Costs and Benefits of Monetary Disintegration:

The Czech-Slovak Case

Katerina Šmídková *)

1. Introduction

After The Velvet Revolution in 1989, Czechoslovakia has proved that "A Velvet divorce" is also possible. At the end of 1992, the process of political disintegration resulted in the split of the Czechoslovak Republic, and the Czech and Slovak Republics then started their co-existence of two independent interdependent republics. The political dissolution followed by the disintegration of the two national economies highlighted the problem of designing the process of monetary disintegration as one of the key issues in defining the new Czech-Slovak relationship.

It was very difficult to decide what should weigh more - whether the interdependence of two republics built in the period of seventy years of a common state or the newly gained political independence. On the one hand, the sudden monetary disintegration was expected to be costly for two highly interdependent economies since it would have replaced the common currency by two inconvertible currencies with similar consequences to those of the CMEA collapse. On the other hand, maintaining of a currency

---

*) Kateøina Šmídková, M.Sc., Head of the Macro-modelling Unit, Institute of Economics, Czech National Bank. The views expressed in the paper are those of the author, and do not necessarily represent those of the Czech National Bank.

union in the longer-term would have required very close economic as well as political coordination that did not appear to be realistic for a "just divorced couple".

As described in the second section, a middle course was accepted when designing the monetary disintegration since two intermediate stages were implemented on the way towards a standard payment system in convertible currencies. The fate of the Czech-Slovak currency union - the first stage of disintegration - is described with its unexpectedly short-lived existence. Subsequently, a brief history of the Czech-Slovak clearing payment union implemented as the second intermediate stage is summarized together with the remaining steps in order to reach the target system. The third section analyzes the costs and benefits of monetary disintegration looking at the Czech-Slovak experience in the first two years of independence. The general costs and benefits of the disintegration process are weighed as well as particular ones imposed by specific features of the Czech-Slovak solution to the monetary disintegration problem. In the last section, it is concluded that economic and political constraints crucially affected the potential costs and benefits of monetary disintegration in such a way that gradual monetary disintegration was superior to a currency union or a sudden monetary disintegration.

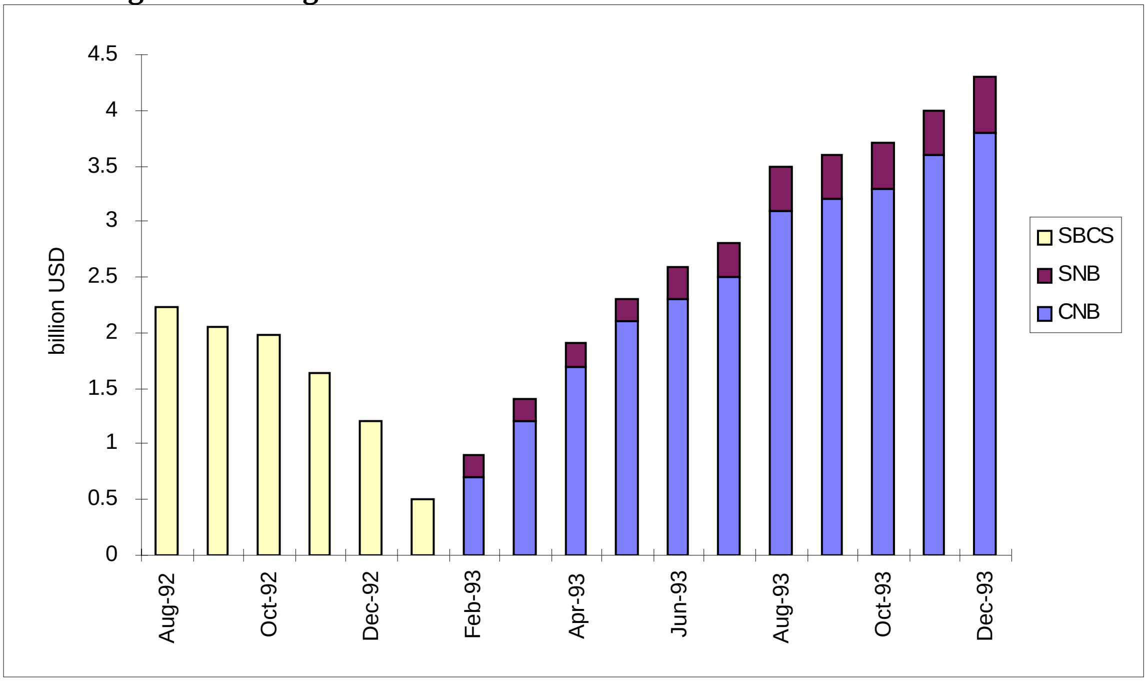
2. The Czech-Slovak Monetary Disintegration

In 1992, the Czech and Slovak authorities declared their desire to conduct independent national monetary and exchange-rate policies as well as to take steps toward full convertibility separately. Consequently, the development of a standard payment system between the Czech and Slovak Republics conducted in convertible currencies became a target in the area of monetary cooperation. The target system was not implemented immediately. The gradual approach was accepted in order to avoid a costly fall in mutual trade similar to the trade decline when the Council for Mutual Economic Assistance (CMEA) collapsed. The monetary disintegration of the former Czechoslovakia was sequenced in two intermediate stages - currency union and payment clearing union.

