MONETARY AND EXCHANGE RATE POLICY IN SLOVENIA

Gonzalo Caprirolo
Vladimir Lavrač

Ezoneplus Working Paper No. 17G:
Regional Input on Monetary and Fiscal Policies
Supplement to Working Paper No. 17

May 2003

The Eastward Enlargement of the Eurozone

Berlin   Evora   Helsinki   Ljubljana   Bologna   Tartu   Warsaw

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IN SLOVENIA

Abstract

The paper is divided in three sections presenting some stylized facts concerning monetary and exchange rate policy framework in Slovenia.
Three periods are covered: Money-based Stabilization Policy (1991-1995), Price and Real Exchange Rate Stability Dual Targeting Policy (1996-2001), and Exchange Rate Based Stabilization Policy and Accession to ERM2 (2001-).

Corresponding author:

Vladimir Lavrač
Institute for Economic Research
Kardeljeva pl. 1 7
1 000 Ljubljana, Slovenia
tel.: (+386 1) 5303 838
fax.: (+386 1) 5303 874
Email: lavracv@ier.si

Gonzalo Caprirolo and Vladimir Lavrač

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Ezoneplus Working Paper No 17G — Regional input

May 2003

Introduction

The monetary policy framework in Slovenia has been modified three times since country's independence in 1991. First, price stabilization was pursued with a framework that relied on monetary anchor (1991-1995). After a single digit inflation level was achieved, the stability of the currency measured both in terms of prices and the real exchange rate was pursued by means of dual targeting of both base money and the exchange rate (1996-2001) although formally monetary aggregates were used as intermediate and operating targets. The last change in the monetary framework, aiming at addressing the persistence of inflation and the EU accession requirements, rests on a framework that uses the exchange rate as a nominal anchor for reducing inflation (2001-).

Two important considerations have guided policy formulation and implementation since independence: the relatively high degree of discretion in conducting monetary policy and the cost dimension. Monetary policy targets (M1) were not announced until 1997 and, from then onwards, wide target ranges for the new M3 intermediate target were used until recently. The last change in the monetary policy framework that took place in 2001 consists of targeting an *unannounced* pre-determined exchange rate depreciation path. Cost minimization of implementing monetary policy, what could be called as "fear of paying", has been a permanent and critical consideration even at the expense of suppressing price signals in the economy, even at the times when response to shocks would have required movements in the interest rates. This is reflected in the use of direct monetary policy instruments (acquiescence with collective interbank agreement on interest rates), pervasiveness of capital controls, use of indirect policy instruments that target volume of money rather than its price (tap sale of securities and volume auction) and recurrent sterilization at negative real interest rates.

The monetary policy framework has evolved, but remained unbalanced as it basically relies on the exchange rate transmission mechanism of monetary policy, while the interest transmission channel has remained obstructed. This has hampered the use of interest rates in the defense of the exchange rate and to convey monetary policy stance.

The exchange rate regime, a *de jure* managed floating since independence, has been *de facto* modified in accordance with the main policy objectives that guided monetary policy in different periods (See Figure 1). In the period 1991-1995 the exchange rate path (nominal and real) followed the trajectory depicted by the overshooting model of Dornbusch. The authorities at that time could not do much to prevent fundamentals-driven exchange rate movements. In 1996, after single digit inflation was reached, the exchange rate regime shifted

to a *de facto* passive crawling exchange rate regime in which the monetary authorities aimed at closing ex post the domestic-foreign inflation differential, and to curb exchange rate volatility. As a result of the policy implemented during the period 1996-2001 the real value of the currency measured in terms of the CPI deflated real effective exchange rate remained fairly constant but inflation lingered on at a high single digit sticky level. The last change in the exchange rate regime took place in order to address the challenges of the prospective membership of Slovenia in the EU and simultaneously to tackle the problem of persistence of inflation that has become more evident. In 2001 the exchange rate regime shifted to a *de facto* active crawling in which the exchange rate tightly follows an unannounced depreciation path.

Figure 1.   Exchange Rate Regime and Monetary Policy.
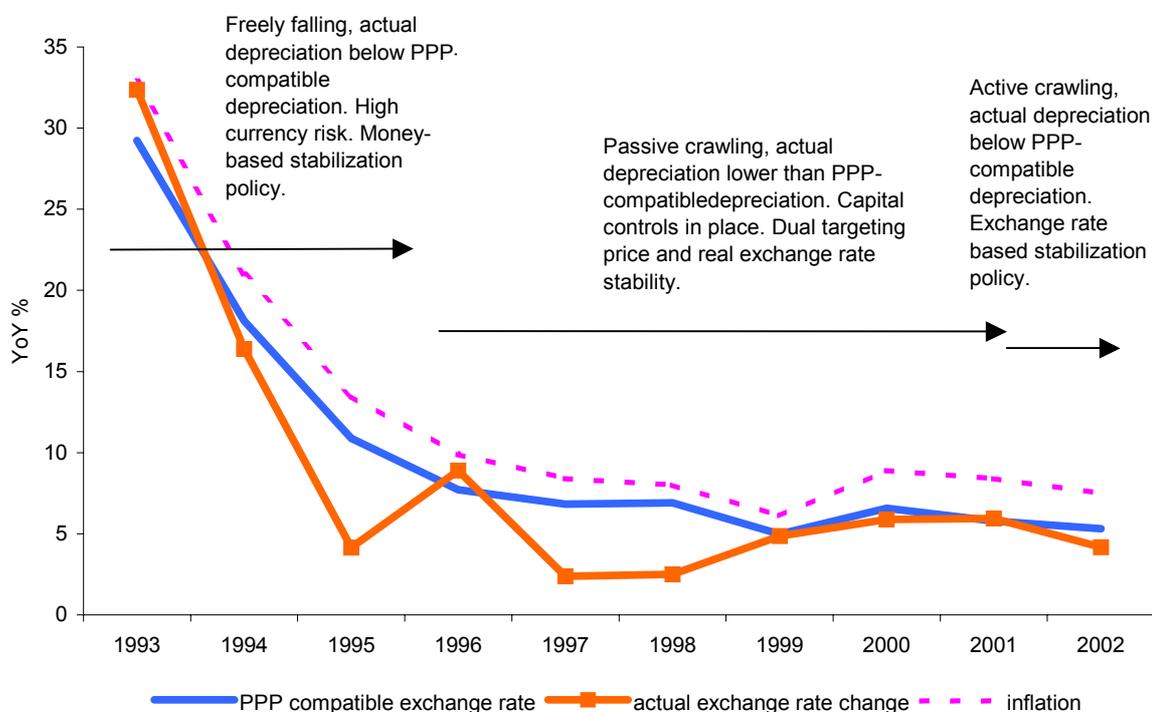
The design of Slovenia's monetary policy has been influenced by four important events:
i) Slovenia's independence in 1991 and the inherited hyperinflation, which influenced the choice of a monetary aggregate as the nominal anchor for price stabilization; ii) an interest rate shock in 1995, driven by de-indexation of demand deposits and changes in the methodology of calculating indexation of financial contracts, which determined the monetary authorities' complacent attitude to pervasiveness of indexation of financial contracts and their policy responses to shocks; iii) Slovenia's regaining access to international financial markets in

1996 and the preemptive capital controls policy from 1995 onwards to reduce the cost of implementation of monetary policy; iv) accession negotiations with the EU in the fields of monetary and exchange rate policy and prospective EU membership that led to the dismantling of capital controls, changes in the central bank law (clearly defining price stability as the primary policy objective), an enhancing of transparency and a more decisive stance to reduce inflation to EU levels.

The main question for the future is whether the recently modified policy framework will have to be modified once more before joining the ERM2. For example, changing the existing regime to one that relies also on monetary policy implementation through the interest rate channel, which is less vulnerable to unintended depreciation of the exchange rate. Similarly, consideration should be given to shifting to a new regime that would be less discretionary and more transparent, in order to anchor inflationary expectations, and that would respond to the requirement of preparing the financial sector to the ECB policy operating environment where monetary policy is implemented and transmitted primarily through the interest channel and not through the exchange rate channel in a pretty much non-indexed environment. A shift in the strategy to a *de facto* compliance with the ERM2 requirements before joining the EU for example in line with Hungary could potentially reduce the risks of postponing the entrance to the mentioned exchange rate regime and of delaying the adoption of the euro. In any case, such a policy change in the monetary policy framework would have to occur at the time of joining the ERM2 at the latest.

