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The disintegration of the ruble zone: Driving forces and proposals for policy change

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The Disintegration of the Ruble Zone:
Driving Forces and Proposals for Policy Change

by

Lucjan T. Orlowski

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Abstract

This paper examines the irreversible process of the ruble zone disintegration. Theoretical fundamentals of a common currency area, with modifications incorporating a mechanism of transition from central planning, are discussed. The key reason for the ruble zone break-up is the discontinuation of indirect transfers that were provided mainly by Russia via underpricing energy exports to other republics. Being cut-off from such transfers and unable to finance rising trade deficits with Russia, the independent states wish to disconnect their economies from the ruble zone. Among other economic arguments for leaving the ruble zone presented by the former Soviet republics are: a desire to insulate their economies from the ruble zone inflation, and a willingness to collect seigniorage revenues from printing their own currencies. The paper critically evaluates these and several other arguments. The abrupt break-up of the ruble zone causes interruptions in supplies of essential materials and consumer goods, and an income downfall among the republics. The foundation for a new inter-state payments mechanism is proposed in order to cushion these negative effects. A system of independently traded currencies with flexible exchange rates is viewed as a reasonable, yet distant solution.

1. INTRODUCTION*

The process of disintegration of the former Soviet Union is assuming a logical sequence. It started from the break-up of political ties, followed by the dissolution of central planning and the central government budget at the end of 1991. This, in turn, caused serious interruptions in traditional trade linkages between the former republics of the USSR as trade balances were financed either through direct budgetary transfers or indirect transfers (under- and overpricing of trade). In 1992, virtually all the republics moved closer to world market prices in the inter-state exchange of goods. Most dramatically, Russia substantially increased prices of its energy exports to other republics and diminished its role as a donor of indirect transfers. This, in turn caused a substantially increased demand for money in those republics which were traditionally importers of underpriced energy and which in the short run face an inelastic demand for Russian energy. If the demand for external savings cannot be met by export earnings or by issuing debts honored by Russia, this prompts the republics to leave the ruble zone and to establish their own currency. Consequently, the ruble zone, formed and supported by the principles of central planning, is also disintegrating.

This paper examines this unprecedented process of the ruble zone disintegration. It describes a theoretical framework for the common currency area as advanced by Mundell [1961] and McKinnon [1963] with adjustments suitable for a mechanism of transition from central planning. Such modification primarily departs from a high short-term inflexibility of economic linkages between the participating states.

The paper starts from a presentation of theoretical requirements of a common currency area in Section II, followed by their adjustment to the characteristics of transition from central planning in Section III. This analysis is supported by the empirical evidence from the former Soviet states in Section IV. In particular, the current state of affairs (in mid-1993) with respect to the ruble zone disintegration is presented and the main arguments advocated by the republics leaving the ruble zone are exposed. Based upon the theoretical foundation (Sections II and III) and the empirical evidence (Section IV), a variety of proposals to solve the post-Soviet currency crisis is examined in Section V. A conclusion in terms of future developments of the post-Soviet payment system is contained in Section VI. Different ways of departing from the ruble zone and related to them different types of national currencies are examined in the Appendix, with a more detailed description of the cases of Estonia and Kirgizstan, the two former republics which have broken away from the ruble system.

* This paper reports on research undertaken in a project on prerequisites of integrating the former Soviet Union states into the world economy. Financial support from the Alfred Krupp von Bohlen and Halbach Stiftung is gratefully acknowledged.

II. PREREQUISITES FOR A COMMON CURRENCY AREA

In order to fully understand the reasons for the breakdown of the ruble zone among the former Soviet Union republics, it is necessary to spell out the economic requirements that ensure creating and sustaining a common currency system within the framework of politically independent states. Under central planning, trade and capital flows are administratively determined by a single central economic authority. Thus, there are inherent administrative conditions for the introduction of a common currency. The former Soviet Union currency, the ruble, satisfied the single currency functions of a medium of exchange, a unit of account and a store of value. The ruble performed all of these functions passively, since the amounts of ruble issued for trade and capital transactions and the amounts of ruble savings by enterprises were administratively decided rather than being determined by market forces.

As advanced in the economic literature, a common currency is a higher stage of an optimum currency area. A common currency area was first defined by Mundell [1961, p. 657] as "a domain within which exchange rates are fixed". This simple definition has never been really questioned as too simplistic. On the contrary, it found strong reinforcements, among others, from McKinnon [1963, p. 717], who claimed that "a fixed exchange rate system with guaranteed convertibility of currencies is almost the same thing as a single currency regime", and from Kindleberger [1968, p. 517] describing it as "a system of permanently fixed rates as an equivalent to the existence of a single world money". Undeniably, a currency unification requires as a critical element *permanently fixed exchange rates*. Therefore, further requirements of a currency union are consistent with the requirements for fixed exchange rates. Among them a crucial role is played by the *harmonization of monetary policies* of member states. Such harmonization becomes particularly difficult when inflation differentials among member states are significant. Inflation differentials increase the economic cost of maintaining the currency union and they require accelerated capital transfers from low inflation countries to high inflation countries to offset absorption of the inflation tax by low inflation members of the union. In other words, conditions of large and uneven inflation among the members provide incentives to member states to increase the amount of seigniorage (or inflation tax collected from low inflation member states) by accelerating the money supply growth beyond the rate applied by others. Therefore, it becomes critical for the currency union to establish a *single monetary constituency* - a single central bank, or a centrally supervised system of central banks (such as the US Federal Reserve System) that would be in charge of regulating money supply in order to avert inflation tax spillovers among member states. If inflation shocks are non-sterilized by monetary policies of member states, a break-up of the fixed exchange rate system leading to a break-up of a currency union

is argued to become the better solution.¹ Furthermore, repeated inflation shocks within the currency union may lead to a loss of the "store-of-value" function of the unified currency and, correspondingly, to a risk premium paid by asset holders for preferring the single currency over other currencies.

A single monetary constituency would correspond to the situation of a single currency in the unified system, or a "hegemonial currency" understood as a dominant currency to which other currencies are anchored (permanently fixed) [see Vaubel, 1978, p. 22].

Another possible alternative of a currency union (or an optimum currency area) is a "community variant" as advanced by McKinnon [1977, pp. 47-54]. In this case, there are separate currencies with fixed exchange rates guaranteed by a full cooperation of the members central banks with respect to:

- monetary policy targets,
- joint agreements which allow discretionary policy reactions to correct deviations from predetermined targets,
- rules on foreign exchange interventions and interstate capital transfers.

Again in this case, a full coordination of monetary policies is strictly required for the currency union. Whenever there are substantial differences in credit policies, for instance, stemming from dissimilarities in structural adjustment programs between the member states, the monetary policy coordination becomes extremely difficult and the currency union may be unsustainable. Undoubtedly, within the currency union each member cannot pursue its own stabilization and growth policies attuned to its specific needs [Salvatore, 1990, p. 608]. In particular, the areas or states with excessively high unemployment, partially related to their slow structural adjustment, may wish to pursue more expansionary monetary and fiscal policies. On the other side, the booming regions may opt for contractionary policies to curb inflation. Based on these differences it can be argued that a currency union is much easier to maintain when *structural similarities* among the regions are relatively strong.

Another vital condition for a currency union is a high degree of *mobility of goods and production factors* among member states. Impediments to trade lead to distorted money balances between the members, either to an excess supply of money in a surplus-generating state, or to an excess demand for currency in the deficit state. Consequently, without

¹ This particular view was advocated by Hayek [1976] who claimed that anti-inflationary effects could be generated by a "free currency competition", i.e. a break-up of the fixed exchange rate system.

compensating capital flows, fixed exchange rates may occur unsustainable and the currency union will break-up. On the side of the labor market, restrictions to the mobility of labor generate unbalanced unemployment rates. Such disproportions normally promote uneven monetary and fiscal policies correcting unemployment rates. Again, a lack of policy harmonization may prompt the currency union break-up.