In October 1992, the Monetary Arrangement was signed between the Czech and Slovak Republics establishing the Czech-Slovak currency union. The aims of the arrangement were to ensure a stability of the Czechoslovak crown as a common currency and to provide a framework for further economic cooperation. The arrangement contained four escape clauses any of which would allow for either member to abandon the union. The union could be abandoned if the deficit of one of the republic members exceeded 10 percent of annual republic revenues; the fall in foreign reserves of one of the central banks exceeded the value of that month's import in convertible currencies; speculative capital flows from one republic to the other exceeded 5 percent of total bank deposits; the Monetary council could not agree on a common monetary policy. The council was established by the Czech National Bank (CNB) and the National Bank of Slovakia (NBS), as successors of the central bank of the former Czechoslovakia (SBCS), in order to negotiate common monetary and exchange-rate policies as well as reserve requirements.

Although the arrangement signaled a temporary life for the union, it was expected to last for six months. However, the role of the Monetary council became extremely difficult. Not only was the union burdened with longer-term asymmetric economic problems but also the external stability of common currency was eroded by expectations of the monetary dissolution rapidly. Large capital outflows hastened the implementation of the second step of monetary disintegration (See Figure 1). The Czech and Slovak crowns were separated after six weeks and the currency union was replaced by a payment clearing union in February 1993.

Figure 1. Foreign Reserves of Central Banks in 1993



Note: The fall of foreign reserves that began in November 1992 was not stopped by the split of Czechoslovakia as had been expected. Both central banks faced a sharp fall in reserves during the time of the currency union and their total reserves were lower than one billion USD in February. Foreign commercial banks stopped quoting the Czechoslovak crown. After the currency dissolution, foreign reserves recovered quite rapidly in the Czech Republic. It took much longer for Slovak reserves to reach the pre-split level.
Data source: Financial Statistical Information (1992), SBCS. Monetary Indicators (1993), CNB.

At the beginning of 1995, this second intermediate stage of monetary disintegration is still being used. All payments between republics are regulated by the Payments Agreement that recognizes three regimes of transactions. First, the majority of transactions belongs to the clearing regime that defines the Czech and Slovak crowns as independent and inconvertible currencies. It is available to all legal and physical persons for their Czech-Slovak transactions. It is worth noting that transactions settled through clearing are not restricted only to trade and service transactions. Transfer payments or capital account transactions (such as purchases and sales of financial assets) belong to the clearing regime as well.

These transactions are settled in domestic national currencies at a clearing exchange rate derived from the cross-exchange rate of the Czech and Slovak crowns vis-a-vis the ECU. Central banks committed themselves to maintaining the deviation of the clearing rate from the cross-exchange rate with 5 percent bands[1]. It implies that the clearing mechanism provides a relatively stable exchange rate between the two national currencies (given both republics use nominal exchange rates as nominal anchors) since the exchange rate can be altered to a different level only if one of the currencies is revalued or devalued vis-a-vis the ECU. Moreover, the transactions from the period before February 1993 that were denominated in the Czechoslovak crown are settled through the "old clearing account" at the fixed exchange rate of one to one. The second regime defined by the Arrangement is the "re-export" regime into which the re-sales of goods imported from the third countries fall. These transactions can only be settled in convertible currencies in order to avoid leakages of instability of foreign reserves between member countries. The third regime of transactions for reciprocal tourism appeared to be minor. According to the Arrangement, private persons in both the Czech and Slovak Republics are allowed to exchange national currencies directly for paying their tourist expenditures. Both Czech and Slovak financial institutions can trade national currencies among themselves and with private persons at a

---

[1] Hence, according to the Payments Arrangement, the maximum deviation of both rates is ten percent in the case that one of the central banks exploits fully the possibility of clearing revaluation and the other bank uses clearing devaluation maximally.

floating rate determined by supply and demand. However, financial institutions prefer to follow the clearing rate and to restrict trading with national currencies in the case of shortages since holdings of national inconvertible currencies deteriorate the quality of their portfolio.

Figure 2. Example of the clearing transaction

Slovak Commercial Bank

Assets	Liabilities
- 110 (reserves with NBS)	-110 (private deposit)

NBS

Assets	Liabilities
-110 (credit to government)	-110 (bank's deposit)

Czech Commercial Bank

Assets	Liabilities
+100 (reserves with CNB)	+100 (private deposit)

CNB

Assets	Liabilities
+100 (credit to government)	+100 (bank's deposit)

Slovak Government

Revenues	Expenses
+110 (clearing account)	

Czech Government

Revenues	Expenses
	+100 (clearing account)

