Articles

ECONOMIC AND MONETARY UNION ACCESSION AND CAPITAL FLOWS

Jiří JONÁŠ*

Abstract:

The paper discusses the prospects for capital inflows to the Czech Republic before Economic and Monetary Union accession. It reviews the potential costs and benefits of capital flows and the history of capital flows to the Czech Republic, before turning to future capital inflows. It notes that different theoretical models provide different predictions about future capital inflows. To get further insight, the paper discusses the future capital inflows from the perspective of nonresidents' supply of external savings and residents' demand for external borrowing and from the perspective of external vulnerability related to large foreign direct investment (FDI) inflow. It concludes that FDI is likely to decline somewhat in the future, but increasing sovereign borrowing needs could lead to higher inflow of portfolio capital. The final section discusses the potential for capital inflows resulting from the so-called convergence plays and concludes that there is presently little incentive for convergence-play related capital inflows.

Keywords: EMU accession, capital flows, external vulnerability, foreign direct investment, convergence play

JEL Classification: F21, F32, F36, G15

1. Introduction

In 2004, the Czech Republic is scheduled to become a member of the European Union (EU) and subsequently Economic and Monetary Union (EMU). In early 2003, the exact timing of the eurozone accession remains yet uncertain. However, the expectation of the eventual membership and the introduction of the euro are likely to

have a significant effect on investors' expectations, on capital flows and economic performance.

The main purpose of this paper is to discuss the issues of capital flows to the Czech Republic in the period before the EMU accession. First I briefly review the potential costs and benefits of capital flows in light of the recent financial crises in a number of emerging market countries and the history of capital flows to the Czech Republic and I discuss how their size and structure has evolved. In the next part, I turn to the question of potential capital inflows in the period ahead of the EMU accession. I discuss the different predictions that follow for future of capital inflows from different theoretical models – neoclassical model of declining marginal product of capital and model of increasing returns/economies to scale. We also look at the possible developments of future capital inflows from the perspective of nonresidents' supply of external savings and residents' demand for external borrowing. Next I turn to the problem of capital inflows and external vulnerability, with special focus on foreign direct investment inflows. In the final section, I discuss the potential for capital inflows as a result of activities in the secondary market – the so-called convergence plays.

2. Capital Inflows: Possible Benefits and Risks

In the aftermath of devastating financial crises of the 1990s, there appeared numerous studies about the potential benefits and risks of large and volatile capital flows. It is not the purpose of this article to discuss this issue in detail. However, for the subsequent discussion of implications of capital flows to the Czech Republic in the run-up to EMU accession, it is useful to bear in mind several important facts.

First, during the 1990s, the thinking of both official financial community and academicians about the costs and benefits of capital inflows to emerging market countries underwent some important changes.[1] Before the Asian crisis erupted, there had been a widespread support for the view that emerging market countries should move quickly with liberalization of capital flows. It was argued that free flow of capital would bring many benefits, including the possibility of better diversification of investment and protection from idiosyncratic shocks, augmentation of domestic savings by foreign savings that would support higher investment and economic growth, and faster development of domestic financial systems and financial intermediation, also conducive to faster growth. At that time, relatively little attention was paid to the risk that large capital inflows could bring, particularly in connection with fixed exchange rates.

Financial crises that started with the Mexican crisis in 1994/1995, but especially with the Asian crisis in 1997, stroke a heavy blow on this benign view about the capital flows to emerging market countries. It turned out that the combination of wrong incentives (to an important extent related to fixed exchange rate), institutional weaknesses, lack of crucial economic information and laid-back attitude of foreign investors have created dangerous vulnerabilities that began to feed on each other once the economy was hit by a negative shock. Large capital inflows induced often by fixed exchange rates created dangerous dependence on external financing, produced large open foreign exchange positions as foreign-currency borrowing finan-

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1) Most of the discussion about the costs and benefits of free capital flows revolved around the middle-income emerging market countries. Less developed countries usually do not enjoy access to international capital market and the problem of capital flows is not very relevant to them. On the other side, advanced economies usually do not experience large volatility of capital flows and do not suffer from the same degree of external vulnerability.

ced domestic currency lending, and reversal of capital inflows in combination with large currency depreciation wreaked havoc on firms' and banks' balance sheets. Large official financial assistance, in combination with drastic domestic adjustment including significant compression of imports and domestic demand, were required to deal with these crises. The lesson from this experience was clear: large capital inflows are not an unqualified blessing. It could be not only a good servant, but also a bad master.

In recent years, institutions like International Monetary Fund (IMF), Financial Stability Forum (FSF) and others have paid a lot of attention to the analysis of optimal policies toward capital flows. It is now generally accepted that capital inflows to emerging market countries are not an unqualified blessing, and that if benefits are to be enjoyed and risks minimized, a number of conditions needs to be put in place. It is recognized that fixed exchange rates can provide the wrong kind of incentives to capital inflows, by leading domestic borrowers to rely too much on external financing that may appear cheaper than domestic financing – as long as exchange rate does not depreciate. It is also recognized that domestic financial sector that often intermediates a significant part of capital inflows has to be up to the task, something that cannot be always taken for granted in emerging market economies. And everyone now understands that both domestic policy makers and foreign investors have to pay closer attention to the developments of borrowing countries' external vulnerability indicators, in order to monitor whether a country does not become too dependent on external financing and thus too vulnerable to external shocks.

What all this development implies for the Czech Republic? Is it possible that the upcoming EU/EMU membership will attract large capital inflows to the Czech Republic? And is there a risk that these inflows will increase the vulnerability of the Czech economy and the risk of subsequent financial turbulence? This risk cannot be dismissed, but in our view, it should not be exaggerated either.

It can be expected that the EU accession and the expectations of EMU accession should make the Czech Republic an attractive destination for capital inflows. Already now, the Czech Republic has practically completed the liberalization of capital movements, and the door for capital inflows is wide open. Moreover, Czech Republic's EU/EMU accession will take place in a different global environment than previous expansions. In the course of the 1990s, global financial system has undergone significant changes and capital flows to emerging market countries have picked up significantly. In the aftermath of recent financial crises, private capital inflows to most emerging market countries dried out, but it continued to flow without significant dent to transition economies (see Table 1). At the same time, volatility of capital flows has increased, the composition has changed and so did the structure of recipients in the borrowing countries: foreign direct investment and portfolio investment replaced bank loans, and private borrowers replaced sovereign borrowers. More recently, even portfolio investment fell, but foreign direct investment remained relatively robust.

Table 1
Net Capital Inflows to Emerging Market Countries (EMC) **and Transition Economies** (TE) (in USD bill.)

	1990	1993	1995	1996	1997	1998	1999	2000	2001
EMC	30	182	193	228	102	62	85	29	25
TE	3	20	48	22	1	15	13	10	27

Source: IMF: World Economic Outlook; IMF: International Capital Markets.

