Capital flows and their implications for monetary and financial stability: the experience of Poland

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Introduction

The last two decades can be characterised as a period of globalisation which has involved economic liberalisation combined with the opening-up of economies to international trade and financial flows. Economic liberalisation implied the lifting of various controls and restrictions and of entry barriers into specific sectors like banking, as well as the pursuit of market-oriented reforms, with far-reaching privatisation. Many countries competed for international capital, reforming their economies to attract foreign investment (see Abiad and Mody (2005)). As a result in many countries, including Poland, the opening-up of the economy has triggered massive capital flows. The main topics of the present paper are policy implications and the effects of these capital movements.

The present paper consists of three distinct parts. The first is devoted to macroeconomic issues related to the conduct of monetary policy in the liberalised capital account environment of the transforming economy. The main topic of the second part is the development of the financial sector in the environment of free movement of capital, with a special focus on the Polish case. Here we analyse the role of foreign capital and investors in the development of the financial system: institutions, markets and instruments. The main conclusion of this section is that the capital inflow has greatly contributed to the evolution and modernisation of the Polish financial system, enhancing its efficiency and stability. The third part of the paper presents implications of the significant presence of foreign financial institutions in the domestic financial system for financial stability. These include, in particular, potential channels of contagion.

I. Capital flows and monetary policy

I.I Policy responses to growing capital flows

Increasing capital flows around the world have influenced domestic policies. Growing global markets have made a significant contribution to improved discipline in the area of monetary and fiscal policies, punishing bad policies and rewarding good ones.

The need for more disciplined monetary policies has fostered a higher degree of independence of central banks and contributed to global disinflation. Not only has the increased independence of central banks improved monetary policy practices (Rogoff (2006)), it has also triggered an evolution in the nature of the monetary transmission mechanism. Monetary policy now affects the economy more through inflation expectations and exchange rates (Bean (2006), Woodford (2005)). Thus, the credibility of policy has become a very valuable asset (Corbo and Schmidt-Hebbel (2001)).

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On the other hand, however, growing capital flows have increased market volatilities and amplified the transmission of shocks, with long-term real interest rates increasingly determined globally. Opaqueness in financial markets limits policymakers' ability to assess risks properly. Not only bad policies but also simple bad luck can be severely punished by the markets. The well known theoretical trilemma (pick one of two under international capital mobility: monetary independence or a fixed exchange rate) has become the key constraint in determining domestic financial policies and the level of international financial integration (Devereux et al (2006)). The room for manoeuvre for domestic policies has shrunk significantly. Higher capital mobility has decreased monetary independence and confronted central banks with corner choices in implementing monetary policy. In practice it has become clear that in a world with increasing capital mobility it is more difficult to maintain the fixed exchange rate strategy than to conduct independent monetary policy.

Many countries have operated a monetary policy regime based on fixed exchange rates. The smooth changeover to a floating exchange rate regime was (and in some cases still is) complicated in many dimensions, thus inducing so-called "fear of floating". Some countries attempted to conduct a kind of eclectic monetary policy regime, combining some elements of inflation targeting with rather strict interventions in the foreign exchange markets in order to manage the exchange rate. In both cases increasing capital flows can easily undermine such an approach. The probability of a fixed exchange rate regime lasting eight years has been calculated to be below 0.3 (Spiegel (2007)).

Some countries have tried to limit financial flows using capital controls. These measures, however, have proved insufficient and, in most cases, ineffective, creating ways to circumvent the restrictions and thus distorting the normal functions of financial systems and markets. Even the case of Chile, presented as a success story, is debatable as strict capital controls (well prepared and based on the existing reporting and supervisory infrastructure) changed the structure and duration rather than the scale of flows (see Sławiński and Dusza (1998)).

In a catching-up economy, a fixed exchange rate regime does not protect the currency from real appreciation. Thus, it seems that an appropriate policy response to large (actual or potential) capital flows should be pursuing price stability and anchoring inflation expectations. The transition from a fixed to a floating exchange rate regime can, however, lead to high exchange rate volatility (as markets test the new equilibrium levels and/or test the solidity of the authorities' commitment). This could bring about a loss of competitiveness and high economic costs, especially in cases where the regime changeover is combined with a disinflation process. The pace of nominal appreciation matters. Some countries have used the above-mentioned eclectic approach to manage the transitory period smoothly (Pruski and Szpunar (2005)). A gradual, orderly regime changeover should reduce the macroeconomic costs of economic agents' adjustment to higher exchange rate volatility (see Graphs 3 and 4 and Table 1).

In the long run, however, monetary policy with low stable inflation as a target should contribute to exchange rate stabilisation. Two countries with price stability targets should have a relatively muted exchange rate, of course with reservations regarding some market and economic factors like market sentiment, potential tensions, the HBS effect, etc.

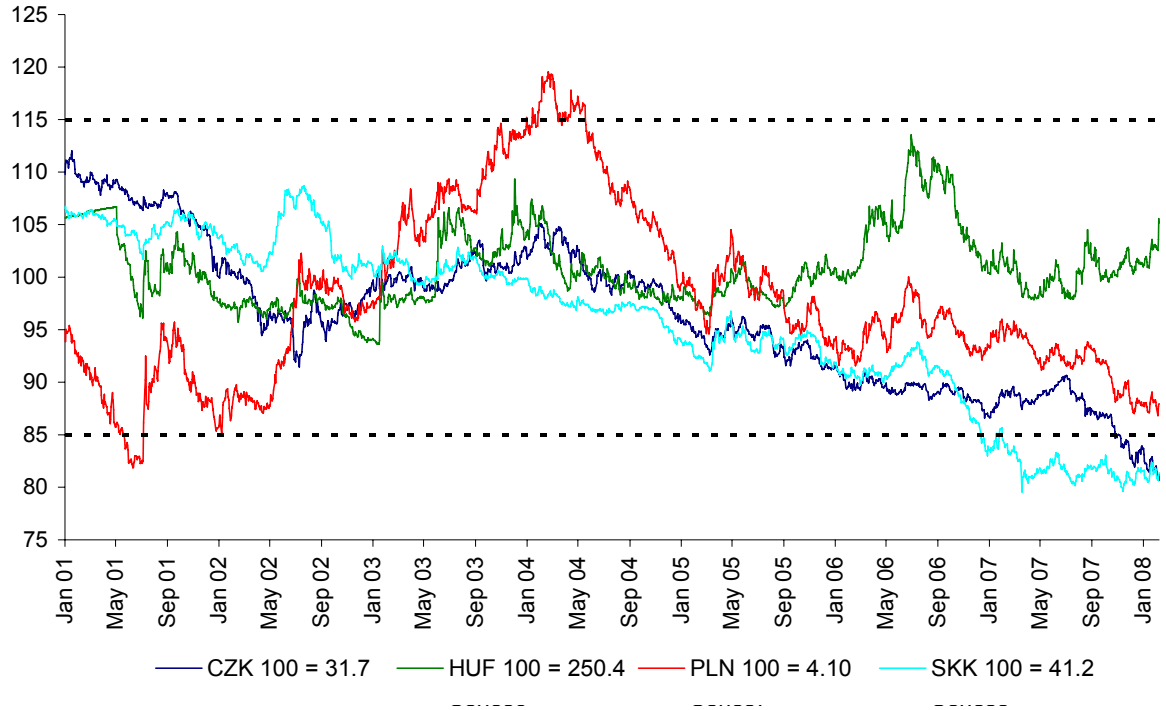
I.II Inflation targeting in coping with capital inflows