The paper is divided in three sections presenting some stylized facts concerning monetary and exchange rate policy framework during the three periods.

1   Money-based Stabilization Policy (1991-1995)

Slovenia inherited hyperinflation from the former Yugoslavia. The main policy task after independence and the introduction of the new currency (the Tolar) in 1991 was to achieve price stabilization. The authorities decided for a money-based stabilization policy. The intermediate target was M1, while base money was the operating target. The strategy was successful in bringing down inflation to a high single digit level by 1995. Fiscal policy to a large extent contributed to such an outcome as the general government budget even registered surpluses throughout the period (1992-1996).

While a *de jure* managed floating exchange rate regime has been in place since independence in 1991, the description that seems to fit best the actual exchange rate developments and

changes in the exchange rate regime is the one of a freely falling exchange rate regime during the price stabilization period (1991-1995) and then, from 1996 on, that of a crawling exchange rate regime (Reinhart and Rogoff 2002). However, it could also be argued, based on the fact that exchange rate intervention started already earlier in the second half of 1992 to prevent the real exchange rate appreciation (Mencinger 2001), that an early classification of the exchange rate regime as a *de facto* crawling is more suitable. In our view, given the fact that the nominal and real exchange rate paths followed the stylized trajectories of the Dornbusch (1976) overshooting model during the period of price stabilization (1991-1995) until the inflation rate reached the high but sticky single digit level, it seems that the description that best fits the exchange rate regime during the period 1991-1995 is the one of freely falling. This characterization seems also appropriate given the fact that the monetary authorities could not do much to influence the exchange rate trajectory (BoS 1996) as determined by the fundamentals and an intensive exchange rate intervention would have been in conflict with the stabilization objective pursued by the authorities.

The operating environment in which monetary policy was implemented during the first half of the decade had the dominant features of a closed economy to capital inflows due to the high currency premium and Slovenia's lack of access to international financial markets. In addition, the economy was undergoing a freely falling exchange rate phase required for achieving price stabilization under the money-based policy. Monetary developments in this period were driven mainly by domestic residents' regaining confidence in the currency (re-monetization) and current account developments under a overshooted exchange rate.

Despite the specific features of an economy in transition and the shock resulting from the loss of internal market of the former Yugoslavia, it is possible to argue that the economy during the money-based price stabilization period exhibited (Table 3.1), to a large extent, features and empirical regularities similar to other money-based programs in chronic inflation economies observed by Calvo and Vegh (1999).

i)   Inflation was reduced sharply after one year.

ii)   There was an initial increase in domestic real interest rates in 1992. Since they were indexed to inflation, rates declined with it in 1993. However, the decline slowed down up to 1994, partially offsetting the excess money demand. In 1995, changes in indexation led to a faster reduction of interest rates and a disequilibrium in the money market.

iii)   The real exchange rate appreciated (particularly in 1995) to correct money-market disequilibria which led to increase in the consumption of foreign goods which in turn contributed to the current account deterioration in 1995.

iv)   There was contraction in the economic activity in the first year but it is difficult to assess the contribution of the stabilization policy as the economy suffered multiple shocks. However, real growth turned positive already in 1993, earlier than in other programs.

v)   Contrary to other programs in which the inflation rate slowly converged to the rate of growth of money supply, in Slovenia the reverse happened, which seems to reflect strong money demand for transaction purposes. Also contrary to other programs, further deterioration of the current account was avoided, and reversed at the end of 1995 by a sharp depreciation of the Tolar, triggered by an increase in money demand resulting from the elimination of indexation on one-month demand deposits and changes in indexation calculation methodology.

Table 1.   Macroeconomic Indicators for the Slovenian Economy (1993-1996)

	1 9 9 3	1 9 9 4	1 9 9 5	1 9 9 6
Inflation (annual average %)	32.9	21.0	13.5	9.9
Base money (average growth %)	80.4	46.8	48.2	13.1
M1 (average growth %)	86.9	55.8	40.4	25.7
Basic interest rate (TOM %)	22.4	18.7	8.2	9.7
REER (CPI, 1995=100)	87.0	90.2	100.0	96.7
Private consumption (real growth %)	13.9	5.1	9.1	2.0
Real growth of GDP (%)	1.9	4.9	4.1	3.5
Exports (real growth %)	2.1	10.0	1.1	3.6
Imports (real growth %)	13.0	5.9	11.3	2.1
Current account balance (% GDP)	1.5	4.0	-0.6	0.2
Memorandum item: real wage growth	13.3	3.6	4.4	4.9

Sources: Bank of Slovenia Monthly Bulletin, various issues and IMAD Spring and Autumn reports, various issues.

As said above, the movements of the exchange rate during the period of price stabilization followed broadly the characteristics of a freely falling exchange rate regime and the stylized trajectories of the Dornbusch overshooting model (See Figure 2)[1]. This characterization seems the most appropriate for the whole period of stabilization and not only for the first two years after independence (Reinhart and Rogoff 2002).[2]

The arguments in favor of characterizing the exchange regime as a freely falling regime are threefold: i) although inflation in Slovenia was above 40% until April 1993, a single digit inflation was reached only in the last quarter of 1995; ii) the policy priority was to achieve price stabilization (BoS 1996), thus reverting the real appreciation of the exchange rate would have undermined the price stabilization process and would have been difficult to implement, and; iii) while Slovenia did not experience a currency crisis in the classic sense, the effect of introducing a new currency is similar.

Figure 2.   Exchange Rate Overshooting
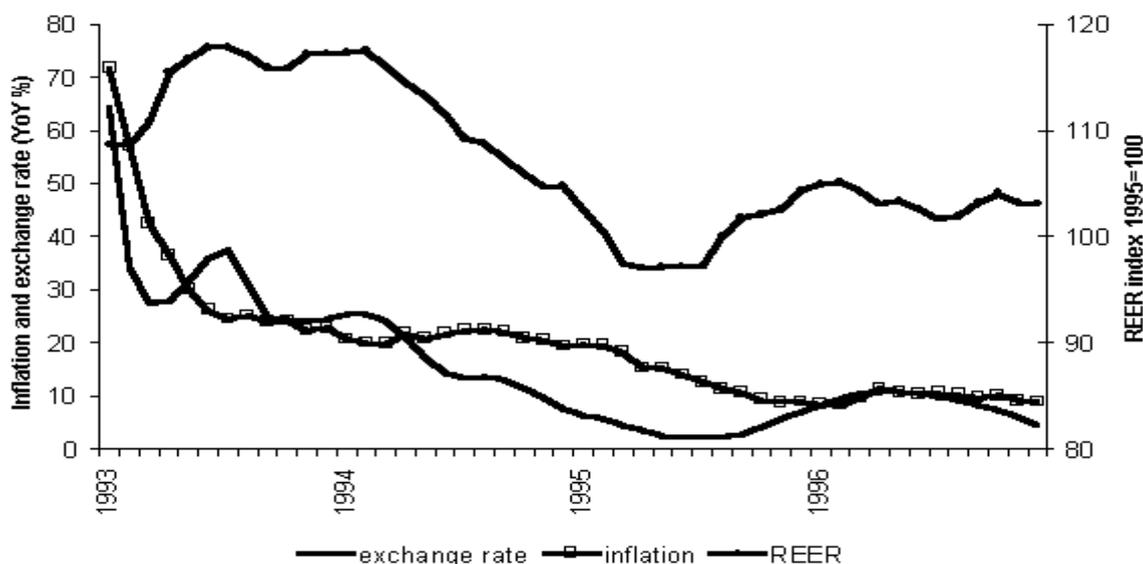
As the evidence shows, the exchange rate (nominal and real) followed a overshooting trajectory during the stabilization period. The freely falling episode started with the initial setting of the nominal exchange rate of the Tolar against the DEM at a rate that implied a

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[1] This finding seems to challenge for Slovenia the view valid for other transition countries of a no apparent link between the evolution of the nominal and real exchange rates at the beginning of the transition (Grafe and Wyplosz, 1997).