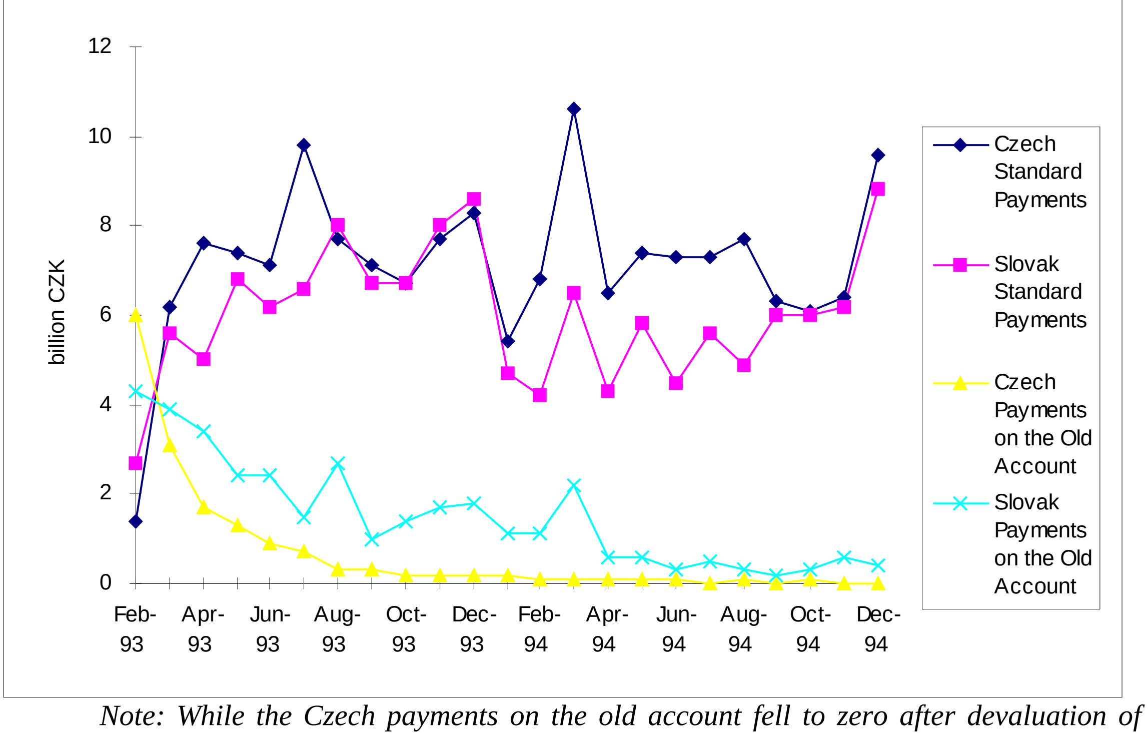
Note: Suppose that the only transaction that took place was a payment by a Slovak importer for Czech goods (worth 100 Czech crowns or 110 Slovak crowns - given the exchange rate) via his account in the commercial bank. The clearing center of NBS completed the operation by announcing it to the center of CNB and by reducing the credit granted to the government. Hence the payment entered the budget of the Slovak government on the revenue side. Similarly, since the payment was announced to the CNB clearing center, CNB made the payment to the exporter's commercial bank and added it to the budget expenses. As a result, the Czech government budget is in deficit, and the Czech Republic became a clearing creditor.

As was said, the majority of transactions belong to the clearing regime. Using the framework of the inter-bank clearing system, the Czech and Slovak central banks established two clearing accounts guaranteed by the governments. The mechanism uses a monthly settlement period and allows for asymmetry in national payments up to 130 million

ECU. If this credit limit is exceeded by either member country, the difference has to be settled in convertible currencies in one month. It implies that with permanent asymmetry in payments, the republic budget of a creditor is burdened with “non-standard” expenses of 130 million ECU to support the mechanism (See Figure 2).

During the two years of the Czech-Slovak clearing union’s existence, the amount of standard transactions settled via the clearing mechanism was quite stable after the initial increase during which economic agents accommodated the shock of currency dissolution. On the contrary, the importance of the old account was falling as pre-split inter-republic debts were paid or fell into the category of bad loans (See Figure 3).

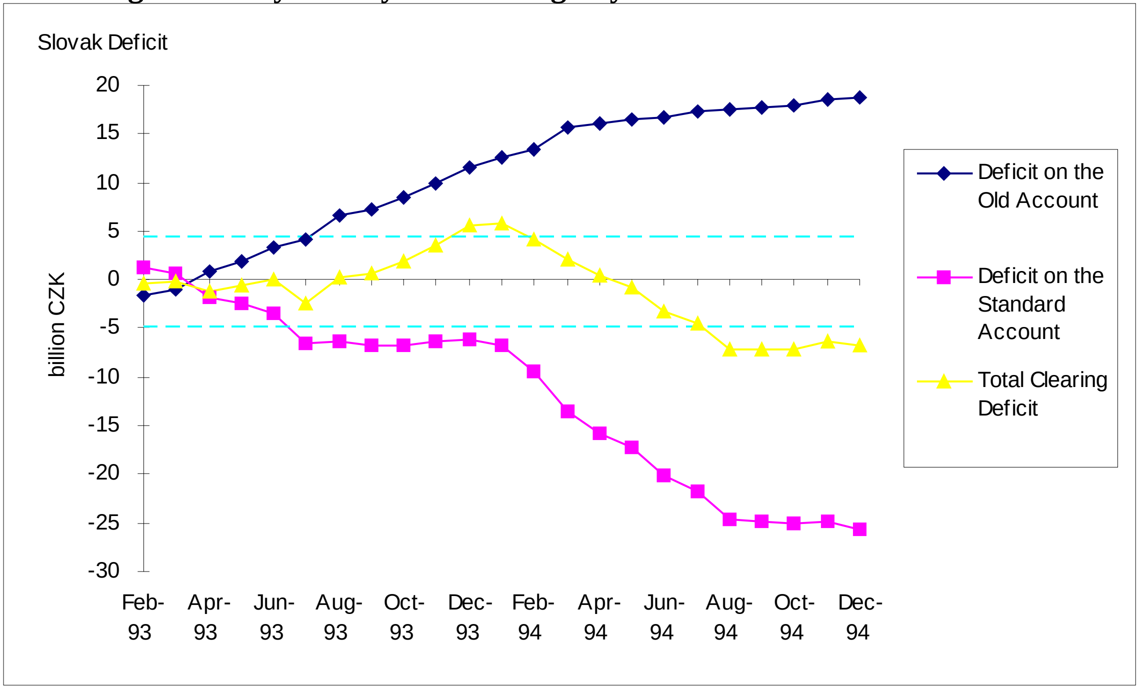
Figure 3. The Czech-Slovak Clearing Payments