Empirical evidence supports the view that inflation targeting as a corner solution combined with free floating is an appropriate response to capital flows. An inflation targeting regime seems to immunise economies against the consequences of capital flows and accompanying shifts in exchange rates. First, exchange rate movements do not necessarily need to be hampered by foreign exchange interventions. Under inflation targeting a central bank uses its own interest rate, which it controls to a much greater extent than exchange rates (as it has the monopoly on issue of its own domestic currency). Second, even large shifts in exchange

rates become less harmful as economic agents have to be prepared for them (no implicit guarantees) and there are instruments available to cope with exchange rate risk. Thus, the macroeconomic cost of exchange rate volatility declines with time. In many cases, pass-through coefficients also drop as economic agents adjust to the environment of exchange rate volatility (see Annex 1). Finally, after the initial volatility under the regime changeover, exchange rate movements may decrease (Graph 1 shows an example for Poland in the last two years).

Graph 1

Exchange rates vis-à-vis the euro



Source: NBP data.

Long-term capital flows, especially foreign direct investment (FDI) flows, can also influence the conduct of monetary policy under an inflation targeting framework. High levels of foreign investor participation in the banking sector might modify the functioning of the credit channel in the monetary transmission mechanism, because of the access of domestic banks to sources of funding in foreign parent institutions. On the other hand, access to parent bank funding may stabilise the supply of funds and smooth the fluctuations that might result from the business cycles. This has been observed in some countries. In Poland, however, the scale of intragroup financing of domestic banks has not been large, and thus has not had a serious impact on the conduct of monetary policy. A larger impact was probably seen through the improvement of banking sector efficiency as well as through increased financing of the real sector of the economy, mainly households.

Yet, inflation targeters are few and relatively recent among emerging market economies. On the other hand, however, in many countries the experience with inflation targeting does not span an entire business cycle, so the new regime has not really been tested. In addition, inflation targeting under limited policy credibility may lead to greater volatility and a procyclical policy stance. There is probably still some “fear of floating” – avoiding real exchange rate volatility is considered an important policy objective in small open emerging economies, as the exchange rate may be the most important determinant of domestic inflation. Some other problems hampering the smooth introduction of an inflation targeting

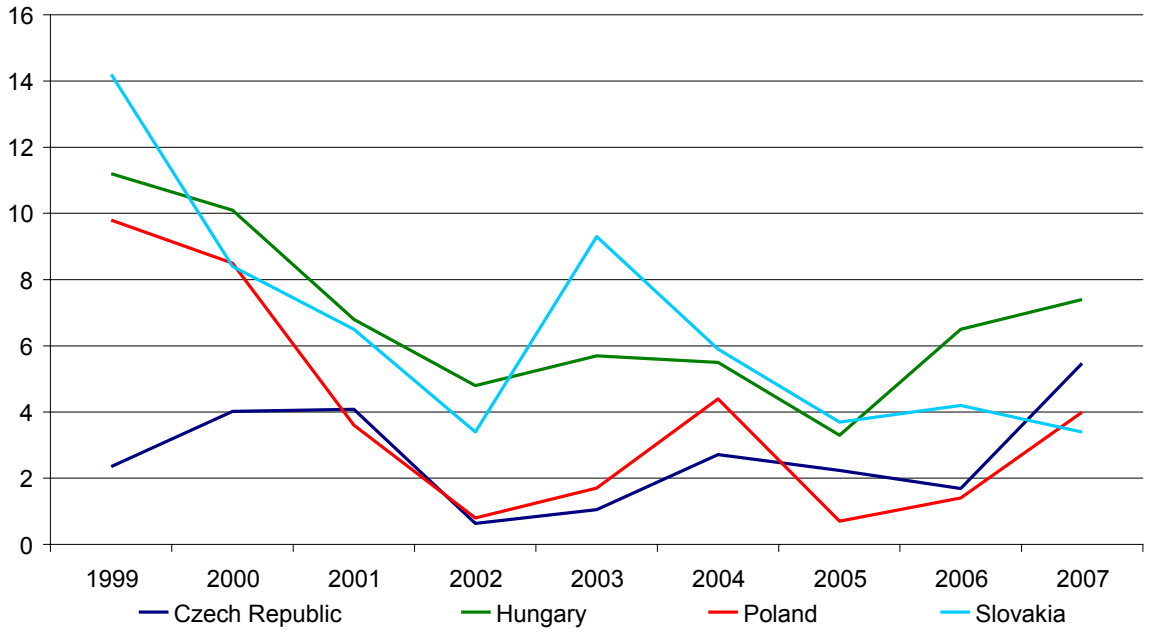
regime may result from: high pass-through, a high share of volatile prices in the CPI basket (eg food), a low level of monetisation or a high level of dollarisation/euroisation. While these obstacles may appear serious, some of them can be easily overestimated. The experience of Poland shows that the most important conditions for inflation targeting encompass: central bank instrument independence, an adequately developed financial system (with an interbank deposit market as the key ingredient), sufficient money market infrastructure (effective interest rate setting, reflecting market conditions), and efficient liquidity management by the central bank (monetary operations). This experience also makes it clear that some other elements (often highlighted in the literature; see Christoffersen et al (1999)) were of minor importance during the initial phase of the changeover to the inflation targeting regime and could be developed gradually thereafter, for example the MTM models or more sophisticated strategy and communication.