The implication is that potentially large capital inflows can have a correspondingly larger impact on economic performance, and thus on the speed and even direction of economic convergence. Sustained capital inflows can increase funds available for investment and thus support faster economic growth. However, as I have noted, sudden large reversal of capital flows could have drastic negative impact on economic growth and could inflict serious damage to the economy.[2] Therefore, we need to pay a close attention to capital flows and their effects on economic performance and on the vulnerability of the economy to adverse shocks.

The Czech economy is very open to trade and capital flows which puts a large premium on a skilful policy management, both in terms of pursuing a properly balanced macroeconomic policy mix and in terms of ensuring a proper supervision of corporate and financial sectors so that these can handle well the potential shocks to which they will be exposed in the course of the accession process. If these conditions are in place, foreign capital can play an important role in accelerating economic convergence with the more developed countries of Europe. But policies that would be at odds with the maintenance of domestic and external equilibrium, or structural weaknesses in financial sector, would increase the risk that capital inflows reverse, with adverse implications for economic performance.

But even with reasonably sound policies, there is a risk that capital inflows could reach proportions that would test the absorbing capacity of the economy and that could eventually create problems. This risk is related to the fact that capital inflows have a dual effect on the economy. First, as foreign capital flows to the economy through the foreign exchange market, capital inflows affect the exchange rate. Second, capital inflows affect directly the real economy – investment, consumption, trade balance and output growth.[3] The problem arises if there appear large discrepancies between these two effects, that is, if these two effects operate with a different strength and/or different speed. That is, capital inflows could have a much stronger or much faster impact on the exchange rate than on real economy.[4] The degree of such discrepancy will depend importantly on the form of capital inflows and I will discuss some examples in more detail below.

Before we turn to the discussion of the future of capital inflows to the Czech Republic, we should take note of a certain contradiction between the theory and reality of capital flows.

3. Capital Flows: Theory and Reality

The financial crises in the 1990s brought to the fore concerns that capital inflows to emerging market countries could be too large, could overwhelm absorption capacity of the recipient country and eventually lead to problems. Therefore, it may appear paradoxical that from time to time, economists are also puzzled that actual capital flow from more to less developed economies are less than would be predicted by theoretical models.

In theory, capital should flow from rich countries with less profitable investment opportunities to poorer countries with more profitable investment opportunities. This

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2) Argentina serves as an extreme illustration. As a result of a virulent financial crisis and several years of negative growth, Argentina's dollar GDP shrank by about 70 per cent, and dollar GDP per capita is now at the same level as 100 years ago.

3) This direct effect on real economy is different from the indirect effect via the changes in the exchange rate.

4) I have in mind a direct effect on real economy, not indirect effect via the change in the exchange rate.

prediction is based on the neoclassical model of declining marginal product of capital. If we assume two countries producing identical goods, and that production function exhibits constant returns to scale and relates output to homogenous input of capital and labor, then differences in production per worker must reflect differences in capital per worker. According to the law of diminishing marginal returns, marginal product of capital will be higher in the less productive country. If there are no obstacles to international capital flows, then capital should flow from richer countries with relatively low marginal product of capital to poorer countries with relatively high marginal product of capital. In the absence of costs and uncertainty, these flows should continue until capital to labour ratios, marginal product of capital and wages and rents become equalized across countries. As a result, investment in a given country should depend more on investment opportunities and less on the level of domestic savings.

This theory was first called into question by Feldstein and Horioka (1980). The authors have analyzed a group of 23 industrialized countries in the 1960s and 1970s and came to the surprising conclusion that domestic saving and investment rates tend to move closely together, that means, that domestic investment is financed mostly by domestic savings and less by foreign savings (capital inflows). To some extent, the relatively high correlation between domestic savings and investment could be explained by barriers to capital flows that existed even among the industrialized countries at that time. Subsequent research has shown that the correlation has diminished somewhat as these barriers were reduced.

On the same vein, Lucas (1990) illustrates that the differences in capital to labour ratio and marginal product of capital among countries are huge, and that capital flows are at the same time much less than what we should expect on basis of the existing differences. Lucas discusses several explanations for this discrepancy, including the differences in human capital between rich and poor countries (less human capital reduces marginal product of capital) and capital market imperfections that inhibit the across the time exchange of capital flow from richer to poorer countries for a subsequent flow of goods and profits in the opposite direction.

More recently, Lipschitz and Lane (2001) have argued that capital flows to transition countries in Central and Eastern Europe are less than what should be expected. The authors argue that if investment decisions were guided by uncovered interest parity, we should see much larger capital flow to Czech Republic and other transition economies. They note that in late 1990s, there were still large differences in output per worker and in marginal product of capital between transition economies and Germany. They suggest that to the extent that large differences in output per worker reflect differences in capital-labour ratios, there is potential for huge capital flows. The authors offer several reasons why actual capital flows are less than predicted by the model, including bottlenecks due to the presence of slowly adjusting factors of production (land, skillful labour); institutional factors that increase the risk for foreign investors (concerning the rules of game); externalities connected with human capital accumulation; ability of financial system to channel their funds effectively; and concerns about macroeconomic instability, including the capacity to service external debt that affects the perceived risk to repayment.

We may offer several additional factors explaining the difference between the actual size of capital inflows to transition economies and inflows predicted by the theoretical models.

First, the role of risk and uncertainty. At the beginning of transition, the difference in capital labour ratios or output per worker were very high and they should have attracted, *ceteris paribus,* a correspondingly large inflow of capital per unit of time. But at that very moment when there was abundance of potentially profitable oppor-

tunities, the risks connected with exploiting these opportunities were also correspondingly large. After all, the very reason of existence of these profitable opportunities for investment was the fact that for a long period of time, these opportunities had not been exploited, capital stock had deteriorated, and labour productivity had remained low. The system of pervasive distortions that characterized centrally planned economies created this situation and the collapse of central planning has opened room for the exploitation of these investment opportunities. But the causes of these distortions could not be removed overnight. In early years of transition, macroeconomic stability was still fragile, capital flows were still controlled, rules of game were unclear or untested, and human capital usable in market economy relatively scarce. Therefore, it may not be surprising that capital flows to transition economies began to accelerate only gradually, as the importance of these obstacles faded.

Second, the neoclassical model omits the implications of a larger inflow of foreign capital to external debt and external vulnerability. In advanced countries, accumulation of present large stock of capital per capita was financed to an important extent from domestic savings. But if a less-developed economy would finance a rapid accumulation of capital by drawing more extensively on foreign savings, this could result in a build-up of a very large external debt that would make the economy much more vulnerable to external shocks, e.g. to changes in market sentiment. For some less indebted transition economies as the Czech Republic, there would probably be still some room for an increase in external debt without triggering concerns about debt sustainability, but more indebted countries as Hungary would probably have a much less room to rely on external savings.