Note: While the Czech payments on the old account fell to zero after devaluation of the Slovak crown, the Slovak payments on the old account decreased more slowly due to relatively longer lags in payments in Slovakia and due to exchange-rate speculations. Standard payments fluctuated on a non-falling trend signaling that the Czech-Slovak transactions did not deteriorate by the monetary disintegration.
Data source: Monetary Indicators (1993, 1994), CNB.

The interesting feature of the clearing payments was their asymmetry. While in 1993 the Slovak Republic was a debtor country, in 1994 the Czech Republic started exceeding its credit limit (See Figure 4).

Figure 4. Asymmetry in Clearing Payments



Note: The cumulative Slovak deficit on the old account increased each month as the Slovak payments exceeded the Czech ones due to the favorable exchange rate of one to one. On the contrary, settlements of standard clearing payments resulted into the Czech cumulative deficit that was accelerated in the middle of 1994 by Slovak trade barriers and financial transactions. The total cumulative deficit, obtained as a sum of standard and old-account deficits, exceeded the credit limit of 4.6 billion Czech crowns (CZK) for the first time in December on the Slovak side. In the second half of 1994 the asymmetry became opposite and the Czech Republic started to be a debtor. As a result, the Slovak Republic paid 2.8 billion CZK in 1993, and the Czech total payment was 12.2 billion CZK in 1994.
Data source: Monetary Indicators (1993, 1994), CNB.

In 1993, the Slovak deficit grew because of a trade deficit as well as financial transfers originating from the assets-division process between the republics. Due to the deficit on the Slovak balance of payments, the Slovak crown was devalued in July 1993, and temporary trade barriers were implemented in February 1994. Consequently, the Czech-

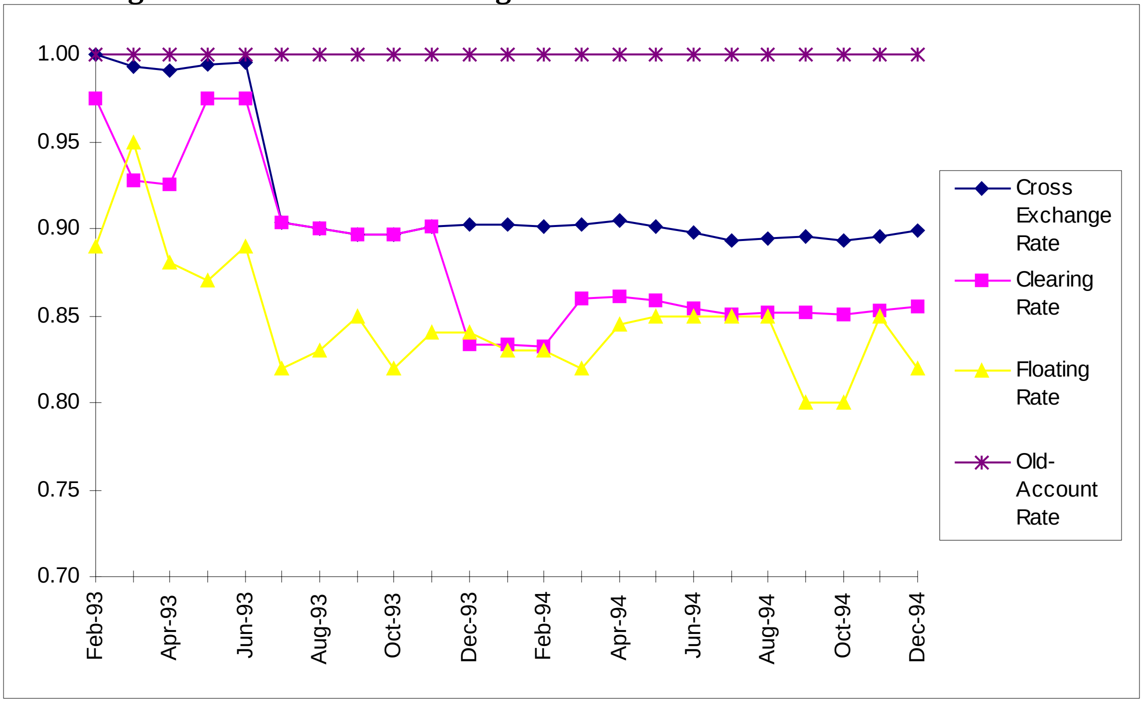
Slovak trade balance started to work in the opposite direction. Moreover, the Czech clearing deficit was enlarged by capital account transactions as financial institutions started to some extent allocating their resources within the payment clearing union by considering interest rate differentials.

