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**Currency Reforms in the Former
Soviet Union (FSU)
- on the Importance of Macroeconomic
Constraints**

**by
Rainer Schweickert**

January 1995



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I. Introduction

With the disintegration of the Rubel zone [Orlowski, 1994], a whole range of new currencies have been created in the FSU. For most of these currencies, the exchange rate system is not well defined and currency reforms reducing the uncertainty about monetary management are urgently required.

This paper looks at the exchange rate policy of four successor states of the Soviet Union: Estonia, Russia, Belarus, and the Ukraine. The exchange rate policy chosen by these countries is as different as their economic performance¹:

- Estonia fixed the value of its currency against the D-mark by establishing a Currency-Board, Russia allows for a dirty float, Belarus manages a kind of dirty fixing against the Russian Rubel, and the Ukraine handles exchange rate management more or less chaotic.
- Estonia is the only sample country which yet escaped the transformation crisis and experiences positive economic growth as well as two-digit annual inflation rates.

Does this imply that a fixed exchange rate is the appropriate strategy for currency reforms in the FSU? Does it imply that - as was argued by some authors (see, e.g. Bofinger [1991], Hofmann/Sell [1993], and Schmieding [1993]) - the credibility of a Western monetary authority could be imported by allowing the money supply to be determined by the exchange rate target?

This paper will provide a rather sceptical view about the appropriateness of a fixed exchange rate system for the FSU countries. The analysis builds on former work of the author which has shown that two macroeconomic constraints determine the credibility of the exchange rate system: the availability of foreign exchange and the sustainability of fiscal balance [Schweickert, 1993b; 1994b]². Sections II.1. and III.1. give the relative importance of these constraints for the credibility of a fixed and flexible exchange rate system respectively and provide the agenda for reforms necessary to relax foreign exchange and fiscal constraints in the transformation process. Sections II.2. and III.2. will look at the progress of these reforms in the four sample countries³. Section IV. draws conclusions for the choice of an exchange rate system.

¹ For details, see Buch et al. [1995].

² For the discussion of the underlying Dornbusch/Corden type model, see Schweickert [1993a].

³ These sections refer to evidence available at December 1994.

II. Macroeconomic Constraint 1: foreign exchange

1. *Importance and agenda for reform*

If trade is not restricted by the lack of foreign exchange, countries in transition could import the price system from the world market thereby curbing the tradable goods prices. This is a necessary precondition for the effectiveness of exchange rate based stabilization as well as for the effectiveness of real exchange rate adjustment by nominal exchange rate changes. Additionally, the sustainability of a fixed exchange rate depends on the availability of foreign exchange to defend it. This is, of course, not necessary from a theoretical point of view because monetary policy instruments could be used to adjust money supply to variations of money demand in order to keep the exchange rate constant [Vaubel, 1994]. However, these alternatives to non-sterilized interventions in the foreign exchange market are likely to fail in practice if the effectiveness of policy instruments to finetune the expansion of the domestic component of the monetary base or to affect the money supply multiplier is rather low due to underdeveloped domestic money and capital markets. The Currency-Board system adopted by Estonia is an institutional setting which makes non-sterilized intervention automatic by issuing domestic money only in exchange for hard currencies⁴. In this way, it rules out discretionary interventions and improves the credibility of the fixed exchange rate but it also makes monetary policy fully dependent on reserve flows.

It is, therefore, crucial for the effectiveness and the sustainability of exchange rate management to relax foreign exchange constraints by promoting the growth and diversification of exports in hard currency⁵. This requires a trade policy oriented towards the integration into the world economy and the convertibility of the domestic currency. The agenda for trade policy reforms is straightforward [Langhammer, 1994, pp. 24-29]:

- quantitative restrictions are to be dismantled because they are inconsistent with market integration, provoke rent-seeking activities, and would imply an inefficient use of the rather low administrative capacity during transition;
- export taxes are to be phased out with the completion of price liberalization and with the beginning of export diversification;

⁴ Additionally, the monetary base is fully covered by foreign exchange. For the functioning of Currency-Boards, see Hanke and Schuler [1993].

⁵ The alternatives would be external lending and import restrictions. While the first is not possible for most FSU countries, the second has been proved inefficient by the experience of many developing countries.

- import taxes should be non-discriminatory and as uniform as possible in order to import the relative prices from the world market and to avoid both discrimination between sectors and between trading partners;
- a liberal trade policy based on import taxation should be made irreversible and credible by becoming member of the international trading system, i.e. of either GATT or WTO.

Two arguments are raised against the current account convertibility of the domestic currency which is necessary to make the trade liberalization effective. First, trade liberalization and convertibility would provoke an import boom without any export response due to the low competitiveness of domestic products. Second, convertibility could not be sustained because foreign exchange reserves are typically rather low in countries in transition⁶. These arguments are, however, arguments against a fixed exchange rate system in cases where the need for a real devaluation could not be ruled out and not against the current account convertibility [Vaubel, 1994].

In the same vein, a fixed exchange rate makes the full convertibility especially risky. Capital exports leading to a deterioration of the foreign exchange position imply a monetary contraction and/or a balance-of-payments crisis [Williamson, 1993]⁷. This gives an argument to restrict the convertibility of the domestic currency but the relevant question, then, becomes if capital controls could be effectively controlled. In most of the countries in transition and especially in the FSU countries the administrative and institutional preconditions for such a control are lacking [Fischer/Reisen, 1992]. Hence, the best advice is to accept the de-facto full convertibility and to allow for exchange rate flexibility if trade liberalization and convertibility fails to yield stable foreign exchange inflows in the case of a fixed exchange rate.