If the currency union is sustained and supported by capital transfers, equilibrated payments balances and fixed exchange rates may be attained. Then, the strongest beneficiaries from the union are backward states running expansionary monetary policies. Staying in the union gives them a guaranteed position of net transfer recipients. On the other side, net transfer donors may find it too burdensome to continue subsidizing backward states and therefore, may opt to depart from the union. The only incentive for the continuation of their net transfers provided to others arises when the poorer states supply essential resources and materials which the net donor is unable to find elsewhere and for which his demand is highly inelastic. This would motivate the transfer donor to maintain the currency union and to continue providing transfers to the states with whom it is closely integrated.

On the side of costs of a currency union to member states, a *demonstration effect on real wages* may occur [as interpreted by Williamson, 1975]. This effect becomes active if there is a strong tendency towards real wage equalization among the union members especially presented by the peripheral states where productivity is much lower. Such tendency is inherent among the conditions for the currency union. Excessively increased real wages in low productivity areas trigger rising wage costs and generate high unemployment rates, which, if not compensated by capital transfers from more affluent states, may release social pressures to leave the currency union.

A demonstration effect on real wages and inflation tax spillovers are the most evident economic costs of a currency union. One may also identify some political costs, such as a loss of sovereignty, or a sacrifice of the autonomy of central banks and government budget authorities that may ultimately promote a departure from the currency union. The economic and political costs of the currency union shall be carefully weighted by the states against the possible economic benefits which may include:

- greater opportunities for economies of scale in production,
- elimination of the exchange rate risk,
- lower costs of money transfers,
- reduced information costs about exchange rate variability and foreign exchange regulations.

There is no uniform system of assessing the costs of membership in the currency union versus the benefits stemming from it. Different nations tend to assign different importance to different factors. Given the enormous economic, ethnic, political, and historical variety including differences in economic size and resource endowment the former Soviet Union republics cannot be expected to have a uniform pattern of evaluating their affiliation with the common currency zone.

III. DRIVING FORCES OF MONETARY DISINTEGRATION: LESSONS FROM THEORY

The initial assumption of the presented model is a system of inter-state trade administratively regulated by central planning. Relative prices are administratively set and, therefore, inflexible. They have no impact on trade volumes and their sectoral and regional composition. The system of economic linkages is bound by the common currency, which serves the functions of a unit of account and, passively, a medium of exchange and a store of value. Since relative prices are fixed and do not matter in the decision-making process they substantially deviate from relative prices in international markets.

The administrative determination of prices and traded volumes results, at least in the short- or medium-run, in highly price-inelastic supply and demand conditions for traded goods. Specifically, producers of final goods in one state are traditionally administratively linked to suppliers of materials in another state. They are neither accustomed to searching for alternative sources of supplies nor encouraged to produce such substitutes themselves. Central administrative decisions are generally not aimed at increasing competition.

What is particularly important, such a distorted trade system provides indirect income transfers. Donors of such transfers are states exporting "underpriced" goods in comparison to world market prices, or accepting imports of "overpriced" products. Particularly under central planning, practices of "underpricing" oil, natural gas and selected other resources, and "overpricing" manufactured products are widespread.

When the central planning mechanism is discontinued and decisions about trade volumes and directions are decentralized, trade partners cannot immediately find alternative supply and demand sources. There will be quite obviously a natural resistance of energy exporters to continue subsidizing others by prolonged sales of underpriced energy and thus to forego export earnings offered by world markets. In extreme cases, by exploiting inelastic demand or a monopoly position, they will adjust prices closer to the revenue maximizing range, or somewhat below it if any sources of competitive energy suppliers emerge. Their price increases will undoubtedly result in a large accumulation of money balances in their accounts. Consequently, it can be argued that energy-exporting states will experience an excess supply

of currency, while energy importers will endure an excess demand for currency. The deeper the changes in relative prices, the bigger the distortions in money balances that will occur. Correspondingly, the energy exporting states will enhance their trade surpluses and the energy importers will amplify their trade deficits.

In a common currency area, a situation of excess supply of money in surplus countries means an absorption of inflation that this state may want to transfer to others by exporting the inflation tax, i.e. providing vast central bank credits to its deficit-experiencing partners [Buiter and Eaton, 1983].

Serious problems in deficit countries arise in a situation of excess demand for money. These countries may equilibrate their money balances either by accelerating exports to regions outside the common currency area, by obtaining credits from the surplus country, or by breaking-up from the common currency area through creating their own money. In the latter case, a creation of an independent currency may be accompanied by a flexible exchange rate which adjusts to current account disequilibria. The flexible rate will, therefore, assume the role of a stabilizer and prevent a wide-spread transmission of inflation impulses.

The option of extensive central bank credit to deficit states will transfer the inflation tax to them. If, however, such pro-inflationary credits are restrained, they will sooner or later opt to issue their own currency, either parallel to the common currency, or separately by a declaration of legal tender rights granted only to the new currency.

An exceptionally long period of price inelasticity in inter-republican trade is one argument for the break-up of the currency union. There are other arguments. The critical argument in reference to the continuation of the currency union arises when *stabilization policies* that include price liberalization as their inherent ingredient are *not coordinated*. Under such circumstances, repeated price liberalizations occurring in different regions at different times, will undoubtedly send many uncoordinated inflationary shocks. This would require repeated, sometimes unexpected, sterilizations by credit tightening from the central bank in charge of money emission. Such destabilizing disturbances and discretionary monetary policy reactions by no means can guarantee the monetary authority credibility which is required for stabilizing expectations of private economic agents and to lower their time preference rate. To shield themselves from repeated inflation shocks brought about by uncoordinated price liberalizations, regional central banks may consider leaving the currency union.

Furthermore, ongoing inflation shocks may induce undesirable fiscal disturbances through repeated Oliveira-Tanzi effects, i.e. a temporarily diminished tax collection in real terms and deeper budget deficits, following the acceleration of inflation, due to deferred or evaded tax payments by economic agents [see, for instance, Dornbusch, 1992]. For economies willing to introduce programs of macro-stabilization and structural adjustment, the unpredictable fiscal

situation and the lack of success with deficit reduction are unacceptable. Again, to shield themselves from repeated inflation shocks that would contribute to a pervasive occurrence of the Oliveira-Tanzi effect, countries may choose to leave the currency union.

In relation to the fiscal situation one can derive the next argument which seems to have a particularly strong relevance to the post-Soviet transformation process. It is a battle for *seigniorage* (inflation tax) defined as government revenue from printing money. In the framework of a currency union only the central bank responsible for money creation collects seigniorage. The union could be sustained if there were a system of apportioning seigniorage revenues among the states. Cassella [1992] emphasizes that seigniorage gains can be adequately distributed between the states only if their monetary policies are fully coordinated. But if such direct non-interest credit transfers are not secured regional central banks may opt to leave the union, create their own currency and collect seigniorage from its emission. If there are several central banks entitled to issue the common currency, the battle for a higher real value of seigniorage can only be won by those whose money supply grows unproportionately stronger than others.

On the other side, staying in the union may induce some monetary benefits as well. For instance, Cassella [1992] views the currency union as an institution imposing a beneficial monetary discipline on all participants. For a small country, participation in the union is beneficial up to a point when it can still receive a favorable share of seigniorage, and a large country stays in the union as long as it can gain more from the discipline brought by a common currency. Whatever the merit of the monetary discipline argument is, without direct capital transfers from a dominant country's central bank, smaller country central banks will find incentives to break away from the currency union since the other alternative, that is an uncontrollable money creation, is too inflationary and shall be viewed as an inferior solution.

The currency union problem arises again in the context of *privatization*. Considering different levels of economic development among nations in the currency union and a situation of unpredictable inflation, it is extremely difficult to appraise the value of firms prepared for privatization. A single currency, strongly battered by unpredictable inflation shocks, is an *impediment to asset valuation* of these firms. Especially smaller, and more developed and productive economies within the union would very likely attempt to introduce their own, more stable currency that would sustain the nominal value of capital of firms throughout the lengthy process of their privatization [Hansson, 1993, p. 168]. Likewise, foreign direct investment is normally attracted by a low inflation environment. Under the circumstances of relatively stable domestic prices both transaction risk (related to cash conversion), and translation risk (related to balance sheets comparability) are diminished. For the purpose of lowering the overall risk for direct investment from abroad, a particular region or state may

consider introducing a new currency separated from the highly inflationary common currency.