Hence both republic budgets were burdened successively when guaranteeing the clearing payments up to the limit. Firstly, the Czech budget surplus was reduced from 6.6 to 1.1 billion Czech crowns with clearing expenses and the Slovak budget deficit was lowered from 28.5 to 23 billion Slovak crowns in 1993. Secondly, the Slovak budget deficit increased from 14.6 to 22 billion Slovak crowns and the Czech budget surplus grew from 3.7 to 10.4 billion Czech crowns in 1994.

The advantage of the payment clearing union, as defined by the Arrangement, is that a gradual change toward a standard payment system is not difficult. The following steps remain to complete the process. Firstly, the abolishment of the old account is inevitable in order to close the period of distinguishing between the old and new inter-republic transactions by unifying two clearing exchange rates. Secondly, it is necessary to stop using clearing revaluation or devaluation since it is a non-standard policy tool and the cross-exchange rate of crowns vis-a-vis the ECU is the “natural” exchange rate. Both steps are important to eliminate room for speculations resulting from the multiple-exchange rate that emerged mainly from the devaluation of the Slovak crown after which alternative exchange rates started diverging (See Figure 5).

Thirdly, the government involvement in the process is to be eliminated by canceling the credit limit and using unconditional regular settlements. As a result, the republic budgets would not suffer from non-standard expenses or revenues, and reserves in convertible currencies would accommodate asymmetries instead. Fourthly, since the Czech crown was planned to become convertible according to the IMF definition, it is possible for the Czech Republic to start clearing transactions in domestic currency.

Figure 5. Alternative Exchange Rates



Note: All exchange rates are defined as prices of the Czech crown in terms of the Slovak crown. The cross exchange rate is a ratio of two exchange rates vis-a-vis the ECU - (CZK/ECU)/(SK/ECU) - as reported by central banks. The clearing rate deviated from the cross rate if one of the central banks (or both) used clearing revaluation/devaluation in order to equilibrate clearing payments. For example, in December 1993, there was a clearing devaluation of the Slovak crown. The floating rate was taken from the exchange list of the Czech Savings Bank - one of the biggest banks in the Czech Republic (rates quoted by other banks were similar). The old-account rate was constantly one to one as was fixed by the Arrangement.
Data source: Hospodáøské Noviny (Economic News), different issues (1993,1994).

After accomplishing the above-named steps, the Czech-Slovak monetary disintegration will reach its target stage allowing both members to conduct fully independent monetary and exchange-rate policies.

3. Costs And Benefits of Monetary Disintegration

According to the Monetary Arrangement from October 1992, the Czech and Slovak Republics continued using the old Czechoslovak crown as a common currency from January 1993. The Monetary Council was formulating common monetary and exchange-rate policies. Hence the initial position gives us a rationale to start our analysis of monetary disintegration using the cost-benefit framework developed for currency unions. In order to analyze monetary disintegration it can be applied in the following way. Benefits of currency union are understood as potential costs of monetary disintegration. The potential costs would become the real ones only if benefits are able to be realized given economic and political constrains (without which monetary disintegration is not likely to take place). For example, common currency inherited from the previously common state is only beneficial if it is stable and credible. Similarly, costs imposed by currency union are understood as potential benefits of monetary disintegration.

According to the cost-benefit structure suggested in the studies analyzing monetary integration[2], countries going through monetary disintegration lose common currency, integrated financial market and to some extent economic integration. Moreover, it is necessary to define exchange-rate system between two newly introduced currencies that is costly in terms of information searching. However, countries gain national sovereignty since they need not coordinate monetary, fiscal and exchange-rate policies closely. Also, they benefit from a new adjustment mechanism since the exchange-rate between newly established currencies is available. Benefits and costs are of varying importance in the structure. On the one hand, costs of disintegration weigh more, the higher a degree of interdependence among the union members was. Costs are lowered with an unstable common currency not supported by any supranational reserve institution, with an under-developed financial market or with economic disintegration. On the other hand, benefits of disintegration are increased with permanent asymmetries that are not reduced sufficiently, either by some adjustment mechanism (labor and capital mobility, nominal price and income flexibility) or by an absorption mechanism such as a federal fiscal transfer system. Consequently, the independent policies are necessary for reaching both external and internal balances.

3.1. Weighing Costs

The costs and benefits of the Czech-Slovak monetary disintegration were determined by several important factors: a long period of common history, the burdens inherited from a centrally planned system, the transition towards market economies and the political divergence as a result of the 1992 elections. Let us first weigh the costs by answering the following four questions. Did monetary disintegration induce the economic disintegration and how important was the mutual trade? How costly was a loss of common currency? To what extent did the monetary disintegration distort the Czech-Slovak financial market? What were the specific costs of applied intermediate stages of the monetary disintegration?

