

# Capital Controls in Slovenia: Design and Efficiency

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## I. Introduction

Huge increases in foreign exchange inflows could be triggered by substantial foreign capital inflows as well as significant surges of surplus in the current account. Deterioration of economic performance caused by excessive foreign capital inflows is far more frequent than that caused by major outbreaks of »Dutch disease«. The consequences of substantial foreign capital inflows are therefore also much better documented and analyzed.

In the seventies, high financial flows had a detrimental impact on economic performance in the Southern Zone<sup>1</sup>. The effects of the huge foreign exchange inflows into South East Asia in the eighties as well as the revival of capital inflows in Asia and Latin America, in the nineties, are also expansively documented<sup>2</sup>. Some economies in transition faced financial inflows on a scale similar to other developing economies in the nineties. It seems, however, that the lessons from the South East Asia or Latin America episodes could not be adopted wholesale by the more developed economies in transition. For the countries in transition, for example, changes in international interest rates were not the dominant factor behind the substantive private capital inflows in the 1990s (the »push« view) as it happened to be for the important group of middle-income economies<sup>3</sup>. The role of privatization-driven inflows (their »stock adjustment« nature) into economies previously almost without foreign capital, was at least as important. The effects of capital inflows were probably not the same either, because several crucial factors mitigating the harmful effects of huge financial inflows<sup>4</sup>, were not present in the transitional economies. The fiscal stance was not strong, the pressure of huge wage increases and private consumption catching up<sup>5</sup> were persistent, the banking system was fragile, etc. And, finally, the effectiveness of standard policy measures<sup>6</sup>, especially sterilized foreign exchange intervention, was lower in the transitional economies since financial markets were shallow, tax revenues unstable and instruments of macro-management still in the making. Possible larger costs of huge forex inflows and, at the same time, potentially less efficient policy measures made the choice of policy responses even more important than in other developing economies.

The Slovenian economy has been facing significant financial inflows since declaring monetary independence. As it is a small and open economy, the harmful effects of inflows and the powerlessness of policy responses could be greater than in the emerging economies of South East Asia or Latin America that face high

capital inflows. It is also an economy in transition, so policy lessons from studied episodes could be even less relevant.

In this paper, non-standard policy efforts to curb rapidly increasing foreign exchange inflows are documented for the Slovenian economy. Special attention is given to capital controls. The main objective of the paper is to describe the instruments through which capital controls were facilitated as well as the evaluation of the capital control effects.

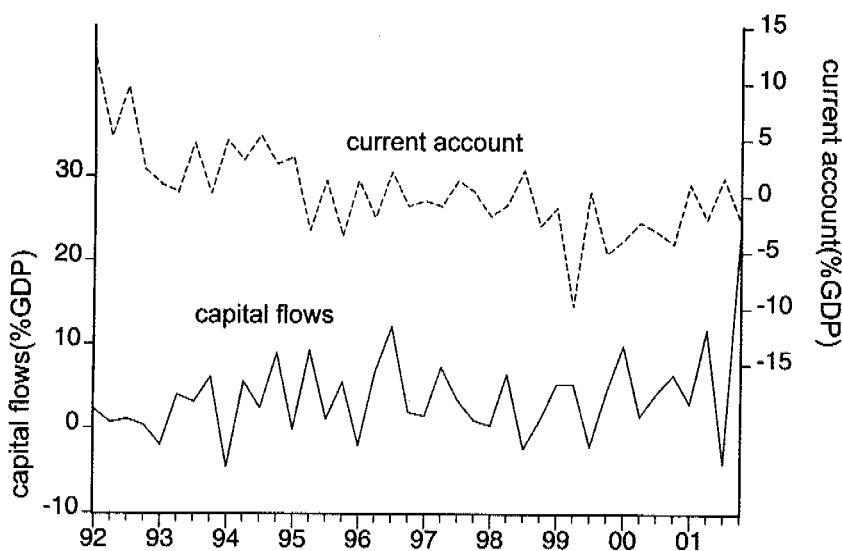
The remainder of the paper is organized as follows. The second section presents empirical evidence about the scale, basic structure and dynamics of foreign exchange inflows after 1991. In the third section, capital control measures are described and the intensity of use documented. Empirical evidence, revealing the effects of capital controls, is given in the fourth section. The main findings are given at the end of the paper.

## II. Illustration of the scale and dynamics of financial flows

Current and capital account balances. General trends in the balance of payment items in the 1992-2001 period are illustrated in Figure 1, where balance of payments items are presented in terms of GDP.

In the period 1992-2001, the structure of foreign exchange inflows went through three phases. In the first three years current account surpluses were high and capital inflows small; in the period 1995-1998 the roles of both balance of payments components were reversed, the current account was negligible and capital inflows hovered around 4% of GDP; after 1998 capital inflows surged even higher (in peaks even over 10% of GDP), while the current account revolved around small deficits.

**Figure 1:** Capital and current account balances



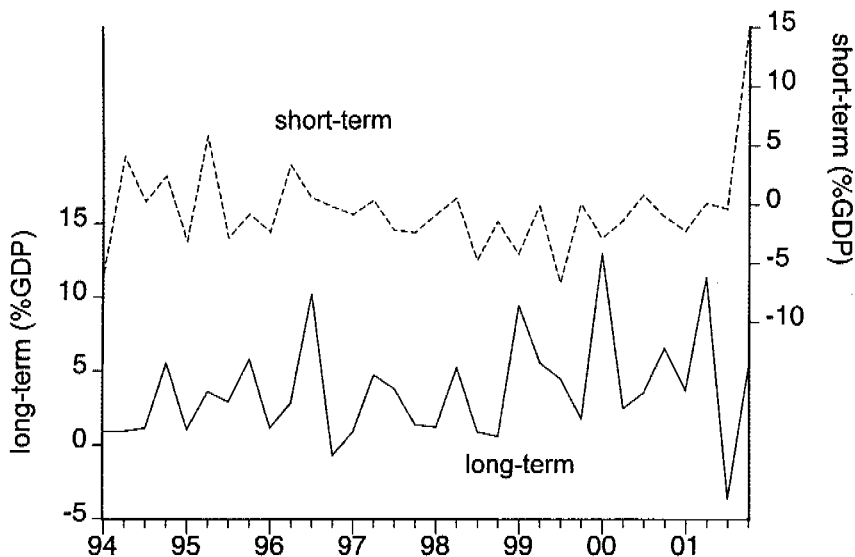
Source: Internal data and Monthly Bulletin of the Bank of Slovenia; own calculations.