In addition to these economic reasons for departure from the common currency, there is always an argument of *political sovereignty*. National central banks may want to gain their full autonomy by divorcing themselves from the dominant central bank's monetary policy, or from monetary policies stemming from a multilateral agreement. It may be especially important for economies in transition that national monetary policies are customized to the specific structural adjustment needs of particular regions. The ambition of gaining political sovereignty sometimes prevails against the economic rationale for staying in the currency union, especially for backward economies which are net recipients of indirect and direct transfers from more developed regions. Governments of depressed regions are ready to sacrifice economic gains for the sake of a broadly defined political autonomy by seceding from the union. Cases supporting this argument include: Slovakia breaking up from the union with the Czech Republic, or Bangladesh from Pakistan, besides the cases of former Soviet republics examined below. It may be, however, argued that the tradeoff between direct economic gains and political sovereignty in a case of depressed economies may be illusive if the political autonomy is treated as a public good. In such a case, the national independence may guarantee a necessary social environment that may lower the risk for foreign direct investment and ultimately generate additional income.

In summary, one may conclude that individual states are expected to be motivated to leave the union if

- they are donors of direct or indirect transfers, and, therefore, importers of inflation,
- they are not bound by highly inelastic imports from other states in the currency union,
- they wish to shield themselves from repeated hyperinflation and uncontrollable depreciation of the common currency against other currencies,
- there is no single coordinated monetary policy,
- decentralization (and, especially, price liberalization) programs are uncoordinated among the union states,
- they wish to gain seigniorage revenues from printing their own money,
- they wish to base their privatization programs on the net present value assessment and to invite foreign direct investment by creating a stable currency and a low currency risk environment,
- they want to gain full political sovereignty and monetary autonomy.

To address the question how important these arguments are for individual former Soviet states, the empirical evidence from these nations' transition experienced primarily in 1991 and 1992 shall be presented.

IV. THE PROCESS OF MONETARY DISINTEGRATION WITHIN THE FORMER SOVIET UNION

Since the collapse of the former Soviet Union in 1991 almost all of the former Soviet republics have established plans to introduce independent currencies, thus making the ruble zone disintegration more apparent. Table 1 presents in a condensed form the degree of departure of individual states from the ruble zone by either the introduction of fully independent currency, or the introduction of a parallel currency with or without plans of transition to an independent currency, or, ultimately by a continuous affiliation with the ruble zone.

Table 1 - Degrees of Participation in the Ruble Zone by the Former Soviet Union States (as of June 1, 1993)

State	Official Currency	Parallel Currency	Ultimate (Planned) Currency	Date of Introduction of the Independent Currency
CIS-Members				
Armenia	Ruble	-	-	-
Azerbaijan	Ruble	Manat	-	-
Belorussia	Ruble	"Bel. Rubel"	-	-
Kazakhstan	Ruble	Limited own coins	-	-
Kirgizstan	Som	-	-	May 17, 1993
Moldova	Ruble	Coupons	Lei	unspecified
Russia	Ruble	-	-	-
Tajikistan	Ruble	-	-	-
Turkmenistan	Ruble	-	Manat	July 1993 (planned)
Ukraine	Ruble	Karbovanets	Hrivna	unspecified
Uzbekistan	Ruble	-	-	-
Non-Members				
Estonia	Kroon	-	-	June 22, 1992
Georgia	Ruble	Coupons	Lari	unspecified
Latvia	Ruble	Rublis	Lat	July 1993 (planned)
Lithuania	Ruble	Talon/Wagnori (coupons)	Lit	July 1993 (planned)

Source: Author's own compilation.

Table 1 presents only the state of introduction of cash, or legal tender money. Disregarded are rubles created by open reserves which either the Central Bank of Russia (CBR) granted to other republics' central banks or which the other central banks issued to domestic commercial

banks and business firms (in the following called "credit rubles"). The republics' central banks generated such credits independently until May 1993 when their ruble credit issuing rights were suspended. The separation of cash rubles and credit rubles is unique for the Soviet two-tier monetary system inherited from the past legislation of the consolidated Soviet Union. The rights of republican central banks to issue their own credit rubles meant, in fact, a departure from the ruble zone as long as their emission was not authorized by the CBR. Presently this procedure is legally restricted due to the fact that the CBR has an exclusive responsibility to regulate the broad supply of rubles according to the Commonwealth of Independent States (CIS) legislation.

As Table 1 shows, there have been two full departures from the ruble zone until June 1, 1993: Estonia and Kirgizstan with three more (Latvia, Lithuania, and Turkmenistan) scheduled for July 1993. At the same time, a number of republics have introduced transitional currencies, or ruble coupons that in essence denote gradual departures from the common currency (for details, see Appendix). The empirical reasons that prompted the states to fully, or to partially leave the ruble zone are very different and complex. They deserve a careful examination in the context of the driving forces presented above.

A very powerful role in the decision to disassociate themselves from the ruble zone has been played by the *break-up of the system of indirect transfers* in trade exercised in the former unified country. In the previous system, these transfers were mainly manifested by exports of underpriced oil and natural gas (by Russia, Turkmenistan, and, to a small extent, Azerbaijan) and by accepting overpriced imports of light industry and food industry goods (mostly by Russia)[Orlowski, 1993, pp. 4-7]. The remaining republics were net recipients of indirect transfers via either imports of underpriced energy, or exports of overpriced industrial products.

The terms "overpriced" and "underpriced" are related to deviations of the former Soviet Union domestic prices from world market prices recalculated by the official exchange rates (also sizeably distorted from the equilibrium market rate). With the ongoing process of economic and political independence of the republics in 1991 and in 1992, the indirect transfers have been substantially reduced. In 1990, such net transfer receipts constituted a significant share of the republics' GDP, being the largest for Moldova (24 percent), Lithuania (17 percent), and Georgia (16 percent)[Orlowski, 1993, p. 7]. In 1992, Russia made a series of decisions to adjust its prices of exported fuels closer to world market levels [see Noren and Watson, 1992]. Consequently, its partners faced sharply deepening trade deficits with Russia generally not compensated for by exports outside the ruble zone. These newly arising deficits

with Russia emerged for all remaining states of the former Soviet territory.² The deficit states and their firms had four options available to them in terms of compensating capital inflows. They could:

1. increase exports outside the union and convert external currencies into rubles in already functioning currency exchanges,
2. obtain credits from the CBR,
3. generate their own "republican" ruble credits,
4. receive external savings from OECD countries.

With the unprecedented depreciation of the ruble from 128 rb per US dollar at the end of May 1992 to 1,024 on May 31, 1993, vast external currency earnings were conveniently located in outside banks as a store of value. Russia's President Yeltsin's decree of October 1992 committing domestic companies to convert their hard currency foreign deposits into rubles had a very limited impact on such conversion in practice. Under such circumstances, the excess demand for rubles exhibited by deficit republics could be covered mainly by credits generated either by the CBR, or by republican central banks. The second source of the credit expansion contributed to the invasion of "republican" rubles parallel to the CBR ruble. Thus, it gave rise to the internal fracturing of the ruble zone.

The dimension of the credit expansion can be assessed from soaring CBR net liabilities to other central banks in the ruble zone as measured by the increased nominal value of other central banks' reserves with the CBR in the period between March and November 1992 (Table 2). The data reflect the 196-fold increase in the total nominal credit officially generated by the ruble zone central banks in the examined period. This credit hike was instrumental to high inflation in the ruble zone republics. Furthermore, it shall be noted that the official data in Table 2 do not precisely reflect the magnitude of credit issued by central banks of individual republics. From the scattered information on this subject, the Central Bank of Ukraine issued arbitrarily, without consultations with the CBR, 500 billion credit rubles in June 1992 alone [The Economist, September 19, 1992], and it repeated massive unauthorized ruble credit emissions at least four times in 1992 for the purpose of "unloading" payment bottlenecks, i.e. covering a shortage of rubles, to facilitate imports of Russian oil, gas and other resources [Report on Selected Problems of the World Economy, Institute of Finance, Warsaw, March 1993]. The one-time credit injection in June by the Central Bank of Ukraine accounted for about 25 percent of the total ruble supply in the republic. In the second

² See also Tarr [1993] for a preliminary assessment.

half of 1992, Russia's commercial banks repeatedly rejected accepting Ukrainian-generated credit rubles (and also Moldovian) because of their sharply declining market value in terms of other republican rubles [Kommersant, October 19, 1992, pp. 29-31].