---

[2] The paragraph summary is based on the following studies: Ishiyama (1978), Willet and Tower (1970), Taylor and Masson (1992) and Gandolfo(1992).

Due to more than seventy years of co-existence within Czechoslovakia, economic interdependence between the two republics was high. In 1992, Slovak exports to the Czech Republic accounted for 46 percent of its total exports and Czech exports to Slovakia accounted for 31 percent of total Czech exports. Moreover, the 1992 statistics did not record all Czech-Slovak trade transactions because intra-firm transactions (Czech-Slovak enterprises) were not often included. Since both republics were already burdened with transitional recession, it was important not to deepen it by any additional fall in outputs due to a collapse in Czech-Slovak trade. As can be estimated from 1992 data, a 30% fall in Czech-Slovak trade would have caused, ceteris paribus, a 4% fall in Czech output and an 8% fall in Slovak output.

However, the efficiency of economic integration was reduced by the fact that both economies had relatively large state sectors which were not developed with respect to the comparative advantages of each region. One implication that follows is that the interdependence was "artificial" in some respects since it was planned by the previous regime. The gradual change in the structure of trading partners of both republics that started with the period of transition was likely to reduce the interdependence of the Czech and Slovak Republics in the medium term because the share of trade with developed-market economies was increasing due to higher efficiency.

The evolution in Czech-Slovak trade in 1993 suggests that although there was a fall in trade, it was not induced by monetary disintegration. In January 1993, there was a coincidence in the timing of the currency union and tax reform. The introduction of VAT reduced all types of transactions temporarily in both republics. Although two intermediate stages of the monetary disintegration were implemented in 1993, Czech-Slovak trade recovered up to 75 percent of its 1992 level after the initial significant fall. There were two main reasons for growing trend. First, as far as non-financial economic agents were concerned, the model of Czech-Slovak transactions had not changed dramatically (they continued using national currencies to settle their transactions). Also, private commercial banks used the clearing center in their domestic countries as if the partner bank was inside their country. The two central banks participated in sharing the increased transaction costs significantly. Second, the clearing mechanism protected member republics from restrictive consequences of low foreign exchange reserves that stopped falling only in March 1993. The reserves in convertible currencies were only used in order to settle excesses in the credit limit. If the monetary disintegration had been sudden and convertible currencies had been implemented as a medium of transactions, the Czech-Slovak trade would have been restricted by their shortage. Especially in the first half of 1993, the amount of foreign reserves was relatively low. In February, the monthly volume of clearing payments accounted for 40 percent of Czech reserves (15 percent in May), and for 60 percent of Slovak reserves (260 percent in May). The Czech-Slovak experience showed that with carefully designed monetary disintegration it was possible not to accelerate a fall in mutual trade. Hence the consequences of induced economic disintegration did not exacerbate costs of monetary disintegration.

The essential problem of monetary disintegration was a loss of the Czechoslovak crown since it was characterized by high credibility and both external and internal stability. The Czechoslovak crown was not devalued for three years, and the Czechoslovak central bank built foreign reserves remarkably. Prices were stable in the former Czechoslovakia, the only big inflation sources were the 1990 price liberalization and the 1991 devaluation of the Czechoslovak crown. Consequently, it was clear that loss of such a well-established currency might be costly because the newly established currencies would not necessarily inherit characteristics of the original one. Interestingly, both an improvement as well as a deterioration of internal and external stability of the currencies could be observed after the break up.

As the Czech-Slovak experience indicates, the external stability of the currency was a decisive factor. It was eroded both by the political split itself as well as by one of its consequences - the proclaimed shortness of the currency union. The transitional Czechoslovak economy did not accommodate high enough reserves to protect its currency for a longer period in order to overcome uncertainty. Due to lost external stability, the costs of monetary dissolution were not fully realized. It was clear that maintaining the common currency would have exhausted foreign reserves and subsequently would have led to either exchange restrictions or devaluation. Monetary disintegration itself did not generate any instability. In either republic, neither internal nor external stability was lost after the monetary dissolution. However, it was proved that newly established currencies were of asymmetric external characteristics. On the one hand, the Czech crown inherited fully credibility of the Czechoslovak crown. Moreover, its external stability was improved by capital inflows, and the Czech crown could move further to convertibility in 1995. On the other hand, the internal stability of the Slovak crown was restored although the increasing budget deficit might have inflationary consequences. The Slovak crown was devalued by 10 percent and an import tariff was employed in order to overcome temporary external instability of the newly established currency.

The loss of a common currency increased transaction costs and uncertainty for economic agents in both republics. However, transaction costs, as was said, burdened the central banks mainly during the intermediate stages of disintegration. The Czech-Slovak experience suggests that with two inconvertible currencies, banking sectors are not willing to support “local convertibility” and accept costs of holding additional reserves. A clearing mechanism with risk on the side of governments is a more realistic solution. The design of the Czech-Slovak monetary disintegration lowered the costs of exchange-rate searching that might strike the private sector under other approach. Due to a common strategy of using exchange rate as nominal anchor, the original exchange rate of one to one changed slowly. Moreover, the problem of inter-republic debts (it was not clear in which currency they were denominated) was overcome by the implementation of the old account into the clearing mechanism. Specifically, two years after the political dissolution it was still possible for economic agents to settle their old debts by Slovak crowns as if they were Czech crowns although the Slovak crown was devalued six months after the monetary dissolution.