2. Progress of reforms

Estonia has already liberalized its trade regime [Schrader, 1994, p. 26f.; EIU, a]; quotas and licences have been removed and only a few imports are subject to tariffs between 10 and 16 percent⁸, exports are unrestricted and export diversification is

⁶ Furthermore, lack of credibility could lead importers to hoard goods thus aggravating the trade deficit.

⁷ Additionally, full convertibility bears the risk of a capital flight and immiserising growth (in the case of strong capital inflows). Independent of the exchange rate system these risks could be reduced by providing conditions for capital to stay and to be allocated efficiently. See Williamson [1993], for a list of recommendation in this respect.

⁸ These are mainly luxury items: furs, cars, bicycles, and yacht. Additionally, exports and imports have to pay 0.5 percent of their value.

encouraged by a non-recurring subsidy for the marketing of new products, GATT membership and free trade agreements with the Baltic neighbours are on the way, and the Estonian Kroon is fully convertible for current as well as for capital account transactions. This policy allows Estonia to import the price system from the world market guiding the reallocation process, speeding up the integration into the world market, and at least helping to keep Estonia on its positive growth path.

The fixing of the exchange rate vis-à-vis the D-mark providing a nominal anchor for the economy was not necessary for importing relative prices from abroad. Increasingly, it begins to become a risky strategy. The real exchange rate appreciated strongly due to a significantly higher inflation rate than in Germany (1992: 1069 percent; 1993: 35 percent). As a consequence, the trade balance switched from a 7 percent surplus in 1991 to a growing deficit which in the first half of 1994 even exceeded the total deficit of 1993. While the strong increase of capital inflows was sufficient to finance the trade deficit and even to increase foreign exchange reserves in 1993, foreign exchange reserves decreased in the first half of 1994 (Table 1) and the real exchange rate is going to become overvalued.

Table 1 - Estonian Balance-of-Payments (Mill. Estonian Kroons), 1992-1994

	1992	1993	1994 ^a
Current account	1 839	493	-1 208
Trade balance	136	-1 733	-2 476
Exports	5 548	10 763	7 797
Imports	-5 412	-12 496	-10 273
Capital account	-342	2 548	1 625
Direct investment	705	2 129	1 604
Errors and omissions	-677	-877	526
Change in reserve position	820	2 164	-29

^a First half.

Source: Esti Pank [1994:3, p. 31; 1994:1, p. 17; 1993, p. 11]; own calculations.

Decreasing foreign exchange reserves do not, however, imply that the fixed exchange rate has to be given up but that the exchange rate based stabilization in Estonia is going to repeat the stylized facts of credible exchange rate based stabilization programs in developing countries, i.e. an initial expansionary honeymoon phase

followed by a contractionary phase which might lead to divorce [Schweickert, 1994a]⁹. In the contractionary phase, the sustainability of the fixed exchange rate depends on the flexibility of monetary policy and domestic prices. The Currency-Board regime in Estonia implies that net foreign exchange outflows will at least dampen monetary expansion putting pressure on domestic inflation to decrease more rapidly to the German level thus slowing the real appreciation process and stopping the foreign exchange outflow by improving the trade balance. Presently, this real exchange rate adjustment does not seem to pose a problem for Estonia (see also section III.) but it could become a problem in the case of an additional negative external shock and the equalization of German and Estonia inflation rates. In such a situation a real devaluation with a fixed exchange rate implies a deflationary process which is likely to overstrain wage flexibility thus increasing unemployment.

Compared to the progress of reforms in Estonia the opening up of the economies of Russia, Belarus, and the Ukraine proceeds rather slowly. Though the pace of reform is the highest in *Russia*, Russian trade policy is still heavily influenced by inherited structures and relies on discretionary instruments to a significant extent [Langhammer, 1994, p. 9ff.; DIW et al., 1994b]. On the import side, quotas and licences have been abolished with only a few exemptions but the system of import tariffs remains ineffective and inefficient because of numerous exemptions, frequent changes, and a rather strong differentiation of tariffs which increases the costs of discrimination and administration. On the export side, Russian exports - especially from commodities - are still regulated by selective and discretionary licensing regimes and a part of hard currency earnings has to be converted in Rubel at an unfavourable exchange rate. This implies that the Russian Rubel is not convertible for current account transactions¹⁰. Even if relative world market prices become relevant under this conditions they are likely to remain ineffective with respect to the reallocation of resources because of soft budget constraints on the part of Russian enterprises (see section III.2.).

Due to high inflation rates (1992: 2059 percent; 1993: 815 percent) and the strong interventions in the foreign exchange market, the Russian Rubel experienced a real appreciation which even exceeded the real appreciation of the Estonian Kroon. However, the trade balance did not show a deterioration as observed in Estonia but a steadily increasing surplus in both intra-FSU and external trade (Table 2). This

⁹ Guidotti and Végh [1992] call this the stabilization blues.

¹⁰ Convertibility is also impaired by restrictions for current account transactions by foreigners and by regulations on capital flows.