Summing up, the experience of Poland with an inflation targeting regime seems to have been largely positive so far. Despite high capital flows and exchange rate fluctuations, strong economic growth accompanied by low inflation and low current account deficits has been achieved. The new strategy has helped reduce inflation and stabilise it at a low level and in this way enhanced the credibility of the monetary authorities (see Graph 2). Inflation targeting has facilitated control over inflation and delivered an instrument to influence credit growth, which is also important for the stability of the financial sector. At the same time, inflation targeting offers more flexibility, including higher resistance to capital flows. It has also helped avoid vulnerability, as there have been no implicit guarantees inducing moral hazard behaviour on the part of economic agents. It has not, however, prevented the advance of currency substitution in domestic credit markets, especially in the housing loan market, which weakens the monetary transmission mechanism and increases households' exposure to foreign exchange risk. To some extent, currency substitution may have even been bolstered by the gradual strengthening and low volatility of the Polish zloty since 2004.

Graph 2

Consumer price index

Annual changes, in per cent

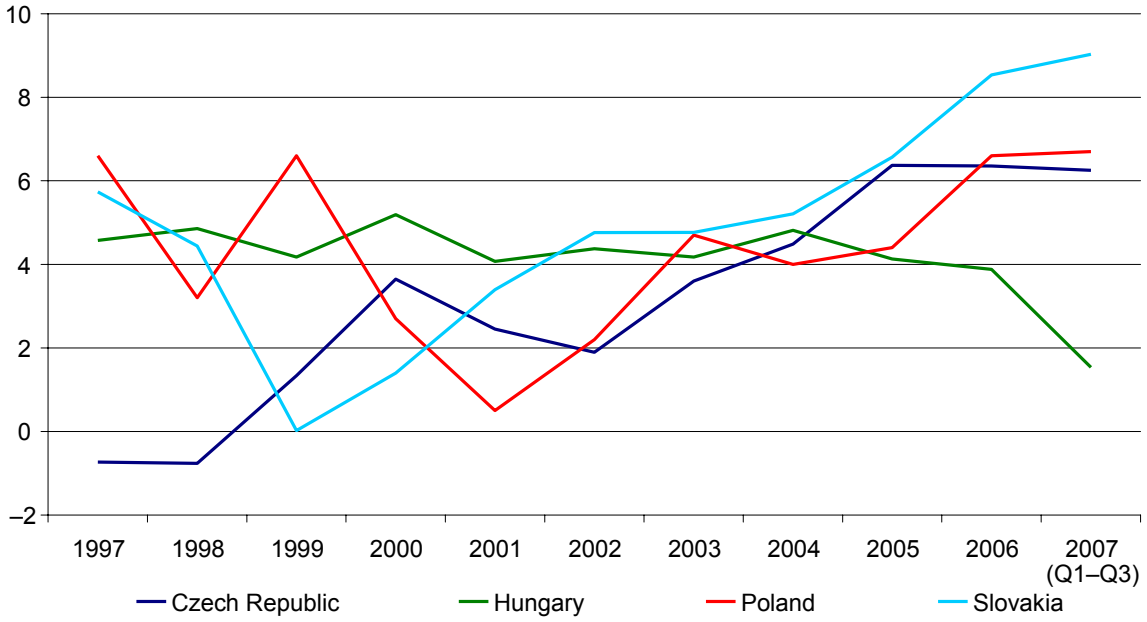


Source: ECB.

Graph 3

Gross domestic product

Annual changes, in per cent

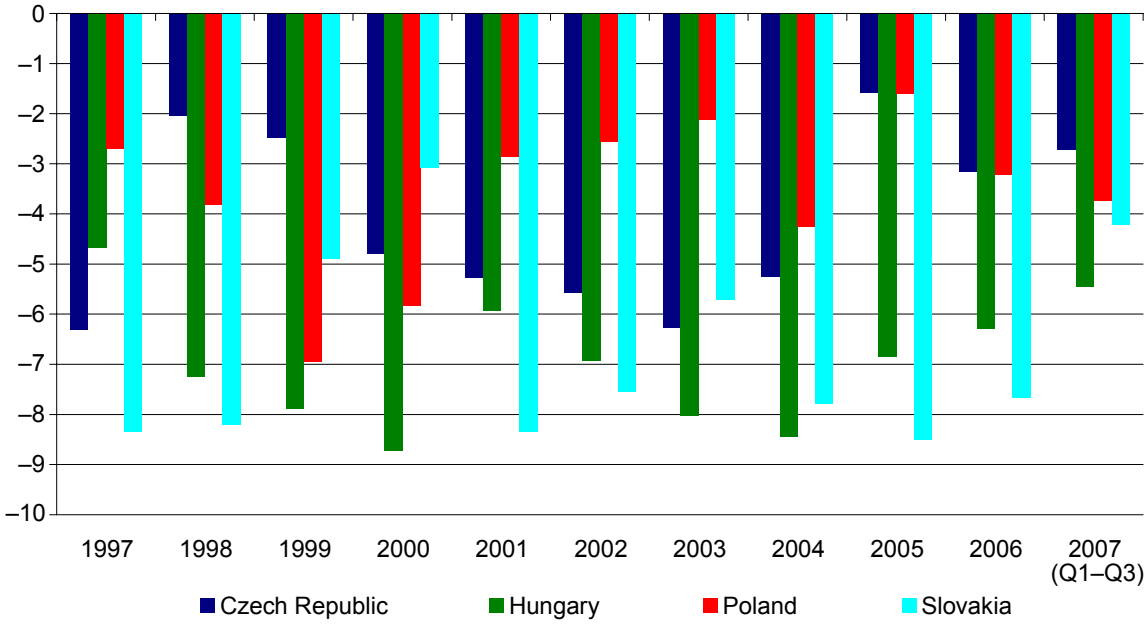


Source: Eurostat.

Graph 4

Current account deficit

As a percentage of GDP



Source: Eurostat.