Third, the neoclassical model abstracts from demand for external borrowing. In practice, debt-creating capital inflows cannot exceed residents' demand for external borrowing. Similarly, FDI inflows cannot exceed the stock of existing assets offered for sale to a strategic investor (both state-owned and private owned assets) plus the room for FDI inflow related to new greenfield projects. How much debt instruments foreign portfolio investors could buy depends on the demand of Czech companies or government for non-bank borrowing, and on the extent to which this demand is satisfied from domestic savings by borrowing from residents. In early transition, government was borrowing only little from private sector, and companies relied on bank loans as the main source of external financing. Therefore, residents' demand for external borrowing was limited.[5]

Fourth, the neoclassical model of capital flows is not the only one. Alternative model based on increasing returns to capital and complementarity of factors of production produces a different prediction for capital flows. The presence of increasing returns means that the standard mechanism of decreasing marginal returns to capital (or any other factors), given the unchanged amount of other factors of production, does not hold. In the presence of complementarities and increasing returns, capital would flow to countries where it is already abundant. A strong complementarity means that productivity of capital would be positively affected by existing higher capital stock, and that the effect of diminishing marginal returns does not kick in. The hypothesis of increasing returns and capital complementarity receives support from the fact that the richest and most capital abundant countries with 20 per cent of world population attract nearly 90 per cent of private gross capital flows (see Easterly, 2001, Chapter 8).

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5) Of course, while domestic firms may initially borrow from residents, residents can subsequently sell their securities to nonresidents.

A different question is what determines the structure rather than the size of capital inflows (FDI versus portfolio flows). The neoclassical model of capital flows does not say anything about the structure of capital flows. But the literature on that topic highlights the role of legal and institutional structures in the recipient economies and the closely related issue of information costs. It is assumed that there exists an information asymmetry between domestic and foreign investors regarding the profitability of domestic investment projects. Different forms of capital flows have different information requirements and will thus exhibit a different degree of sensitivity to information asymmetries. According to the so-called theory of pecking order of capital flows, FDI are the least sensitive to information asymmetries and thus will be the prevailing form of capital inflows in countries where the problem of asymmetric information is the most serious. As structural and legal reforms gradually contribute to reducing information asymmetries, portfolio investment will gain in importance as well. I will return to this issue later.[6]

4. History of Capital Inflows

The discussion on future capital inflows should be started by reviewing shortly the history of capital inflows. Table 2 summarizes the main features of history of capital inflows to the Czech Republic. The size and structure of capital inflows has been changing quite significantly, reflecting multiple factors, including the progress with the liberalization of capital movements (both inward and outward), foreign exchange rate regime, the state of the economy and investors' expectations regarding future performance, progress with privatization and last but not least, the situation in the international financial market and risk aversion of foreign investors.

Table 2
Czech Republic: Developments in Capital Account (in ECU, EUR bill.)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Financial account	2.6	2.8	6.4	3.3	0.9	2.6	2.9	4.2	5.0	12.6
FDI flows[1]	0.5	0.6	2.0	1.0	1.1	3.2	5.8	5.4	5.4	9.4
Portfolio flows[1]	1.4	0.7	1.0	0.6	1.0	0.9	-1.3	-1.9	1.0	1.0
Derivatives[1]	0	0	0	0	0	0	0	-0.1	-0.1	-0.3
Other[1]	0.7	1.5	3.4	1.7	-1.1	-1.6	-1.6	0.7	-1.8	1.7

1) Net flows; 2002 includes data from 2001:Q4 to 2002:Q3.
Source: Czech National Bank.

Several observations are in place. First, in the whole history of the Czech Republic, in no single year there was a new outflow of foreign capital (negative balance of financial account of the balance of payments). Even in the year of financial tur-

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6) For a more detailed discussion of determinants of the structure of capital flows see Buch and Piazolo (2001) and the references therein. The authors also provide some estimates of actual and predicted cumulative capital flows in accession countries and come to the conclusion that the difference is much less than in the estimates of Lipschitz et al. (2002).

bulence in 1997, there was a small net inflow of foreign capital. In this respect, the experience of the Czech Republic differs from a number of other emerging market economies that were affected by a financial crisis and experienced large net capital outflows, reflecting often not only the outflow of foreign capital, but also the flight of domestic capital. Second, there were two distinct waves of capital inflows to the Czech Republic. First wave took place in the period before the financial turbulence (in 1995 – 1996); second wave came in the period starting in 2000. Third, there were important shifts in the composition of capital inflows. During the first wave, more than one half of capital inflows was in the form of "other capital", mainly nonresidents' purchase of koruna bank deposits. This was a typical phenomenon in an economy with a fixed exchange rate and relatively high domestic currency interest rates that provided nonresidents with an attractive investment opportunity, and domestic borrowers with a cheaper source of financing – of course, only as long as currency does not depreciate.

During the second wave, in 2000 – 2002, total net capital inflows (cumulative EUR 21.8 billion) came nearly exclusively in the form of foreign direct investment (cumulative EUR 20.2 billion). Two main factors explain this significant shift in the composition of capital inflows. First, in 1997, koruna began to float, and in 1998, koruna interest rates began to fall, offering a less attractive investment opportunity in the form of koruna deposits. This explains the reversal of inflow of "other" capital. The reversal of "other" capital flows to the Czech Republic was a part of the more general phenomenon of retrenchment of developed countries' banks, as they were cutting their exposure to emerging markets in the wake of losses during the Asian crisis. Second, the acceleration of privatization of banks and nonbank corporations, together with the introduction of special incentives to foreign investors, contributed to a sharp pickup of FDI inflow. As for net inflow of portfolio investment, these remained relatively small compared to the total capital flows.

5. Future Capital Inflows

Let's now turn to the issue of future of capital inflows to the Czech economy. For a small open economy with nearly completely liberalized capital account transactions, capital flows are likely to be an important determinant of economic performance. Large and effectively intermediated capital inflows can help accelerate economic growth and convergence with the more advanced economies. But excessively large capital inflows could have also negative effect on the economy as a result of too fast and too large currency appreciation and build-up of external vulnerabilities, increasing the risk of future reversal. For there reasons, it is of interest to know what will determine the size and structure of future of capital flows to the Czech economy. However, we need to keep in mind that capital flows are affected by a whole range of factors and it is nearly impossible to make precise projections about their size.[7] This issue can be discussed from different angles.

5. 1 Capital Flows from the Model Perspective

As I have noted, capital flows to a less-developed country could be modeled using different approaches. I have discussed two different models of capital flows:

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7) The huge discrepancy between the IMF's projections of capital inflows and actual size of these in countries with large IMF-supported programs illustrates the inherent difficulty in predicting the size of capital inflows (see Cotarelli and Giannini, 2002).

the neoclassical model based on decreasing marginal product of capital, and increasing returns/economies of scale model. The question is which model is more appropriate to describe the reality of the Czech economy (and world economy more generally).