[2] The freely falling regime characterization of Rogoff and Reinhart (2002) applies to episodes in which twelve-month inflation is above 40%, or to currency crises marked by a transition from a fixed or quasi-fixed regime to a managed or independently floating regime, typically characterized by exchange rate overshooting.

16% real devaluation, compared to the December 1989 rate, and then it continued with nominal and real exchange rate overshooting trajectories, whereby the exchange rate sought a clearing level for the foreign exchange market.[3]

The observed exchange rate trajectory during the period is consistent with the monetary authorities' policy of controlling money supply, a gradual increase of confidence in the currency and the existence of relative price rigidity. The perception that the exchange rate might have overshot its long run value seems to have occurred in early 1994, when the last sharp upward swing of the monthly depreciation rate was observed. Afterwards, the annual depreciation rate started falling smoothly. At that time, individuals became willing to hold Tolars at any domestic interest rate. The expected exchange rate appreciation (the adjustment from the overshooting), combined with tight control of domestic credit, corrected the money demand imbalance (the former by raising money demand at any given interest rate, the latter by reducing its supply).

It can be said that a new exchange rate equilibrium was reached in 1995. The growth rate of base money, the operating target of BoS, finally reached in 1995 a high single digit, steady-state growth rate characteristic of a post stabilization period (1996-2002). The increase in money demand, as evidenced in the gradual repatriation of foreign currency deposits by households in the period 1992-1995, particularly in 94-95, stabilized as the high growth rates of total deposits in the banking system decreased after 1995. The unequivocal sign of the end of the overshooting and probably the end of the stabilization period was the first nominal appreciation of the Tolar, from March until June in 1995, and the underlying appreciation of the real exchange rate.

Another stylized fact of this period is that the monetary authorities influenced interest rates only indirectly, through the declining of inflation anchored in the money-based stabilization policy, given the huge volatility of interest rates (e.g. interbank rate[4]). An important factor explaining interest rate volatility and the lack of direct link between policy intentions and interest rates (nominal and real) developments is indexation. Interest rates in the economy were tied to the movements of the indexation factor of financial contracts, the so-called basic interest rate of the economy (TOM) calculated by BoS. Until 2002 all financial contracts denominated in Tolars with maturity beyond 30 days were indexed to TOM, equal to the

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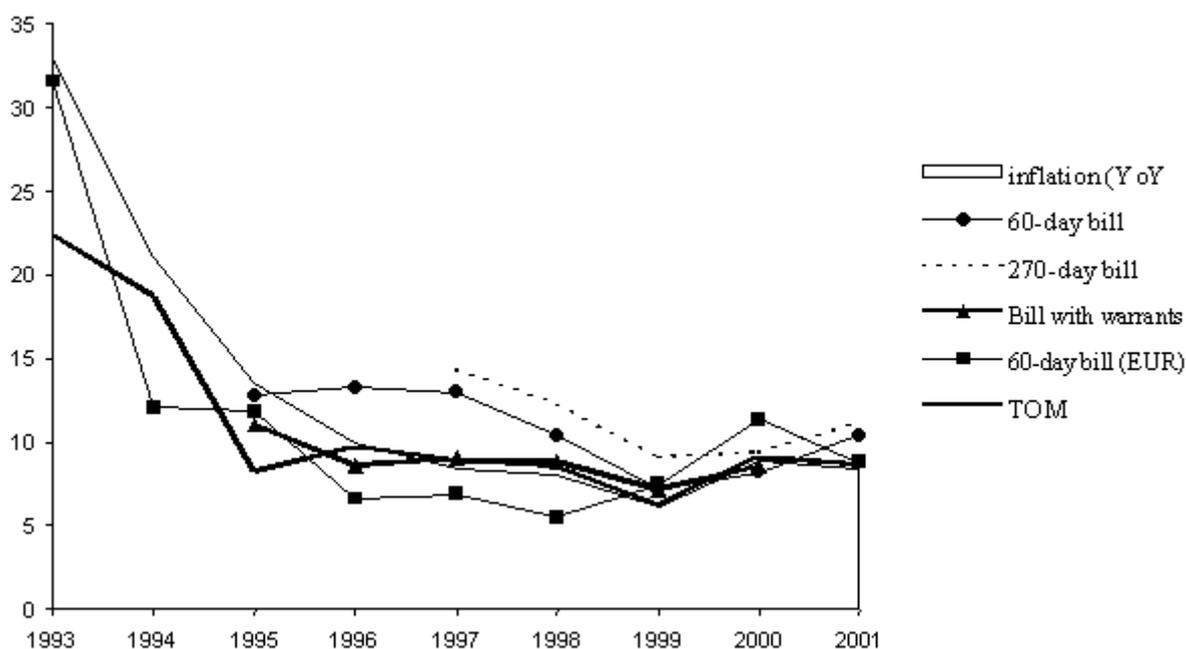[3] According to Mencinger (2001) the initial nominal exchange rate was set at a level to match a similar level of the real exchange rate of the Yugoslav Dinar in 1988 which enabled partial convertibility and the growth of foreign exchange reserves during 1988 and 1999.

[4] Despite this fact, the interbank interest rate remained positive, reflecting less distortion in the money market during this period.

previous monthly inflation rate until June 1995.[5] Interest rates were either tied to TOM or to the exchange rate (annualized BoS' end of month DEM and EURO exchange rate growth) and exhibited enormous volatility. Interest rates, by being tied to past inflation, were always positive in real terms, with the exception of a period in 1995 when the methodology of estimating TOM changed and when indexation of demand deposits with maturities of less than 30 days was abolished.

The monetary authorities did not influence directly the nominal and real level of interest rates in the economy which is explained by BoS monetary target and by a cost minimization policy ("fear of paying"). In fact, the interest rate on the central bank bills (CB-bills) used for controlling base money (foreign currency bills or bills with warrants indexed to either the exchange rate or exchange rate and inflation) when expressed in Tolar nominal terms, was negative in average real terms (See Figure 3).

Figure 3.   BoS Nominal Interest Rates (%)

The BoS attracted banks' demand for CB-bills, particularly foreign-currency denominated bills that were the main sterilization instrument during the period, by granting banks access to its standing credit facilities and to repo operations using CB-bills as collateral, and by requiring their use to meet reserve requirement. Such an approach on the one hand delivered lower costs of monetary policy implementation, but on the other hand hindered the functioning of the interbank market. Moreover, the central bank also refrained from using interest rates to respond to shocks. In particular, the BoS did not raise interest rates to offset the shock caused by the above mentioned changes in indexation in 1995. It instead responded by imposing capital restrictions and administrative measures from February 1995 onwards as a consequence of high sterilization costs in 1994 (Caprirolo and Lavrač 2001). The BoS influenced the general level of interest rates only by means of direct instruments. Also in 1995, in order to reduce high lending rates resulting from aggressive pricing behavior of smaller banks to attract deposits, the BoS brokered an interbank agreement capping deposit interest rates. Such an agreement lasted until March 1999, when it was formally abolished.

The lack of interest rate signals in the economy and the obstruction of the interest rate channel from the point of view of policy formulation is explained to a large extent by the monetary targeting but is primarily due to cost considerations (reliance on CB-bills which absorbed liquidity at non-market clearing rates). The interbank agreement on interest rate was also an important element in this regard. From the operational environment's point of view, the main impediment was the widespread indexation of financial contracts.