Table 2 - Russian Balance-of-Payments (Bill. US-Dollar), 1992-1993

	Intra-FSU		External	
	1992	1993	1992	1993
Current account	1.5	3.6	-5.7	2.3
Trade balance	1.5	5.0	4.4	11.9
Exports	10.8	15.4	41.6	46.3
Imports	-9.3	-10.4	-37.2	-34.3
Capital account	0.0	-7.7	-1.2	-10.1
Errors and omissions	3.1	1.3	-6.4	-6.5
Change in reserve position	4.6	-2.9	-13.3	-14.4
Net reserves	-	-	0.8	3.4
Debt and rescheduling	0.0	-2.5	n.a.	-11.2
Bilateral correspondent accounts	4.6	-0.9	-	-
Convertible currency	0.0	0.4	-	-

Source: IMF [1994a]; own calculations.

difference between Estonia and Russia is explained by the lack of foreign exchange in Russia leading to an import constraint¹¹. Obviously, foreign investors do not trust the Russian reform strategy and do not provide fresh money for financing Russian imports while domestic investors export their capital¹². Under these conditions it was only possible to improve hard currency reserves by defaulting on external debt, i.e. the real exchange rate is clearly overvalued.

The experience of developing countries with non-cooperative relations with external creditors shows that defaulting on external debt is - at best - a short run emergency measure which even makes the foreign exchange constraint more binding in the

¹¹ Additional explanations are the improvement in the terms of trade due to increasing commodity prices and the neglect of imports by small and medium sized enterprises in the trade statistic.

¹² The official balance-of-payments figures give an idea about the minimum amount of the capital flight. In 1993, 'Errors and omissions' accounted for more than 50 percent of the trade surplus. Assuming that this reflects capital flight, more than 50 percent of net export earnings have been invested abroad.

medium run [Nunnenkamp/Schweickert, 1989; Funke et al., 1992]. Establishing cooperative relations by spending foreign exchange reserves on servicing external debt instead of intervening into the foreign exchange market is likely to relax the external credit constraint and, hence, the foreign exchange constraint. Such a switch in debt management would, of course, need an exchange rate regime adequate to remove the real overvaluation of the Russian Rubel. This would either imply a free float or a passive Crawling-Peg¹³ with additional devaluations providing a stable devaluation process and a steady inflow of foreign exchange¹⁴. With a further liberalization of the trade regime, the hardening of soft budget constraints, and the full convertibility of the Rubel, the real devaluation will then encourage export expansion and diversification reducing the need for nominal exchange rate adjustment to the difference between inflation rates at home and abroad.

The conclusions with respect to *Belarus and the Ukraine* are qualitatively the same as for Russia though the progress of trade reform is quite different [DIW et al., 1994c; Clement et al., 1993b; 1994]. In order to prepare for a trade union with Russia, Belarus copies the Russian import regime and starts to liberalize the export regime by abolishing licences and quotas as well as reducing the compulsory exchange of hard currency earnings. If implemented, this trade reforms should lead to a trade regime which compares to the Russian trade regime. No such tendency is to be observed in the Ukraine. Quotas, licences, bilateral barter trade, and state trading dominate the trade regime on both the import and the export side. Additionally, the Ukraine government even plans to intensify the rationing of foreign exchange by discriminating between essential and non-essential imports and strategic and non-strategic exports.

The balance-of-payments situation of both Belarus and the Ukraine is characterized by a contraction of exports and overvalued currencies (Tables 3 and 4):

- Belarus was able to limit the (official) outflow of foreign exchange by official credits from Russia and international organizations in 1993 but this strategy is unlikely to be sustainable. First, the values shown for 'Errors and omissions' indicate a strong capital flight. Second, the capital inflows have decreased in 1994 while arrears are accumulated with respect to energy supplies from FSU. Third, the external debt burden already increased to 40 percent of GDP without any debt inherited from the Soviet Union.

¹³ Under a passive Crawling-Peg, nominal exchange rate devaluation equals the difference between inflation at home and abroad, i.e., the real exchange rate remains constant.

¹⁴ The latter strategy was successfully implemented in Chile in the 1980s [Schweickert, 1993b].

Table 3 - Belarussian Balance-of-Payments (Mill. US-Dollar), 1992-1994

	Intra-FSU ^a			External		
	1992	1993	1994 ^b	1992	1993	1994 ^b
Current account	-188	-243	-193	319	-172	-177
Trade balance	-246	-195	-227	289	-158	-62
Exports	2498	2108	691	1082	838	477
Imports	-2744	-2303	-918	-793	-996	-539
Capital account	-293	247	47	-94	301	23
Errors and omissions	209	-202	135	-198	-114	44
Change in reserve position	-274	-198	-11	27	14	-50

a 1992 and 1993 incl. Baltic States. - b First half.

Source: DIW et al. [1994c], unpublished material from IMF and the Central Bank; own calculations.

Table 4 - Ukrainian Balance-of-Payments (Bill. US-Dollar), 1991-1993

	Intra-FSU			External		
	1991	1992	1993	1991	1992	1993 ^b
Current account	-0.9	-1.2	-1.5	-2.0	0.5	0.7
Trade balance	-0.7	-1.1	-3.0	-2.7	0.5	0.5
Exports	42.7	5.3	7.6	7.3	6.0	5.2
Imports	-43.4	-6.4	-10.6	-10.0	-5.5	-4.7
Capital account	...	-1.7	0.2	...	-0.4	-0.5
Change in reserve position	...	-2.9	-1.3	...	0.1	-0.2

Source: Clement et al. [1993b]; IMF [1994b]; own calculations.