Each model has different implications for the future size of capital inflows: if the neoclassical model of declining marginal product of capital would best describe the reality of the Czech economy, and more generally the operation of the whole international financial system, the prediction for the future capital inflows is not clear-cut. On the one hand, the accumulation of the stock of foreign capital would suggest that marginal product of capital is declining and that capital inflows should slow down. On the other hand, the importance of some of the factors that may explain past lower than predicted capital inflows relative to the model (macroeconomic, legal and institutional uncertainty) should diminish, suggesting the potential for stronger capital inflows in the future. At the general level, it is difficult to make a definitive judgment what will be the net effect on capital flows of these two opposite forces.

A theoretically more clear conclusion about the future size of capital inflows could be drawn if the reality of the Czech Republic would be better captured by the increasing return/complementarities model. In that case, recent large FDI inflow into the Czech Republic should not produce a declining marginal product of capital and thus should not reduce the incentives for more FDI inflow. On the contrary, the attractiveness of the Czech economy as a destination for FDI would increase with the size of the FDI stock already in the country, as they would produce important positive complementarities and affect positively the productivity of the incoming capital.[8]

It is difficult to make a definitive judgment about the validity of one or other of these two models. However, some recent developments in the world economy suggest that there is some validity in the story behind the model of increasing return/complementarities. Table 3 is instructive in that respect. It shows how the allocation of world savings between developed and developing countries evolved in recent years. As we can see, in 1999, something noteworthy happened: developed countries as a group became net importers of foreign savings, while developing countries became net exporters, exactly the opposite what the neoclassical model of diminishing returns would suggest. The main reason behind this shift was the Asian crisis which significantly curtailed the flow of foreign savings to many emerging market economies. More recent turbulences in Latin America have further contributed to this trend. At the same time, the United States became the world largest im-

Table 3
Current Account Balance (in USD bill.)

	1996	1997	1998	1999	2000	2001	2002
Developed countries	34	93	47.2	-96	-227	-188	-210
Developing countries	-75	-58	-85	-10	67	40	19
Transition economies	-15	-17	-20	-23	-20	-19	-21

Source: IMF, 2002b.

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8) In terms of FDI per capita, the Czech Republic has attracted the highest volume of FDI inflows. In 2000, cumulative FDI inflow in the Czech Republic reached EUR 2,231, compared to EUR 1,790 in Hungary, EUR 1,348 in Slovenia, EUR 1,000 in the Slovak Republic and EUR 671 in Poland (see Social and…, 2002).

porter of foreign savings, as its current account deficit continued to increase rapidly.[9] Already existing high stock of capital in the U.S. economy did not repudiate but rather attracted more foreign investment, as the increasing return theory would suggest.

However, the evidence from recent years does not necessary suggest that the increasing return model will prevail at all times. It needs to be kept in mind that at some point, capital inflows driven by increasing returns could hit different limits than the declining marginal product as in the neoclassical model.

One such limit could be the limited availability of certain inputs. As the recent experience of Ireland suggests, large capital inflows could at some point hit the constraint of availability of other inputs, including labour. This could push upward wage costs and gradually undermine the attractiveness of a country as a destination of foreign investment, even in the presence of increasing returns to scale at a lower level of capital inflows. Such limits could be present in the Czech Republic as well. There is anecdotal evidence that in some areas, foreign investors are facing a shortage of highly qualified workers that does not allow to expand their activities as much as they would like.

Another potential constraint on capital inflows from the operation of increasing returns/economies of scale mechanism is the growing external vulnerability of the country attracting large capital inflows. Not every form of capital inflows increases recipient country's external vulnerability to the same extent, if at all. But the likelihood increases that with the size of capital inflows, the incremental effect on external vulnerability of each additional unit of capital inflows increases. The reasons are quite straightforward in case of debt-creating capital inflows, as external debt rises and the capacity of the country to earn foreign reserves to continue servicing the increasing debt need not keep pace. But even non-debt-creating capital inflows need not be an unqualified blessing to a recipient country. I will discuss the issue of external vulnerability in more detail below.

5. 2 *Capital Inflows and Supply of Capital*

From a more practical perspective, we can also ask how the future size of capital inflows to the Czech Republic will depend on nonresidents' supply of foreign savings and on resident' demand for foreign borrowing.[10] First, we look on the supply of foreign savings.

From the supply of capital perspective, the volume of capital inflows will depend on the overall volume of world savings available (the sum of current account surpluses) and on the relative attractiveness of the Czech Republic compared with other alternative users of these savings. The question is, how is the relative attractiveness of the Czech Republic going to change in the period ahead.

Several points need to be emphasized. First, recent turbulent times in global financial market have increased investors' aversion to risk and have curtailed the new

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9) Clearly, capital inflows do not depend only on technological characteristics of the production process, but also on economic policies and institutional conditions in the economy that affect the profitability of investment. From this perspective, investors viewed the U.S. economy as offering better investment opportunities that crisis-hit emerging market countries, or even than Europe and Japan.

10) In some countries, return of domestic capital could also contribute significantly to capital inflows. For example, it is estimated that Argentinean residents now hold abroad about USD 100 billion of domestic savings, which represents a potentially large source of capital inflows. However, Czech savers do not hold a significant amount of savings abroad and thus the potential for return of domestic capital is limited.

inflow of foreign capital to emerging market countries as an asset class (see Table 1).[11] While increased financial turbulence triggered initially by the crises in Asia, Russia, Turkey and Latin America has negatively affected the price and volume of borrowing in international capital market, particularly for higher-risk borrowers, increased political risk (or perception of thereof) resulting from the recent developments in Argentina has subsequently affected adversely FDI flows.[12] Second, unlike many other emerging market countries, the Czech Republic and other accession countries were not seriously affected by the increased investors' risk aversion, and net inflow of capital to this group of countries has remained relatively stable.[13] Furthermore, as Table 4 shows, compared to sovereign borrowers in Latin America, spreads on sovereign external debt of accession countries has remained relatively low during the period of market turbulence, suggesting better differentiation among investors.

Table 4
Selected Countries: Sovereign Debt Spreads (in USD bill.)

	1998	1999	2000	2001	July 2002	September 2002	July 2003
Poland	198	199	197	185	250	305	40
Hungary[1]	155	107	116	78	x	x	x
Argentina	705	548	773	1,566	7,000	6,840	5,000
Brazil	825	920	749	863	2,200	2,200	800

1) Since 2001, Hungary has not had a foreign-currency denominated sovereign debt.
Source: Bloomberg, 2003.