2 Price and Real Exchange Rate Stability Dual Targeting Policy (1996-2001)

In 1996 the BoS *de facto* shifted to a different monetary policy framework, whose primary goals were price stability and external equilibrium. This dual intermediate target policy framework relied on the control of money growth (first M1, later M3) to achieve price stability, and on managing the exchange rate to close the domestic-foreign price differential to preserve the stability of the real exchange rate. Capital controls, which were progressively introduced since February 1995 to reduce the cost of implementing monetary policy, and in a preemptive attempt to discourage capital inflows (Bole 1994), enabled a dual target policy

until late 2001.[6] The monetary policy framework resembled the one described by Bofinger and Wollmershauser (2001) in which the monetary authority would pursue the accomplishment of internal equilibrium by influencing interest rates and external equilibrium by managing the exchange rate. However, the BoS used monetary aggregates -and not interest rates- to preserve the internal equilibrium, while it used exchange rate intervention to maintain the external equilibrium.
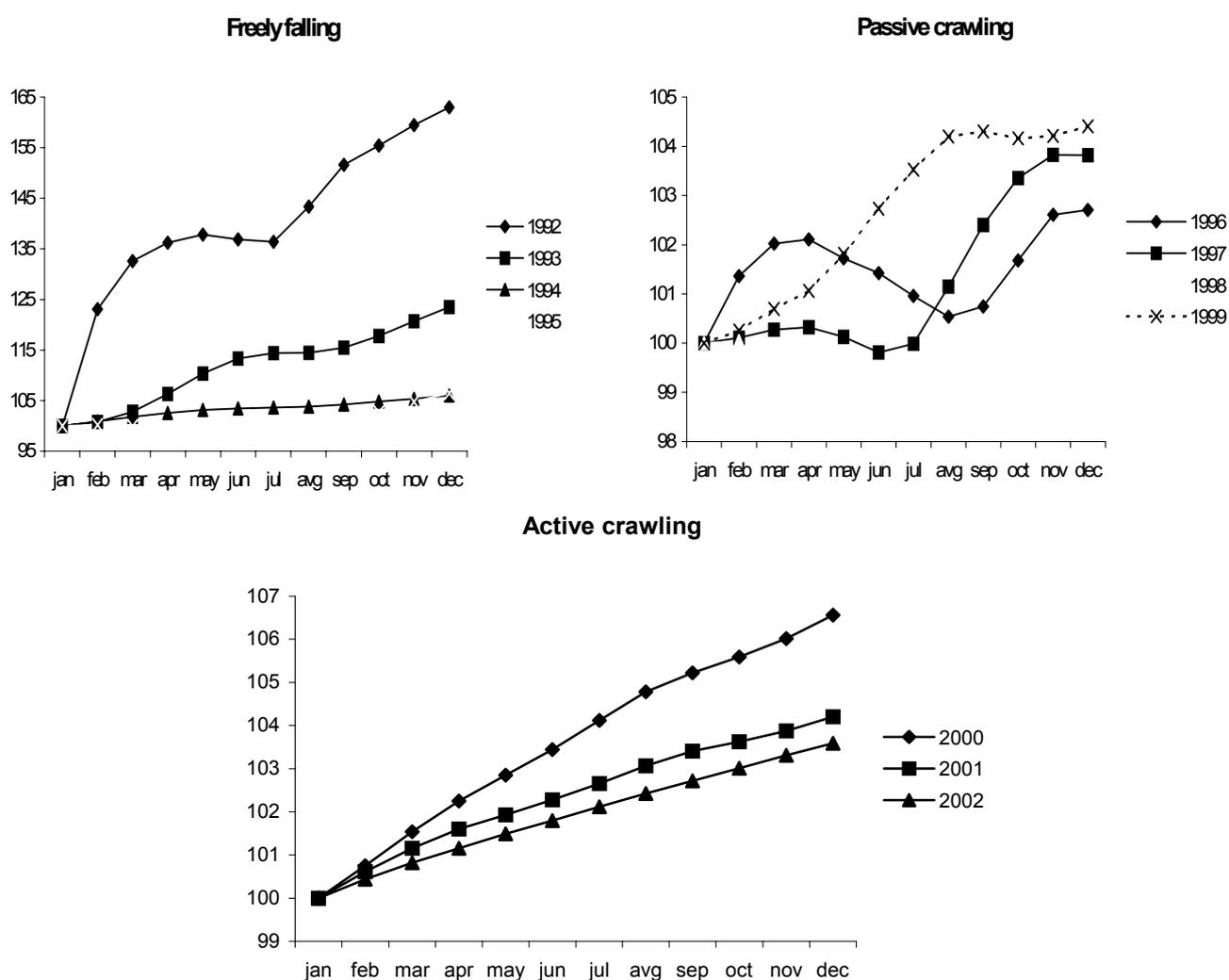
The operating targets were base money and the exchange rate (SIT/DEM and then SIT/EURO). To control base money, the BoS resorted to sterilization of excess liquidity with CB-bills sold on tap. Their interest rates were set administratively on non-market clearing levels (for instance, the key 60-day bill rate was negative in real terms since the second half of 1999 until late 2000).

Until 1997 the control of base money by means of sterilization was implemented with foreign currency bills. Since 1997 sterilization was implemented with Tolar denominated CB-bills (non-indexed 60-day bills and indexed to inflation 270-day bills), while foreign currency bills were used as collateral in open market operations and for meeting reserve requirements. The price of the CB-bills during the period did not reflect the BoS policy stance. Thus, indirect instruments withdrew excess liquidity without conveying price signals to the economy. The TOM continued to be the reference interest rate in the economy throughout the period.

The exchange rate was managed as a *de facto* passive crawling regime, in which exchange rate movements aimed at eliminating the domestic-foreign price differential. The correction of price divergences took place mostly in the second half of the year (specially during the 1996-98 period: see Figure 4). Exchange rate intervention was also used to reduce exchange rate volatility. During the years 1999-2000 the pattern of depreciation of the exchange rate, although still closing the inflation differential, was not the same. It was affected by the shock produced by the introduction of the VAT, which triggered an unintended depreciation of the exchange rate in 1999, and by the deterioration in terms of trade that led BoS to curb depreciation at the end of 1999, displaying a more aggressive exchange rate policy stance to correct the current account deficit in 2000. As a consequence, the CPI-deflated real exchange rate depreciated in 2000.

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[6] Capital controls were mostly dismantled in 1999 although short-term restrictions on foreign portfolio investments of less than 6 months maturity continued until January 2002 when they were finally removed.

Figure 4. Exchange Rate Dynamics during Different Regimes (YoY; Jan = 100)

Freely falling

Legend: 1992, 1993, 1994, 1995

Passive crawling

Legend: 1996, 1997, 1998, 1999

Active crawling

Legend: 2000, 2001, 2002

Foreign exchange intervention at the beginning of 1996 was first implemented by means of two cumbersome instruments, the so-called "triple offer" and "purchase' of foreign exchange with the right-to-sell", and from 1997 onwards by means of a special agreement between BoS and commercial banks ("club"), according to which BoS set the parameters for foreign currency transactions between banks and their clients. The "club" agreement was modified in 1999, 2000 and 2001.[7]

Two important features inherited from the earlier stabilization period which obstructed the interest channel of monetary policy continued to characterize the operating financial environment during the period under consideration here: the indexation of financial contracts

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[7]The terms and conditions of the 1997 agreement, which was amended by an annex to the agreement signed at the end of 1999, laid down mutual rights and obligations in the following cases: (1) intervention buying rate, (2) intervention selling rate, (3) determining maximum margin between buying and selling rates applied by the banks, and (4) temporary purchase of foreign exchange and (5) temporary sale of foreign exchange for the

to TOM throughout the period and the ceiling on deposit rates of commercial banks until 1999. In particular, the traumatic experience of the aftermath of the de-indexation of deposits with maturities below 30 days in 1995 seems to have deeply influenced monetary authorities' attitude towards a further de-indexation of financial contracts.

As financial deepening continued, the relationship between the targeted monetary aggregates and inflation became unstable. After 1996, average growth rates of different monetary aggregates stabilized and appeared not to contribute to further reductions in inflation (See Figure 5). The first clear reaction to this development was the change of intermediate target from M1 to M3, although the BoS kept base money as the operational target.

