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Rainer Schweickert\*

# Searching for Credible Exchange Rate Regimes in the Former Soviet Union

*Two macroeconomic constraints determine the credibility of an exchange rate system: the availability of foreign exchange and the sustainability of fiscal balance. The following paper analyses the relative importance of these constraints for fixed and flexible exchange rate systems, examines the progress of reforms to relax these constraints in Estonia and Russia and draws conclusions for the choice of an exchange rate system for other countries of the former Soviet Union.<sup>1</sup>*

With the disintegration of the rouble zone,<sup>2</sup> a whole range of new currencies has been created in the former Soviet Union (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 two of the successor states of the Soviet Union: Estonia and Russia.<sup>3</sup> The exchange rate policies chosen by these countries are as different as their economic performances:<sup>4</sup>

□ Estonia fixed the value of its currency against the D-mark by establishing a currency board<sup>5</sup> while Russia allows a dirty float;

□ Estonia is the only example of a country so far which has escaped the transformation crisis and is experiencing 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<sup>6</sup> – the credibility of a Western monetary authority could be imported by allowing the money supply to be determined by the exchange rate target?

## The Foreign Exchange Constraint

If trade is not restricted by a lack of foreign exchange, countries in transition can import the price system from the world market, thereby curbing 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 in money demand in order to keep the exchange rate constant.<sup>7</sup> 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 fine-tune 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

<sup>1</sup> Cf. Rainer Schweickert: Alternative Strategies for Real Devaluation and the Sequencing of Economic Reforms in Developing Countries, in: *Kyklos*, Vol. 46, 1993, pp. 65-85; Rainer Schweickert: Stabilization and Real Adjustment in Emerging Market Economies – What Can be Learned from Macroeconomic Reforms in the Southern Cone? in: *INTERECONOMICS*, Vol. 29, 1994, pp. 244-252. For the discussion of the underlying Dornbusch/Corden type model, cf. Rainer Schweickert: Implikationen alternativer geld- und wechsellkurspolitischer Regeln im Transformationsprozeß, in: *Kredit & Kapital*, Vol. 26, No. 2, 1993, pp. 205-229.

<sup>2</sup> Cf. Lucian Orłowski: The disintegration of the rouble zone: driving forces and proposals for policy change, in: *Außenwirtschaft*, Vol. 49, 1994, pp. 101-129.

<sup>3</sup> For the discussion of the exchange rate policies of Belarus and the Ukraine, cf. Rainer Schweickert: Currency Reforms in the Former Soviet Union (FSU) – on the Importance of Macroeconomic Constraints, Kiel Institute of World Economics, Kiel Working Papers, No. 670, Kiel 1995.

<sup>4</sup> For details, cf. Claudia M. Buch, Michael J. Koop, Rainer Schweickert, Hartmut Wolf: Währungsreformen im Vergleich: Analyse und Bewertung monetärer Strategien in Rußland, Weißrußland, der Ukraine und Estland, *Kiel Studies*, 270, Tübingen 1995, forthcoming.

<sup>5</sup> For details of the Estonian Currency Board, cf. e.g. Adam G. G. Bennett: The Operation of the Estonian Currency Board, in: *IMF Staff Papers*, Vol. 40, 1993, pp. 451-470; Seija Leinela: Currency Reforms in the Baltic States, in: *Communist Economies and Economic Transformation*, Vol. 5, 1993, pp. 427-443.

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setting which makes non-sterilized intervention automatic by issuing domestic money only in exchange for hard currencies.<sup>8</sup> 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 currency.<sup>9</sup> This requires a trade policy oriented towards integration into the world economy and the convertibility of the domestic currency. The agenda for trade policy reforms is straightforward:<sup>10</sup>

□ quantitative restrictions are to be dismantled because they are inconsistent with market integration, provoke rent-seeking activities, and would imply the 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;

□ import taxes should be non-discriminatory and as uniform as possible in order to import 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 the country's becoming a member of the international trading system, i.e. of GATT or the WTO.

