of currency substitution ranged from 45.7% in 2001 to 54.7% in 2004. It is apparent that the demand for foreign money was not created due to the insufficiency of domestic money, but because of its excessiveness at a certain point in the past resulting in its devaluation and the demand for foreign currency to protect the value of assets and provide for more easily measured values.

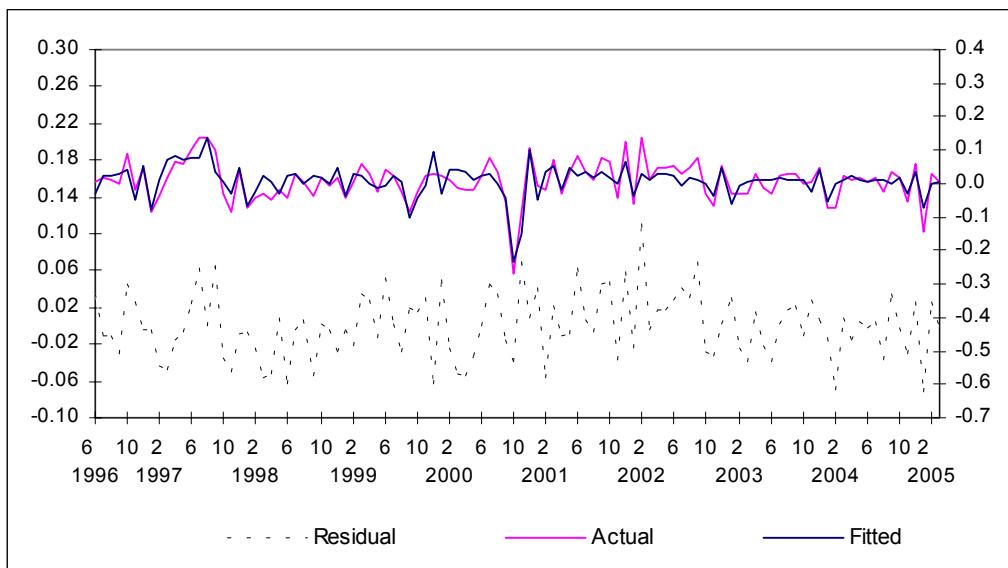
The effects of depreciated exchange rate from the previous period, in addition to the inflation expectations, have much stronger impact in the short term relative to the effects of interest rates. A single percentage point increase of interest rate applied to time deposits would stimulate household savings and reduce money demand by 0.06% in the period of four months, considering the fact that such deposits are not included in the M1 aggregate.

The adjusting parameter is significant, negative, and it equals to 8.5%. This points to the significant effect of long-term imbalance on short-term movements in money demand. The variance of money demand from the long-term imbalance decreases by 8.5% per month.

The graph below illustrates the series of actual and fitted real money supply, as well as the fitted model residual.