The collapse of the internal (Yugoslav) market in 1990-1992 and the recession in Western Europe squeezed final demand, thus making many enterprises »distress exporters« in the first year of stabilization. Restrictive monetary policy squeezed domestic demand even more, so imports plummeted. Strong exports and weak imports pushed the current account surplus to over 7% of GDP. After 1992, imports increased and exports fell, nevertheless, the current account kept strong (around 4% of GDP) for another two years, up to the end of 1994. High sovereign and currency risk and high uncertainty because of unfinished institutional reshuffling were the main obstacles for financial inflows from abroad, in that phase of transition. More important inflows were triggered by the privatization of flats <sup>7</sup> and direct investments made by foreign enterprises that had also been present on the Slovenian market before the declaration of monetary sovereignty (they were information-technology biased).

After 1994 the current account dropped to zero, while the reduction in the foreign exchange risk premium accelerated capital inflows. In the period 1995-1998 net medium and long-term capital inflows exceeded average values in developing countries; they even attained the peak values known from the APEC<sup>8</sup> countries' capital inflow episode in the nineties<sup>9</sup>.

The introduction of VAT in 1999 accelerated imports (and prices). In 2000 prices of oil also increased. Because of these two changes the current account deteriorated for a short period, and the deficit even increased to over 3% of GDP. After 2000 weak domestic demand calmed imports so the current account again levelled off around zero. Net capital inflows increased significantly after 1998. There were especially strong inflows in 2001, when inflows through the household sector alone attained almost 900 million Euros. Conversion of household »under the bed» savings (in DEM) into bank deposits because of the final abolishing the German mark at the end of 2001, was the main reason for the rocketing of capital inflows through the household sector.

*Structure of capital flows.* Because of the continuous policy-makers' efforts to contain and neutralize huge financial inflows, net items in Figure 1 do not illustrate appropriately either the scale and dynamics of unmitigated financial flows or their potential damaging impact on the macroeconomic performance of the economy (possible effects on foreign exchange appreciation, money supply increase, etc). Neither do the graphs in Figure 1 enable the discerning of even the most important factors of capital inflows, because of which various components of financial inflows did not have the same scale and volatility. Comparison of financial flows components with basically distinct characteristics (persistence, volatility) and proneness to measures of economic policy could illustrate the factors and potential effects of unmitigated financial flows on macroeconomic performances.

**Figure 2:** Short and long term flows

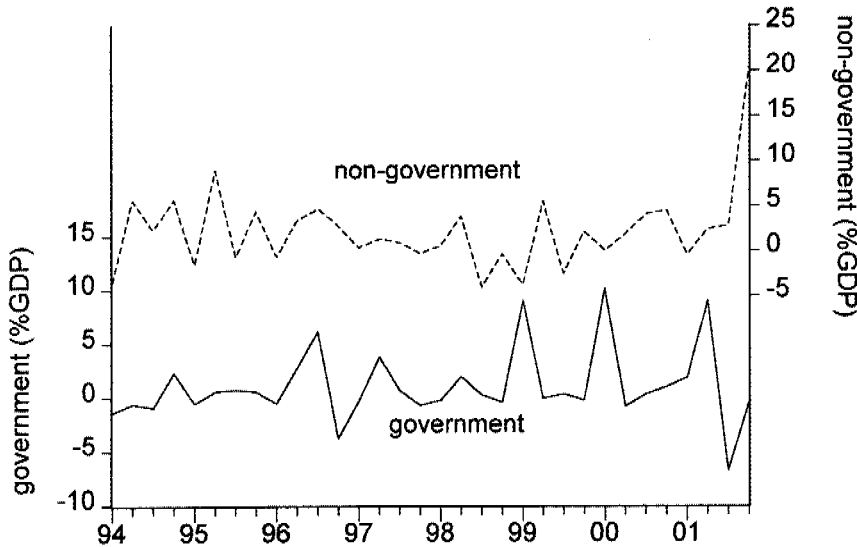
Source: Internal data and Monthly Bulletin of the Bank of Slovenia; own calculations.

To demonstrate the potential differences of various financial flow components in persistency, volatility and proneness to policy measures, two basic desagregations of capital flows are presented in Figures 2 and 3. In literature it is well documented that possible opportunity costs, of huge forex inflows, especially possible reversals and effects on banking soundness, depend on the term structure of flows<sup>10</sup>. Therefore, short and long-term net capital inflows are presented in Figure 2. Because policy-makers' measures for containing and neutralizing huge financial inflows were aimed at flows into the non-governmental sector (flows into the governmental sector could be controlled directly), capital flows are also desagregated in non-governmental and governmental flows (flows into the governmental sector); graphs are given in Figure 3. Figure 1 already illustrates that the size and dynamics of net capital inflows attained significant values only after 1993. Therefore, the desagregated components of net financial flows in both Figures (as well as in all subsequent Figures) are presented for the period 1994–2001. Components of flows are given in percentages of GDP.