Table 2 - Central Bank of Russia (CBR) Net Liabilities to Other Central Banks of the Ruble Zone in 1992

End of	Bln Rubles	Percentage Change from the Previous Month	Ratio of the Change in CBR Liabilities to Russia's Monthly Nominal GDP
March	6,140	-	0.8
April	61,889	907.9	10.0
May	110,695	78.9	9.6
June	178,753	61.5	9.2
July	312,391	74.8	15.7
August	309,099	-0.1	-0.3
September	609,589	97.2	21.7
October	1,177,977	93.2	25.8
November	1,212,203	2.9	1.7
Total: March-November	-	19642.7 or 196 times	12.7

Data Source: CBR, Balances of Corresponding Accounts; and Dabrowski [1993].

The uncontrollable credit creation by republican central banks sent a very strong blast to the ruble zone causing a substantial delincation of purchasing power between the "republican" rubles. The first mutual exchange market of credit rubles issued by republican central banks that allowed monitoring their exchange rates was installed in Latvia on July 20, 1992. Table 3 presents the exchange rates between "republican" rubles and Latvian rubles as reported by the Central Bank of Latvia based on quotations on the free market exchange of these pseudo-currencies in Latvia. It shall be noted that all the individual rates were set on the one-to-one level upon the Latvian market inception. Within roughly ten months the rates significantly departed from the initial parity, with the Ukrainian rubles depreciating by far the most. On the other extreme, the "appreciation" of the rubles issued by Georgia and Azerbaijan in terms of the Latvian ruble can be presumably explained by the relatively more restrictive credit

supply by their central banks, although precise data have not been disclosed to the public.³ These disproportions added to the ruble zone disintegration and promoted the formation of independent currencies.

As an attempt to control inflation, mainly before July 1992, and after the beginning of May 1993, the CBR tried to limit its lending to the republican central banks and to control their credit emission as well. But the attempts of CBR to tighten credits gave rise to unauthorized emissions of republican ruble credits, meaning creations of parallel money eroding the ruble zone from inside. The control measures adopted by the CBR included: quotas set on cash deliveries to other republics, and setting up "credit monitoring offices" at other central banks. By all means, these measures failed to effectively restrain the credit expansion.

Table 3 - "Republican" Rubles Values per Latvian Rubles
(All rates were 1.0 on July 20, 1992)

Republics	May 7, 1993
Belarus	1.9245
Lithuania	1.4483
Kazakhstan	1.6839
Azerbaijan	0.8985
Kirgizstan	1.3378
Russia	2.9000
Uzbekistan	1.6694
Georgia	0.8086
Armenia	1.1711
Turkmenistan	2.1005
Moldova	1.4224
Tajikistan	1.4905
Ukraine	22.7272*
* May 14, 1993 quote.	

Source: Central Bank of Latvia (reported by Rzeczy-
pospolita, May 9, 1993).

³ Table 3 does not allow for any estimate of cross rates between the CIS ruble rates and the Russian ruble rate because the quotations are derived from strictly bilateral supply and demand conditions. "Markets" for individual CIS rubles in Latvia are fully separated from each other.

The size of CBR direct credit to other central banks in the ruble zone is reflected by the corresponding "technical credit" accounts in Table 4. The first column presents the 1992 limit assigned by the CBR for a direct credit to other central banks. The second column reflects the magnitude of the overdraft or the available balance on this account. The latter should be understood as central banks actual credit drawing from the CBR aimed at providing further loans to facilitate imports from Russia, or used for other purposes. The size of quotas granted to individual republics appears to be rather arbitrary. For the second largest state of the CIS, Ukraine, the credit limit was set at only 15 billion rubles while for Kazakhstan it was set at 70 billion. The allowed overdraft on the Ukrainian Central Bank account reached 84 billion rubles by September 15, 1993. This policy reflects the lack of consequence and the lack of an appropriate mechanism of defending the ruble zone by the CBR.

Table 4 - CBR "Technical" Credit to Other Central Banks in the Ruble Zone (bln. rubles)

Republic	1992 Quota	Available Balance (+) or Overdraft (-) on September 15, 1992
Azerbaijan	5	+0.6
Armenia	12	+4.7
Belorussia	40	+6.1
Kazakhstan	70	-5.6
Kirgizstan	8	+2.3
Moldova	5	+1.2
Tajikistan	6	+3.9
Turkmenistan	20	+13.6
Uzbekistan	10	5.3
Ukraine	15	-84.3
Georgia	20	+10.3
Estonia	0.5	+1.3
Lithuania	-	-0.8
Latvia	0.5	+0.3

Source: Kommersant, October 19, 1992; and Niczavisimaja Gazeta, November 25, 1992.

In addition to Russia, Turkmenistan, the other net donor of indirect transfers in the previous system, also provided sizeable credits to its main export recipients due to large price increases of export natural gas. More specifically, it granted a credit of 125 billion rubles to Uzbekistan in the second half of 1993 [Business Central Europe, No. 2, June 1993, p. 55]. It seems that similar payment bottlenecks which plagued the European part of the CIS in 1992, started to penetrate the Central Asian states in 1993. Again, interruptions in credit deliveries from the states experiencing trade surpluses and the formal halt on credit emission by non-Russian central banks in May 1993 may prompt the states to leave the ruble zone.

In a close relation to uncontrollable credit give-aways in 1992 and in the first four months of 1993, the ruble zone experienced very high *inflation* rates. It is a willingness to insulate themselves from the transmission of inflation brought by the ruble that prompts the nations to seek independent currencies [see, for instance, Kommersant, October 19, 1992, p. 30]. With new, more stable currencies their governments hope to introduce more credible stabilization programs and seek external assistance for their implementation. These programs shall be customized to the specific needs for domestic economic transformation of individual republics. Thus, their monetary policies shall not be excessively geared to sterilization of repeated inflation impulses transmitted via the ruble zone. Furthermore, there are no chances to introduce a common structural adjustment program for the CIS due to a substantial incomparability of size, production patterns and financial conditions of individual republics [see Michalopoulos and Tarr, 1992].

The argument of protection against inflation seems to be the most crucial economic reason for the formation of independent currencies. Former Soviet states certainly blame the ruble zone, and indirectly, the monetary authorities of Russia as a key player in the post-Soviet monetary system, for the transmission of inflation [The Economist, May 22, 1993, pp. 78-79]. Moreover, the view that the introduction of separate currencies by all states of the former Soviet Union will play a strong anti-inflationary role and should be considered as the essential prerequisite for their independent reform programs is strongly advocated by the International Monetary Fund (IMF). The IMF officially wants most of the CIS republics to leave the ruble zone by the end of 1993, and it has promised monetary assistance to support the introduction of their new currencies [Business Central Europe, No. 2, June 1993, p. 49].

It is extremely difficult to evaluate the postulate of insulating the republics from excessive inflation in the ruble zone due to the limited reliability of the officially reported data.⁴ In

⁴ For instance, in the March 10, 1993 issue of the PlanEcon Report [Russian Economic Monitor, p. 3] Russia's 1992 retail price-based inflation was reported to be 1750 percent, while the official report of the Russian Government released at the end of March gave an inflation rate of 2600 percent.

addition, the official statistics are not adjusted for a high degree of still existing repressed inflation by price controls. Most notably, Uzbekistan, whose 1992 inflation of 840 percent was the lowest reported among the CIS states (by the PlanEcon Report) still keeps 80 percent of retail prices administratively fixed, while Russia virtually abandoned central retail price fixing with the final liberalization of oil and gasoline prices in the beginning of June 1993. Notwithstanding these obstacles, it can be argued that the states that have experienced the highest inflation rates are the most eager to leave the ruble zone [Kommersant, October 19, 1992, p. 30].