- The Ukraine has even experienced a net outflow of (official) capital and, hence, decreasing foreign exchange reserves. Payment arrears widened in 1993 and the gross foreign exchange reserves are estimated to have declined to an import coverage of one week by the end of 1994 [IMF, 1994b].
- Losses of foreign exchange are even more severe in intra-FSU than in external relations.

The balance-of-payments problems of Belarus and the Ukraine imply that these countries even more urgently need to adopt the advice given above in the case of Russia, i.e. to allow for more flexible exchange rates. The deterioration of the reserve position stemming from intra-FSU trade and capital flows shows that especially a fixed exchange rate against the Russian Rubel is likely to provoke a balance-of-payments crisis rather than market integration. A payments union for FSU countries as proposed, e.g., by Bofinger and Gros [1992] does not provide a solution to this problem because net deficits still would have to be settled in hard currency while trade liberalization and convertibility is discouraged¹⁵.

All in all, the scarcity of foreign exchange in Russia and especially in Belarus and in the Ukraine constrains the possibility to adopt a fixed exchange rate system because this implies the need to use foreign exchange reserves to stabilize the exchange rate. Contrary to the three CIS economies, a liberal trade regime and a fully convertible currency helped a strong export expansion and an inflow of external capital which generated the foreign exchange to sustain a fixed exchange rate in the case of Estonia. However, the boomy first phase of exchange rate based stabilization ended in 1994 and a dampening of monetary expansion becomes likely. Under such conditions the sustainability of the fixed exchange rate crucially depends on the sustainability of fiscal balance.

III. Macroeconomic constraint 2: fiscal balance

I. Importance and agenda for reform

Economies in transition typically face rudimentary domestic money and capital markets as well as limited access to the international capital market. Consequently, the bulk of fiscal deficits have to be financed by monetary expansion. Hence, any stabilization success critically depends on the elimination of fiscal deficits. The problem is that the need to balance the budget constrains the use of monetary

¹⁵ For the functioning of the Interstate Bank, the negative incentive effects of a payments union, and the development of private clearing and settlement schemes in the FSU, see Buch et al. [1995, Ch. V.2].

instruments, i.e. a monetary contraction or a nominal devaluation¹⁶, if the use of these instruments feed back into the public sector increasing the fiscal deficit:

- a monetary contraction may decrease government revenue by lowering the inflation tax rate¹⁷;
- a monetary contraction may reduce the possibility to increase internal public debt and may at the same time increase the interest payments on internal debt;
- a nominal devaluation increases government expenditures by increasing the external debt service denominated in foreign currencies; and
- a nominal devaluation may decrease government revenues by lowering import tax revenue in the case of a high price elasticity of imports.

If either a monetary contraction or a nominal devaluation increases the fiscal deficit above a critical level, private agents would expect a policy change. The experience of developing countries shows that this is likely to become a self-fulfilling expectation. Therefore, a fiscal reform should reduce the importance of inflation and trade taxes for financing the fiscal budget as well as the overall fiscal deficit in order to relax the fiscal constraint for the use of the monetary policy instruments. While the immediate elimination of inflation and trade taxes would be in line with the introduction of a simplified Western European tax system, securing tax revenue has to have priority over a rapid progress towards a desired tax system in order to secure fiscal balance [Hussain/Stern, 1993].

Two short-term policy measures can be identified which help to solve this dilemma. First, ample experience with tax reform in developing countries shows that the short-term revenue effect of a tax reform can be maximized by focusing on indirect taxation and especially on the Value-Added-Tax (VAT) in the first place. Second, fiscal expenditure has to be cut down in the short run by privatizing public owned enterprises in a way that eliminates the soft budget constraints of these enterprises¹⁸. For economies in transition this can induce a virtuous circle: the pressure for tax reform is reduced allowing for a further elimination of inflation and trade taxes and a

¹⁶ A monetary contraction is necessary to stabilize the price level and to devalue the real exchange rate in the case of a fixed exchange rate system; a nominal devaluation is necessary to devalue the real exchange rate in the case of a flexible exchange rate system.

¹⁷ Due to the Laffer-curve effect, this does not hold for very high inflation rates because in such a situation the increase in money demand is likely to compensate the decreasing tax rate (see Dornbusch and Fischer [1990]).

¹⁸ If public owned enterprises have a positive market value, privatization will also increase government revenue in the short run. For economies in transition, however, such revenues are highly uncertain.

decreasing fiscal deficit allowing for a more restrictive monetary policy which, in turn, will reduce inflation and the possibility to evade VAT, increase tax revenues, reduce the fiscal deficit, etc.

2. Progress of reforms

As was the case with respect to the implementation of the trade reform agenda, Estonia is clearly in the lead with respect to the implementation of the fiscal reform [Schrader, 1994; EIU, a]. In 1993, a new tax system was introduced with a simple structure: a VAT collected as a sales tax with a tax rate of 18 percent, a corporate and (since 1994) a personal income tax with a uniform and proportional tax rate of 26 percent, a social and health insurance tax with a tax rate of 33 percent to be paid on wages and salaries (extrabudgetary), and a tax on land as a first form of a property tax with a tax rate of 0.5 percent (national tax) and up to 0.7 percent (local tax). Additionally, the privatization process is on schedule. By the end of 1994, about 40 percent of industrial enterprises and the majority of small enterprises were privatized.