The graphs in Figure 2 show that short and long-term net financial flows had almost persistently the opposite dynamics. With the exception of two quarters, long-term capital in net terms flowed into the economy in the period studied. Although less systematically, short-term capital in net terms flowed from the economy in the same period. Foreign direct investment, portfolio investments in debt securities and long-term loans presented the bulk of long-term flows. As is documented elsewhere, it was not only net long-term flows but also its three important components that were net inflows<sup>11</sup>. By far the largest component of net short-term outflows was a (continuous) net increase in the claims of the large export sector against its partners abroad (trade credits)<sup>12</sup>.

Figure 2 illustrates that the volatility of net long-term capital flows was significantly greater than the volatility of net short-term flows in the period studied. As is obvious from Figure 3, considerably greater volatility of long-term flows was generated predominantly by flows through the governmental sector. A considerable increase in government inflows took place after the middle of 1996, when the country finalized agreements with lenders to former Yugoslav entities and gained the single investment grade -A; subsequent successful international bonds issues on the Euro market are clearly seen in the graph.

**Figure 3:** Flows through the governmental and the non-governmental sector



Source: Internal data and Monthly Bulletin of the Bank of Slovenia; own calculations.

Capital flows through the non-governmental sector were also persistently net inflows (only a few quarters were exceptions), although the scale of corresponding inflows had been falling in the period 1995-1999 and started to increase again after 1999; there was an exceptional jump of inflows at the end of 2001, when household DEM savings »under the bed« were converted in Euro deposits in banks.

*Macroeconomic implications of high financial inflows.* The substantial surge of foreign financial (capital) inflows mitigates the constraints on restructuring and investment imposed by insufficient domestic savings. Recent empirical evidence from various episodes of huge net financial inflows reveals that increased capital inflows have been accompanied by a revival of economic growth and a remarkable increase of foreign exchange reserves in the recipient developing economies<sup>13</sup>.

However, foreign capital inflows may also raise several concerns. The main ones include speculative reversals, reducing external competitiveness, increasing fiscal debt, losing control over the money base and accelerating inflation or even more pronounced financial disarray<sup>14</sup>. The adverse side effects of financial inflows

depend on their volatility and persistency (proneness to reversals). Inflows of short-term and portfolio capital endanger the performance of the recipient economy most, while stable and nonvolatile foreign direct investment (FDI) do so least. However, there are arguments that because of the deepening of financial markets and the sophistication of financial instruments, the usual labelling of capital inflows does not provide any information about the persistency and volatility of flows<sup>15</sup>.

In Slovenia, empirical evidence corroborates the fact that in the nineties financial flows caused an appreciation of the exchange rate, accelerated real private consumption and jeopardized the control of money. Besides, net financial inflows through the governmental sector »crowded out« private consumption, while considerable gross flows through the banking sector destabilized banks. Of the detected favourable effects, a decrease in the domestic real interest rate and the »liquidity« premium should be mentioned<sup>16</sup>.

In Slovenia, probably the most dangerous thing would have been the (potential) indirect impact of unmitigated financial flows on distorted relative prices and, therefore, unsustainable price stabilization. Micro-distortions on the labour and product markets combined with huge capital inflows gave a boost to the relative prices of non-tradables after 1992<sup>17</sup>. The appreciation of the domestic currency held down domestic prices of tradables, while prices of non-tradables kept rising, as the strong market position (weaker competition) enabled enterprises in the non-tradable sector to mark up cost pressures, especially those of wages, over marginal products. At the same time, loose money control, caused by huge financial inflows, was ill-prepared to check the demand. Unmitigated financial inflows could have therefore enhanced the already existing micro-distortions on the labour and product markets and made exchange rate anchored price stabilization unsustainable<sup>18</sup>.

### **III. Activated sectors of economic policy and the role of capital controls**

*Containing and neutralizing effects of financial inflows.* In an economy facing sudden and significant surges of foreign financial inflows, a variety of policy responses is used to alleviate the real appreciation of the exchange rate, money overhang and banking instability. Policy responses depend on the institutional characteristics and performance of the economy, primarily on the fiscal stance, foreign exchange rate regime and possible micro-distortions.

In developing countries, policies for containing and neutralizing the effects of financial inflows include measures to neutralize the effects of previous financial inflows and measures to discourage future inflows of capital.

The most common policies belonging to the first group include measures of trade policy, sterilized and non-sterilized foreign exchange intervention, increasing marginal reserve requirements, increasing interest rates on a variety of borrowing at the central bank and reducing access to re-discount facilities. Measures of tight fiscal policy, taxes and deposits on borrowing abroad (asymmetric-Tobin-tax like measures) and banking regulation measures are used to reduce future inflows of capital from abroad<sup>19</sup>. Although taxes or deposits on foreign credits and some bank regulation measures are non-standard («non-market») measures, they have

been quite common in containing huge financial flows, especially in economics with less developed financial markets. But facing problems with high capital flows, even developed countries have used such direct measures<sup>20</sup>. Although measures of bank regulation and different types of taxes or deposits on foreign borrowing are used predominantly for reducing future flows, their effect on changing the structure of (future) flows could also be important. The future inflows structure could have smaller macroeconomic opportunity costs – the flows would be more sustainable; such direct measures could, for example, curb volatile short-term flows, while keeping FDI flows undisturbed.

In Slovenia, measures for containing and neutralizing financial flows were adopted after 1991. Of the indicated policies, only fiscal and trade policies were not specially adjusted for containing and neutralizing the effects of financial inflows. Indeed the fiscal stance was sound and foreign trade liberalized, almost from the beginning of transition restructuring.<sup>21</sup> All other indicated policies were used at least partly in the period 1992–2000. However, the intensity of the adopted policies was changing over time, and it was not the same for different policies. Up until 1995, it was mostly measures for neutralizing financial flows that had been used, while with the reduction of the sovereignty and currency risk premium, measures for containing future inflows came to the forefront.