There are several reasons for this relative resistance of accession economies to worsened conditions in international capital market. First, generally lower degree of external vulnerability. While external debt and current account deficits in terms of GDP may not be dramatically lower in accession countries compared to Latin American countries, there is a notable difference in terms of trade openness and the size of the tradable sector which is much larger in the accession economies. This allow them to run higher current account deficits and take more external debt, without causing investors to worry about their capacity to service their external obligations

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11) For a more detailed analysis of the developments in international capital markets see the different issues of IMF's Global Financial Stability Report.
12) Some market participants also argue that increased uncertainty about the legal framework of crisis resolution resulting from the discussion of different proposals for sovereign bankruptcy may have increased the borrowing costs of those sovereign borrowers who are perceived as more likely to resort to such mechanism.
13) According to the UNCTAD information on world investment released in September 2002, FDI inflows in 2001 declined to all regions except Central and Eastern Europe and Africa (where they remain still rather small). FDI inflows to Latin America declined by 11 per cent in 2001 relative to 2000, but increased by 2 per cent to Central and Eastern Europe. According to the latest data released by the Institute of International Finance, net capital inflows have declined generally in all regions including Europe. However, this decline reflects mainly developments in Turkey and less the development in the accession countries which maintain a good access to international capital market. Table 1 also shows that net capital flows to transition economies remain relatively stable.

and thus without increasing their risk premium and borrowing costs. Second, and perhaps even more importantly, accession countries benefit from the positive effect on investors' expectations of future EU/EMU accession. Expected future EU/EMU membership provides a guarantee that the candidate countries will not pursue de-stabilizing policies that will increase the risk of inability to service their external debt.

Investors' risk aversion could possibly recede in the future, depending on the resolution of financial crises in several important emerging market countries, as well as on other political and economic factors developments in the world economy.[14] Increased investors' willingness to take risk and search for higher yields could have ambiguous effect on capital flows to the Czech Republic and other accession countries. First, it should increase the capital flows to emerging market countries as a group. As such, all emerging market countries should benefit from it. Second, incre-ased investors' risk tolerance should result in higher share of capital flows to coun-tries that were recently shut off from international capital market or that had only a limited access. Investors' increased risk tolerance could eventually increase the competition that the accession countries face, both in international capital market and as a FDI destination, and could reduce the share of foreign savings that inves-tors are willing to allocate to this region.[15] But how this would effect the total size of capital flows to accession countries and the Czech Republic is uncertain.

On the other side, if financial problems of the crisis-affected countries remain unresolved, accession countries could benefit as a safer and more attractive desti-nation. However, increased political uncertainty could adversely affect investors' sentiment more generally, and in that case, accession countries could be adversely affected as well. Nonetheless, in the longer run, accession countries are likely to benefit from investors' better discrimination and from the fact that the prospective EU/EMU accession makes them a separate investment class relative to other emer-ging market countries.

How does the Czech Republic stand among the transition economies as a des-tination for inflow of foreign capital? In favour of the Czech Republic as a destinati-on for foreign capital speaks relatively low level of external debt, high level of do-mestic savings and foreign reserves, still low level of public debt, as well as low inflation. Some concern may arise with respect to large fiscal deficits, but in this respect, the Czech Republic is not unique, as many other transition economies struggles with the task of bringing public finance under control.

Therefore, it can be concluded that while supply of capital could be adversely af-fected by increased political uncertainty, the Czech Republic should benefit from its status as an accession country with low risk. Lack of supply of foreign capital should not be a tight constraint on the size of capital inflows.

5. 3 *Capital Inflows and Demand for Capital*

Whether the relatively favourable supply conditions will lead to actual higher in-flow of foreign capital will depend also on the domestic demand for foreign borro-wing. It could be argued that capital inflows to the Czech Republic are mainly de-

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14) In fact, there was already a significant narrowing of spreads of high-yield countries, as can be seen by comparing data for September 2002 and July 2003 in Table 4. But the question remains whether this reflects a sustainable reduction of risk premium.

15) However, the importance of this crowding-out effect is open to criticism. Some would argue that accession countries do not fall into the category of emerging market economies any more, and that inves-tors treat them as a separate investment category.

mand-driven, that means, the constraint on the size of capital inflows does not rest with the availability of foreign capital but with limited demand of residents for external borrowing. This is best illustrated by the fact that unlike many other emerging market countries, the Czech Republic was never forced to resort to a policy adjustment to reduce the size of current account deficit in order to adjust it to reduced availability of capital inflows.[16] Another evidence that the size of capital inflows is limited by demand for external borrowing is offered by the ability of the Czech sovereign to borrow abroad at a reasonably good price if it decided to do so.

Whether demand for the use of foreign savings in the Czech Republic will increase in the future depends on the total investment needs and on the availability of domestic savings to meet these needs. More specifically, the question is whether households' savings will be sufficient to meet borrowing needs of the private corporate sector and public sector.

Probably the most important changes that lie ahead concern the borrowing needs of the public sector. The latest Ministry of Finance of the CR Budgetary Outlook for 2003 – 2006 projects that in the absence of fiscal reforms, consolidated public debt will increase from 20.3 per cent of GDP in 2002 to 41.7 per cent of GDP in 2006. Public debt will increase even under the scenario of an ambitious reform program. Given the potentially large contingent liabilities, actual borrowing needs of the sovereign could be even higher than this projection suggests. Second, the easy access to domestic financing that the sovereign enjoyed thus far may not last. Similarly, the availability of privatization revenues as a non-debt creating source of financing public deficits will gradually fade out. These two developments are likely to push the government to borrow in international capital market. Given the low level of public debt (which is mainly issued domestically), the sovereign should have no problems accessing international capital market at reasonable terms.[17]

The above-discussed developments could increase the sovereign demand for borrowing and thus provide a potential channel for increased demand-driven inflow of portfolio investment. At the same time, however, the need to comply at some point in the future with the Maastricht criterion of general government deficit less than 3 per cent of GDP will serve as a long-term limit on the issuance of new government debt. Of course, the longer the EMU accession is delayed, the longer could fiscal deficits stay above the Maastricht ceiling, which together with the eventual recognition of contingent liabilities would mean more increase in public debt before the Maastricht constraint discipline begins to apply.

What about capital inflows resulting from the external borrowing of the corporate sector? Theoretically, approaching EMU membership should make external financing more attractive to nonsovereign borrowers. Establishing a sovereign foreign currency benchmark could improve the access of Czech corporations to international capital markets, and portfolio inflows related to nonsovereign borrowing could thus increase in the future. So far, banks have played a dominant role as a source of corporate sector financing, while the role of capital markets remained limited. This

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16) It could be argued that in a regime of floating exchange rate, adjustment to lower availability of foreign capital would take place automatically via currency depreciation.

17) Of course, the problem is the eventual impact of sovereign external borrowing on the exchange rate. This is the reason why so far, the Czech government has abstained from borrowing abroad from private creditors. However, it could be argued that the need to borrow externally will arise mainly as privatization revenues as a source of external financing fall. This could imply the change in the structure of capital inflows rather than the increase in total size, and thus the net effect on the exchange rate should not be that large.

may be changing, as banks begin to pay more attention to lending to households. Still, the size of nonbank external borrowing by domestic firms is likely to remain limited, and is unlikely to produce a surge in portfolio capital inflow.[18]

6. Future Capital Flows and External Vulnerability

As I have noted, the size of future capital flows to the Czech Republic could be constrained by the risk of increased external vulnerability. Too large volume of capital inflows would result in increased external vulnerability, either in the form of higher external debt as a result of debt creating capital inflows, or in a deterioration of current account balance because of the currency appreciation (and also higher profit repatriation in case of higher FDI inflow). It is true that indicators of external vulnerability are not flashing red in the case of the Czech Republic, and concerns about external debt and balance of payments sustainability are not likely to become in the near term a binding constraint on further capital inflows. Nevertheless, this could change if the already large capital inflows increase further and if the economy does not adjust to these inflows by increasing its capacity to earn foreign currency to service higher external debt.