Two arguments are raised against the current account convertibility of the domestic currency which is necessary to make 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

<sup>8</sup> Cf. Peter Bofinger: Options for the Payments and Exchange Rate System in Eastern Europe, in: CEPR, Discussion Paper Series, No. 545, London 1991; Volker Hofmann, Friedrich L. Sell: Credibility, Currency Convertibility and the Stabilisation of the Rouble, in: INTERECONOMICS, Vol. 28, No. 1, 1993, pp. 11-16; Holger Schmieding: 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 1993, pp. 34-51.

<sup>7</sup> Roland Vaubel: Die Währungsordnung im Transformationsprozess, in: Carsten Herrmann-Pillath (ed.): Marktwirtschaft als Aufgabe, Stuttgart 1994, pp. 561-573.

<sup>8</sup> Additionally, the monetary base is fully covered by foreign exchange. For the functioning of currency boards, cf. Steve H. Hanke, Kurt Schuler: Currency Boards and Currency Convertibility, in: The Cato Journal, Vol. 12, 1993, pp. 687-705.

because foreign exchange reserves are typically rather low in countries in transition.<sup>11</sup> 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 arguments against current account convertibility.<sup>12</sup>

In the same vein, a fixed exchange rate makes 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.<sup>13</sup> This provides an argument to restrict the convertibility of the domestic currency but the relevant question then becomes whether 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.<sup>14</sup> Hence, the best advice is to accept de facto full convertibility and to allow for exchange rate flexibility if trade liberalization and convertibility fail to yield stable foreign exchange inflows in the case of a fixed exchange rate.

### Progress of Reforms

*Estonia* has already liberalized its trade regime:<sup>15</sup> quotas and licences have been removed and only a few imports are subject to tariffs between 10 and 16 per cent,<sup>16</sup> exports are unrestricted and export diversification is encouraged by a non-recurring

<sup>9</sup> 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.

<sup>10</sup> Cf. Rolf Langhammer: Designing New Trade Policies for the CIS States. Legacies, Barriers and Prerequisites, in: Kiel Working Papers, No. 625, Kiel 1994.

<sup>11</sup> Furthermore, lack of credibility could lead importers to hoard goods, thus aggravating the trade deficit.

<sup>12</sup> Cf. Roland Vaubel: op. cit.

<sup>13</sup> Additionally, full convertibility bears the risk of 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. Cf. John Williamson: 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 1993, pp. 25-34, for a list of recommendations in this respect.

<sup>14</sup> Bernhard Fischer, Helmut Reisen: Full Currency Convertibility in Eastern Europe? in: INTERECONOMICS, Vol. 29, No. 5, 1992, pp. 203-209.

<sup>15</sup> Cf. Economic Intelligence Unit (EIU): Country Report. Baltic Republics: Estonia, Latvia, Lithuania 1994, No. 1 - No. 3; Klaus Schrader: Estland auf dem Weg zur Marktwirtschaft: Eine Zwischenbilanz, in: Kiel Discussion Papers, No. 226, Kiel 1994.

<sup>16</sup> These are mainly luxury items: furs, cars, bicycles and yachts. Additionally, exports and imports have to pay 0.5 per cent of their value.

subsidy for the marketing of new products, GATT membership and free trade agreements with Estonia's 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 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 in order to import relative prices from abroad. Increasingly, it is becoming a risky strategy. The real exchange rate appreciated strongly due to a significantly higher inflation rate than in Germany (1992: 1069 per cent; 1993: 35 per cent). As a consequence, the trade balance switched from a 7 per cent 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.

Decreasing foreign exchange reserves do not, however, imply that the fixed exchange rate has to be abandoned but that the exchange rate based stabilization in Estonia is going to repeat the stylized facts of credible exchange rate based stabilization programmes in developing countries, i.e. an initial expansionary honeymoon phase followed by a contractionary phase which might lead to divorce.<sup>17</sup> 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

<sup>17</sup> Cf. Rainer Schweickert: Exchange Rate Based Stabilization – Lessons from a Radical Implementation in Argentina, in: *The World Economy*, Vol. 17, 1994, pp. 171-189; Pablo E. Guidotti, Carlos A. Végh: *Losing Credibility: the Stabilization Blues*, IMF Working Paper, WP/92/73, Washington, D.C. 1992.