From the very beginning of transition, indirect-standard measures of sterilized foreign exchange intervention were launched to contain and neutralize huge increase of net foreign exchange inflows triggered by the strong current account balance and inflows of capital through the household sector. High currency and country risk made sterilized foreign exchange intervention fairly efficient, although the corresponding (financial) markets were still in the making and financial mediation was shallow. Non-standard measures for containing (and neutralizing) financial flows were used extensively after 1995 and especially after 1996, when the currency and country risk premium fell and standard sterilized foreign exchange intervention became less effective and in particular much more expensive<sup>22</sup>. Non-standard measures were facilitated through deposits on foreign credits as well as through changing (increasing stringency of) bank regulation measures.

In the period of intensive use of capital controls (from 1995 to 1999), four components of capital inflows to the non-government sector were not curbed by the corresponding measures: capital inflows through the household sector<sup>23</sup>, long term financial credits (with maturity over 5 and 7 years respectively), trading credits and foreign direct investments.

*Bank regulation measures.* Usually domestic banks are crucial for massive capital inflows. Intermediating huge capital inflows makes banks vulnerable if a deposit insurance scheme is presented. A surge in lending triggered by financial inflows may increase maturity mismatch, because deposit insurance makes banks neglect matching maturities. In developing countries, it is usual to suggest adjusting risk-based capital requirements and proliferating quality of supervision to insulate the banking sector from possible bubbles caused by sizable (in)flows of foreign capital. Frequently different marginal reserve requirements are also used to prevent uncontrolled increases of credits triggered by monetarization of foreign exchange<sup>24</sup>.

In Slovenia, financial flows generated considerable swings in monetarization on

the retail forex markets, which also caused significant volatility in the volume of bank credits. These swings in the volume of credits endangered banking soundness; a minor banking crisis in 1996 was triggered by just such a mechanism<sup>25</sup>. To make banks stronger, the central bank already started to increase the minimum required capital for commercial banks in 1992; increased minimum required capital was mandatory for banks licensed for foreign exchange transactions. The level of minimum required capital was increased in steps; the final step was made in 1995 when the new minimum capital requirement needed for a full license<sup>26</sup>, was set at DM 60 million<sup>27</sup>!

From 1991 onward, commercial banks were obliged to have at least a certain percentage of their foreign exchange deposits in their accounts abroad or in government bonds of OECD countries or in foreign exchange bills of the central bank. The percentage of the foreign exchange cushion depends on forex deposits maturity. The percentages have been changed several times; at the beginning of 1997 the »foreign exchange minimum» cover for forex deposits was as follows: 100% for sight deposits, 75% for three-month deposits, 35% for time deposits with maturity less than one year and 5% for time deposits for over one year.

After the minor banking crisis in 1996, two additional measures were introduced; both aimed at potentially enormous credit expansion (because of falling net foreign assets), triggered by huge swings in financial flows from abroad. The first was the marginal forex position (it was formally called, »net foreign assets position«); by which banks had to increase their claims against non-residents by the amount of increase in their liabilities against non-residents. Liabilities and claims could be nominated in tolar or foreign exchange<sup>28</sup>. To insulate the domestic credit market also from the effects of (volatile) portfolio capital inflows, in 1997 custody accounts (which were obligatory for non-resident portfolio investors)<sup>29</sup> were also included in a »net foreign exchange position«. The liquidity ladder requirement was the second measure from the banking regulation segment introduced in the wake of the 1996 banking crisis. It would have to mitigate the possible effects of financial flows on maturity mismatch.<sup>30</sup>

*Taxes and deposits on foreign credits.* In some developing countries, taxes on (short-term) borrowing abroad were used to contain foreign financial inflows<sup>31</sup>. Instead of taxing foreign borrowing, a variable deposit requirement can also be used. Its built-in feature is that it penalizes foreign credits of shorter maturity more severely, and its flexibility is used to contain unanticipated fluctuations in capital flows, making it more attractive for developing countries, especially those with a weak tax enforcement infrastructure<sup>32</sup>. It is well known that easy circumventing is the main shortcoming of such a measure. All the same, variants of such tax deposit measures were also used in developed countries<sup>33</sup>.

In Slovenia, the central bank enacted a variant of the variable deposit requirement in 1995. All legal entities were obliged to keep with the central bank an unremunerated tolar deposit against non-trade credits with maturities shorter than that of the threshold. The threshold maturity and the percentage of credit kept as a deposit were changed twice. After 1997 all residents had to pay a 40% deposit for foreign non-trade credits with maturity shorter than 7 years and the non-banking sector also 10% for non-trade credits with maturity longer than 7 years.



*Lifting capital controls.* Capital control measures were not relaxed until 1999. Because of the Association Agreement between Slovenia and EU, in 1999/II a short time frame was fixed for removing capital controls. Almost all non-standard measures for containing and neutralizing huge net financial flows were removed in a period of one year.

Capital controls had to be removed, although the most important micro-distortions on the micro-markets had not been removed until 1999. Most pronounced were the significantly segmented labour market (differences between the labour market for non-market services, market services and tradable products<sup>34</sup>) and considerable differences in the market structure between markets for tradables and non-tradables. Removing of capital controls could therefore make macroeconomic opportunity costs of potential exchange rate anchored stabilization much higher, and uncertainty of price stabilization sustainability greater<sup>35</sup>.