Figure 5.   Monetary Aggregates and Inflation. (please insert original figure with M3)
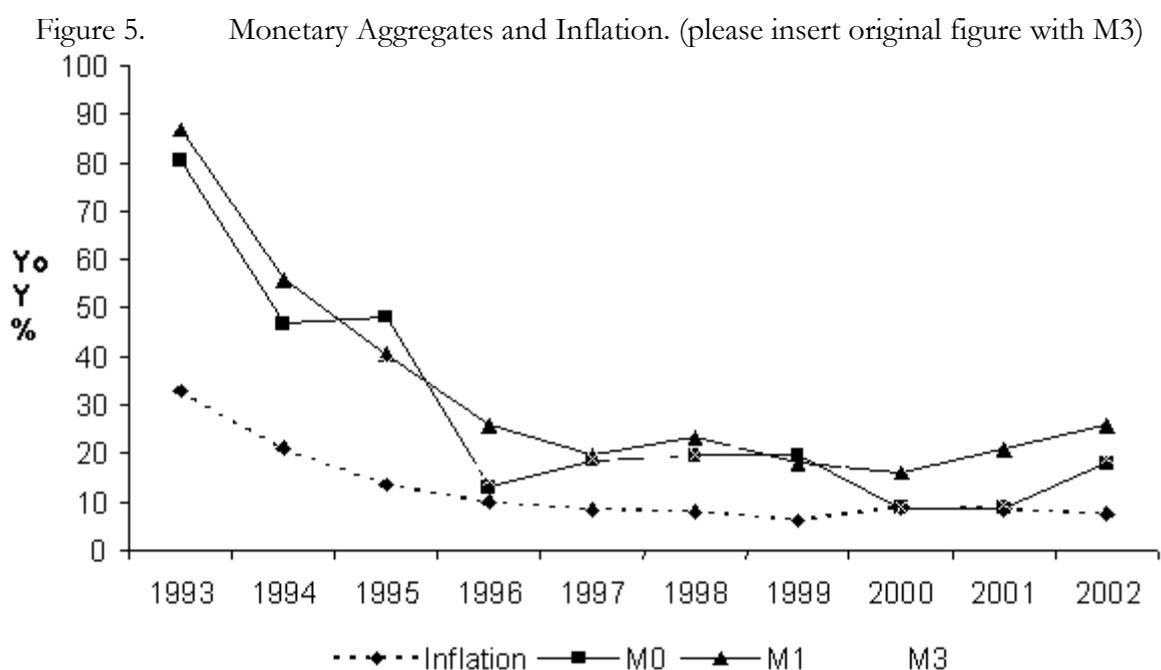
During the reduction of inflation that culminated with the lowest annual rate in June 1999 (4.3%), M1 and base money annual growth rates exhibited increasing trends, while M3 annual growth rate started to decline only in the second half of 1998. The behavior of M3 was influenced by the undergoing change in its composition towards the Tolar component (the share of foreign currency in M3 declined from 33.1% in 1996:Q1 to 23.8% in 1999:Q2), and by the lower depreciation of the exchange rate during 1997-98. After the VAT shock, the annual growth of M3 did not decline further, which can be partly explained by the reversal in the composition of M3 towards the foreign currency component.

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period of two months. The Bank of Slovenia remunerated the banks, signatories of the agreement, for opportunity costs associated with contractual obligations (BoS 2001).

The stabilization of the growth rates of monetary aggregates in 1997-99, and the relatively little progress in inflation reduction, particularly after 1999, also indicates that further reduction in inflation by monetary targeting would have required a substantial additional monetary tightening.

To enhance credibility in its policy, the BoS started to announce its targets publicly for the first time when it changed its intermediate target to M3 in 1997. The target was set in terms of a relatively wide range of the last quarter annual growth of M3 for the year. The range was 8% during 1997-1999, later reduced to 6% in 2000-2002. This relatively wide margin for the target provided a satisfactory degree of discretion for the BoS to alternate between the objectives of reducing inflation and maintaining external competitiveness.

Nevertheless, this dual targeting framework instrumented via control of quantity of money within a wide range and an unannounced depreciation path of the exchange rate could not serve as an anchor to inflationary expectations. The monetary stance was not visible and the short-term connection between the monetary aggregates and inflation was not obvious. Moreover, the policy stance was to a large extent interpreted as conflicting, particularly because the exchange rate accommodated various price disturbances. The main weaknesses of the framework, besides the lack of a visible anchor for inflationary expectations required for reducing inflation, was the control of base money via CB-bills sold at non-market clearing rates. Thus, in the short-term, the CB virtually relied on the exchange rate as the only price-information-giving instrument. The obstructed interest rate channel of monetary policy further aggravated this. Such a framework, even when supplemented with capital controls, was highly vulnerable to any unintended currency depreciation driven by foreign currency outflows (e.g. loss of confidence in the currency or a current account deficit). This vulnerability was latent even if BoS could resort to the "club" bank agreement on foreign exchange transactions to curb the depreciation of the exchange rate, because the central bank, in the event of a sudden increase in domestic demand for foreign currency or in a crisis of confidence in the currency, could only act reactively to reduce depreciation of the exchange rate and never proactively.

However, this dual targeting framework, supported by capital controls, did allow a gradual reduction of inflation until mid-1999, just before the VAT introduction. The policy mix, as captured by a depreciation of the exchange rate lower than the one required to close the domestic-foreign price differential, underlying a positive uncovered interest differential, highlights the critical importance of the exchange rate in reducing inflation (See Figure 1,

above). In fact, the annual average depreciation rates of the exchange rate in 1997 and 1998 despite the intervention were the lowest registered so far (below 2.5% annually).

The importance of the exchange rate in inflation dynamics is further highlighted, when one remembers, as said above, that the average annual growth of money aggregates remained stable, and that the share of controlled prices in the CPI basket declined significantly from 22.4% in 1996 to 14.3% in 1999 -albeit their contribution to inflation was the highest in seven years[8] (EBRD 2002).

Capital controls contributed to achieve the relatively constant real exchange rate (using the level of 1995 as the basis) and to lower inflation during 1996-1999 by primarily reducing the cost of implementing monetary policy. However, it can be argued that similar policy outcomes could have been achieved by simply relying on actively targeting the domestic-foreign price differential (or the uncovered interest differential) in a *de facto* active crawling exchange rate regime, instead of using capital controls extensively which, in fact, is the strategy pursued since 2001. This alternative strategy could have been even more suitable taking into account that during the mentioned period FDI inflows were low and privatizations of large public enterprises have not yet started to occur.

The best characterization of the exchange rate regime in this period is the one of a *de facto* passive crawling regime.[9] The BoS did not announce the rate and pattern of the exchange rate crawl, which the evidence shows was determined based on ex-post developments in the domestic-foreign inflation differential, which particularly influenced the exchange rate movements in the second half of the year. Similar indications of the existence of a passive crawling exchange rate regime are the facts that the actual change in the exchange rate was below the required change needed to close the inflation differential, particularly in the period 1996-98, and that a shift to a more proactive policy stance took place in 2000.

The robustness of this monetary framework was tested when the VAT tax was introduced (July 1999). As a consequence of inflationary expectations concerning the eventual price impact of the VAT (Table 3.2), aggregate demand increased in the second quarter of the year in anticipation of the shock (e.g. the annual real growth rate of consumption was 6%, the highest rate so far since 1995), the current account turned into a substantial deficit, while the exchange rate depreciated significantly (the annual rate of depreciation jumped above the

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[8] The share of controlled prices in the CPI basket reached its peak in the whole period in 1995 (22.5%), then after it decreased to 20.4%, 17.0%, 14.3% and 13.7% in the years 1996 to 2000 respectively. Available data on the contribution of controlled prices to average inflation during the period of declining inflation was 20.4% in 1997, 16.5% in 1998 and 13.7% in 1999. In the last three years (2000-2002) the contribution was 14.0%, 13.4% and 13.0% respectively (IMAD 2002).

annual inflation rate, a situation observed only at the end of 1995 and during the stabilization process) reverting for the second time the pace of disinflation in the economy (the first time occurred in 1995).

Table 2. Macroeconomic Indicators for the Slovenian Economy (1998-2000)

	Real growth rates (%)							
	Government consumption	Exports	Private consumption	Gross fixed capital form.	Import	GDP	CAB $us mil.	Inflation (yoy %)
1998:Q1	0.8	-0.6	1.0	12.2	8.2	6.0	-74.9	3.1
1998:Q2	-2.7	2.1	-0.4	-11.4	-5.3	2.5	-29.6	1.8
1998:Q3	9.8	3.5	2.5	14.2	7.1	3.3	161.4	0.2
1998:Q4	-4.2	2.0	-1.2	10.4	4.7	3.4	-52.2	1.4
1999:Q1	2.1	-5.5	2.4	-3.1	-2.2	2.9	-50.9	1.8
1999:Q2	**7.1**	**2.3**	**5.1**	**21.1**	**8.9**	**7.4**	**-493.7**	1.0
1999:Q3	-6.7	2.0	-3.7	-17.8	-8.3	4.3	18.2	**3.5**
1999:Q4	3.0	3.9	2.4	9.3	5.8	5.0	-256.2	1.9
2000:Q1	1.1	2.2	-0.7	-1.4	1.1	6.3	-169.0	2.6
2000:Q2	2.8	3.3	2.1	3.6	-4.0	3.6	-89.0	1.7

Source: Statistic office of Republic of Slovenia. National Accounts, various numbers. Bank of Slovenia Monthly bulletin, various issues.