This result of this radical fiscal reform can be seen in Table 5. Translated into real terms, the transformation crisis has reduced government revenue but this trend was stopped by the tax reform and the cuts in government expenditure have been sufficient

Table 5- Estonian Fiscal Budget, 1991-1994

	1991	1992	1993	1994 ^a
		<i>(Mill. Estonian Kroons)</i>		
Revenue	3 383.2	2 084.4	4 175.7	5 692.0
thereof:		<i>(in % of total revenue)</i>		
VAT	31.6	43.0	47.7	39.7
Corporate income tax	27.5	22.7	24.7	20.5
Personal income tax	—	—	—	16.0
Trade tax	0.3	0.7	0.9	1.2
		<i>(Mill. Estonian Kroons)</i>		
Expenditure	3 030.3	2 026.1	4 034.4	5 692.0
thereof:		<i>(in % of total expenditure)</i>		
Economy	28.9	19.2	15.0	22.8
Social ^b	39.7	36.0	39.0	32.3
Debt Amortization	—	—	0.5	1.5
		<i>(Mill. Estonian Kroons)</i>		
Surplus	352.9	58.3	141.3	0
^a Planned. - ^b Since 1993 incl. social funds.				

Source: Schrader/Laaser [1994, pp. 91f.]; own calculations.

to yield even a budget surplus. The simple and adequate tax structure produces the expected results: tax evasion does not pose a significant problem, VAT revenues have taken the lead in improving government revenue and direct taxation is going to increase with economic growth and due to the introduction of the personal income tax. Table 5 also shows that the cut in government expenditure was not proportional but that social expenditure has become the main item, i.e. priority has been given to smoothing the personal rather than the entrepreneurial hardships of the transformation process.

The radical fiscal reform was necessary to establish the credibility of the Currency-Board which implies that the monetary policy is dictated by the market determined accumulation of foreign exchange on the active side of the Central Bank's balance sheet and, hence, that monetary policy has to be completely decoupled from financing the fiscal budget. Therefore, Estonia has not imported the credibility of the Bundesbank by fixing the exchange rate of the Estonian Kroon vis-à-vis the D-mark but has earned the credibility of the fixed exchange rate regime by a radical fiscal reform which relaxed the fiscal constraint to monetary policy.

Table 6 reveals that *Russia* has still a long way to go to consolidate the fiscal budget [DIW et al., 1994a; 1994b]. In terms of GDP, the deficit increased from 3.6 percent in 1992 to 9.5 percent in 1993 and from 3.1 percent in the first half of 1993 to 9.0 percent in the first half of 1994. Moreover, there is a direct link between fiscal and monetary policy because the bulk of the fiscal deficit is financed by credits from the Central Bank (1994: 86 percent) with a maturity of 10 years and a nominal interest rate of 10 percent. This implies that the fiscal deficit directly translates into monetary expansion.

Contrary to Estonia, *Russia* has not succeeded to reduce real expenditure in line with the shortfall of real revenue because budget constraints of Russian enterprises remain soft. Though their privatization has been accelerated, in most cases either the government or the labour force still hold a controlling interest¹⁹. As can be seen in Table 6, the share of government expenditure for 'Economy' has decreased but this decrease was compensated by the increase of 'Other expenditure' meaning that direct financing of public enterprises has been substituted by subsidized credits.

¹⁹ Up to mid-1994, about 74 percent of smaller enterprises mainly in the service sector should have been privatized. 70 percent of privatized enterprises have been bought by their workforce. 50 percent of medium and large enterprises have been privatized by vouchers. In 75 percent of all cases the workforce holds the majority of shares and the government share is larger than 25 percent in more than 50 percent of all cases.

Table 6 - Russian Fiscal Budget, 1992-1994

	1992	1993	1994 ^a
	<i>(Trill. Rubel)</i>		
Revenue	5.3	41.8	60.0
thereof:	<i>(in % of total revenue)</i>		
VAT	37.7	27.0	20.2
Corporate income tax	29.4	40.1	30.2
Personal income tax	8.1	10.5	9.8
Trade tax	8.8	5.6	12.0
Other	12.0	12.5	24.2
	<i>(Trill. Rubel)</i>		
Expenditure	6.0	57.3	81.0
thereof:	<i>(in % of total expenditure)</i>		
Economy	42.0	28.1	24.4
Social	23.2	25.0	25.4
Other	20.5	34.4	38.3
	<i>(in % of GDP)</i>		
Deficit	3.6	9.5	9.0
^a First half.			

Source: DIW et al. [1994b]; own calculations.

The insufficient cut in government expenditure and the direct link between the fiscal deficit and the monetary expansion resulted in high and unstable inflation rates which impaired the prospects for VAT revenues to improve government revenue. But the inconsistent tax policy also contributed to the decline in real government revenue. First, the government repeatedly tried to lower the VAT tax rate though the VAT should have the first priority in the first stage of a tax reform. Consequently, the share of VAT in total government revenue declined from 37.7 percent in 1992 to 20.2 percent in the first half of 1994. Second, the corporate income tax rate is highly differentiated according to branches and even tailored to single enterprises. The maximum rate has been increased to 43 percent. This policy allows soft budget constraints to determine government revenue because any cut in direct financing and subsidized credits is likely to induce affected enterprises to ask for tax exemptions or to reduce their real tax burden by delaying tax payments. Third, the complexity of the tax system overstrains the management capacity of the tax administration making effective tax rates arbitrary and easing tax evasion²⁰.

²⁰ Tax evasion is estimated to have reached 40 percent in 1993.