Different forms of capital flows have different effect on the economy and its vulnerability. Arguably, the least risky is the inflow of foreign direct investment that finances private investment and that brings improved efficiency and better management. Debt-creating inflows (portfolio investment or bank borrowing) could be more risky, both because these flows are usually more volatile and because they result in a build-up of external debt. But much depends on the use of these inflows, and on their effect on production, efficiency, trade balance, etc.

Demand and supply considerations suggest a shift in the structure of capital flows is likely to take place in the future. Dominant role of FDI inflows will recede as privatization sales to nonresidents comes to an end. While large greenfield project-related FDI inflows may continue, total volume of FDI inflows may decline somewhat from the recent record high levels. At the same time, the share of portfolio inflows will probably increase.[19] Within portfolio inflows, sovereign borrowing is likely to increase for the reasons discussed above. In other words, the structure of capital inflows is likely to shift toward the more risky composition, but this shift is likely to be slow and limited.

Given the prominent role of FDI in capital inflows to the Czech economy, it is useful to discuss in more detail the potential effects of these on economy's external vulnerability. FDI inflows are usually considered to be more stable, not subject to sudden panicky withdrawal, they address the problem of information asymmetry between domestic and foreign investors, reduce the risk of information surprise that could lead to a drying out of capital inflows or even to capital outflow. FDI brings not only money but also possibly better managerial expertise, better technology and better access to foreign markets. FDI inflows allow to finance current account defi-

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18) Experience of emerging market countries where corporate sector external borrowing (either directly or intermediated through domestic financial sector) reached large size suggests the important role played by the borrowers' perception that foreign funding is relatively cheaper than domestic. This perception was often fueled by fixed exchange rate. With domestic interest rates low, Czech companies may not see much benefits from borrowing abroad, even though the expectations of further koruna appreciation may increase the attractiveness of external borrowing.

19) This shift from FDI inflows to portfolio inflows is also in line with the prediction of the pecking order theory of capital inflows noted earlier.

cit without resulting in higher stock of external debt like in the case of debt-creating flows.[20] Even though the size of FDI inflows is likely to decline somewhat in the future, they will still continue to be a major factor affecting the Czech Republic's economic performance and real convergence with the euro area.

The potential risks of large FDI inflows are related to their already mentioned dual effect. FDI inflows affect not only real economy, but also the foreign exchange market and the currency external value: they tend to produce currency appreciation.[21]

To the extent that FDI inflows increase productivity, real equilibrium exchange rate appreciates as well, and stronger currency should not pose a risk to external balance. Increased productivity would be expected to mitigate the adverse effects of currency appreciation on net exports and on external current account balance. Also, increased productivity would be expected to reduce domestic price of those domestically produced goods that compete with imports, therefore allowing domestic producers to compete on domestic market with imports made cheaper as a result of real appreciation. Therefore, FDI inflows should normally produce a sustainable real appreciation and thus sustainable real convergence. But there are some caveats to this conclusion.

First, it is not always clear if the large share of FDI in capital inflows is an evidence of strength of weakness. For example, Hausmann and Fernandez-Arias (2000) find that high share of FDI in total capital inflows tends to occur in riskier countries. They conclude that rather than a sign of strength, large FDI inflows are a sign of a weakness. Also, the notion that FDI inflows cannot be easily reversed needs to be qualified. While physical capital like machines and building cannot be reversed, financial transactions related to the original FDI inflows could be reversed more easily and faster.[22] This observation is in line with the analysis of structure of capital flows by Buch and Piazolo (2001) who emphasize the role of FDI as a tool to evade the problems related to information asymmetries and other market imperfections. However, the observation of Hausmann and Fernandez-Arias does not imply that large share of FDI in total capital inflows should be automatically seen as evidence of the above-noted weakness. In case of the Czech Republic, it could be argued that the relatively small role of portfolio inflows reflects less the market imperfections and more the limited demand of residents – particularly the sovereign – for this form of foreign funding. And large FDI inflow is related to EU and EMU accession and is not primary motivated by information asymmetries and other problems – though these certainly exist.

Second, there is an asymmetry between the impact of the FDI inflows on the exchange rate and on productivity. Currency appreciation as a result of FDI inflows is certain to take place, and it happens immediately, while any positive benefits of FDI inflows are less certain to materialize, and if they do, it will be in a more distant future. We can analyze two modalities of this problem.

First modality refers to the situation where the increase in FDI inflows would be sudden and large, and when this would produce a sudden large exchange rate effect. In this case, the problem may arise mainly because of the time asymmetry: the

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20) This does not mean that FDI inflows could eventually affect adversely balance of payments, because of the future repatriation of profits from foreign-owned companied abroad.

21) Of course, not every FDI inflow affects the exchange rate. If FDI inflows are to have a direct effect on koruna exchange rate, the payment by foreign investors for the acquisition of a stake in the company has to take place in foreign currency, or in koruna that were bought in foreign exchange market.

22) I am grateful to Rachel van Elkan for making this point.

negative effect of currency appreciation on competitiveness is front-loaded, but the positive effect on productivity of competitiveness of the investment financed by the FDI inflows will be more back-loaded. In best case, this could cause temporary problems to exporters and domestic producers that compete with imports. In worst case, it could result in bankruptcy of some producers and deterioration of trade balance.

Second modality refers to the situation where positive effect of FDI inflows on competitiveness does not materialize (or materializes only to a limited extent) because FDI inflows are directed mainly to the sector of nontradables. For example, FDI in the form of purchases by foreigners of the existing energy network companies may not have a direct effect on export competitiveness at all. In such case, FDI inflows could result in real appreciation of the currency that would exceed the appreciation of equilibrium exchange rate, with potential adverse consequences for balance of payments developments.[23)]

This problem may have been present in the Czech Republic during the 1990s. As Table 5 shows, FDI to nonmanufacturing industries (approximation of nontradables) was about twice higher than to manufacturing (tradable goods). Therefore, the direct positive effect of FDI inflows on competitiveness of Czech exports may have been less than suggested by the size of total FDI inflows.[24)] The Czech Republic has not only the highest FDI per capita, but also one of the highest fixed capital investment in terms of GDP and relative to the EU, measured in terms of purchasing power parity. According to the data quoted in Social and… (2002), in 1999, fixed capital investment in the Czech Republic has reached 56 per cent of the EU's level, less than Slovenia (79 per cent), but more than Hungary (39 per cent) and Poland (37 per cent). In terms of GDP, fixed capital investment in 2000 reached 28.3 per cent of GDP in the Czech Republic. However, one unit of output (GDP) required in 1994 – 1998 on average 22 units of investment, while this incremental investment to output ratio was only 9 in Poland and 3 in Hungary, suggesting much higher output effect of investment.