The BoS did not act preemptively to burst inflationary expectations and to dampen the strong domestic demand which triggered a sharp depreciation of the Tolar. The BoS could have preemptively increased interest rates to offset the depreciation of the currency driven by inflationary expectations and the jump of domestic demand in the second quarter of 1999 in anticipation of VAT introduction but it did not.[10] In particular, the BoS could have raised the interest rates on CB-bills: actually, the key rate of the 60-day CB-bill turned negative in real terms in the last quarter of 1999 and remained so until the last quarter of 2000 (Figure 3). The BoS also did not increase the interest rates of the rest of its instruments.[11] The resulting high depreciation rate in 1999 and the reversion in the declining annual growth rate of M3 also point out to the accommodation of the shock (IMF 2001). Even if the BoS had acted preemptively to burst inflationary expectations by rising interest rates it is questionable whether such a move would have been transmitted by the banking system to the economy,

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[9] Bofinger and Wollmershauser (2001) distinguish between active and passive crawling peg regimes.

[10] The use of interest rates to defend the currency would not have major fiscal implications, as for example those mentioned in Lahiri and Vegh (2000) because the government's debt service is mainly indexed to inflation or exchange rate and the government fiscal stance is quite solid in term of both deficit and debt levels. Furthermore, defending the currency would have had a positive fiscal effect.

[11] The only rate that increased during 1999 was the 28-day repo rate as a consequence of the strong demand for tolars. The increase responded to a liquidity crunch as reflected in the movements of the interbank market rate,

given the indexation and interest ceiling on deposit rates. This highlights once more the weakness of the monetary framework, particularly its limited responsiveness to an unintended depreciation of the exchange rate.

The similar developments in 1995 and 1999 indicate that the exchange rate influences prices faster than monetary aggregates, and that there is a strong pass-through from exchange rate to inflation.[12] Regarding the size of this pass-through in Slovenia, empirical analysis indicates that it ranges between 0.8 and 1 (Coricelli, Jazbec and Masten, 2001, estimate the long run or equilibrium pass-through effect to be about 1). This high pass-through might be explained by the exchange rate being the most visible policy price variable in the economy, the one that reflects most clearly current developments and because it is the price that the central bank can influence directly and effectively. It clearly indicates that whatever strategy of reduction of inflation is to be implemented it has to rely on weakening this strong link by either: i) lowering the depreciation rate in the case of the current exchange rate regime, or; ii) allowing the exchange rate to float or simply fixing the exchange rate if the exchange rate regime is to be changed. In a crawling or floating exchange rate regime it is necessary to develop a strong interest rate transmission mechanism of monetary policy to defend the currency in case of shocks (primarily domestic driven), to convey policy stance and to influence expectations.

When evaluating monetary policy during this period, it is also important to assess whether the BoS gave more pre-eminence to the domestic or external equilibrium objectives. It is possible to argue that BoS gave higher priority to the domestic target, attributing inflation persistence at high single digit levels to the inherent vulnerability of the framework to unintended depreciation and to the obstructed interest rate transmission channel. However, the fundamental question to address is whether, *within the limitations of existing framework*, the BoS could have been more assertive in lowering inflation by reducing the speed of the exchange rate crawl if, for example, the existence of a Balassa-Samuelson (B-S) effect in Slovenia were recognized.

Most empirical studies have acknowledged the existence of a B-S effect in EU candidate countries. Empirical research on the presence of B-S effect in Slovenia has been also examined in several studies based on time series and panel co-integration techniques. Most of them find that relative price developments are related to relative productivity developments.

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that despite its imperfection, turned to be positive in real terms for the first time since the first quarter of 1998 and remained positive for almost three quarters in 1999 (later again turning negative until today).

[12] The full pass-through effect is estimated to happen in three quarters. The pass-through effect was uniformly distributed during the period 1996-1999 being more intensive in the 5 and 6 months. In the period that followed

The main difference in Slovenia seems to be the period in which the B-S effect is present. While some pioneer studies like Rother (2000), using a sample data for 1993-1998, found out that productivity differentials explain about 1.5% higher equilibrium inflation in Slovenia than in Germany, recent studies based on time series analysis indicate that the effect of the productivity differential on the Slovenian-Germany inflation differential over more extensive period (1991-2001) is negative (Egert 2002), or lower (1993-2001) 0,7% (Žumer 2002). The difference concerns primarily the first half of the nineties, where the structural changes and labor market developments that accompanied the transition process make difficult to account for any early presence of a B-S effect. However, it seems to intensify e and become evident in the period 1995-01, explaining an inflation differential that ranges from 0,8% (Egert 2002, ibid.) to 1.4% (Žumer 2002, ibid.) and that it should remain between 1% to 2% in the future, given the trends in productivity growth (IMAD 2002). If it is accepted that relative price developments are related to relative productivity developments in Slovenia at least in the second half of the nineties, it is possible to assess whether the inflation objective or the external equilibrium got preeminence, by comparing the depreciation rate differential between the B-S consistent exchange rate and the actual exchange rate, on the one hand, and by comparing the resulting differential to the actual movement of the CPI deflated REER. It can be then shown that even for a 0% B-S effect on inflation differential, the external equilibrium objective got preeminence in the year 1996 and 1999-2001 as the REER depreciated in those years. This could be the case even for 2002 if a B-S effect on inflation differential of 1% is accepted. It is also clear that, with or without B-S effect, the inflation objective got preeminence in 1997 and 1998, as the actual depreciation of the exchange rate was lower than the one consistent with a large B-S effect. Similarly, the REER seems to have appreciated in both years above the real exchange rate consistent with a B-S effect on prices of about 1%, particularly in 1997.

Thus, *once the presence of a B-S effect on prices is recognized*, at least for the period 1999-2002, it is possible to conclude that the central bank could have exercised a more decisive stance towards lowering the depreciation rate of the Tolar and thereby lowering inflation. *However, the central bank's preferences seems to have shifted towards external equilibrium at the expense of inflation, as it reached a rate of 8.9% at the end of 2000.*

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the pass-through intensity seems to have moved earlier to the 3 to 5 months. The year 2000 seems to be an exception in which the intensity of the pass-through is higher in the first three months.

3 Exchange Rate Based Stabilization Policy and Accession to ERM2 (2001-)

Recent changes in the monetary policy framework are deeply rooted in the accession negotiation process to the EU. This process already triggered the lifting of most capital controls in 1999 (credit operations), leaving restrictions mainly on short-term inflows (portfolio investments with maturity below 6 months), which were removed later, in January 2002. Similarly, the central bank law had to be amended, particularly with regard to strengthening the final objective of the central bank in terms of price stability. The negotiation process also resulted in an increase of transparency, required by the need to align monetary instruments with those used by the European Central Bank.

The impact of the accession process has not influenced monetary policy only directly, due to Slovenia's bilateral negotiations with the EU on the subject, but also indirectly, as other Central European countries have taken decisive steps to lower inflation in order to join the EMU as soon as possible. The sharpening of the policy stances in other candidate countries resulted in comparatively lower inflation rates than in Slovenia, particularly at the end of 2002, which put additional pressure on Slovenian policy makers.

The central bank decided to change its monetary policy framework in 2001 as a result of the frustration with persistent inflation, the changes resulting from EU negotiations and the challenges of joining the ERM2, and later the Euro area. The new framework had to address simultaneously the operating environment of an open economy, practically for the first time, and the requirement of lowering inflation in order to join ERM2 as soon as Slovenia would become an EU member.

In designing the new policy framework, the central bank explicitly recognized the limited controllability of M3 and its impact on attaining the final objective of price stability, the critical importance of the exchange rate transmission channel, both in terms of inflation and external equilibrium, and the negligible significance of the interest rates transmission channel (BoS 2001).