This inconsistent fiscal policy makes the fiscal deficit endogenous. It implies that neither a fixed exchange rate regime nor a restrictive money supply rule could be a credible commitment for the Russian monetary policy. In the former case, monetary policy is determined by net inflows of foreign exchange while in the latter case monetary policy has to be exogenous. In both cases the financing of the public deficit by the Central Bank would have to be ruled out which needs fiscal reform.

The only credible commitment for the monetary policy in the present situation is to accept the dependence of monetary policy on the fiscal budget [see, e.g., McKinnon, 1991], to stabilize the fiscal deficit, and to announce a monetary expansion consistent with the process of fiscal reform leading to a planned reduction of the fiscal deficit. This implies a *Tablita*²¹ for the fiscal deficit and the monetary expansion tailored to the willingness and the ability for fiscal reform. The exchange rate regimes consistent with such a rule range between a passive *Crawling-Peg* and a free float. The structure of the fiscal budget does not seem to constrain such strategies: the share of revenue from trade taxation is increasing but still moderate (12 percent in the first half of 1994) and an increase of the external debt burden is likely to be compensated by the relaxation of the foreign exchange constraint (see section II.2.).

Belarus and the Ukraine even lack behind Russia with respect to fiscal reform and the reduction of the fiscal deficit (DIW et al., 1994c; 1994d and Clement et al., 1993a; 1994; EIU, b). As in Russia, the tax system is characterized by frequent changes of tax rates, a highly diversified corporate income tax rate, a progressive personal income tax rate, a low tax burden for enterprises with low budget constraints, and a complex tax structure. Additional to these common features, Belarus and the Ukraine have not made significant attempts towards the privatization of state-owned enterprises or at least the hardening of budget constraints of public enterprises.

Given this background, it might be surprising that the fiscal budget of Belarus shows a lower deficit compared to Russia's (Table 7). The development during 1994, however, indicates that the official fiscal deficit is simply substituted by a quasi-fiscal deficit of the financial sector if the official fiscal deficit becomes too high. In the first quarter of 1994, the official fiscal deficit soared to 13 percent of GDP. In the following two quarters, expenditures were cut to an extent that produced a total official fiscal deficit in the first three quarters of 1994 of only 3 percent of GDP. But notwithstanding the drastic fiscal contraction, inflation keeps increasing from 1994 percent (1993) to 2191

²¹ A *Tablita* normally means a schedule for the nominal exchange rate adjustment resulting from an active *Crawling-Peg* as was the case during a former Argentine stabilization attempt (see, e.g., Corbo et al. [1986]).

Table 7 - Belarussian Fiscal Budget, 1992-1994

	1992	1993	1994a
	<i>(in Bill. Rubel)</i>		
Revenue	296.0	3 623.1	27 736.9
thereof:	<i>(in % of total revenue)</i>		
VAT	37.1	27.6	28.0
Corporate income tax	25.6	29.7	30.3
Personal income tax	7.4	7.1	7.1
Other	12.6	15.8	18.7
	<i>(in Bill. Rubel)</i>		
Expenditure	314.7	4 168.3	30 607.5
thereof:	<i>(in % of total expenditure)</i>		
Economy	41.8	38.7	29.9
Social ^b	30.6	30.3	33.9
Other	2.1	9.6	17.1
	<i>(in % of GDP)</i>		
Deficit	2.0	4.7	2.9

^a First three quarters. - ^b Incl. Education and Culture.

Source: DIW et al. [1994d]; own calculations.

percent (first half of 1994)²².

For the Ukraine, the fiscal situation is even more uncertain. In 1992, the fiscal budget including extrabudgetary transfers reached 32.3 percent (Table 8). According to the ministry of finance, the fiscal deficit should have declined to 10 percent in 1993 and 8.4 percent in the first half of 1994 [IMF, 1994b] but other sources indicate that the deficit has not declined significantly since 1992 [Clement et al., 1994; EIU, b]. These pessimistic estimations are supported by several attempts to revise the fiscal budget during 1994 on the basis of a total deficit of about 20 percent of GDP [IMF, 1994b].

The budgetary imbalances in Belarus and the Ukraine lead to qualitatively the same conclusion as for Russia: neither a fixed exchange rate nor a restrictive money supply rule would be credible and only a Tablita for the fiscal and monetary policy complemented by a flexible exchange rate system would be consistent with the present

²² One could argue that inflation normally reacts with a significant time lag but this does not apply to a hyperinflation during which prices are typically highly flexible.

Table 8 - Ukrainian Fiscal Budget, 1991-1993

	1991	1992	1993 ^a
		<i>(in Bill. Rubel)</i>	
Revenue	74.3	1 223.0	8 121.3
thereof:		<i>(in % of total revenue)</i>	
VAT	...	39.7	24.6
Corporate income tax	...	22.6	16.6
Personal income tax	...	12.1	6.8
Trade tax	...	0.6	12.4
Privatization	...	0.1	8.0
		<i>(in Bill. Rubel)</i>	
Expenditure	107.9	1 920.0	9 094.6
thereof:		<i>(in % of total expenditure)</i>	
Economy ^b	...	44.6	29.3
Social	...	6.6	7.8
		<i>(in % of GDP)</i>	
Deficit	14.4	16.6	7.5
incl. extrabudgetary transfers	...	32.3	...

^a Planned. - ^b Incl. Subsidies.

Source: Clement et al. [1993a]; EIU [1994a]; own calculations.

state of fiscal reform. Higher fiscal imbalances and lower reform efforts compared to Russia even rule out a credible peg to the Russian Rubel while exchange rate flexibility and - because of overvalued currencies - significant nominal devaluations can yet be expected not to increase fiscal deficits significantly because the share of trade taxes in total government revenue and the external debt burden are still relatively low.