Table 5
Czech Republic: Foreign Direct Investment (in USD mill.)

	1997	1998	1999	2000	2001
Nonmanufacturing	892	2,434	4,316	2,936	3,483
Manufacturing	408	1,284	2,008	2,050	1,433

Source: IMF, 2002d.

In addition, the negative effect of FDI-driven appreciation on balance of payments and production could be also exacerbated by the possibility that not every producer who sells for exports or who competes with imports will be able to adjust to the appreciating exchange rate by cutting costs and/or increasing productivity as fast and to the same extent. As a result of FDI-induced koruna appreciation, some of

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23) This is a variant of the well-known Dutch disease phenomenon.
24) This is not to deny that foreign investment in financial sector, energy, retail sector etc. does not have positive effects that would make the whole economy more efficient and that would ultimately also improve the ability of industrial firms to compete abroad.

these marginal producers could be pushed out of business. They could become uncompetitive in foreign markets, and they could also loose domestic market share to cheaper imports. Not everyone is a recipient of foreign direct investment, and not everyone will benefit from a productivity-enhancing investment that would allow to adjust to a stronger koruna. If the appreciation is large and happens fast, and if it results in overshooting of the exchange rate, it could put out of business more producers than what would be required to adjust to a new equilibrium exchange rate, with potentially adverse macroeconomic consequences. Eventual reversal of the exchange rate overshooting – if it happens – will not reverse this process.

Another potential problem of the FDI inflows is that while the FDI-driven koruna appreciation could gradually weaken recipients' country external balance and increase its external vulnerability, this weakening need not trigger automatically a correction. Unlike portfolio inflows, FDI inflows are usually not very sensitive to the deteriorating external balance and increased country's risk premium. There is no strong mechanism that would trigger an automatic reduction of FDI inflows, preventing thus further koruna appreciation, further loss of competitiveness and further widening of external current account deficit. However, if/when FDI inflows eventually fall, alternative sources of financing of external current account deficit would need to be found or policy adjustment implemented. Of course, the alternative sources of external financing are likely to be more sensitive to increased external vulnerability.

In 2001 and particularly in 2002, as a result of large FDI inflows, the koruna has appreciated rapidly.[25] While the Czech National Bank and the government sought to limit the impact of FDI inflows on foreign exchange market, this effort did not prevent the koruna from strengthening. Only the acceleration of intervention in foreign exchange market since mid-2002 stopped the koruna appreciation. Because an important part of recent FDI inflows was related to the privatization (partly in the sector of nontradables), one should perhaps be concerned that the koruna appreciation went too fast and too far relative to the beneficial effect of FDI inflows on competitiveness of exporters. While data for the first nine months of 2002 did not produce a clear evidence of adverse effect of strong koruna on trade balance, trade deficit began to widen in the fourth quarter of 2002, suggesting that currency appreciation began to affect adversely export performance.[26]

7. Secondary Markets and Convergence Play

So far, I have discussed capital flows related to the primary issuance of securities or FDI inflows. However, capital inflows could be not only a result of activity in primary markets (issuance of new securities), but also a result of activity in secondary markets, as a result of nonresidents buying existing securities from residents. In the period preceding the EMU accession, particular attention needs to be paid to one specific potential source of capital inflows connected with the secondary market activity, the so-called convergence play.

The convergence play refers to capital inflows stimulated by the expected profit opportunities resulting from the behavior of interest rates and exchange rates ahe-

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25) In nominal effective terms, the koruna appreciated from 2000 to mid-2002 by more than 20 per cent, before depreciating by about 5 per cent in the second half of 2002.

26) Initially, exporters may try to maintain market share by cutting costs and squeezing profit margins, and strong koruna need not immediately affect trade balance, but at some point, exporters may be forced to resort to cuts in production and employment, with adverse effects both on economic activity and on trade balance.

ad of the EMU accession. Countries that have joined EMU in the past have experienced a sizable decline in the currency risk premium of their debt, that is, premium to compensate the debt holders for the risk that the currency will loose value.[27] Decline in currency risk premium resulted in lower interest rates on their debt instruments in local currency, and thus higher price of these instruments. Increased price allowed holders of these instruments to realize capital gains. These gains were largest in these countries where the risk premium associated with the currency devaluation was initially the highest, and where the spread compression resulting from the credibility-enhancing effects of adopting a common currency was the most significant.

Arguably, the country risk premium, that is, the additional costs to borrower to compensate the investors for the risk that the borrowing country will not be able to repay its debt, does not fully disappear with the disappearance of the national currency and the currency risk. But country and currency risks are not completely independent, and disappearance of currency risk should normally reduce country risk and thus total risk premium as well.[28]

Therefore, past experience would suggest that transition countries that will join the EU and EMU will experience a convergence of government bond yields to levels in the euro area. Reduction in interest rates on debt instruments issued by these countries would allow investors to benefit from capital gains. Therefore, investors have an incentive "to play" on the convergence of interest rates to EMU level.

The extent to which EMU accession could elicit the convergence play-related capital inflows depends crucially on initial conditions of an accession country. A country with a profligate fiscal policy and with a high risk premium can experience a more significant improvement in fiscal discipline by following the EMU rules, and it could see a more significant compression in risk premium, resulting in correspondingly larger capital gains for the holders of its sovereign debt. Often-mentioned example is Italy, which saw a dramatic reduction in fiscal deficits and correspondingly large decline in interest rates and spreads. Conversely, countries with a relatively well-disciplined fiscal policy whose sovereign debt risk premium is relatively low are likely to see correspondingly smaller compression of this premium once they join the EMU, and holders of their sovereign debt could thus expect smaller capital gains, making the convergence play less enticing.

Table 6 shows yields on government debt of different maturities in local currencies of four accession countries, as well as their spreads compared to the EU benchmark. Immediately, one thing stands out: the spread of Czech Republic's bonds is negative, i.e., nominal yields are lower than yields on comparable EU instruments! The convergence of Czech yields has already taken place, there is no more room for further spread compression. Therefore, the situation in early 2003 suggests that there is no potential for convergence play-related portfolio inflows to the Czech Republic.

27) For example, in case of Italy, the sovereign risk measured by a spread of Italy's government bonds over the similar German bonds has declined from more than 400 points before Italy joined the EMU to about 50 points after it became a EMU member.
28) The reason being the negative effect of currency fluctuations on borrower's financial situation and thus the capacity to service its debt. Moreover, joining the EMU does not imply only giving up national currency. It also means accepting the rules for the conduct of fiscal policy that should result in a stronger financial position of the public sector and thus in less probability that the sovereign will be unable to service its debt obligations.