#### **IV. How efficient were capital controls?**

*Empirical evidence and efficiency of capital controls.* Elsewhere it is already documented that in Slovenia the policy of containing and neutralizing financial flows prevented significant real appreciation of the foreign exchange rate; neither does empirical evidence in the same study confirm significant side effects of such a policy on interest rates, money and inflation<sup>36</sup>. Although such an evaluation confirms the successfulness of the policy for containing and neutralizing financial flows, there is a question as to what were the effects of the specific segment of such a policy (namely, the segment of capital controls).

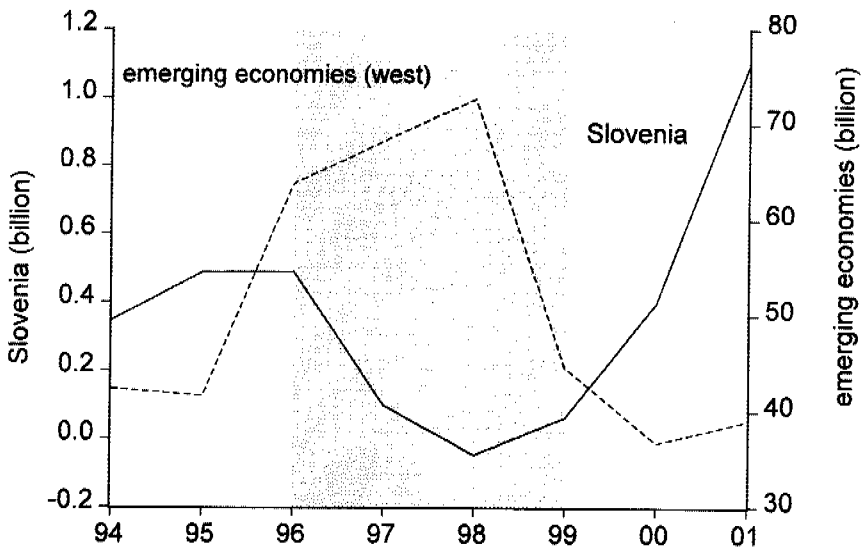
Evaluation of capital control efficiency by straightforward analysis of controlled components of capital flows could be challenged for several reasons. Firstly, in the period studied, institutions were still in the making and the economy under intense restructuring (secondary privatization, bank restructuring, etc). Secondly, other measures for neutralizing the effects of financial inflows were also used in that period and it would be necessary to separate the effects of those measures. Thirdly, external push factors of capital flows changed significantly in the period 1997-2000 because of the crisis in the Czech Republic, Russia and economies in East Asia; crude data for the economies of transition and other emerging economies already reveal a considerable contagion effect<sup>37</sup>; besides, the corresponding picking up phase of flows in more developed transition (and other emerging) economies almost coincide with the timing of lifting of capital controls in Slovenia. And last, but not least, because of substitutability of different components of flows into the non-governmental sector, empirical evidence only on the dynamics of controlled components is not an appropriate indicator for the possible effects of capital controls.

Because the economy was still in a heavy structural reshuffling in 1995, it does not seem reasonable to detect possible effects of capital controls in the starting phase of the capital controls episode (in 1995/II) – there would be too much »noise« in the data for that period. Therefore, empirical evidence on financial flows characteristics close to the phase of lifting capital controls is used to illustrate the potential effects of capital controls. Because of volatile »push« factors of capital flows as well as strong contagion effects in the time of the 1997-1998 financial crisis in the emerging economies, illustration of potential effects is made by com-

parison with the characteristics of financial flows in two different groups of emerging economies: transition and western hemisphere emerging economies<sup>38</sup>. Because of possible substitution between components of flows and because FDI flows were not restricted in Slovenia, potential effects are documented for total flows and also for non-FDI components. Only net items of flows are presented.

*Effects on the volume of flows.* In Figure 4 and 5 total (net) flows to the non-governmental sector in the period 1994–2001 are presented for Slovenia. The non-governmental sector includes households, banks and non-financial corporations. Graphs of net private flows to transition economies and western hemisphere emerging economies are also added. Although the definitions of flows for emerging economies are not the same as for Slovenia, they are used as an appropriate (available) indicator of changes in external «push» factors. In the next two Figures (Figure 6 and 7) net non-FDI flows to the non-governmental sector are presented for Slovenia. For comparison, net private flows without FDI are given for the same groups of emerging economies. In all Figures, years in which capital controls were used in Slovenia are shadowed; because capital controls were used in the period 1995/II–1999/II, the indicated area is slightly larger than actual. In all Figures flows are given in billions of US dollars.

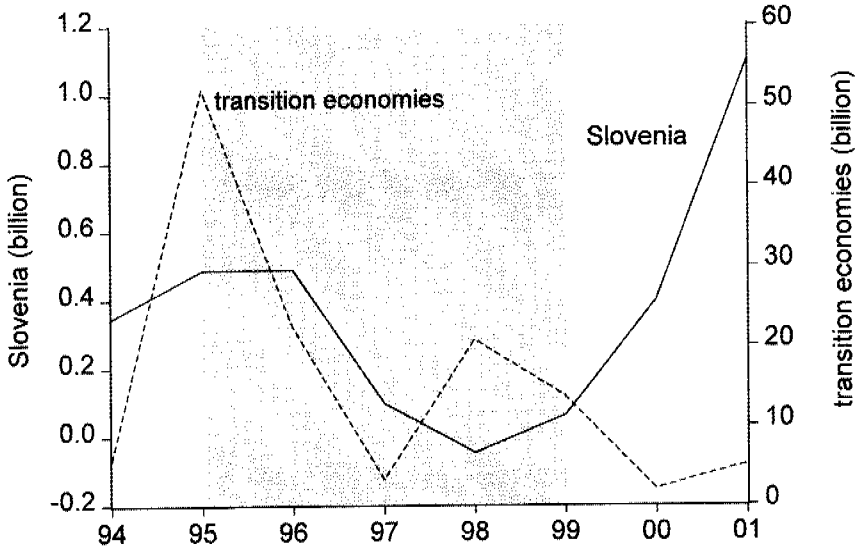
**Figure 4:** The volume of flows through the non-governmental sector; comparison with western hemisphere emerging economies



Source: IMF(2002); internal data of the Bank of Slovenia; own calculations.