<sup>18</sup> Cf. Rolf Langhammer, op. cit.; Deutsches Institut für Wirtschaftsforschung, Institut für Weltwirtschaft, Institut für Wirtschaftsforschung (DIW/IfW/IWH): *Die wirtschaftliche Lage Rußlands – Fortsetzung des Niedergangs ohne hinreichenden Strukturwandel*, in: Kiel Discussion Papers, Nos. 240/241, Kiel 1994.

<sup>19</sup> Convertibility is also impaired by restrictions on current account transactions by foreigners and by regulations on capital flows.

balance. Presently, this real exchange rate adjustment does not seem to pose a problem for Estonia but it could become a problem in the case of an additional negative external shock and the equalization of German and Estonian 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 Russian economy proceeds rather slowly. Russian trade policy is still heavily influenced by inherited structures and relies on discretionary instruments to a significant extent.<sup>18</sup> On the import side, quotas and licences have been abolished with only a few exceptions 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 of commodities – are still regulated by selective and discretionary licensing regimes and a part of hard currency earnings has to be converted into rouble at an unfavourable exchange rate. This implies that the Russian rouble is not convertible for current account transactions.<sup>19</sup> Even if relative world market prices become relevant under these 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.

Due to high inflation rates (1992: 2059 per cent; 1993: 815 per cent) and strong interventions in the foreign exchange market, the Russian rouble experienced a real appreciation which even exceeded

**Table 1**  
**Estonian Balance of Payments, 1992-1994**  
(Million Estonian Kroons)

	1992	1993	1994*
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

\* First half.

Sources: Esti Pank Quarterly Review, Nos. 1-3 (1994:3, p. 31; 1994:1, p. 17), Tallinn 1994; Esti Pank: *Estonian Kroon*, June 1993, p. 11, Tallinn 1993; own calculations.

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 difference between Estonia and Russia is explained by the lack of foreign exchange in Russia leading to an import constraint.<sup>20</sup> 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 capital.<sup>21</sup> 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 makes the foreign exchange constraint even more binding in the medium run.<sup>22</sup> 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 rouble. This would either imply a free float or a passive crawling peg<sup>23</sup> with additional devaluations providing a stable devaluation process and a steady inflow of foreign exchange.<sup>24</sup> With a further liberalization of the trade regime, the hardening of soft budget constraints, and the full convertibility of the rouble, the real devaluation will then encourage export expansion

<sup>20</sup> 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 statistics.

<sup>21</sup> The official balance-of-payments figures give an idea as to the minimum amount of capital flight. In 1993, "Errors and omissions" accounted for more than 50 per cent of the trade surplus. Assuming that this reflects capital flight, more than 50 per cent of net export earnings have been invested abroad.

<sup>22</sup> Cf. Peter Nunnenkamp, Rainer Schweickert: Determinanten der Kreditvergabe von Privatbanken an Entwicklungsländer in den achtziger Jahren, in: Die Weltwirtschaft, No. 1, 1989, pp. 152-171; Norbert Funke, Peter Nunnenkamp, Rainer Schweickert: Brazil: Another Lost Decade? – Domestic Policies and Attractiveness for Foreign Capital, in: Kiel Discussion Papers, No. 188, Kiel 1992.

<sup>23</sup> 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.

<sup>24</sup> The latter strategy was successfully implemented in Chile in the 1980s; cf. Rainer Schweickert: Stabilization and Real Adjustment ..., op. cit.

<sup>25</sup> 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.

Table 2

Russian Balance of Payments, 1992-1994

(Billion US-Dollar)

	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	-	-

Sources: IMF: Russian Federation. Recent Economic Developments, Washington, D.C. 1994, mimeo; own calculations.

and diversification reducing the need for nominal exchange rate adjustment to the difference between inflation rates at home and abroad.

All in all, the scarcity of foreign exchange in Russia constrains the possibility of adopting a fixed exchange rate system because this implies the need to use foreign exchange reserves to stabilize the exchange rate. Contrary to the situation in Russia, in the case of Estonia 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. However, the first boom phase of exchange rate based stabilization ended in 1994 and a dampening of monetary expansion is becoming likely. Under such conditions the sustainability of the fixed exchange rate crucially depends on the sustainability of fiscal balance.