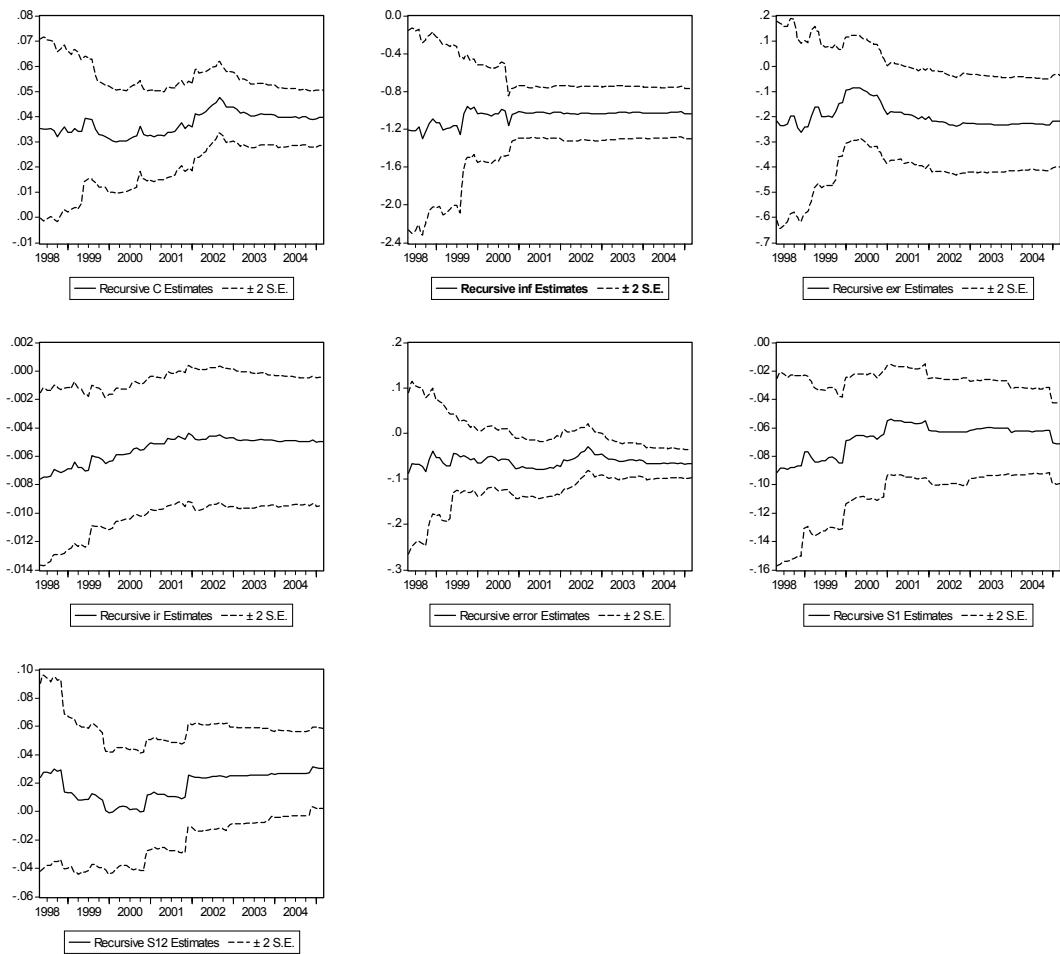
⁹ Percentage of FX deposits in broadly defined M3 aggregate.

Graph 5: Actual, fitted and residuals



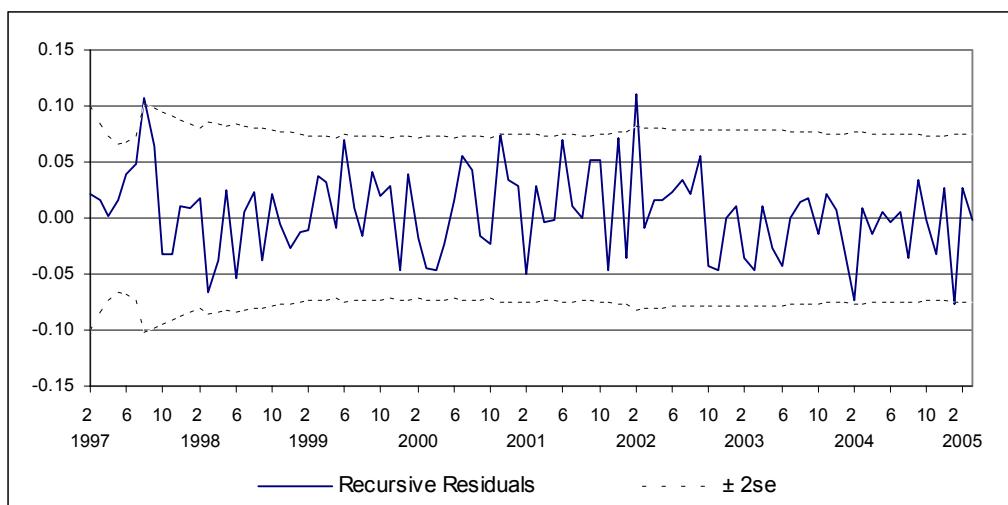
The stability of estimated coefficients was tested by recursive estimates of observed variables. The analysis of recursive estimated parameters led to the conclusion that the estimated regressors were not stable throughout the observed period. The relative stability of coefficients may be noted as of mid 2002, and this period is too short for the estimated demand for money function to be used for the monetary aggregate targeting.

Graph 6: Recursive Estimated Parameters



The Chow structural shock test pointed to the necessity to introduce the D1 dummy variable in the short term which added to the function stability, as shown in the chart illustrating the estimated model recursive residuals.