Table 1

Macroeconomic developments under the inflation targeting regime in Poland

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Annual average change, in per cent										
CPI	11.8	7.3	10.1	5.5	1.9	0.8	3.5	2.1	1.0	2.5
GDP	5.0	4.5	4.3	1.2	1.4	3.9	5.3	3.6	6.1	6.2[1]
Domestic demand	6.4	5.2	3.1	–1.3	0.9	2.7	6.0	2.4	6.6	6.3[1]
Real effective exchange rate	4.7	–3.4	9.7	12.5	–3.7	–9.3	0.7	12.6	2.7	5.5
As of December each year, in per cent										
NBP interest rate	15.50	16.50	19.00	11.50	6.75	5.25	6.50	4.50	4.00	5.00
As a percentage of GDP										
Current account balance	–4.0	–7.4	–5.8	–2.8	–2.5	–2.1	–4.3	–1.6	–3.2	–3.7[2]
FDI in Poland	3.7	4.3	5.5	3.0	2.1	2.1	5.1	3.4	5.6	...
Portfolio investment	1.1	0.4	1.9	0.6	1.6	1.7	4.2	4.9	0.5	...
Financial derivatives	0.0	0.3	0.2	–0.2	–0.5	–0.4	0.1	0.1	–0.2	...
Loans to corporations (stock)	4.5	6.1	6.6	7.3	7.6	8.5	6.5	6.3	6.8	...
Official reserve assets (stock)	16.5	17.0	15.3	13.6	14.1	15.2	11.9	14.1	13.3	...
Public finance balance, ESA95	–4.3	–2.3	–3.0	–5.1	–5.0	–6.3	–5.7	–4.3	–3.9	–2.5[1]

... = not available.

[1] Estimates available as of February 2008. [2] As of third quarter of 2007.

Sources: NBP data; Central Statistical Office.

II. Capital flows and the financial system

Financial development constitutes a potentially important mechanism for long-term growth. Numerous studies show that the opening-up of the domestic economy to foreign competition, as well as the establishment of appropriate economic institutions, seems crucial in this respect (see Rajan and Zingales (2003) and Baltagi et al (2007)). Foreign investors have played a very important role in the development of the Polish financial system, with regard to both financial institutions and financial markets. Their visible presence was the result of the liberalisation of financial and capital flows carried out mainly during the 1990s (see Graph 5).

Financial liberalisation was one of the fundamental market-oriented reforms implemented at the beginning of the transformation in Poland, and included both domestic reforms and policies and the gradual lifting of foreign exchange controls. The former involved reducing

entry barriers to the financial market for new entities with a different ownership structure. The legal framework for the latter included a new act on foreign exchange controls, an act on investment with participation of foreign entities adopted in mid-1991, and further measures implemented later. These measures were connected with Poland's entry into the OECD and its accession to the European Union. There were many drivers behind this liberalisation process, including:

- assuring access to foreign funding to facilitate the modernisation of the economy and to provide capital in the absence of domestic sources of funds at the beginning of the transition;
- ensuring access to modern technology and management skills, to make the economy competitive and efficient;
- enabling participation in the global economy and international division of labour.

The full adjustment to OECD capital flow rules was made in 2002, when the remaining restrictions on short-term operations were lifted. The high presence of foreign capital has strongly influenced the characteristics of the Polish financial system and its ability to withstand shocks (financial stability).

II.I Financial institutions

Foreign investors are now majority owners of most Polish financial institutions. They control 71% of the capital of the Polish banking sector, 77% of the insurance sector, and 40% of the pension funds sector, as well as 26% of investment funds (as at the end of 2006). This key role of foreign capital is the result of the fact that due to historical reasons, the amount of domestic private capital available at the beginning of the transition process was low. The process of increasing the presence of foreign investors has been a gradual one. The developments in the banking sector can serve as a good example of this process, which comprised both FDI and portfolio investment. In the former case, three forms were present: privatisation of existing banks, takeovers of Polish private banks and greenfield investment.

During the 1990s the inflow of FDI to Poland paved the way for an efficient privatisation of Polish banks (NBP (2003)), which play a key role in the Polish financial sector.[3] The privatisation methods used have evolved over time and at first only limited participation of the strategic investors was allowed. It took some time for investors to take the dominant position in the equity capital of banks by the acquisition of shares on the Warsaw Stock Exchange, which also included new issues of shares.[4] Some private banks changed their ownership structure and gradually became subsidiaries of foreign institutions. Gradually, the government attitude changed, and the privatisation strategy adopted in the late 1990s involved the sale of a majority of shares to a single strategic investor. That was supportive in selecting the best suited and most reputable candidates for investors, as well as in negotiating the price and additional conditions of the privatisation deals. At present, most large Polish banks are subsidiaries of foreign banks with head offices typically in the EU 15 countries.

The access of foreign financial institutions to the Polish market through greenfield investment has also evolved through the years. The early 1990s saw only few banks established as greenfield institutions. Those greenfield banks, which had operated since the early stages of

[3] The share of banks' assets in the assets of the financial sector is still the highest (67% in 2006), although it has diminished by 26 percentage points in the recent decade, as a consequence of steady and more dynamic growth of non-banking financial institutions (NBP (2003)).

[4] With appropriate authorisation from the Commission for Banking Supervision.

the transformation, were very successful and profitable, specialising in corporate banking and trade finance. The Polish market attracted greater interest after a successful restructuring of the banking sector and upon Poland receiving a positive credit rating in the mid-1990s.

After the completion of the privatisation of the banking sector and entry into the European Union, the pattern of capital inflows to the financial sector started to change. Since 1 May 2004 new entrants to the Polish market have been mostly branches.[5] Foreign direct investment in banks which are subsidiaries of foreign institutions mostly takes the form of an accrual of retained earnings. In banks with a low deposit base, the inflow of capital takes the form of acceptance by the parent bank of subordinate debentures or issuance of other types of debt securities by the Polish subsidiary. The attractiveness of Poland for foreign investment has stemmed from the development of an appropriate institutional environment, including a legal and regulatory framework. Moreover, the prompt and successful restructuring of state banks has greatly helped in improving Poland's reputation abroad and in drawing the attention of potential investors. The other important factor was the accession process and entry into the European Union in 2004.

Analysing the tendencies in foreign capital inflows to the Polish banking sector in the last decade according to their type, three distinct periods can be distinguished: 1997–98, 1999–2003 and 2004–06. The first period was characterised by a high share of FDI flows in total inflows, reaching 40–50%, decreasing portfolio inflows and an increasing role of credit and other types of debt. The second period can be characterised by a still high share of FDI, ranging from 47 to 56%, but much lower portfolio investment and a steady share of foreign credit inflow. The third period was characterised by a drop in the FDI share to 32%, with simultaneous strong growth in portfolio investment and a high, but steady share of credit and other types of debt. The changes in the structure of flows were the results of changes in public policy towards foreign investor access to the Polish banking sector, including privatisation, and the situation of the banks themselves (mainly their capital buffer levels and tendencies in their liquidity position).