The Fiscal Constraint

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 instruments, i.e. a monetary contraction or a nominal devaluation,<sup>25</sup> if the use of these instruments feeds back into the public sector increasing the fiscal deficit:

- a monetary contraction may decrease government revenue by lowering the inflation tax rate;<sup>26</sup>

- a monetary contraction may reduce the possibility of increasing internal public debt and may at the same time increase the interest payments on internal debt;
- a nominal devaluation increases government expenditure by increasing the external debt service denominated in foreign currencies; and
- a nominal devaluation may decrease government revenue 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 will 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 on the use of 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 rapid progress towards the desired tax system in order to secure fiscal balance.<sup>27</sup>

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 value-added-tax (VAT) in

the first place. Second, fiscal expenditure has to be cut down in the short run by privatizing publicly owned enterprises in a way that eliminates the soft budget constraints of these enterprises.<sup>28</sup> 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 decreasing fiscal deficit allowing for a more restrictive monetary policy which, in turn, will reduce inflation and the possibility of evading VAT, increase tax revenues, reduce the fiscal deficit, etc.

### Implementation

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.<sup>29</sup> 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 per cent, a corporate and (since 1994) a personal income tax with a uniform and proportional tax rate of 26 per cent, a social and health insurance tax with a tax rate of 33 per cent 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 per cent (national tax) and up to 0.7 per cent (local tax). Additionally, the privatization process is on schedule. By the end of 1994, about 40 per cent of industrial enterprises and the majority of small enterprises were privatized.

The result of this radical fiscal reform can be seen in Table 3. 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 to yield even a budget surplus. The simple and adequate tax structure is producing 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 3

**Table 3**  
**Estonian Fiscal Budget, 1991-1994**

	1991	1992	1993	1994 <sup>a</sup>
	(Million Estonian Kroons)			
Revenue	3,383.2	2,084.4	4,175.7	5,692.0
thereof:	(in % of total revenue)			
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
	(Million Estonian Kroons)			
Expenditure	3,030.3	2,026.1	4,034.4	5,692.0
thereof:	(in % of total expenditure)			
Economy	28.9	19.2	15.0	22.8
Social <sup>b</sup>	39.7	36.0	39.0	32.3
Debt Amortization	-	-	0.5	1.5
	(Million Estonian Kroons)			
Surplus	352.9	58.3	141.3	0

<sup>a</sup> Planned. <sup>b</sup> Since 1993 incl. social funds.

Sources: Klaus Schrader, Claus-Friedrich Laaser: Die baltischen Staaten auf dem Weg nach Europa. Lehren aus der Süderweiterung der EG, in: Kiel Studies, No. 264, Tübingen 1994, pp. 91 f.; own calculations.

<sup>26</sup> 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 for the decreasing tax rate; cf. Rüdiger Dornbusch, Stanley Fischer: *Macroeconomics*, 5th edition, Singapore 1990.

<sup>27</sup> Cf. Athar Hussain, Nicholas H. Stern: *The Role of the State, Ownership and Taxation in Transitional Economies*, in: *The Economics of Transition*, Vol. 1, 1993, pp. 61-87.

<sup>28</sup> If publicly 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.

<sup>29</sup> Cf. Economic Intelligence Unit (EIU), op. cit.; Klaus Schrader, op. cit.

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 monetary policy is dictated by the market determined accumulation of foreign exchange on the asset 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 on monetary policy.

Table 4 reveals that *Russia* still has a long way to go to consolidate its fiscal budget.<sup>30</sup> In terms of GDP, the deficit increased from 3.6 per cent in 1992 to 9.5 per cent in 1993 and from 3.1 per cent in the first half of 1993 to 9.0 per cent 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 per cent) with a maturity of 10 years and a nominal interest rate of 10 per cent. This implies that the fiscal deficit directly translates into monetary expansion.

**Table 4**  
**Russian Fiscal Budget, 1992-1994**

	1992	1993	1994 <sup>a</sup>
	(Trillion Rouble)		
Revenue	5.3	41.8	60.0
thereof:	(in % of total revenue)		
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
	(Trillion Rouble)		
Expenditure	6.0	57.3	81.0
thereof:	(in % of total expenditure)		
Economy	42.0	28.1	24.4
Social	23.2	25.0	25.4
Other	20.5	34.4	38.3
	(in % of GDP)		
Deficit	3.6	9.5	9.0

<sup>a</sup> First half.