The third potential cost of the monetary disintegration is a distortion of common financial market. In the Czech-Slovak case, the capital market was not developed at the time of monetary dissolution. The first wave of voucher privatization was organized within Czechoslovakia and residents could bid for shares from both republics without restrictions. Trading on independent stock exchanges in Prague and Bratislava started in May 1993. However, residents were allowed to trade their shares on both Czech and Slovak markets via the clearing mechanism. The second wave of voucher privatization was already organized separately. Hence the possibility of a diversifying portfolio was restricted for residents to their domestic republic only. It implies that monetary disintegration blocked further developments of a common capital market rather than deteriorating it substantially. As far as the money market is concerned, a broad implementation of the clearing mechanism to all types of transactions linked banking sectors in both republics protecting them from a sudden disintegration.

In the end of this section, let us consider the specific costs of the Czech- Slovak solution to monetary disintegration. Due to diverging exchange rates, speculations became costly. It was possible to move the Czech-Slovak transaction to more a favorable category. For example, the Slovak payments were channeled to the old account whenever it was possible to avoid the Slovak crown's devaluation. Also, the speculations within the system were profitable[3]. As a result, imbalances in payments on the old and standard accounts deepened, and contributed to losses of foreign reserves of central banks (when settling an excess of the credit limit). Also, republic budgets suffered from additional expenses. It was not costly in 1993 when the clearing mechanism was credited by the Czech government but it became costly in 1994 since the Slovak budget deficit was already high. The analysis implies that the main share of costs was borne by public sectors although diverging exchange rates gave rise to a necessity for private banking sectors to monitor carefully clearing transactions.

[3] Suppose that a Slovak firm paid 1 million Slovak crowns to settle its old debt using the old account, its Czech partner received 1 million Czech crowns. In the second step, the Slovak firm required reimbursement due to the incorrect settlement. The payment was returned through the standard account with dirrerent exchange rate. Hence the Slovak firm received 1.1 million Slovak crowns. Net profit of this circle speculation was 100, 000 Slovak crowns.

3.2. Weighing Benefits

Independent monetary, fiscal and exchange-rate policies were the main benefits of monetary disintegration. While the monetary and exchange-rate policies were coordinated closely within the currency union (and fiscal policy was limited by the Arrangement), the second stage of monetary disintegration fully realized the benefit of independence. This section tries to show that due to asymmetric problems as well as limited adjustment mechanisms, the benefits were substantial for both republics. In addition, the clearing mechanism provided a specific benefit in the form of a temporary absorption mechanism.

The different nature of the Czech and Slovak economies built during the previous regime of a centrally planned economy was revealed during a transition period and originated in different consequences for two economies. On the one hand, the Czech economy was more diversified, and it proved more adept at absorbing shocks. On the other hand, the less diversified, less adaptable and more open economy of the Slovak Republic was more sensitive to the transitional problems and to external shocks (such as the EC recession or the collapse of the former USSR). Specifically, before the political dissolution, the Slovak Republic faced a significant rise in unemployment, a greater fall in output and higher budget deficit than the Czech Republic. In 1992, the Czechoslovak current account was in surplus due to revenues from tourism and services the significant share of which came from the Czech Republic. Also, the capital account exhibited surplus and 90 percent of private capital inflows were concentrated in the Czech Republic.

After the political dissolution, the asymmetry in performance was enlarged (See Figure 6) by the collapse of the fiscal federal system and by the separation of the balance of payments.

Figure 6. Asymmetric Problems.

Indicator --------------------- Country		Inflation (%) *)	Unemployment Rate (%)	Budget Surplus (billion crowns) **)	Foreign Reserves of Central Bank (USD mil)
Czech Republic	1993	20.8	3.5	6.6	3,800
	1994	10.2	3.3	10.4	6,200
Slovak Republic	1993	23.2	14.4	-23	449
	1994	13.4	14.8	-22.8	1,745

*Note: *) Inflation is defined in terms of consumer prices. The 1993 price jump was linked to the VAT tax reform in both countries.*

***)As reported, the budget accounting included both clearing expenses and revenues.*

Data source: Monetary Indicators (1995), CNB. Annual Report (1994), NBS.

The fiscal federal system was an important tool through which the Czech Republic transferred part of its revenues into the Slovak Republic. The Czechoslovak State Bank estimated these transfers to be from ten to fifteen billion crowns per year since 1948. In 1992, the estimated transfer was about 20 billion crowns. Moreover, the federal fiscal system was not the only redistribute tool within the former Czechoslovakia. Czechoslovak financial institutions were redistributing financial resources in order to balance the gap between the level of savings and the level of investment in Slovakia. Also, the redistribution of profits within Czech-Slovak enterprises was possible in the previous regime. It is worth noting that the Czech-Slovak trade entered the Slovak balance of payments as an additional deficit entry and an absence of the capital inflow from the Czech Republic increased the need for a capital inflow from the third countries significantly. Hence common targeting of internal and external balances was more difficult than within Czechoslovakia.