To substantiate this claim, Table 5 shows inflation differentials between individual CIS states and Russia in 1992. There is a clear evidence that the states whose inflation rates outgrew Russia's rate have already broken away from the ruble zone (Ukraine and Kirgizstan) or have formally announced intentions to do so (Azerbaijan and Belorussia). Their central banks injected large amounts of credit to facilitate essential imports from Russia, during a period when nominal ruble prices were booming (since the beginning of 1992). Those states lagging behind Russia's inflation suppressed price increases by maintaining large margins of administratively fixed prices, thus delaying an abrupt dissipation of the monetary overhang (most notably Uzbekistan), or by having extensive domestic substitutes for energy imports from Russia (mainly Turkmenistan). It has become evident that all of the republics that have not yet expressed intentions to leave the ruble zone had a negative inflation differential with Russia (lower than Russian inflation rates) in 1992.

Table 5 also presents the computation of differentials between the percentage decline of the real *net material product produced* (NMPP) in individual republics and in Russia.⁵ The Russian NMPP was estimated to have fallen by 20 percent in 1992 comparing to 1991. There is hardly any connection between the NMPP drop and the republics' eagerness to leave the ruble zone. Therefore, one may argue that real income shocks do not seem to have played an important role for the monetary affiliation with the ruble zone. The largest reductions in the real NMPP could be observed in the cases of Armenia, Tajikistan, and Azerbaijan, all of which have been inflicted with dramatic domestic conflicts. Moreover, their social and political unrest does not favor any change of currency, because the introduction of a new currency is costly. On top of this, their continuous affiliation with the ruble zone may motivate Russia to sustain the military and food assistance for them, as it has been proven in the cases of Tajikistan and Armenia.

⁵ The *net material product produced* is the total value of all material products (excluding services) produced by industrial sectors, as opposed to the *net material product used*, which is the total value of these products distributed for consumption and investment.

The availability of political and economic assistance from Russia is directly related to the willingness of individual republics to establish *political sovereignty*. The argument of political sovereignty is increasingly advanced by the states willing to leave the ruble zone [Hansson, 1993]. The republics seeking political independence from Russia, such as Estonia and Kirgizstan, have already effectively left the ruble zone, while those who strongly depend on Russia's political and military aid at the time of their domestic conflicts are bound to stay in it. On the economic side, republican central banks are also interested in a separation from the CBR monetary policy. Their full autonomy is an essential precept for an independent monetary policy geared to their specific structural adjustment needs.⁶

Table 5 - Differences in Real NMPP Growth Rates and Inflation Rates between the CIS States and Russia in 1992, in Percentage Points

Republics	Inflation ^a	Change in Real NMPP
Azerbaijan	+530	-8
Ukraine	+430	+4
Belorussia	+300	+9
Kirgizstan	+10	-6
Kazakhstan	-12	+6
Moldova	-290	-1
Tajikistan	-300	-11
Armenia	-420	-23
Turkmenistan	-770	+5
Uzbekistan	-910	+7

^aChanges in the Consumer Price Index (CPI).

Data Source: PlanEcon Report No. 5-6, 1993, pp. 2 and 3.

Political sovereignty may have played a major role in decisions to leave the ruble zone by the former Soviet republics who opted also not to join the CIS, namely: Estonia, Latvia, Lithuania, and Georgia. Despite the fact that they received substantial direct transfers

⁶ On the other side, formal departures from the ruble zone create political conflicts as well. Most dramatically, the Kirgizstan decision to introduce the som on May 14, 1993 prompted the post-communist government of Uzbekistan to close its land border, cut-off telephone lines, stop bank transfers, and even to ban purchases of the neighbor republic residents on its local market [The Economist, May 22, 1993, p. 17]. These measures were imposed to insulate its economy from the massive inflow of rubles. In May 1993 there were 55 billion rubles in circulation in Kirgizstan, of which only 6 billion had been exchanged for som [The Economist, May 29, 1993, p. 62].

[Orlowski, 1992] and indirect transfers [Orlowski, 1993] from Russia in the framework of the unified Soviet Union they were willing to sacrifice these capital inflows for the sake of political sovereignty. Their governments have announced plans to install national currencies as a manifestation of power and as a declaration of a full-scale autonomy.

Another practical argument contributing to the dissipation of the ruble zone is related to *differences in timing and sequencing of economic deregulation* among the former Soviet republics. Among the largest republics, Russia started its deregulation program first with the January 1992 price liberalization of almost 90 percent of all retail prices. Ukraine did not move in this direction until October 1992. Kazakhstan has approached price liberalization more gradually. Different moments of price liberalization released inflation shocks in the ruble zone at different times. For Russia, the biggest jump in the retail price-based inflation was reported in February 1992 (of 245 percent on the monthly basis), and a similar reaction in Ukraine did not happen until the end of 1992. Such misalignments in inflation within the common currency area have already sent (and are likely to send further) repeated inflation shocks. Consequently, there has been a substantial asymmetry between the countries in terms of optimal taxation rates, i.e. the rates that would maximize government revenues. Under such circumstances, individual states would rather prefer to have independent currencies to optimize benefits from the inflation tax because their participation in the ruble zone diminishes fiscal gains from inflation. Moreover, since inflation shocks are expected to occur repeatedly, the Oliveira-Tanzi effect is also expected to have a pervasive character. This argument is supported by the initial outburst of inflation in Russia in 1992 which caused a significant slump in tax collection within the next several months due to the overwhelming number of firms and individuals seeking tax deferrals, or possibly, evading tax payments. As Table 6 shows, the inflation shock in the first quarter of 1992 and the corresponding fiscal surplus were followed by a deepening budget deficit in the second and the third quarter of 1992, while the last quarter budget turned into a surplus.⁷

⁷ The last quarter of 1992 improvement in the fiscal balance of Russia should be, however, interpreted with a high degree of caution. In the beginning of October 1992 the CBR designated a special 500 bln ruble credit to special accounts at commercial banks called "card indexes number 2" aimed at facilitating an average for enterprise net liabilities in areas. The majority of this credit was used by enterprises to pay deferred taxes. Thus, one may argue that it was the CBR which in fact paid taxes. Without this "credit" the budget deficit would still amount roughly to 250 bln rubles.

Table 6 - Russia's Average Monthly Inflation and Cumulative Budget Deficit (-), or Surplus (+) in 1992

1992 (quarters)	Average Monthly CPI Inflation	Budget Balance in Current Rubles	Ratio of Budget Balance to GDP
I	141.5	+21.5	+1.7
I-II	21.3	-216	-5.4
I-III	12.7	-544	-6.6
I-IV	30.0	+225 est.	-

Source: CBR - Monthly Balances, and Dabrowski [1993].

A strong impetus to introduce a national currency comes in practice also from the willingness of individual governments to collect *seigniorage* (inflation tax). Following the May 1993 agreement between the CIS central banks, the CBR has exclusive rights to issue central bank credit. Thus, seigniorage revenue from this credit is effectively collected by Russia. The magnitude of such credits understood as a part of the total seigniorage was substantial in 1992. As Table 2 shows, the total net liabilities to the CBR accumulated by all central banks in the ruble zone in the period March - November 1992 amounted to 12.7 percent of Russia's GDP.⁸

Such high share of seigniorage revenues in GDP by far exceeds shares of total increases in the central bank monetary base as a share of GDP in high inflation economies. For instance, in the period 1975-1985 the highest shares of seigniorage in GDP could be observed for Italy (6.6 percent), Turkey (5.1 percent), Peru (4.9 percent), or Brazil (4.1 percent). Even Bolivia during its hyperinflation scored "only" 5.0 percent [Sachs and Larrain, 1993, p. 341]. The seigniorage in the ruble zone in 1992 resulted from the willingness of the individual central banks to generate more credits in order to transfer inflation impulses to the others. With the changes in May 1993, which were strongly influenced by the IMF and tied to its crediting conditions for the former Soviet states, seigniorage revenues from the CBR crediting of other central banks are more restricted and inflation tax spillovers among the republics are blocked by the formal ban on non-Russian central banks to issue credits. This will prompt the central banks to move into their own currencies that would allow them to generate seigniorage revenues and to partially equilibrate their fiscal deficits.