Table 6
Accession Countries Spreads versus European Union

Maturity	EU	CR		Poland		Hungary		Slovakia	
	bench	yield	spread	yield	spread	yield	spread	yield	spread
3M	3.22	2.78	-0.44	7.00	3.78	9.30	6.08	7.95	4.73
6M	2.94	2.75	-0.19	6.60	3.66	9.38	6.44	7.78	4.84
1Y	2.92	2.78	-0.14	6.20	3.28	9.39	6.47	7.67	4.75
2Y	3.10	2.76	-0.34	5.96	2.87	x	x	7.4	4.3
3Y	3.34	2.71	-0.63	6.08	2.75	8.82	5.49	6.39	3.06
4Y	3.60	3.25	-0.36	6.19	2.59	x	x	x	x
5Y	3.84	3.19	-0.65	6.15	2.31	7.82	3.98	6.05	2.21
7Y	4.27	3.91	-0.36	x	x	x	x	x	x
10Y	4.56	4.29	-0.27	5.95	1.39	6.83	2.27	5.95	1.39
15Y	4.92	4.57	-0.35	x	x	6.96	2.04	x	x
20Y	5.01	x	x	6.01	1.00	x	x	x	x

Source: Česká spořitelna/Erste, Macroeconomic and Fixed Income Weekly Report, November 4, 2002.

Table 6 suggests several questions. Why are the spreads in transition economies so small and why the much higher yield compression compared to other accession countries took place in the Czech Republic? Is this compression sustainable or is there a risk that it could be reversed?

I have already discussed why accession countries' foreign currency-denominated debt has much lower yield and spreads than debt of many other emerging market countries. Similarly, low yields and spreads on domestic currency debt most likely reflect the credibility-building effect of EU/EMU accession, which represent a very powerful guarantee of sound policies over the medium and long-term. Positively-sloped yield curve in the Czech Republic compared with the negatively-sloped yield curve in other three countries probably reflects very low inflation in the Czech Republic, very low short-term interest rates and little expected further interest rate cuts. As for the existence of the negative spreads on Czech sovereign debt, there are several possible explanations. First, although rising, public debt in the Czech Republic is lower than in other three countries. Second, inflation expectations are lower in the Czech Republic than in other three countries, and thus inflation-adjusted spreads are more similar. Third, abundant liquidity in banking sector creates large demand for government securities, pushing down yields and spreads.

As Czech spreads on government securities of all maturities are presently below the EU benchmark, there is no more room left for capital gains and convergence plays. Therefore, there is little possibility for convergence play-motivated capital inflows. This does not mean that inflow of portfolio capital cannot increase, but with negative spreads, there is little possibility that this would reflect the activity of non-resident investors in secondary markets. While predominant part of existing stock of government securities is in the hands of residents, mainly banks and other insti-

tutional investors, and thus the potential for nonresidents' purchases is high, low yields and spreads make this unlikely.[29]

To be sure, it remains to be seen whether the present negative spreads and low yields will remain sustainable. Some suggest that the disappearance of positive spread may even reflect a bubble in the Czech fixed income market. The sustainability depends on the main causes of the spread compression in the first place. For example, if inflation expectations increase significantly, yields on government securities would increase as well. Failure to rein in soon large fiscal deficits and arrest a rapid increase in public debt could have similar consequences. In that case, spreads between the Czech yields and EU benchmark could widen again, creating room for subsequent spread compression and convergence play. However, if the spreads do not widen significantly and stay close to present level, portfolio capital inflows will most likely be driven mainly by domestic borrowers' demand for new foreign funding, instead of nonresidents' large-scale purchases of existing securities from residents.

8 . C o n c l u s i o n

In this study, I have discussed some issues related to capital flows in the period before the Czech Republic's EMU accession. During this period, the Czech Republic is likely to continue to receive a large volume of foreign capital. I offered some thoughts about the driving force of these inflows, about its size and the composition.

In the aftermath of the financial crises of the 1990s and early 2000s that have affected several emerging market countries, a more nuanced view about the costs and benefits of capital inflows has emerged. Therefore, it is important to understand the conditions under which benefits related to capital inflows will prevail over the potential costs. I have noted that unlike some emerging market countries in other regions, accession countries in Central and Eastern Europe have remained relatively unscathed by the financial turbulence and continued to enjoy a good access to international capital markets. To an important degree, this is the result of the credibility-building effect of the policy discipline related to the future EU/EMU accession.

I have made a note of certain paradox related to capital inflows to emerging market countries. While the costly experience with financial crises in recent years led many to wonder about the risks of excessively large capital inflows, some economists come to the conclusion that based on a neoclassical model, capital flows from more developed to less developed countries could in fact be higher than observed in practice. We have discussed possible reasons why actual flows to the Czech Republic (and possibly other transition economies) may be lagging behind theoretical predictions. We noted that the neoclassical model does not take into account the risk factor which may have played a particularly important role in early stages of transition and a build-up of external vulnerability that may accompany larger capital inflows.

I discussed the future capital inflows from several perspectives. From a theoretical perspective, while looking at the implications for future capital inflows of the neoclassical model of capital flows and the model of increasing returns/economies of

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29) Theoretically, nonresident investors could be attracted to domestic securities even in case of low yields and negative spreads if they expect the currency to appreciate, but in view of the already strong koruna, further significant appreciation that would compensate for the negative spread does not appear at this moment likely.

scale. I argued that while the neoclassical model does not provide a clear prediction about the future size of capital inflows, model based on increasing returns would suggest a potential for further acceleration of capital inflows. However, at some point, capital inflows driven by increasing returns could hit some constraint which would cause it to slow down.

From a more practical perspective, I looked at the future development of capital inflows from the perspective of supply of external savings by nonresidents and on residents' demand for external borrowing. I concluded that while the very large FDI inflows are likely to decline somewhat, increasing sovereign borrowing needs could produce an increased inflow of portfolio investment. I emphasized that increasing external vulnerability could represent an ultimate limit to the size of capital inflows, and I discussed whether the present large FDI inflows bring not only benefits but also costs to the economy. I concluded that due to asymmetric effect on foreign exchange market and on real economy, large FDI inflows could contribute to an increased external vulnerability.

Finally, I asked whether the activity on secondary markets could become a source of large capital inflows to the Czech Republic before the EMU accession. I pointed to the previous experience of countries like Italy which saw a sharp decline in yields and spreads and to the so-called convergence play where foreign investors buy domestic debt instruments in the expectation of capital gains resulting from falling yields. However, yields on koruna-denominated debt are already very low and spreads over the EU benchmark are even negative, suggesting that the yield convergence has already taken place and that there is no opportunity for a convergence play-related capital inflows. A different question is whether this yield compression is sustainable. Among others, this will depend on continued low inflation, on credible macroeconomic policies and on the absence of negative surprises regarding the timing of the EMU accession.

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