With closely coordinated monetary, fiscal and exchange-rate policies, both republics would have relied on adjustment mechanisms since the re-building of supranational institutions cushioning asymmetries would have been very difficult after the split. However, the adjustment mechanism were not strong enough. A housing problem (a housing market was not developed yet), traditions (during the previous regime people did not change their jobs and places of residence) and structural unemployment problems (skills of unemployed workers did not match requirements of available job openings and the re-qualification program in Slovakia was not very successful) were causes of low labor mobility. Higher competitiveness of production of depressed regions concentrated in Slovakia could not be gained through the real depreciation of the Slovak crown because of downwardly inflexible nominal prices and wages. Moreover, capital mobility as the possible strong adjustment mechanism supported divergent trends. When transfers from the Czech Republic were stopped, private foreign capital flowing mainly into the Czech Republic could only enlarge differences. Consequently, it was unambiguous that the necessity of independent policies would increase in the medium term.

The gain of independence was exploited first in the case of exchange-rate policies because the diverging performances of the balances of payments called for different policy responses urgently. On the one hand, the Czech Republic begun building its foreign reserves since the monetary dissolution. The large capital inflows improved the convertibility of the Czech crown. On the other hand, the Slovak Republic devalued the currency and imposed import tariff in order to ensure the external balance. Also, the fiscal deficit run by the Slovak government would have not been available under the currency union.

The clearing payment union, as applied in the Czech-Slovak case, provided the member republics with an important additional benefit. It cushioned the losses of federal fiscal system, the integrated banking sectors and supranational foreign-exchange reserves. In 1993, the Czech budgetary surplus was transformed into the Slovak budget via the clearing mechanism to a large extent. It functioned as the pro-export economic tool because the Czech government credited purchases of Czech goods that might not be covered by Slovak foreign exchange reserves. In 1994, the Czech foreign exchange reserves were transferred partially to Slovakia. The financial transactions that were increasing the Czech clearing deficit signaled that redistribution of free reserves took place and cushioned a temporary lack of resources on the Slovak money market.

4. Conclusions

The cost analysis suggests that the gradual monetary disintegration via the payment clearing union did not generate all the potential costs that could have been added to those imposed by the political dissolution. The fast economic disintegration was not induced. The increase in transaction costs was borne by the public sectors to a considerable extent. A credibility of the new currencies was not lost during the process. However, the capital markets were organized separately and the money markets were linked only partially. The gradual approach allows the Czech crown to start functioning as a medium of Czech-Slovak transactions because it might become convertible before the final stage of the disintegration is applied.

The costs of the disintegration were likely to be higher if the process had been designed without intermediate stages. The economic disintegration would have been accelerated by a lack of reserves and the increased transaction costs. The problem of the transactions denominated in the Czechoslovak crown (including the ownership of shares from the first wave of voucher privatization) would have had serious consequences for the private sectors. With the slower disintegration, the external stability of the common currency could have deteriorated and the foreign exchange reserves exhausted fully. Moreover, credibility of the new currencies might have been lost.

The benefit analysis implies that the political split sharpened asymmetry in economic performances of the Czech and Slovak Republics. Adjustment mechanisms were not strong enough to cushion those problems. Hence it was necessary either to respond with economic policies independently or to re-build the supranational institutions. The latter possibility was not feasible because of the political split. Consequently, the main benefit of monetary disintegration - a gain of independent economic policies was important to both republics.

The slower design of the monetary disintegration would have required closer coordination of monetary, exchange-rate and fiscal policies. Specifically, the common exchange-rate policy might have either exhausted the foreign reserves in one country or required a devaluation unacceptable for the other country. Also, the limited fiscal deficit might have been costly. With faster disintegration, the specific benefit of the clearing mechanism that cushioned the diverging trends in deficits and reserves would not have been available. In summary, in the Czech-Slovak case, the gradual monetary disintegration was superior to a single currency or a sudden monetary disintegration.

References

Dìdek O. (ed.) (forthcoming in 1995), Ekonomická historie zániku Èeskoslovenska (The Economic History of the Czechoslovak Dissolution), Academia, Prague.

Gandolfo, G. (1992), " Monetary Union" in Newman P., Milgate M. and Eatwell J. (eds.), The New Palgrave A Dictionary Of Money and Finance, London.

Ishiyama, Y.(1978), The Theory Of Optimum Currency Areas, IMF Press.

Šmídková K. (1993), Exchange Rate System Between the Czech and Slovak Republics, IE CNB research publications, No.16, Czech National Bank, Prague.

Šmídková K. (1994), The Czech-Slovak Currency Union, Prague Economic Papers, Vol.III, No.3.

Taylor, M. P. and Masson, P. R. (1992), Common Currency and Currency Unions, CEPR Discussion Paper, No. 617, London.

Willet, T. D. and Tower, E. (1970), The Concept Of Optimum Currency Areas And The Choice Between Fixed And Flexible Exchange Rate, Princeton, The Burgenstock Papers.