The final empirical argument for the ruble zone disintegration is directly derived from unstable, high inflation disturbances of the ruble and the resulting fast-track depreciation of

⁸ Such credit is only a part of seigniorage of central banks in the ruble zone. Even more credit (around 54 percent in the case of the CBR total credit) was generated directly to state enterprises [Financial Times, April 3/4, 1993].

the ruble vis-à-vis OECD currencies. The argument states that the unstable and falling ruble *impedes asset valuation* of firms prepared for privatization. It becomes almost impossible to conduct the revenue forecasts, the present value analysis, and the return on investment calculation in the presence of the rapidly declining ruble value parity to the US dollar and to other Western currencies. At the end of May 1992, the market ruble-per-dollar exchange rate was 128, but on June 2, 1993 this exchange rate reached 1,024, meaning an approximately 9-fold nominal depreciation of the ruble over the period of one year. Consequently, the assessment of profitability of foreign investment and joint ventures is made virtually impossible by the unpredictable ruble depreciation. Thus, asset valuation of companies assigned for privatization and ventures with foreign capital participation can only be based on a rationale not supported by any viable efficiency calculus.

Despite the rationale for the ruble zone disintegration, one may find some economic advantages of maintaining the ruble as a common currency for Russia as the dominant economic force within the system. Preserving the ruble zone may be viewed as economically beneficial to Russia for at least two reasons. Firstly, it seems to help to sustain Russia's export markets in the former Soviet republics since, at least in the short run, there are limited options to find equivalent markets outside the ruble zone for a large number of its industrial products. Secondly, Russia shall be interested in a continuation of some indirect transfers to the neighbouring republics in order to diminish their negative income shocks that would trigger an immigration influx of mostly ethnic Russians into its territory. A sudden wave of immigration would enhance Russia's unemployment and housing shortage problems.

In conclusion of the survey of the driving forces behind the ruble zone disintegration, one may state that there are almost no reasons to fix or to maintain the ruble as a common currency system. Only to the extent that trade between the republics is highly inelastic, the common currency is helpful in facilitating trade relations, yet solely in the short run. On the contrary, the sovereignty and autonomy ambitions, the maximization of seigniorage, and the introduction of new currencies to support structural adjustment and privatization programs, all favor the ruble zone disintegration. The importance of these arguments for individual republics cannot be easily established because of their different structural adjustment needs and different degrees of implementing stabilization and deregulation programs. Those republics which may find alternative recipients of their exports and alternative sources of imports (especially the European states of the former Soviet Union) may favor a faster currency separation. In addition, the republics that have advanced their deregulation programs also may want to seek a corresponding autonomy of their currencies (the Baltics and Kirgizstan). In practice, the ruble zone disintegration can be viewed as a case of "creative destruction" during the turbulent period of the initial demolition of traditional inter-republican economic links set up in the past by the mechanism of central planning. Once the

new cooperation patterns based on market conditions are established, a new institutional foundation for the interstate payments mechanism can be constructed.

V. REFORMING THE CURRENCY UNION: AN ASSESSMENT OF DIFFERENT PROPOSALS⁵

The dramatic decline of inter-republican trade in 1992 and its expected further reduction in 1993⁹ have caused deep negative income shocks. This situation prompts many both Eastern and Western economists to come forth with the proposals to improve the inter-republican payment system while, at the same time, assuming that the ruble zone will have to be eventually dismantled. On one extreme, several proposals have been launched based on the assumption of a fixed exchange rate system between the new currencies. On the other extreme, an inter-republican payments system based on flexible exchange rates between the currencies and on their full convertibility was advanced.

The most radical form of the fixed exchange rate approach is a currency board supported, among others, by Hanke and Schuler [1991], Milton Friedman [1991] and Alan Walters [1992]. A currency board is a formal institution that issues a new currency backed on a one-to-one basis by commodity money or by a foreign hard currency. Such a board cannot engage in discretionary monetary policy but stands ready to convert its currency issues into the reserve money. A general agreement on such a board for the CIS seems to imply that in the beginning a new currency is introduced pegged to the US Dollar, or to a basket of convertible currencies, parallelly to national currencies which may be more or less gradually replaced. This means in practice an introduction of a third, by far more solid currency simultaneously applied to all the member states.

The solution has several flaws. Apart from political inconveniencies, the monetary mechanism of a typical board does not guarantee financing of existing trade imbalances between the republics, because a board issues a new domestic currency only in return for the foreign currency and therefore, has no credit-creation power. This practically means, a currency board will be unlikely to facilitate Ukraine's payment crunch for the delivery of Russia's oil. In addition, the CIS is a very large economic block by far exceeding experiences of existing currency quasi-boards of small open economies such as Singapore or Hong Kong. This means that the board would have to be endowed with a fairly large stock of foreign currency [Fieleke, 1992, p. 22] despite of the galloping depreciation of the ruble. It appears unlikely that foreign governments are prepared to subscribe to the required dollar equivalent.

⁹ For instance, the Ukrainian Government in its official report before the June 18, 1993 summit between Presidents Yeltsin of Russia and Kravchuk of Ukraine anticipated a 50 percent decline of Russia's oil exports to Ukraine in 1993 comparing to 1992.

Any partial solution, meaning a quasi-repudiation of the outstanding currency with a foreign exchange backing and convertibility provided only for a newly issued currency, may not be feasible, because it will diminish the confidence in the board's new currency as well.

Another serious concern about applicability of a currency board for the CIS is derived from a diminishing mobility of labor caused by the erected national borders. If, at the same time, labor cannot accept reductions in wage rates the currency board will necessarily cause uneven unemployment rates corresponding to productivity differences between the regions. In this case, different monetary policies are desirable to restore full employment in the regions but such policies cannot be implemented with a currency board [see also Fieleke, 1992, p. 16].

Finally, in general terms, different monetary policies with an active role of credit are much needed today among the CIS states at the time of their economic transformation and deep structural adjustments. A currency board normally neither allows differentiated monetary policies tuned to the specific resource endowment of the regions. Nor is it permitted to issue credit aimed at financing trade imbalances. At least in a short-run it will not solve basic credit needs of the CIS economies. In practice, different proposals of a currency board for the CIS have been advanced in order to reduce uncontrollable money-creating and inflation-generating powers of republican central banks. But it seems more realistic to put pressures on central banks to control the credit expansion by conditioning further external assistance upon it.

An alternative solution to a currency board which is also based on the fixed exchange rate system is a multilateral payments union as advanced by Bofinger and Gros [1992]. This arrangement is based on the general foundation of the European Monetary System and is claimed by the authors to be applicable to the CIS. According to the proposal, independent CIS currencies are linked by a fixed exchange rate system and could be pegged to Western currencies, preferably to the European Currency Unit, via the Russian Ruble. Simultaneously, the payments union could be expected to act as a multilateral clearing house and as a provider of credit facilitating temporary bottlenecks in inter-state payments [Bofinger and Gros, 1992, pp. 10-17]. However, given the present state of affairs, the solution looks increasingly implausible for at least two reasons. Firstly, such an arrangement requires a full reserve backing (as a currency board does as well) since it is bound together by fixed exchange rates. Bofinger and Gros estimate the required external injection of such reserves at 3-4 billion dollars. Observing the size of payment arrears that emerged in the CIS in 1992 and in 1993, this hard currency endowment may, however, be inadequate. Alternatively, Russia, as the dominant state of the system, will have to designate such reserves to the union, but given its present political pressures and income decline, it probably has neither incentives nor resources to do so. Secondly, the multilateral payments union requires establishing fully coordinated, if not uniform, monetary and fiscal policies. Most of all, it would require Russia

to control inflation and to establish credible credit and cash supply policies. So far, these conditions have not been met. Furthermore, uniformity of monetary and fiscal policies implies directly exogenously determined, non-autonomous transformation programs that may not be consistent with the heterogeneity of resource endowment in individual states.