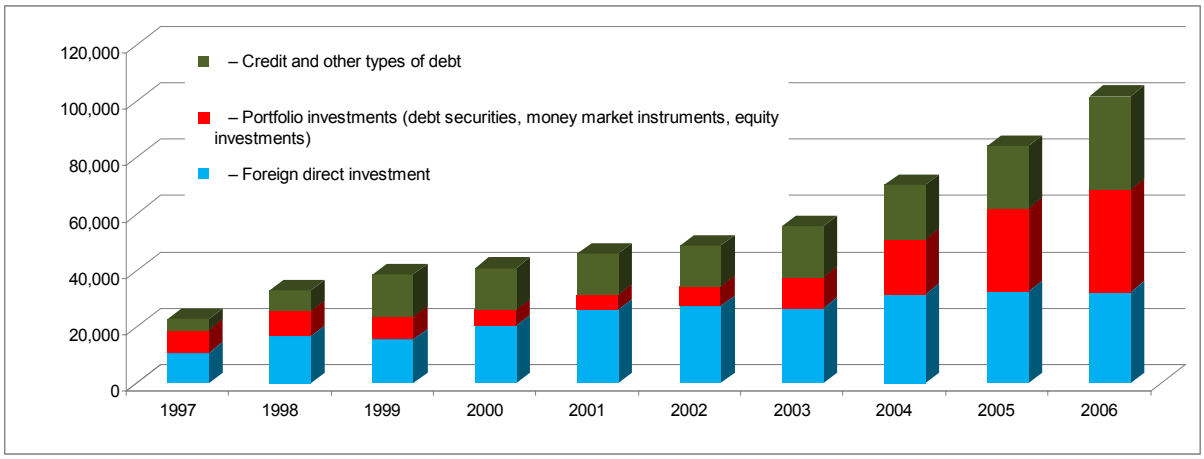
The banking sector in Poland is the largest segment of its financial system, accounting for 71% of its assets in 2006. But the liberalisation of capital flows has provided the possibility of raising funds directly from international markets, and large amounts of FDI in the real sector of the economy have caused the banking sector's role in the supply of funds for financing domestic enterprises to be smaller and less dynamic than originally expected. The cross-border financing of companies by their parent institutions has played an especially important role (see Graph 6). Contrary to this, the financing of the household sector is completely dominated by banking institutions.

[5] A result of the adoption of the single passport principle.

Graph 5

Gross private sector capital inflows

In millions of zlotys

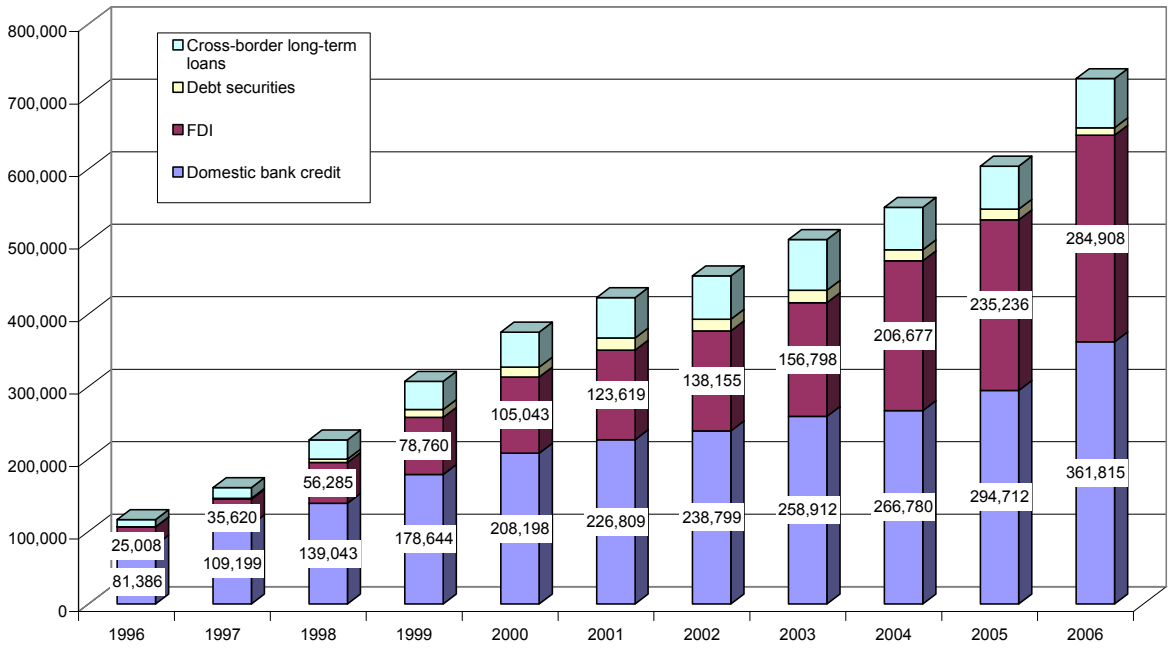


Source: NBP (2006).

Graph 6

Sources of funding of the real sector

In millions of zlotys



Source: NBP (2006).

II.II Financial markets

Foreign investors have also contributed significantly to the development of financial markets in Poland. The emergence of some segments, notably the over-the-counter (OTC) derivatives market, was due to the activity of London-based banks. Foreign players have made substantial contributions to the liquidity of the markets in which they operate. In some Polish financial markets non-residents play a dominant role (for example the foreign exchange spot market and OTC derivatives market).

The development of the OTC market for derivative instruments – for both currencies and interest rates – would not have been possible without foreign banks. Such instruments (non-deliverable forwards, interest rate swaps, forward rate agreements, foreign exchange options) started being traded in the mid-1990s on the London market. Polish banks have successively joined that market. Currently foreign banks are very active participants in the OTC derivatives market (their share in net turnover on the domestic interest rate instruments market exceeds 50%). Part of foreign banks' investments in Polish treasury bonds is funded on the FX swap market (by rolling over T/N zloty loans). The share of foreign banks in net turnover on the FX swap market exceeds 90%. FX swaps have commonly been used in carry trade transactions. Foreign banks are very active on the domestic FX spot market; their share in net turnover on the zloty market has reached 70%. The liquidity on that market is primarily created by foreign banks. These banks also have large positions in off-balance sheet interest rate instruments. Large exposures in BPVs[6] without flows of funds show that transactions serve speculative or hedging purposes. Some derivative instruments would not be offered by banks active in Poland, if not used to offset the exposures resulting from their sale (hedge back-to-back) to banks abroad (mainly parent banks). In the case of more sophisticated instruments, such as foreign exchange exotic options and interest rate options, banks in Poland only play the role of agents in their sale.