An aspect that deserves particular attention is the interest rate transmission channel. Among the reasons explaining its weaknesses, the BoS includes the widespread use of indexation of financial contracts, the presence of the interbank agreement on interest rates until the end of 1999 and the existence of "structural" excess liquidity in the money market. The other important factor, as discussed previously, is the implementation of monetary policy

(sterilization) by means of non-market instruments. The use of these instruments contributes to perpetuate excess liquidity and also does not convey the policy stance. In particular, a 270-day CB-bill was auctioned for the first time only in November 2001, and this instrument remains the only one that is currently auctioned. Even here the CB sets in advance the volume and the highest interest rate, thus in fact capping interest rates.

The new policy framework introduced at the beginning of 2002 may be best described as an informal system of inflation targeting. The BoS aims at achieving a medium-term inflation projection -not a binding inflation target- by relying on the so-called 'two pillar' approach, similar to the approach employed by the ECB. The first pillar, consistent with BoS previous policy emphasis, is control of broad money and its components (M3). The second is a set of indicators (external equilibrium and its determinants, wages and controlled prices), which may be used to justify deviations from the previously stated and now projected reference values for M3 growth.[13]

The weakness of the new framework is that it still provides a high degree of discretion to the CB. Moreover, as the broad target range of M3 has been abandoned but not replaced, *there is no anchor for inflationary expectations*. However, given the fact that overall environment resulting from the EU accession compels to prioritize the reduction of inflation, and that the central bank formally recognized the role of the exchange rate as the main instrumental variable, the central bank has changed its policy to a *de facto* exchange rate based stabilization policy (ERBS), in which the exchange rate is the main anchor of monetary policy and the operating target.[14] Since the exchange rate tightly follows an unannounced depreciation target path from 2001 onwards, the *de facto* passive crawling exchange rate regime in place since 1996 has evolved into a *de facto* active crawling exchange rate system (See Figures 1 and 4).

The new policy is implemented via a gradual reduction of the depreciation rate of the exchange rate. Since 2001 the central bank intervenes in the foreign exchange market in the framework of a modified agreement by which now all banks trade in foreign currency with third parties within narrow bands around a base rate set by the central bank. In exchange, banks get unrestricted access to Tolar liquidity based on a seven-day foreign currency swap standing facility (i.e., the swap rate is set administratively). One of the main differences in this type of intervention compared to the previous period is that now the central bank is permanently present in the foreign exchange market.

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[13] The M3 target set at the beginning of 2001 was overshoot (23.9% well above the 11%-17% band) as well as the projection of M3 for 2002 (22.7%, well above, the 12%-18% band).

[14] In part resulting from the change in policy, the volatility of base money has increased.

The BoS resorted to the use of a short-term foreign currency swap standing facility instead of outright transactions in foreign currency because this instrument, in combination with prudential regulation (a so-called 'liquidity ladder') restricts credit expansion (i.e., restrains granting long-term loans on the basis of short-term securities). This option, which on the one hand contributes to monetary control, on the other has the drawback of hindering interbank activity as banks instead of lending to each other in the interbank market can simply sell foreign currency to BoS to obtain Tolar liquidity (interbank rates are still negative in real terms since the middle of 1999). What is even more problematic is the piling up of foreign currency on a seven-day swaps (of about 7% of GDP in mid-2002), which creates enormous vulnerability in the case of a currency crisis. This is a possible reason for the BoS to offer longer maturity swaps (270 days) since the end of 2002.

Originally the rate of swap or, more properly, the annualized rate of a seven day forward contract, was administratively set to give signals regarding the future dynamics on the exchange rate and simultaneously contribute to close the domestic-foreign interest rate differential. At the time of its introduction in 2001 the forward rate was set at a level consistent with the annualized monthly depreciation rate of the exchange rate (4.5%). However, since the domestic-foreign inflation differential has remained wide, while interest rates have declined in the EU, this has created tensions between the objective of closing the interest rate differential -which requires a high depreciation rate- and the objective of lowering inflation -which requires a lower depreciation rate. As a consequence, the level of the annualized forward rate, that in principle should be the unbiased prediction of the future spot rate, has remained unchanged, and so departed from the actual annualized exchange rate depreciation, which has declined.

This difference between the swap rate (forward rate) and the actual depreciation rate of the exchange rate has become a *de facto* tax on all foreign currency transactions, particularly on the banking system. While this is appealing from the point of view of lowering the costs of monetary policy (or discouraging interest sensitive capital inflows by contributing to close the interest differential) on the other hand it has a distortionary effect because, like other taxes, the implicit tax, when possible, is transferred to third parties (in this case, clients), either via lower deposit rates or via higher lending rates. Additionally, the de-coupling of the movements of the forward rate and the effective future spot rate resulting from the actual depreciation of the exchange rate means that they provide two conflicting indications of the future depreciation path of the exchange rate. The conflicting signaling in a monetary policy

framework that already lacks an explicit anchor for expectations can undermine the very objective it pursues, namely lowering inflation.

Despite the policy changes introduced in 2001, the monetary framework remains unbalanced and vulnerable because, it still relies basically on the exchange rate to simultaneously preserve internal and external equilibrium. Control of base money by means of sterilizing the liquidity created through the swap or forward standing facility is still targeted to ensure low costs of monetary policy, instead of conveying interest rates signals that should be transmitted throughout a (yet nonexistent) yield curve to the economy, to influence inflation expectations and domestic demand. Thus, the monetary framework and the inflation objective are still vulnerable to unintended depreciation of the exchange rate, triggered by currency crisis or other shocks, which is magnified by the substantial amount of foreign currency accumulated in very short term swaps.

This framework, which has been designed to face the challenges of an open economy environment by relying on closing the interest rate differential with the "help" of the implicit tax on foreign exchange transactions, can successfully deter interest-sensitive capital inflows, and in fact it has done so, by significantly reducing loans from abroad in 2001-02, but it cannot cope with non-interest rate sensitive capital inflows, such as FDI. FDI inflows, to a large extent due to the relatively slow privatization agenda, have started to pour into the economy creating excess liquidity in the banking system that is not sterilized at market clearing rates.[15] In fact, a rate of sterilization of monetized foreign exchange inflows of around 60% under invariable interest rates since June 2002 (via 60 day and 270 day bills), could not once again deter the reverting upward trend of M3 in the last part of 2002. This explains why, for the first time a one-off offer of a 360-day bill at 'acceptable' market interest rates was made available to banks at the end of 2002: to mop up excess liquidity that otherwise could not have been sterilized at the previous non-market rates.

A positive and critical development in 2002, that has not yet been properly incorporated in the monetary policy, is the fact that from July 2002 onwards financial instruments with maturity of less than one year are not indexed anymore. This important development happened as a result of changes in the accounting standards concerning revalorization of capital. The event is of outmost importance because it had added enormous transparency to the financial system and to its products, at least to those with maturity up to one year. This *unintended* change, the lifting of the veil, has started to unclog the interest rate transmission

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[15] Given the impact of FDI inflows on monetary conditions there have been some views favoring postponing privatization (of, for example, banks) until *after* Slovenia joins the EU.

channel of monetary policy, with potential positive beneficial effects for conducting monetary policy and adding resiliency to any monetary policy framework.

In fact, the key central bank interest rate on 60-day bills, that was negative for the most part of 2000 and for the first quarter of 2002, turned gradually to positive by June 2002 and started to unexpectedly influence other short-term rates. In view of the importance of this policy development, monetary authorities should actively pursue de-indexation of instruments with maturity longer than one year, to continue building a interest rate transmission channel and to dispel persistent inflationary expectations. A well functioning interest rate transmission channel would enhance transparency and the resiliency of the monetary policy framework. Similarly, the overdue de-indexation of financial contracts would contribute to prepare financial institutions to the EU environment in which inflation risk is not fully hedged and where monetary policy is transmitted primarily through interest rates.

While it is still premature to make an assessment concerning the effectiveness of the new exchange rate stabilization policy in terms of reducing inflation, it can be said that the trend of reducing inflation observed in 2002, despite of shocks produced by changes in tax rates and increases in controlled prices, is clearly consistent with the declining depreciation path observed before the shocks in 1995 and 1999. This framework should lead to a similar reduction in inflation in the near future, even with higher-than-average increases in administered prices than the ones observed in 2002 (such as those experienced in 1997-98, which accompanied the reduction in inflation until 1999: see Table 3.3). For such an outcome three considerations are important: i) the rate of exchange rate depreciation should reach similar and sustained lower levels as in 1997-98, which were lower than those observed in 2002; ii) the monetary authority should resist the temptation to accommodate shocks via exchange rate and; iii) the monetary authority should proceed with de-indexation of financial contracts and stand ready to use interest rates to offset currency shocks in order not to repeat the 1995 and 1999 experiences.