Graph 6: Recursive Residuals

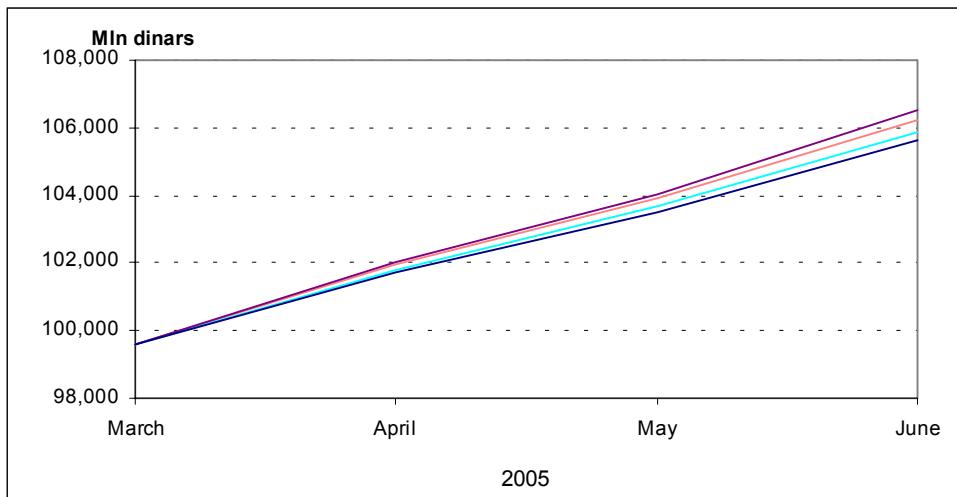


The tested model has adequate statistical properties. The amount of determination coefficient $R^2 = 0.6382$ of the tested model is satisfactory and shows that the demand for money is well explained by the observed set of variables. The autocorrelation test indicates the stationariness of residuals from this regression, as also proved by the correlogram and the Box-Ljung statistics.

The described model may solely be used for shorter term forecasts. Namely, based on the estimated movements of exogenous variables and given quantitative limits under the arrangement with the IMF, the forecasts based on the tested model generates satisfactory results for the period up to three months.

The graph below illustrates the projections of the monetary aggregate M1 based on the estimated demand for money function model. The variations within the given range result from the varying endogenous variables within the possible limits of their values. The mean forecast for the following month matches the projection provided by the IMF staff, while certain variances may be noted with the three following months.

Graph 7: Projections of M1 Based on Error-Correction Model



5. CONCLUSION

The empirical analysis results show that both long- and short-term models of the demand for money function are well specified, but that the money demand was unstable throughout the observed period, as well as that its stability may be identified in the period as of mid 2002. The cointegration analysis applying the Johansen procedure pointed to the strong cointegration between the real money, overall economic activity, inflation, and interest rates. The long-term earning elasticity is close to one and the opportunity cost variables have expected designations.

The short-term (ECM) model shows that the money demand is still mostly affected by the expected inflation which is only normal for this stage of transition. Furthermore, the analysis showed that the interest rate payable on short-term highly liquid transaction deposits, as the instrument of monetary policy, has not yet had a significant role in our circumstances. The significance attached to the exchange rate variable in the short-term proves high level of euroization of both balance sheet assets and

liabilities. To a certain extent, the above facts cause the instruments of monetary policy to be less efficient.

The instability of the demand for money function points to the sensitivity of Serbia's economy to external shocks. In this context, the instable demand for money function means that it may not be forecasted in the long run based on the set of observed factors and, therefore, it may not be used for the monetary aggregate targeting, as also proved by the test results.

In practice the relation between the money supply and inflation rate proves much more complex than the results of simplified model analysis suggest. The empirical analysis suggests that the money demand is instable, one of the reasons being the dynamic nature of changes in the Serbian financial system in the last several years. Newly introduced institutions and banking products have brought about changes in the payment instruments and savings drive, all pointing to the conclusion that the money demand could not be seen as a fully predictable and that the central bank could not determine the money supply rate comparable to the prices stability. Nevertheless, access to timely information, as well as application of modern methods of analysis could greatly aid the central bank in enhancing its assessments and monitoring the reaction of the economy and citizens to its monetary policy measures.

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