Note: The period of capital controls is shadowed; flows are in US dollars.

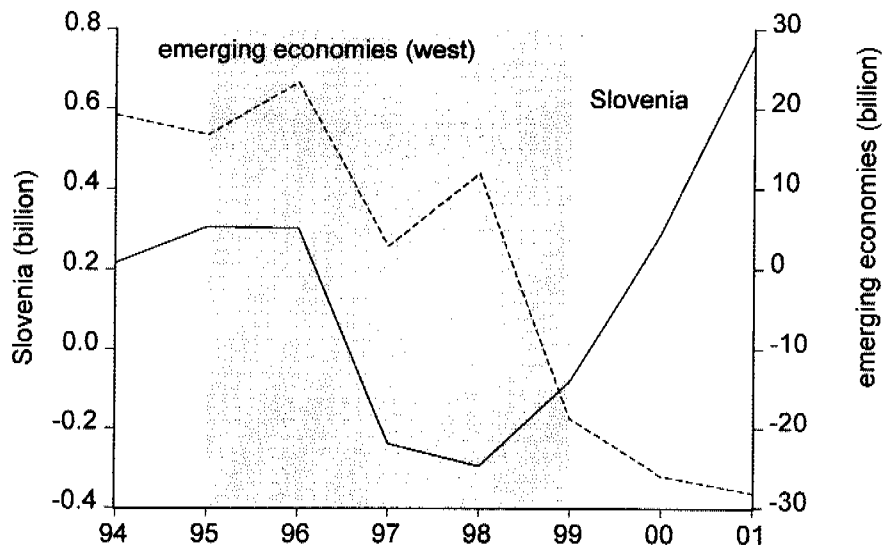
**Figure 5:** The volume of flows through the non-governmental sector; comparison with transition economies



Source: IMF(2002); internal data of the Bank of Slovenia; own calculations  
 Note: The period of capital controls is shadowed; flows are in dollars.

Both Figures 4 and 5 show that in the period of capital controls, the volume of net inflows into the non-governmental sector dropped by more than 2% of GDP (in 1996 net private inflows attained almost 450 million US dollars, while in 1998 they dropped to slight net outflows). For the analysis of capital control effects, the most important piece of evidence is the sharp increase in inflows after capital controls were lifted in 1999/II. In the transition economies net private inflows had also been falling in the 1995-1999 period, but contrary to the dynamics in Slovenia, net private flows in the transition economies dropped after 1999 even more! Although the dynamics of net private flows in western hemisphere emerging economies had been different than in transition economies in the period up to 1999, after 1999 net private inflows in western hemisphere emerging economies also went on to fall. It seems obvious that the change in internal (domestic) factors had to be behind the reversed dynamics (strong acceleration) of net flows in Slovenia after 1999, in comparison with the dynamics in other emerging economies.

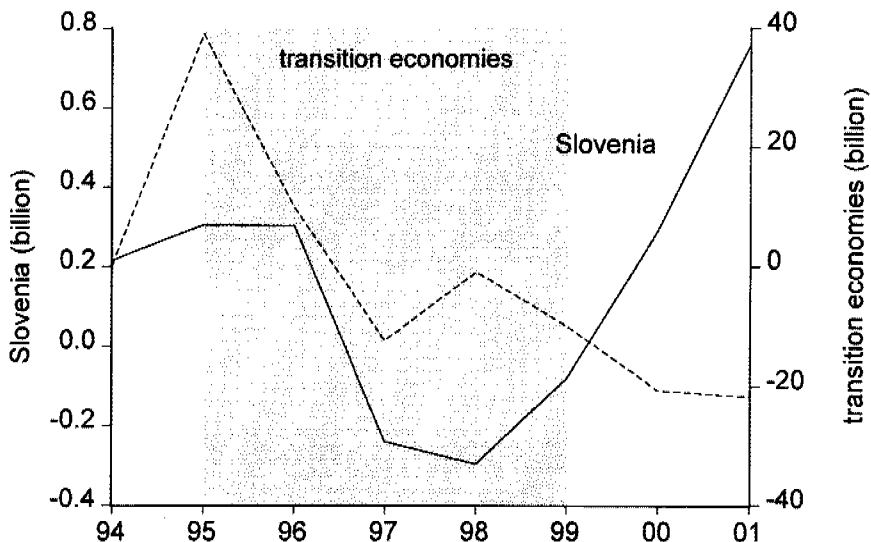
**Figure 6:** The volume of non-FDI flows through the non-governmental sector; comparison with western hemisphere emerging economies



Source: IMF(2002); internal data of the Bank of Slovenia; own calculations

Note: The period of capital controls is shadowed; flows are in dollars.