Table 3.   Contribution of Controlled Prices to Inflation in Percent (1997-2002)

		Contribution of controlled prices to inflation (%)	
	Inflation (end of year %)	Ministry of Economy	Institute of Macroeconomic Analysis (IMAD)
1997	9,4	20,4	20,4
1998	6,5	16,5	16,5
1999	8,0	13,7	13,7
2000	8,9	14,0	14,0
2001	7,0	12,2	13,4
2002	7,2	11,8	13,0

Source: Information from the Ministry of Economy and IMAD estimates.

Could the inflation in 2002 have been lower than it actually was? The answer can be affirmative, given the current account surplus of 2002, which indicates a higher than necessary depreciation of the exchange rate. Since the rate of the crawling is not announced, this could have been implemented by reducing the currency depreciation rate. As to the issue of how and with what effects, the options were two: to reduce the depreciation path either slightly or considerably (e.g., via a discrete change in the path). The policy choice would probably have different impacts on the inflation rate and on the evolution of the real exchange rate. In view of evidence which suggests that the intensity of the pass-through has accelerated in time during the last two years (three to five months), it is likely that a considerable reduction in the rate of depreciation rather than the alternative could have larger immediate effects on lowering inflation, and would have also signaled a more decisive stance towards reduction of inflation, therefore enhancing credibility.

The impact of the alternative scenarios on the real exchange rate is more difficult to discern. Taking into account the empirical evidence of a high pass-through in both cases, the effect should lead to the same appreciation of the real exchange rate but with different dynamics. Nevertheless, a critical factor influencing the outcome is *credibility*. In absence of an announced rate of the crawling and of another anchor for expectations, the only way to establish credibility in the policy is by a credible reduction of the depreciation rate, but even in this case it may not be easy. From this perspective the eventual real appreciation of the exchange rate typically observed in exchange rate-based stabilization programs should be lower under a sharp reduction of the speed of exchange rate depreciation than in the case of a gradual reduction, because of the absence of an anchor of expectations and the room for

discretion. From this point of view, the current policy based on a gradual reduction of the unannounced rate of crawling can be interpreted as temporary and reversible and can, as such, perpetuate inflation inertia.

Another important issue to address is whether the Slovenian economy, given the persistence of a high single digit inflation level and a central bank following a *de facto* ERBS, would experience the short term expansionary effects of other exchange-rate based stabilization programs (Fisher, Sahay and Vegh (2002), Calvo and Vegh (1999). The discussion is not only relevant in terms of the potential danger inherent to such programs -given the fact that ERM2 provides a default exit if things go wrong: namely, joining ERM2 instead of accepting a reversal in inflation- but particularly in terms of the expected developments in some key variables, particularly inflation.

A key issue in this regard is the timing of joining ERM2 and the speed at which inflation will be brought down to an "acceptable" level. This issue is particularly relevant taking into account possible delays in joining ERM2, based on arguments such as that a given rate of inflation has not been reached yet or that the level of inflation achieved is not stable yet.

Despite the effectiveness of ERBS in bringing down inflation, empirical evidence has been found that the *inflation rate does not converge to the rate of depreciation*. This behavior is explained by the fact that inflation in tradable goods' sector slows at much faster rate than in the non-tradable goods' sector, explained among other, by inflation inertia build in expectations and the productivity differential between the tradable and non-tradable sectors. Thus, the very exchange rate strategy chosen by the BoS, compared with other EU candidate countries central banks' strategies, implies that the inflation rate in Slovenia would remain higher than in other candidate countries. Therefore, a relatively higher inflation (or a lower speed of inflation convergence) in view of the timeframe for accession should not be used as an excuse to delay entrance in ERM2, thus endangering the achievement of the major macroeconomic strategic goal of joining EMU as soon as possible. This consideration is even more relevant taking into account the behavior of inflation differentials in existing EU member countries before and after joining the EMU, and taking into account that Slovenia has achieved a similar degree of real convergence as some of the existing EU members. In fact, existing EMU countries reduced sharply the inflation rates *before* complying with the Maastricht requirement (1996), while *afterwards* the inflation rates diverged again (1998).

Given the fact that the chosen ERBS strategy in Slovenia, compared to other strategies followed in Central Europe, will deliver a slower pace of disinflation, it is also important for policymakers to resist the temptation of turning to an heterodox policy , in particular to

control administered prices, since such an approach can eventually undo the very objective of the policy. It could hinder confidence, as it can be rightly anticipated that at certain point in time prices under control would have to catch up with their normal dynamics, while in the mean time they would create losses, increase public sector debt and create fiscal risks.

Given the lack of explicit monetary policy anchor, probably a formal commitment to an early entrance to ERM2 immediately after joining EU would serve as a monetary anchor, as the monetary authorities would have to abide to the date of entrance. This strategy requires a direct involvement of the government in setting the ERM2 entry date to be a *binding target* for the central bank, to enhance credibility. Alternatively, the monetary authorities could speed up the reduction in inflation by changing the exchange rate regime as some other Central European accession countries have done, particularly given the historically supportive fiscal stance in Slovenia, with the collateral advantage of enabling an early entrance to the Euro area, if a *de facto* compliance with the ERM2 is recognized by the EU as formally satisfying with the observance of the ERM2 requirement.

Conclusions

This chapter identified three monetary and exchange rate policy regimes in Slovenia since independence in 1991: money based stabilization policy (1991-95), price and real exchange rate stability dual targeting policy (1996-01), and exchange rate based stabilization policy and accession to ERM2 (2001-). The exchange rate regime, a *de jure* managed floating since independence, has been *de facto* modified in accordance with the main policy objectives that guided monetary policy in different periods. In the 1991-95 period the exchange rate regime can be characterized as freely falling regime in which the exchange rate (nominal and real) followed the path depicted by the overshooting model of Dornbusch. In 1996, after single digit inflation was reached, the exchange rate regime shifted to a *de facto* passive crawling exchange rate regime. The last change in 2001 to a *de facto* active crawling exchange rate regime took place in order to simultaneously address the challenges of the impending membership of Slovenia in the EU and to tackle the problem of inflation persistence.

The main characteristic of the implementation of monetary policy throughout the three different periods, which was termed "fear of paying", is the preference of the monetary authorities to use non-market arrangements for pricing monetary policy instruments, including capital controls, *in order to minimize costs of implementing monetary policy*. This has resulted in a policy framework that is vulnerable to exchange rate shocks, as the interest rate channel

of monetary policy still remains blocked. In particular, the lack of use of interest rates to defend the currency in 1995 and 1999 resulted in reversals of the disinflation trends that preceded both shocks.

Given the critical importance of joining the Euro area as soon as possible, the monetary authorities should pursue further de-indexation of the financial contracts and stand ready to use interest rates to defend the currency, insuring that the inflation reduction trend would not revert once more. An early entrance to the EMU, in addition to the advantages brought by a single currency, will result in an enhanced and transparent monetary policy framework, able to cope with the challenges of a small open economy, which will eventually contribute to eliminating existing distortions when facing an open financial market.

Shifting to a balanced conduct of monetary policy that also relies on the interest rate channel in a de-indexed economy environment would contribute to prepare the financial sector to the ECB policy-operating environment, where monetary policy is implemented and transmitted primarily through the interest rates, and not through the exchange rate. In addition, a de-indexed environment will also contribute to financial institutions' learning to manage inflation risk. Also, the announcement of a self imposed target entry date to ERM2 at the earliest possible date by the government could serve as the missing anchor for monetary policy.

In view of the strategy chosen, the authorities should be aware of the trade-off between the speed of convergence of inflation and an early joining the ERM2. Also, the experience of existing EU members with respect of inflation developments before and after Euro area entry should be taken into account. From this perspective, authorities should resist the temptation of introducing additional anchors to the unannounced exchange rate crawling (i.e. restrain controlled price increases), because they would result in accumulation of debt and fiscal risk and in an eventual reversal in the objective of reducing inflation.

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