All in all, Russia, Belarus, and the Ukraine are well advised to allow for flexible exchange rates consistent with the fact that monetary policy is de-facto dependent on the development of the fiscal budget which rules out any other binding rule for the money supplies. In sharp contrast, the fiscal reform in Estonia allows to sustain the fixed exchange rate even in the case of a modest loss of foreign exchange reserves. The Estonian reform shows that it is not possible to import credibility from outside by fixing the exchange rate but that it needs radical reforms to built up the credibility for a fixed exchange rate regime. Therefore, the minimum requirement for any FSU country thinking about a fixed exchange rate system as a nominal anchor guiding the

transformation process should, first, think long and hard before fixing the exchange rate [Williamson, 1991] and, second, be ready to copy the Estonian reform efforts.

IV. Policy conclusions

A fixed exchange rate regime requires high standards in terms of trade and fiscal reforms needed to ensure its credibility. This is especially the case for a Currency-Board implemented in Estonia which renders monetary policy dependent on changes of foreign exchange reserves dictated by the development of the balance-of-payments. In Estonia, radical trade and fiscal reforms have relaxed the foreign exchange and the fiscal constraint to such a monetary and exchange rate regime. A surplus of the fiscal budget generated both the flexibility of monetary policy and the confidence in Estonian reforms which induced significant capital inflows. Together with the export expansion promoted by trade liberalization and the full convertibility of the Estonian Kroon, capital inflows allowed to finance the surge in imports induced by the real appreciation which is unavoidable when fixing the exchange rate with inflation being substantially higher than in the anchor currency.

The ability and the willingness of the other sample countries - Russia, Belarus, and the Ukraine - to copy the Estonian trade and fiscal reforms presently seem to be rather low. Especially due to the slow progress of fiscal reform, any other anchor to monetary policy but a rule for monetary expansion in line with the development of the fiscal deficit would not be credible. For Belarus and the Ukraine, even a peg to the Russian Rubel would be hardly credible because reforms efforts are significantly lower and balance-of-payments and fiscal problems more severe than in Russia.

Generally, a fixed exchange rate regime is not the appropriate strategy for currency reforms in the FSU. Even in the case of radical complementary reforms, the fixed exchange rate is likely to aggravate the negative impact of a negative external shock which could not be ruled out especially given the high uncertainty related to the transformation process. This means that the FSU countries are well advised not to take unnecessary risks, to adopt flexible exchange rates (either some kind of Crawling-Peg or a free float), and to concentrate on developing credible direct rules for monetary policy. A Tablita giving a time schedule for the reduction of monetary expansion is such a rule: it could be tailored to an expected progress of trade and fiscal reforms thus limiting the risk of overstraining a country's ability and willingness to implement such reforms. In any case, the Estonian reforms provide a blueprint for liberalizing trade and consolidating the fiscal budget during the first stage of transition but not for the design of an exchange rate system for FSU countries.

References:

- Bofinger, Peter [1991], Options for the Payments and Exchange Rate System in Eastern Europe. CEPR, Discussion Paper Series, 545, London.
- Bofinger, Peter, Daniel Gros [1992], A Soviet Payments Union: Why and How? CEPS, Working Document, 60, Brüssel.
- Buch, Claudia M., Michael J. Koop, Rainer Schweickert, Hartmut Wolf [1995], Währungsreformen im Vergleich: Analyse und Bewertung monetärer Strategien in Rußland, Weißrußland, der Ukraine und Estland. Kiel Studies, 270, Tübingen, forthcoming.
- Burgess, Robin, Nicholas H. Stern [1993], "Taxation and Development". *Journal of Economic Literature*, Vol. 31, pp. 762-830.
- Corbo, Vittorio, Jaime de Melo, James Tybout [1986], "What Went Wrong with the Recent Reforms in the Southern Cone". *Economic Development and Cultural Change*, Vol. 34, pp. 607-640.
- Clemeni, Hermann, Michael Knogler, Alexej Sekarev [1993a], Verschärfte Wirtschaftskrise in der Ukraine - Inflationäre Geld- und Finanzpolitik bei ordnungspolitischer Stagnation. Arbeiten aus dem Osteuropa-Institut München, Working Papers, 161, München.
- [1993b], Die ukrainische Außenwirtschaft vor dem Zusammenbruch? Stand und Perspektiven der Reform des ukrainischen Außenwirtschaftssystems. Arbeiten aus dem Osteuropa-Institut München, Working Papers, 166, München.
- [1994], Regionale Ungleichgewichte erzwingen regionalpolitische Entscheidungen. Die ukrainische Wirtschaft 1993/94. Arbeiten aus dem Osteuropa-Institut München, Working Papers, 166, München.
- Deutsches Institut für Wirtschaftsforschung, Institut für Weltwirtschaft, Institut für Wirtschaftsforschung (DIW/IfW/IWH) [1994a], Die wirtschaftliche Lage Rußlands - Beschleunigte Talfahrt durch verschleppte Reformen. Kiel Institute of World Economics, Kiel Discussion Papers, 232, Kiel.
- [1994b], Die wirtschaftliche Lage Rußlands - Fortsetzung des Niedergangs ohne hinreichenden Strukturwandel. Kiel Institute of World Economics, Kiel Discussion Papers, 240/241, Kiel.
- [1994c], Die wirtschaftliche Lage Weißrußlands - Krisenbewältigung durch Flucht in die Rubelzone? Kiel Institute of World Economics, Kiel Discussion Papers, 234, Kiel.
- [1994d], Die wirtschaftliche Lage Weißrußlands - Ungenügende Reformen trotz verschärfter Krise, Kiel Institute of World Economics. Kiel Discussion Papers, 242, Kiel.
- Dornbusch, Rudiger, Stanley Fischer [1990], *Macroeconomics*, 5th edition, Singapur.
- Economic Intelligence Unit (EIU) [a], Country Report. Baltic Republics: Estonia, Latvia, Lithuania, 1994, No. 1 - No. 3.