**Figure 7:** The volume of non-FDI flows through the non-governmental sector; comparison with transition economies



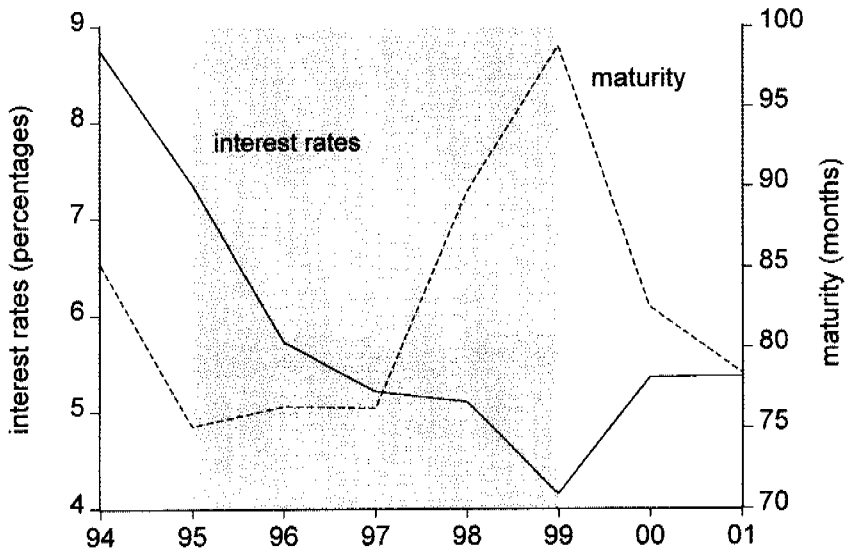
Source: IMF(2002); internal data of the Bank of Slovenia; own calculations.

Note: The period of capital controls is shadowed; flows are in dollars.

Foreign direct investments were not restricted in the capital controls episode in Slovenia. To illustrate the fact that after 1999 there was an acceleration in the very components of flows in the non-governmental sector which had been controlled in the period up to 1999/II, in Figure 6 and 7 only non-FDI net flows into the non-governmental sector are illustrated. For comparison, net private non-FDI flows are presented for the transition economies and western hemisphere emerging economies. The considerable differences in the dynamics of net non-FDI private capital flows in emerging economies and net non-FDI inflows into the non-governmental sector in Slovenia in the phase of lifting capital controls in Slovenia, strongly corroborate the fact that after 1999 (the change in) domestic factors strongly accelerated non-FDI inflows in Slovenia.

*Possible effects on interest rates, maturity and average size of credits.* To give further evidence that in 1999 domestic factors (lifting of capital controls) must have considerably influenced components of financial flows, which had been restricted by capital controls in the period 1995/II-1999/II, in Figure 8 interest rates and maturity of newly disbursed long-term bank credits are presented, and in Figure 9 the average size of newly disbursed (fixed and variable rate) long-term credits is given. Because there are no data (available up to 2001) for comparison with emerging economies, only graphs for Slovenia are presented. Again the period of the capital controls episode is shadowed.

**Figure 8:** Interest rates and maturity of newly disbursed long-term credits



Source: Internal data of the Bank of Slovenia; own calculations.

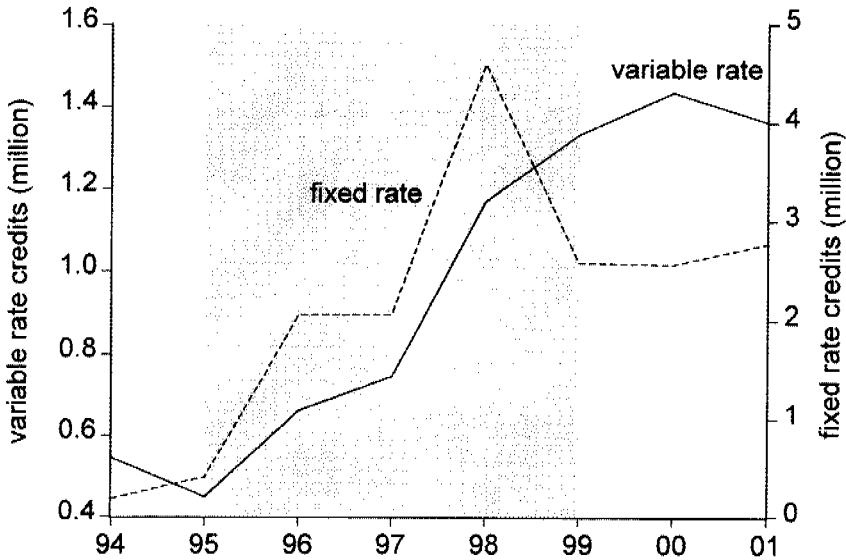
Note: The period of capital controls is shadowed; only variable interest rate credits are presented.

Figure 8 illustrates that in the period of capital controls, the maturity of newly disbursed long-term credits had been increasing, especially after 1997, when the deposit scheme on foreign financial credits was further sharpened. In the period of

capital controls the average maturity of newly disbursed long-term credits was increased by approximately 2 years (to around 8 years). After 1999, when capital controls were removed, the maturity of corresponding credits dropped in the period of two years to around 6.5 years.

In the same Figure 8, a graph of (variable) interest rates on newly disbursed long-term credits is also presented. Interest rates had been falling smoothly in the whole period of capital controls, including the period 1997–1998 when the Czech, Russian and East Asian crisis pushed interest rates up for emerging economies. After the lifting of capital controls in 1999, interest rates immediately increased. It seems that by making foreign credits more expensive, capital controls rationed less favourable credits. Heuristically speaking, both graphs could indicate that capital controls prevented domestic agents with lower solvency (or non-available good collateral) from taking foreign credits – they were rationed from the market.

**Figure 9:** Average size of newly disbursed long-term credits



Source: internal data of the Bank of Slovenia; own calculations.

Note: The period of capital controls is shadowed.

The graphs in Figure 9 give additional evidence for the rationing hypothesis. Indeed the average size of newly disbursed long term credits had been increasing in the period of capital controls, while in the phase of lifting controls the average size of new credits dropped or at least ceased to grow.

## Summary

In transition, Slovenia faced strong foreign exchange inflows. Sources of inflow changed radically up to 2000. Driven by »distress exporting«, an enormous current account surplus was the major source until 1993; after 1994, capital inflows took the lead.