On the assumption that it will not be possible to introduce fiscal and monetary discipline which is required for the ruble convertibility, several economists have advanced another currency arrangement for the CIS generally described as a *parallel currency* [Kazmin and Tsimailo, 1991; and Soros, 1991]. The proposed parallel currency would be a new, fully convertible currency backed by foreign reserves that would circulate together with the indefinitely inconvertible ruble. Supply of the new convertible currency shall be regulated by an independent international institution [according to Soros, 1991], and if the exchange rate between the new currency and the ruble is fixed such a currency would be simply issued within the framework of a currency board. Thus, with fixed rates, the parallel currency solution does not differ from the currency board. The excess demand for the new currency would persist as long as severe current account deficits between the republics were experienced. But with flexible rates between the ruble and the new currency, balance of payments disequilibria would be more easily corrected. There are differences in the proposed ways of introducing a parallel currency. Kazmin and Tsimailo [1991] suggest to issue the new currency by granting credits to enterprises, but only to those which produce consumer goods, in order to promote their output. Alternatively, Soros [1991] postulates to give away to each resident an amount of 10 to 15 US Dollars every month without any equivalent. Today, this translates to more than an average monthly salary in rubles. To enterprises, Soros proposes to grant a lump-sum in "Soviet ECU's". Whatever the merits of these proposals are, the new parallel currencies seem unlikely to solve liquidity problems related to serious current account imbalances between the republics.

The introduction of yet another currency seems likely to promote speculation, and would result in high costs of currency conversion unnecessary to be borne within the same economic system. In addition, selective give-aways of the new currency only to consumer goods producers would probably result in a discrimination of other, perhaps more effective producers. Again, a parallel currency solution would require uniform fiscal and monetary policies because of the need for common rules of its introduction. Such unified policies may not be suitable for structural adjustment programs customized to the resource endowment of individual republics.

The developments that contributed to the disintegration of the ruble zone described in Section IV seem to suggest that the most plausible solution to the problem of repairing the ailing payments and currency system among the post-Soviet states consists of a new inter-state payment mechanism (ISPM). Such mechanism should be based on new, independent national

currencies, which are fully convertible at flexible exchange rates. Valuable suggestions for the construction of such a mechanism are presented by Fischer [1992, pp. 44-45]. The case for an inter-state payment mechanism is based upon the advantage of convertibility over a payments union. Main reservations against a payments union are related to its prolonged central steering of trade and payments. Lessons substantiating these reservations can be drawn from the European Payments Union (EPU) in the 1950s, where the EPU played an active role in directly managing trade and payments for an extended period of time. A centralized institution similar to the EPU would be against the general trend toward economic decentralization that is taking place in the post-Soviet economic system. It would not guarantee elimination of market distortions in inter-republican economic relationships. On the other side, convertibility between independent currencies with flexible exchange rates is consistent with the general character of economic reforms. However, at least in the short-run, a problem of financing suddenly erupting severe trade deficits arises. To facilitate the settlement of payments imbalances, a new inter-state payments mechanism (ISPM) is proposed by Fischer [1992]. Desirably, it should be a temporary measure in order not to perpetuate concessional elements in the republican economic relations. Providing a short-term credit for the republics that would unload payment bottlenecks is a primary function of such a mechanism. The rationale behind it is based on three precepts. Firstly, the ISPM would allow to economize on central banks reserves. Secondly, it would take away credit facilitating responsibilities from the CBR, which, by itself has been inclined to give a priority to crediting Russian economic institutions first and thereby discriminating against other republics [Raport o Wybranych Problemach Gospodarki Swiatowej, Institute of Finance - Warsaw, 1993]. Thirdly, it would probably manage short-term credit better than the rudimentary CIS banking system with too many small, technically unprepared, and undercapitalized banks.¹⁰

A necessary condition for the ISPM is that the republican central banks will have to agree on mutual credit limits to prevent credit constraints and imperfections stemming from bilateral agreements on trade [Fischer, 1992, p. 44] and from inter-state trade protocols containing trade quotas on numerous commodities. A possible source of reserves for the ISPM short-term financing may be provided by external assistance, however, with a matching participation of republican central banks so that the republican authorities will assume a partial responsibility for prudent credit management. The central banks cooperation seems to be necessary to ensure a temporary nature of the ISPM. If external assistance was the only source of the ISPM reserves, the central banks and other local economic institutions would very likely treat the scheme as a permanent source of concessionary funding. Such a

¹⁰ See "Banking and Investment Survey" [Business Central Europe, Nr. 2, June 1993]. For illustration to the problem it takes approximately 6 months to clear a single check between two banks of the CIS.

treatment would create a moral hazard problem and would delay the process of necessary structural adjustments.

It is imperative that the ISPM will not be sought as a source of long-term financing. Direct investment financing and eventual long-term borrowing by the republics shall be facilitated by inter-governmental agreements [Fischer, 1992, p. 45], and by project funding through IMF, World Bank, EBRD, and other specialized institutions. This approach would very likely promote economic transformation, while assigning long-term financing functions to ISPM would rather delay it. In this sense, the ISPM should not interfere with national monetary policies that would play an active role in stipulation of structural adjustment.

Furthermore, the ISPM shall be also treated as a facility assisting the establishment of a system of independent, fully convertible currencies backed by adequate reserves. It appears, that the current rapid destruction of inter-republican trade links is not favorable for a creation of convertibility of new currencies at flexible exchange rates (see Appendix). It causes serious short-term disequilibria and destabilizing currency speculation that need to be sterilized by short term capital transfers. Constructed for this purpose, the ISPM would add to the creative disintegration of the ruble zone by cushioning short-term negative income shocks. Consequently, it would prevent currency overshooting and promote realignments of exchange rates between new currencies.

So far, by mid-1993 a very limited ground has been established for satisfactory arrangements defending uninterrupted payments within the disintegrating ruble zone. Perhaps one of the main reasons for the lack of reform is the isolation of central banks from governments which in fact are the main negotiators of CIS agreements. While being in charge of monetary policy, the CBR officially reports to the Parliament of the Russian Federation and not to the President and the Ministry of Finance. Among the formal agreements between the CIS states that have addressed the issue of inter-state payments and the ruble zone are the Bishkiek Agreement of October 9, 1992 and the Moscow CIS Summit Protocol of May 14, 1993. Both of them acknowledge a support for maintaining the ruble zone and for establishing a mechanism facilitating the bilateral ruble clearing system between central banks as a temporary solution to a creation of the multilateral clearing bank called The Inter-Economic Bank (Miczgosudarstviennyj Bank)[Kommersant, October 19, 1992, p. 29]. The Agreements permit ruble surrogates (Bishkiek) and new currencies (Moscow) and express intentions to establish an Inter-Nation Central Bank that would control the emission of Central Bank credits, while the emission of cash will be left for the CBR. More precise functions of such a Bank have not been defined and no agreement on the decision-making within its governing body has been reached (the CBR wants more than one vote in it).

It seems desirable, that the CIS states should formally acknowledge the ruble zone disintegration and work out a program of establishing exchange markets for independent

currencies. The new system will have to abandon the two-tier financing scheme, i.e. a separation of credit and cash, allowing each country to freely exchange different monetary assets. With the assistance of the IMF, the governments including central banks should more actively attempt to establish the ISPM as an institution facilitating a short-term credit for trade financing.

VI. CONCLUSION

The ruble zone disintegration is at the present stage irreversible. Most of the independent republics are either actively introducing new currencies, or establishing plans to do so. Those states heavily integrated with Russia's economy, most notably Kazakhstan, may consider delaying such plans because a currency separation without an immediately guaranteed full convertibility to the ruble would cause severe trade interruptions and income shocks. Even Russia, unable to be competitive on international markets for many of its exports traded within the CIS, has some incentives to maintain the ruble zone.

But the willingness to decouple their economies from the ruble inflation and to pursue fully autonomous stabilization policies geared to their specific resource endowment and transformation process is a more powerful argument for the republics to leave the ruble zone. Additional pressures on dismantling the ruble zone are put by the IMF in its credit conditioning policy. These influences are accompanied by the willingness to gain more autonomy in designing the economic policy and by a thirst to collect seigniorage revenues from their own money creation. They create stronger incentives for the republics to secede from the monetary union than the economic rationale to stay in it because of the short-term inelasticity of trade linkages.