The importance of foreign players can be seen in the example of the futures and options market of the Warsaw Stock Exchange. This has been developing in a different way to previously mentioned market segments, with relatively lower participation of non-residents (their share in futures contract turnover did not exceed 4% in 1999–2004, while in 2006 the share of non-residents in futures contracts was 9% and in options 3%). The market is still of minor importance in Poland and its liquidity is not comparable to that of the OTC market.

Foreign capital has also contributed to the development of the equity market. In the mid-1990s, at the early stage of stock market functioning in Poland, the market was characterised by low capitalisation, a limited number of listed companies and high investment risk. Foreign investors were an important source of capital for listed Polish companies (their share in capitalisation was nearly 30%). With the development of the stock market in Poland (growth in capitalisation, new companies listed, privatisation) foreign participation in shares of domestic companies on the Polish market grew and by the end of the 1990s reached 50%. A record high level (60% of capitalisation) was achieved in 2004. Since then foreign players' share in the market has been falling, due to both strong demand on the side of domestic investors and some withdrawal of foreign capital from the Warsaw Stock Exchange (strong profit-taking after 2005), as well as a number of IPOs of Polish private companies. One should add that around two thirds of foreign investors on the Warsaw Stock Exchange are direct investors (taking into account the share in the value of investment).

The activity of foreign institutions has been especially important for the build-up of liquidity in the financial markets. The liquidity ratios of the stock and bond markets have been steadily

[6] The BPV (basis point value) is a fundamental measure used in interest rate instrument portfolio management which corresponds to the change in the value of an instrument (portfolio) caused by a shift of 1 basis point in the yield to maturity.

improving. The share of foreign investors in stock market turnover in 1996–2006 was over 30%; in 2005 it exceeded 40%. Foreign investors are very active in the most liquid segments of the Polish financial market, and provide a substantial contribution to their liquidity. These segments comprise stocks which belong to the WIG20 index basket (90% of the stock portfolio of non-residents is placed in WIG20 companies) and the benchmark bond market (non-residents accounted for over 36% of turnover in the treasury bond market in 2006). These findings are confirmed by such measures as the turnover/capitalisation ratio (in the case of stocks) the bid-ask spread, and the Hui-Heubel ratio. After pension funds, foreign investors are the second largest group of investors on the Polish bond market, with a 22% share at the end of June 2007. The drop in non-residents' activity in the third quarter of 2005 had a serious impact on bond market liquidity, evidenced by an increase in the vulnerability of bond yields to changes in benchmark bonds' turnover, as measured by the Hui-Heubel ratio.

III. Strong presence of foreign capital and financial stability

The inflow of foreign capital has facilitated the development of Poland's financial institutions and markets. Its potential adverse macroeconomic effects have been moderated by an adequate choice of monetary policy framework and its rigorous execution. This has led to generally positive results in the area of financial stability, although some potentially negative results of the process can also be identified. In an open financial system, certain channels of international contagion may arise due to exposure to international financial markets.

The flow of foreign investment to Poland seems comparable to the pattern observed in countries undergoing similar changes and transforming into market economies. In most countries in transition the creation of a stable banking sector has implied the active participation of foreign investors. Those countries that have attempted to develop the banking sector relying to a great extent on domestic capital have eventually ended up facing banking crises or at least major difficulties (as examples one may quote, among EU member countries, Bulgaria, the Czech Republic, Romania, Slovakia). This has confirmed the results of international studies, which show that the presence of foreign investors in the financial sector improves its resilience to external shocks and assures the stability of credit supply and overall financial stability (see Clarke et al (2003)). There are also opinions that in deep crises, the presence of foreign capital protects the domestic market from capital outflows (see Peek and Rosengren (2000)).

The participation of foreign strategic investors in Poland, as in most transition countries, has facilitated the development and modernisation of the financial sector, primarily by the transfer of know-how. As a result of the presence of foreign investors, one could observe an increase in market competition resulting in an increase in the efficiency of financial institutions. Foreign investment has led to a wider variety of financial products becoming available to non-financial sectors. This has encouraged the process of diversification of assets of households and corporations, diminishing their vulnerability to possible shocks. The same process can be observed on the liability side of their balance sheets.

Risk management at foreign-owned institutions

The transfer of know-how has been especially valuable in the area of risk management. The transfer of developed in-house risk management systems has brought major improvement in this area. This has resulted in a tightening of credit policies and practices and a more determined attitude towards non-performing loan (NPL) resolution (see BIS (2004)) reflected in the steep increases in NPLs just after the takeover of domestic banks. In the long run this process has also caused a structural change in the allocation of capital in the economy, based only on business considerations. The credit policies followed by the new banks

differed greatly from domestic banks' policies before their privatisation. State-owned banks granted credit mostly to their traditional customers from the public sector (related party lending), while private and privatised banks, especially those with foreign owners, usually follow different patterns. They tend to provide funding to companies from more technologically advanced sectors, to be more competitive and efficient, to rely on more formal credit assessment standards and to apply risk-adjusted pricing. This change was anticipated by reformers when transforming the banking sector, as they decided to leave capital allocation in the economy to the independent, private banks.

The result of a change in risk management was also visible in the price of credit. Contrary to common views, recent studies conducted at the NBP have shown that the presence of foreign banks has a positive impact on the cost of credit to clients (Degryse et al (2007)). The lowest credit rates were offered by banks controlled by foreign entities, which started their operations as greenfield institutions. The second lowest came from banks privatised with the participation of foreign strategic investors, due to their better assessment of credit risk. Acquiring strong strategic owners has also resulted in a lowering of the cost of credit to banks themselves, as this fact positively influenced domestic banks' ratings.

The organisation of risk management systems in numerous banking groups may also constitute a challenge to financial stability. Some banking groups tend to centralise risk management functions, meaning that decisions concerning risk exposure and management methods are made at the parent banks' head offices. Such a division of power among the dominant and subordinate entities may lead to a lack of more sophisticated risk management skills among domestic managers.

Another problem emerges in banking groups where a matrix management system is utilised. The balance sheet structure of a domestic bank can be optimal from the group perspective, but if acting as a standalone entity, the domestic bank's structure can be far from this state.

Among the advantages of the way in which foreign strategic investors run Polish banks, one could name the insulation from direct negative effects of large international exposures, but this has a negative side as well. Concentration mainly on domestic activities limits the diversification of assets of banks, increasing their vulnerability in the case of shocks to the Polish economy.

Strategic ownership and intragroup division of power

The Polish experience shows that strategic foreign owners (mainly parent banks) have contributed to the stability of domestic banks through other channels as well. Having a strategic investor brings the asset of reputation to a bank. While at the beginning of the 21st century the overall level of NPLs in the Polish banking system had reached 21% of the total loan portfolio and, in the case of some banks, an increase in NPLs resulted in financial losses, strategic owners constituted a serious source of capital.