Since financial inflows could have significant adverse effects on the performance of the economy, especially on distorted relative prices and, therefore, sustainability of disinflation, policy measures for containing and neutralizing the effects of financial flows were launched back in 1992. Sterilized foreign exchange intervention was used from the very beginning. Non-standard («non-market») policy measures for containing and neutralizing huge financial inflows were also used. Measures of capital controls were enacted in the third year of the financial inflow episode, after a significant drop in the foreign exchange »liquidity« risk premium took place. To mitigate the vulnerability of banks intermediating huge financial flows, banking regulation and supervision was also modified. Capital controls were lifted in 1999/II.

Available empirical evidence indicates that capital controls reduced the volume of net inflows into the non-governmental sector. After lifting capital controls, the dynamics of analyzed flows was just the opposite to the dynamics of flows in other emerging economies; net flows, with and without FDI, considerably increased immediately after capital controls were lifted. There is also partial empirical evidence available indicating that capital controls curbed less favourable credits more; after capital controls were removed, average interest rates increased, while maturity and the average size of credits dropped. Access to foreign credits for economic agents with lower solvency or (and) worse collateral was therefore more difficult in the period of capital controls.

## Appendix

1. *Sources of data.* All data used in the study are obtained from various issues of the Monthly Bulletin and internal database of the Bank of Slovenia.

2. *Definition of components of financial flows.* Analyzed balance of payments components are aggregated from items corresponding to the IMF »Standard Components of the Balance of Payments«; five digit BP classification of basic data is used.

Construction of financial flow components roughly follows that made in the paper by Claessens, Dooley and Warner(1995). Only the definition of the reserves (and corresponding short-term flows) component and the role of equity securities are changed. To make the effects of policy measures more transparent, bank deposits are added to the (total) reserves component, and equity securities are classified among long-term flows. In the following scheme the construction of financial flow components is indicated; in calculation all items are used in gross terms.

*Long-term flows*

- a. Debt and equity securities.
- b. Loans; assets, liabilities; long-term.
- f. Trade credits; assets, liabilities; long-term.

*Short-term flows*

- a. Trade credits; short-term.
- b. Currency and deposits; assets.
- c. Deposits; liabilities.
- d. Loans; assets, liabilities; short-term.
- f. Other; assets, liabilities.
- g. money market securities and derivatives; assets and liabilities.

*Foreign direct investment*

- a. Direct investment; abroad, in reporting economy.

*Reserves*

- a. Reserve assets (official).
- b. Currency and deposits; assets; banks.

**Notes**

- 1 See, for example, McKinnon (1990), Corbo and de Melo (1985) or Dijaz-Alejandro (1985).
- 2 See, for example, Reisen (1993a), Reisen (1993b) and Calvo, Leiderman and Reinhart (1993b) or Corbo and Hernandez (1996).
- 3 See, Dooley, Fernandez-Arias and Kletzer (1996).
- 4 See, for example, Calvo, Leiderman and Reinhart (1993a).
- 5 Kornai's premature increasing of present-day material welfare («goulash postcommunism»); see, Kornai (1997).
- 6 As described, for example, in Calvo, Leiderman and Reinhart (1993a).
- 7 Privatization of flats was mainly financed through repatriation of private foreign exchange deposits. See, Stanovnik (1994) and Mencinger (1991).
- 8 Asia-Pacific Economic Cooperation Council.
- 9 See, for example, Ishii and Dunaway (1995) and Bole (1999).
- 10 See, for example, Calvo, Leiderman and Reinhart (1993a).
- 11 See Bole (1999).
- 12 Deposits of banks are classified in reserves.
- 13 See, for example, Mishra, Mody and Murshid (2001).
- 14 See, for example, McKinnon (1990), Corbo and De Melo (1985), Calvo, Leiderman and Reinhart (1993b) and Schadler, Carkovic, Bennett and Kahn (1993).
- 15 See, Claessens, Dooley and Warner (1995).
- 16 See, for example, Bole (1999) and Bole (2000).
- 17 See, for example, Bole (1997).
- 18 See, for example, Bole (2002).
- 19 See, for example, Schander, Carkovic, Bennett and Kahn (1993), Calvo, Leiderman and Reinhart (1993a), Calvo, Leiderman and Reinhart (1993b).
- 20 Capital controls were used quite extensively, for example, in France in 1981-1984 or in Spain in 1991; before 1980 non-standard measures for containing capital flows were used even in the USA (interest equalization tax). On the role of capital controls in sustained exchange-rate stabilization see McKinnon (1999).
- 21 In the period 1992-1999 the average general government balance was -0.1% GDP; in the same period, foreign trade ratio was over 1.15.



- 22 After restructuring debt from the former Yugoslavia Slovenia also received investment grade A-. See, for example, Bole (1999).
- 23 Encompassed in the item »currency and deposits - other sectors« in the IMF balance of payments classification.
- 24 See, for example, Calvo, Leiderman and Reinhart (1993a).
- 25 See Bole (2000).
- 26 To offer also foreign exchange deposits and to perform foreign exchange payments.
- 27 Average capital adequacy ratio was well over the Basle norm (around 20). Actually, it corresponds to suggestions made for economies in transition (see, Caprio (1995)).
- 28 This »net foreign assets position« was obviously not the same as the standard foreign exchange position.
- 29 Investors with a control package of equities and primary market disbursements were excluded.
- 30 See, for example, Marston (1995).
- 31 See, for example, Valdes-Prieto and Soto (1999).
- 32 See, Calvo, Leiderman and Reinhart (1993a), see also Lee (1995).
- 33 See, for example, Lec (1995).
- 34 See, for example, Bole (2002).
- 35 See McKinnon (1999) and Bole (2002).
- 36 See, for example, Bole (1999).
- 37 See, for example, EBRD (2001).
- 38 Data and classification are from IMF (2002).

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