Under such circumstances, it seems appropriate for the republics to accept the introduction of new currencies that shall be convertible for trade and capital transactions and exchanged at flexible rates to avoid transmission of inflation shocks. Simultaneously, no restrictions on inter-republican capital flight shall be adopted. For the existing impediments on capital exchange, such as temporary bans of the central bank on acceptance of new state currencies, mutual agreements on their elimination should be reached.

Only after independent and convertible currencies are erected and their effective exchange mechanism is established, steps toward new currency arrangements can be undertaken. Future attempts to create a CIS currency union or at least a CIS currency exchange mechanism shall be conditioned upon a successful coordination of monetary and fiscal policies, and synchronization of privatization and structural adjustment programs. Then, perhaps, an appropriate platform for currency arrangements based on fixed exchange rates may be constructed. But this situation seems to be presently very distant.

APPENDIX: TYPES OF NATIONAL CURRENCIES IN THE FORMER SOVIET UNION

Countries may choose different forms of separation from the currency union by introducing different types of their own currencies, ranging from a fully independent currency, via coupons transitional to independent currencies, to parallel surrogate currencies. This scale of classification is based on the degree of isolation from the common currency with the separate, fully independent money meaning the strongest severance. The choice of the degree of separation by individual states from the common currency zone is dependent upon the strength, or inelasticity of economic linkages with the countries that remain in it. If a single state is able to find early enough recipients of its exportables and suppliers of its imported materials outside the zone, and also if it expects large additional capital transfers from outside it may pursue a higher degree of currency independence. In such a case, there is a chance that the negative income shock related to balance of payments disturbances will be much milder. Also, the country must have sufficient gold and hard currency reserves to guarantee the new currency convertibility.

As of June 1993 an introduction of a *fully independent currency* has been finalized by Estonia and Kirgizstan, as it was shown in Table 1. Estonia was able to find alternative trading partners, primarily among the countries bordering the Baltic Sea, with Finland taking a lead in its current account and capital account transactions in 1992. In the second half of May 1992, the Estonian Central Bank (Eesti Pank) started the process of introduction of the Kroon [Eesti Pank, The Monetary Reform of Estonia, 1992].

The Kroon was declared a convertible currency which emission became dependent on changes in the country's gold and currency reserves estimated to be 120 million US Dollars at that time. Approximately 30 percent of the Kroon emission was backed by the reserves. The Kroon exchange rate was pegged to the German Mark at the 8 Kroon per 1 DM rate with the permitted band of fluctuations plus-minus three percent. After one year, the Estonian decision is generally viewed as a success. Inflation become very stable (after an initial mild shock in June 1992) and real income has started to grow in 1993. The peg has been successfully maintained and the Kroon has not yet been devaluated. On the other side, the Estonian trade with Russia has virtually collapsed and the country's ruble debt to Russia has increased, but only to about 4 billion rubles in 1992. The danger of the reform is that if Estonia is not able to repay this debt by exporting to Russia, and if Russia demands its repayment in hard currencies or gold the foundation of the monetary reform may be somewhat shaken. So far such situation has not yet emerged.

The Kirgizstan case is somewhat different. Its central bank rather suddenly announced the introduction of the som giving the residents a week to exchange rubles at 200 rb-per-som rate [The Economist, May 29, 1993, p. 62]. The country seems not to have short-term trade

alternatives that are available to Estonia, and its international reserves are probably insufficient to tie changes in the som supply to their accumulation. The initial reports seem to indicate that the main rationale for the reform was to insulate the state economy from the ruble zone inflation. Kirgizstan expected to transfer excess supply of rubles to other republics. Yet, the initial exchange rate set at four som per 1 US Dollar has not been sustainable. One month later, on June 23, 1993, the rate was already 4.35. The banking infrastructure of the country has also been poor resulting in the lack of deliveries of the som to remote areas of the country in the designated one week period for the ruble exchange. Perhaps the most important initial obstacle to the reform is a distrust of the economic agents in the new currency. They do not believe the currency may lower inflationary pressures [Frankfurter Allgemeine Zeitung, June 4, 1993, p. 17].

The experiences of these two former Soviet republics with the currency separation from the ruble allow to draw several conclusions in terms of conditions required for a successful monetary reform:

- the country must have alternative sources of currency earnings from exports outside the ruble zone,
- the country must be provided with sufficient gold and hard currency reserves, either through short-term and long-term capital inflows or through foreign assistance,
- the country must rapidly build up a banking system able to facilitate the reform [Sachs and Lipton, 1993],
- the reform, its main goals, objectives and mechanics, must be consistent and reasonable to economic agents,
- the monetary authority must have a credible program of further monetary policy actions following the currency introduction.

The key advantages of choosing fully independent currencies are consistent with a fulfillment of the before examined postulates for the currency separation, such as the insulation from the ruble zone inflation, a gain of a full monetary autonomy, seigniorage revenues, or uninterrupted tax collection by avoidance of the Oliveira-Tanzi effect. Disadvantages of the extreme form of the currency separation are consistent with a risk of excessive income shocks if the country is not able to find alternative trading partners to Russia and to other members of the ruble zone. There is always a risk of the reform failure if the above stated other conditions for the currency separation are not met in practice.

Among the factors that would undermine the reform, the inflation differential shall be placed on the forefront. If the republic breaking away from the ruble zone fails to control inflation

better than the CBR, the domestic currency may turn out to be a poor store of value, and after some time, it may be also useless as a unit of account and as a medium of exchange [Calvo and Végh, 1992, pp. 1-2]. Consequently, the "good" foreign money (ruble) may drive out the "bad" domestic money.

There is also an additional disadvantage of the complete currency separation related to the costs of printing money and to the transaction costs of exchanging money. Yet, with the tremendous instability of the ruble, these costs cannot be expected to outweigh the benefits of the money separation, at least for most of the republics who are willing to adopt stabilizing monetary and fiscal policies.

A half-way option for a currency autonomy is the introduction of *coupons*. Formally, the republics which adopted them pronounced their action as a temporary bridge to the introduction of a fully independent currency. But in practice at least Ukraine and the Baltics had also an important different motive. The early 1992 price liberalization in Russia substantially boosted ruble prices of most of consumer goods on its territory. This, in turn, gave incentives for Ukrainian companies and residents to sell goods in Russia. Such shipments of goods to Moscow and other Russia's cities contributed to a drainage of many consumer products from domestic markets and attributed to speculative sales. As a defense mechanism against market shortages and their eventual political consequences, Ukraine decided to introduce coupons. The mechanism of their initiation was based on a wage compensation in coupons for workers which was lower than the parallelly received ruble wage. Consequently, many consumer purchases required payments of matching numbers of rubles and coupons [Hansson, 1993, p. 169]. The coupons, as they were built into the compensation system, were equivalent to a cut in real wages. For a short period of time after their introduction, they indeed contributed to the improvement of local market supplies and their values were traded at a premium to the ruble, but after a few months their market trading price fell and they were finally abandoned [ibid, 1993, p. 170].

A widely applied form of currency separation in the former Soviet Union are *parallel*, or *surrogate currencies*. They have generally assumed two forms in response to the continuously maintained two-tier financial system: republican credit, and national cash surrogates. On the credit side, their market exchange rates have gone in very different directions, as shown in Table 3. Their apparent deviations from the initial parity indicate that there are no market fundamentals for maintaining fixed exchange rates between Russia's credits, and republican credits. Main reasons for this situation can be sought in inconsistencies between directions of monetary policies of individual central banks and in the lack of reserve transfers that would be required to support fixed exchange rates.

Because of their temporary, or transitory nature both surrogate cash and republican credits do not guarantee a more stable system-wide monetary policy. They give rise to speculative

expectations on the currency depreciation and thus may absorb even more inflation than the one transmitted via the ruble zone. The uncertainty of their status may lead to their excessive depreciation and to reinjection of inflation. On the other side, their main advantage is a lower cost of introduction than the cost of fully independent currencies. They presumably also create a lower degree of transaction risk in the national economy since they have to be internally exchanged, or even pegged to the parallelly existing rubles. Both the coupons and the surrogate currencies shall be rather dismissed as a viable alternative to separate currencies once international transactions begin to play a more significant role in these economies.

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