Sources: DIW/IfW/IWH: Die wirtschaftliche Lage Rußlands – Fortsetzung des Niedergangs ohne hinreichenden Strukturwandel, in: Kiel Discussion Papers, Nos. 240/241, Kiel 1994; own calculations.

Contrary to Estonia, Russia has not succeeded in reducing real expenditure in line with the shortfall in real revenue because the 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 interest.<sup>31</sup> As can be seen in Table 4, the share of government expenditure for the item "Economy" has decreased but this decrease was compensated for by the increase in "Other expenditure", meaning that the direct financing of public enterprises has been substituted for by subsidized credits.

The insufficient cuts in government expenditure and the direct link between the fiscal deficit and monetary expansion resulted in high and instable inflation rates, which impaired the prospects of VAT revenues' improving 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 VAT should have first priority in the primary stage of a tax reform. Consequently, the share of VAT in total government revenue declined from 37.7 per cent in 1992 to 20.2 per cent in the first half of 1994. Second, corporate income tax rate is highly differentiated according to branches and even tailored to single enterprises. The maximum rate has been increased to 43 per cent. 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 facilitating tax evasion.<sup>32</sup>

This inconsistent fiscal policy makes the fiscal deficit endogenous. It implies that neither a fixed exchange rate regime nor a restrictive money supply

<sup>30</sup> Deutsches Institut für Wirtschaftsforschung, Institut für Weltwirtschaft, Institut für Wirtschaftsforschung (DIW/IfW/IWH): Die wirtschaftliche Lage Rußlands – Beschleunigte Talfahrt durch verschleppte Reformen, in: Kiel Discussion Papers, No. 232, Kiel 1994; Deutsches Institut für Wirtschaftsforschung, Institut für Weltwirtschaft, Institut für Wirtschaftsforschung (DIW/IfW/IWH): Die wirtschaftliche Lage Rußlands – Fortsetzung des Niedergangs ..., op. cit.

<sup>31</sup> Up to mid-1994, about 74 per cent of smaller enterprises, mainly in the service sector, should have been privatized. 70 per cent of privatized enterprises have been bought by their workforce. 50 per cent of medium and large enterprises have been privatized by vouchers. In 75 per cent of all cases the workforce holds the majority of shares and the government share is larger than 25 per cent in more than 50 per cent of all cases.

<sup>32</sup> Tax evasion is estimated to have reached 40 per cent in 1993.

rule could be a credible commitment for 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 requires fiscal reform.

The only credible commitment for Russian monetary policy in the present situation is to accept the dependence of monetary policy on the fiscal budget,<sup>33</sup> 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<sup>34</sup> for the fiscal deficit and the monetary expansion tailored to the willingness and the ability to implement 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 per cent 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 above).

All in all, Russia is 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 supply. In sharp contrast, the fiscal reform in Estonia allows the fixed exchange rate to be sustained 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 radical reforms are required to build up 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 be, first, think long and hard before fixing the exchange rate<sup>35</sup> and, second, be ready to copy the Estonian reform efforts.

### Policy Conclusions

A fixed exchange rate regime requires high standards in terms of the trade and fiscal reforms needed to ensure its credibility. This is especially the case for the 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 both the foreign exchange constraint and the fiscal constraint on such a monetary and exchange rate regime. A fiscal budget surplus 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 made possible the financing of the surge in imports induced by the real appreciation which is unavoidable when fixing the exchange rate while inflation is substantially higher than in the anchor currency. The ability and the willingness of Russia as well as of most other FSU countries to copy the Estonian trade and fiscal reforms at present 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.

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 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 would be 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 the expected progress of trade and fiscal reforms thus limiting the risk of overstraining a country's ability and willingness to implement such reforms. The Estonian reforms do 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.

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<sup>33</sup> Cf. Ronald I. McKinnon: *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 1991, pp. 59-87.

<sup>34</sup> 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. Cf. e.g. Vittorio Corbo, Jaime de Melo, James Tybout: *What Went Wrong with the Recent Reforms in the Southern Cone*, in: *Economic Development and Cultural Change*, Vol. 34, 1986, pp. 607-640.

<sup>35</sup> Cf. John Williamson: *Advice on the Choice of Exchange Rate Policy*, in: Emil-Maria Claassen, op. cit., pp. 395-403.