- [b], Country Report. Ukraine Belarus, Moldova. 1994, No. 1 - No. 3, London.
- Esti Pank [a], Quarterly Review, 1994, No. 1-3, Tallinn.
- [b], Estonian Kroon, Juni 1993, Tallinn.
- Fischer, Bernhard, Helmut Reisen [1992], "Full Currency Convertibility in Eastern Europe?" *Intereconomics*, Vol. 29, No. 5, pp. 203-209.
- Funke, Norbert, Peter Nunnenkamp, Rainer Schweickert [1992], *Brazil: Another Lost Decade? - Domestic Policies and Attractiveness for Foreign Capital*. Kiel Institute of World Economics. Kiel Discussion Papers, 188, Kiel.
- Guidotti, Pablo E., Carlos A. Végh [1992], *Losing Credibility: The Stabilization Blues*, IMF Working Paper, WP/92/73, Washington, D.C.
- Hanke, Steve H., Kurt Schuler [1993], "Currency Boards and Currency Convertibility". *The Cato Journal*, Vol. 12, pp. 687-705.
- Hussain, Athar, Nicholas H. Stern [1993], "The Role of the State, Ownership and Taxation in Transitional Economies". *The Economics of Transition*, Vol. 1, pp. 61-87.
- Hofmann, Volker, Friedrich L. Sell [1993], "Credibility, Currency Convertibility and the Stabilization of the Rubel". *Intereconomics*, Vol. 28, No. 1, pp. 11-16.
- IMF [1994a], Russian Federation. *Recent Economic Developments*, Washington, D.C., mimeo.
- [1994b], Ukraine. *Recent Economic Developments*, Washington, D.C., mimeo.
- Langhammer, Rolf [1994], *Designing New Trade Policies for the CIS States. Legacies, Barriers and Prerequisites*. Kiel Institute of World Economics. Kiel Working Papers, 625, Kiel.
- McKinnon, Ronald I. [1991], "Stabilizing the Ruble: The Problem of Internal Currency Convertibility". In: Emil-Maria Claassen (Ed.), *Exchange Rate Policies in Developing and Post-Socialist Countries*, International Center for Economic Growth, San Francisco, pp. 59-87.
- Nunnenkamp, Peter, Rainer Schweickert [1989], "Determinanten der Kreditvergabe von Privatbanken an Entwicklungsländer in den achtziger Jahren". *Die Weltwirtschaft*, No. 1, pp. 152-171.
- Orlowski, Lucian [1994], "The Disintegration of the Rubel Zone: Driving Forces and Proposals for Policy Change". *Aussenwirtschaft*, Jg. 49, pp. 101-129.
- Schmieding, Holger [1993], "Comment on: Peter Bofinger, Erik Swindland, Benedikt Thanner, Prospects for the Monetary Order in the Republics of the FSU". In: CEPR, *The Economics of New Currencies*, London, pp. 34-51.
- Schrader, Klaus [1994], *Estland auf dem Weg zur Marktwirtschaft: Eine Zwischenbilanz*. Kiel Institute of World Economics. Kiel Discussion Papers, 226, Kiel.
- Schrader, Klaus, Claus-Friedrich Laaser [1994], *Die baltischen Staaten auf dem Weg nach Europa. Lehren aus der Süderweiterung der EG*. Kiel Studies, 264, Tübingen.

Schweickert, Rainer [1993a], "Implikationen alternativer geld- und wechsellkurspolitischer Regeln im Transformationsprozeß". *Kredit & Kapital*, Vol. 26, Nr. 2, pp. 205-229.

— [1993b], "Alternative Strategies for Real Devaluation and the Sequencing of Economic Reforms in Developing Countries". *Kyklos*, Vol. 46, pp. 65-85.

— [1994a], "Exchange Rate Based Stabilization - Lessons from a Radical Implementation in Argentina". *The World Economy*, Vol. 17, pp. 171-189.

— [1994b], "Stabilization and Real Adjustment in Emerging Market Economies - What Can be Learned from Macroeconomic Reforms in the Southern Cone?" *Intereconomics*, Vol. 29, pp. 244-252.

Vaubel, Roland [1994], "Die Währungsordnung im Transformationsprozess". In: Carsten Herrmann-Pillath (ed.), *Marktwirtschaft als Aufgabe*, Stuttgart, pp. 561 - 573.

Williamson, John [1991], "Advice on the Choice of Exchange Rate Policy". In: Emil-Maria Claassen (Ed.), *Exchange Rate Policies in Developing Countries and Post-Socialist Countries*, San Francisco, pp. 395-403.

— [1993], "A Cost-Benefit Analysis of Capital Account Liberalisation". In: Helmut Reisen, Bernhard Fischer (Eds.), *Financial Opening. Policy Issues and Experiences in Developing Countries*, OECD, Paris, pp. 25-34.