It has to be remembered that Poland has yet to experience a crisis situation involving a foreign-owned bank. The experiences of other countries in this field vary. The case of Rijecka Banka, the third largest bank in Croatia, shows that the support of a majority investor cannot be treated as a given. An NBP survey on this issue (NBP (2007)) reveals that some banks can count on liquidity support from foreign owners (in the form of credit lines). According to estimates based on NBP survey data, these banks hold nearly 25% of deposits of non-financial entities. Banks holding 40% of deposits of non-financial entities have been provided with a promise of liquidity support in a less binding form (eg a promise contained in the financial reports of a capital group or submitted to the Commission for Banking Supervision). However, meeting contractual obligations may depend on the liquidity of the owners (parent banks), especially in periods of stress, when refinancing on the interbank monetary market is difficult or costly, for example as in early August 2007. Recent developments in the global markets, which led to the liquidity crisis in the European market in

particular (see Section II.I) and in the United States, had no impact on the liquidity of the Polish banking sector.

Polish banks, as subsidiaries of global or large European banking groups, do not invest directly in the global markets. Thus, Polish banks were not directly influenced by the recent turmoil in global markets caused by the US subprime crisis. The owners had also decided that they should mainly specialise in providing services to domestic clients, and this has so far insulated the Polish banking system from the outcome of the crisis.

New channels of contagion

In spite of the current state of insulation from the subprime fallout, several channels of possible contagion may be identified. These include the credit, funding, capital and confidence channels, which are elaborated on hereafter.

Contagion through the credit channel arises due to domestic banks' credit exposures to foreign entities, especially foreign financial institutions. Although these exposures are generally low and diversified, there is a risk of a sudden increase in intragroup exposure if a parent company experiences liquidity or solvency problems. The parent company may attempt to gather funding from subsidiaries at a low price which would not compensate for credit risk. In the short run, this could result in turmoil in domestic financial markets as the affected subsidiary would be forced to raise cash and convert it into foreign currency. Due to the opacity of financial markets, such a fire sale could even incite a crisis of confidence within the financial sector. The risk profile of the affected institution would also be put under pressure. In the longer run, if default on the intragroup loan became likely, the solvency of the affected institution could be compromised. For Poland, the likelihood of credit channel contagion can be assessed as low due to, inter alia, the systemic importance in their domestic markets of foreign banking groups which operate in Poland and – as demonstrated in summer 2007 – EU banking groups' preference for using ECB liquidity operations instead of intragroup support. Still, if credit channel contagion did materialise, its impact could be very severe, as in extreme situations the subsidiary might need to provide credit to an insolvent parent company.

The funding channel is linked to foreign funding of domestic financial institutions. Short-term foreign funding could be very volatile in times of crisis, especially if it is not provided by the group. If foreign funding sources form a substantial part of a bank's liabilities, the bank might be unable to replace them and forced to sell assets at distressed prices. This would induce market turmoil as well as halt loan supply. As short-term foreign funding does not constitute a very significant component of Polish banks' liabilities, a shortage in such funding would not threaten overall financial stability. Some small Polish institutions, however, rely on intragroup funding. In several EU countries, foreign banks acting as strategic owners play an important role as the source of financing for the credit expansion of domestic banks. The case of the Baltic countries shows that in extreme cases, such reliance could lead to very large macro imbalances in the domestic economy, as well as the build-up of a potential asset bubble, and render domestic institutions vulnerable to liquidity conditions in the international markets.

Foreign-owned financial institutions are also reliant on parent companies' ability to provide them with capital if they intend to expand. Problems at the parent company, however, may prompt a large dividend payout, in line with the short-term interest of the investor. This would hamper the growth potential of the subsidiary and could lead to suboptimal allocation of credit as some investment opportunities would not be pursued due to overly restrictive financial constraints. If, on the other hand, the subsidiary needs recapitalisation after a substantial loss, and the parent company is unwilling to commit capital, a threat to financial stability could materialise. Due to disproportionalities in the development of financial markets in Poland and in the investors' countries of origin, banks may be systemically important to the host country (thus requiring a great deal of attention and scrupulous supervision), while at the same time being insignificant from the point of view of operations of a financial group as

a whole or investors in the country of origin (which may be an incentive to minimise supervision costs). This will also cast doubt on the ability and will to act in a crisis situation.

Given that several subsidiaries of foreign banking groups operate under the group's brand, reports on group losses may be associated by the public with the current standing of the local subsidiary. This in turn could trigger a decline in confidence in the subsidiary, up to a sudden withdrawal of deposits. Similar effects may appear in the interbank markets, especially when exact linkages between the parent and subsidiary are uncertain.

Capital flows, liquidity of financial markets and availability of credit

Foreign investors are positively influencing the stability of the Polish financial system by contributing to the development of financial markets. Contributions have included creating a market for risk hedging instruments, increasing the liquidity of the markets and diversifying the investor base. The diversification and expansion of the investor base has contributed to stability by eliminating the negative consequences of investment limits of some large domestic institutional investors. This brings the benefits of diversified objectives and preferences. The existence of this effect is confirmed by the correlation between the monthly transaction balance of foreign investors and the monthly balance of investment transactions of Polish pension funds, which were strongly negative in 2006 (–0.624). The activities of investors from different countries are also determined by events on their local markets. This contributes to market liquidity, making transactions easier to perform, allowing specific strategies to be pursued (see Grossman (1977)), and facilitating hedging activities.

Financial stability is also enhanced by the activity of foreign capital in the non-financial sector of the economy. A large part of the foreign indebtedness of Polish enterprises (40%) consists of intragroup exposures. This means that besides the relatively strong growth of foreign debt of this sector of economy (in the last 10 years it has increased from 2.3% to 6.5% of GDP), financing conditions seem very stable.

Competition in the banking market and financial stability

The majority of foreign owners of Polish banks are large complex European banks. We are currently observing the process of the creation of a single pan-European financial market. One of the symptoms of this process is increasing concentration in the EU banking system. The side effects of the concentration in home markets are bank mergers in host countries, resulting in the creation of large, systemically important institutions. This has further implications for the financial stability of the host country financial system, namely the effect on competition in the domestic banking sector and the incentives for home and host supervisory institutions to act promptly in normal times, as well as in crisis situations.

We have mentioned the very positive general effects of large foreign capital activity on the development of Polish financial markets and, through this, on the stability of the Polish financial system. The consequences of strong capital inflows and strong foreign presence in the financial system and the economy as a whole cannot, however, be assessed unambiguously. There are several potentially negative side effects of this situation for both financial development and stability. The widespread foreign ownership of financial institutions, especially systemically important banks, creates new channels of contagion from parent banks and the markets in which they operate to domestic banks. In the event of distress at a parent institution the reputation asset becomes reputation risk. It is also worth mentioning that the way in which foreign investors operate (intragroup financing, centralisation of risk management) has contributed to the underdevelopment of some financial market segments in Poland, namely the corporate bond market, credit derivatives, etc.

IV. Summary

Increasing capital flows, facilitated by financial and capital account liberalisation in numerous countries, have created a new macroeconomic environment across the globe. The last two decades can be characterised as a period of globalisation, which has involved economic liberalisation combined with an opening-up of economies to international trade and financial flows. Economic liberalisation implied the lifting of various controls and restrictions and of entry barriers into specific sectors like banking, as well as the pursuit of market-oriented reforms, with far-reaching privatisation. Many countries opened up their economies in order to compete for international capital and reformed their economies to attract foreign investment (see Abiad and Mody (2005)). This in turn induced massive flows of capital and fluctuations in exchange rates. In the central and eastern European (CEE) countries, including Poland, these processes accompanied the transition from central planning to market economy.

Focusing on the case of Poland, we have analysed the consequences of increasing capital flows for both the conduct of monetary policy and financial market stability and development. We have learned that inflation targeting constitutes the appropriate strategy to cope with increasing capital flows and the associated negative consequences for exchange rate stability. The experience of Poland shows that under an inflation targeting regime, strong economic growth accompanied by low inflation and low current account deficits have been achieved despite high capital flows and exchange rate fluctuations (see Table 1). Inflation targeting has facilitated control of inflation and delivered instruments to influence domestic demand and credit growth, which is also important for the stability of the financial sector. At the same time inflation targeting allows the economy to respond more flexibly to higher resistance to capital flows. It also helps avoid vulnerability, as there are no implicit guarantees inducing moral hazard behaviour among economic agents (see Table A1).

On the other hand, the opening-up of the capital account has enabled Poland to attract large FDI flows, including those flowing into the financial system. These inflows have greatly contributed to the evolution and modernisation of the Polish financial system, as well as its efficiency and stability, in a number of ways (see Graph 5).

First, the presence of investors has considerably accelerated the development of financial markets and instruments (for example the issuance of short-term market debt instruments and the development of hedging instruments). Second, as active traders they have been providing liquidity to various markets. Third, foreign-owned banks have supported the development of the banking sector. They have been a source of technology diffusion, including risk management techniques – for example through staff turnover or demonstration effect, and also via the market transactions performed with other banks. Some foreign-owned banks have been leaders in bringing advanced customer products to the market and in implementing high standards of customer service. This has also stimulated competition in various market segments which have been expanding from corporate to retail customers and intensifying, exerting pressure on the cost of credit and lending conditions. Foreign investors have undoubtedly had a positive influence on the stability of the Polish banking sector. Their involvement in the restructuring of the sector in the form of capital injections has enabled many banks to survive and prevented the failure of many major banks.

The examples of several countries suggest that the presence of foreign strategic investors does not guarantee unconditionally the safety of domestic banks and therefore the stability of the domestic financial system. New channels of contagion could emerge in line with increasing intragroup linkages. The experience of Poland to date has shown that all the positive effects of opening to foreign capital and the high presence of foreign investors have materialised while the negative aspects have so far remained absent. This does not mean, however, that one should not closely follow the risks involved.

Annex 1

Table A1

Central bank assessments of exchange rate pass-through (PT)

	Recent estimate of PT coefficient[1]	Has PT coefficient declined recently?	Main reason for PT decline	Relative size of PT to different price indices	Other
Hong Kong SAR		No evidence that PT declined			
India	8–17%	Yes, since the 1990s	Decline in inflation; lower tariffs		
Malaysia		No; PT relatively stable in 1990–2006			
Philippines	1.2%	Yes, from 23% before 1993			PT is generally very low
Singapore	3%			CPIPT < Imp.PricePT	Complete PT after two years
Thailand	Small	Increased slightly	ER flexibility	CPIPT << Prod.Pr.PT << Imp.Pr.PT	PT to import prices full and rapid; PT to CPI not full even in the long run
Colombia	3% in 2006	Yes, from 4–5% in mid-1980s			
Peru	10% in 2006	Yes, from 10–20% in 2001–04			
Venezuela		Yes, during 2005–06	FX reserves↑; oil prices↑; lower ER volatility		
Czech Republic	0–40%	Yes	Inflation targeting, ER flexibility	CPIPT << Imp.PricePT	
Hungary		Yes	Widening of ER band, inflation targeting		
Poland	12% in 2006	Yes, from 24% in 2002	Inflation targeting, ER float		Asymmetric response of PT (ER↓ > ER↑)
Israel	23% in 1999–2004	Yes, from 33% in 1991–98	Decline in inflation, ER stabilisation		Half of PT via rental contracts fixed to the US dollar
Turkey	42% since 2001	Yes, from 63% before the float			Full PT takes one year (versus four–five months before)
South Africa	7.8%	Not clear that PT has declined			Asymmetric, threshold effects apply

[1] Percentage increase in the CPI following a 10% depreciation of the exchange rate (individual national definitions may differ slightly).

Source: Mihaljek and Klau (2008).

Annex 2

Table A2

Banking sector assets, credits and deposits in CEE countries and selected EU and euro area countries in 2004–06

As a percentage of GDP

	Assets/GDP			Credits/GDP			Deposits/GDP		
	2004	**2005**	**2006**	**2004**	**2005**	**2006**	**2004**	**2005**	**2006**
Czech Republic	93.5	98.7	97.9	32.5	37.5	43.3	57.0	58.5	60.2
Hungary	72.0	79.8	88.4	35.1	39.3	43.4	32.9	34.1	35.5
Poland	58.2	59.7	64.4	24.7	26.3	30.6	32.8	33.5	35.5
					2005				
Austria		264.5			156.4			100.6	
Estonia		107.0			59.3			48.5	
Germany		299.5			91.7			61.2	
Italy		163.8			61.7			42.9	
Lithuania		63.0			36.5			35.3	
Portugal		243.7			137.4			93.3	
Euro area countries		283.3			123.5			102.0	

Sources: ECB (2006); national central banks; Eurostat.

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