Tetiana Voloshko*

LARGE CAPITAL INFLOWS TO EMERGING MARKET ECONOMIES: POLICY RESPONSES

The article examines the experiences of a number of emerging countries in coping with capital inflows. It analyzes the mechanism of regulation the large private capital inflows to emerging economies. It describes the nature of the inflows, their implications for macroeconomic and financial stability, and the policy responses used to cope with them. The actions that help to increase the absorption capacity and resilience of the economies and financial systems to the risks associated with the inflows are determined in the article as well.

Key words: private capital, inflow, emerging countries, policy responses, experience, effectiveness.

У статті розглянуто досвід декількох країн, що розвиваються, де спостерігаються притоки капіталу. Проаналізовано механізм регулювання крупномасштабних потоків приватного капіталу до країн, що розвиваються. Розглянуто суть потоків, їх вплив на макроекономічну та фінансову стабільність, і відповідні заходи політики, що застосовуються в даній ситуації. Визначено дії, що допоможуть збільшити поглинаючу здатність та стійкість економіки та фінансової системи до ризиків пов'язаних з притоками капіталу.

Ключові слова: приватний капітал, приток, країни, що розвиваються, відповідні заходи політики, досвід, ефективність.

В статье рассмотрено опыт некоторых развивающихся стран, где наблюдаются притоки капитала. Проанализирован механизм регулирования крупномасштабных потоков частного капитала в развивающиеся страны. Рассмотрено сущность притоков, их влияние на макроэкономическую и финансовую стабильность и ответные меры политики, которые применяются в данной ситуации. Определены действия, которые помогут увеличить поглотительную способность, а также стойкость экономики и финансовой системы к рискам вследствие притока капитала.

Ключевые слова: частный капитал, приток, развивающиеся страны, ответные меры политики, опыт, эффективность.

Formulation of the problem. With the global economy beginning to emerge from the financial crisis, capital is flowing back to emerging market economies (EMEs). Although capital flows to emerging market countries are generally welcome – providing lower-cost financing and indicating market confidence in the fundamentals of the economy – sudden surges can complicate macroeconomic management and create financial risks. On the macroeconomic front, the concern is that the surge will lead to an appreciation of the exchange rate and undermine com-

* 5th Year student of Zaporizhzhya National Technical University

petitiveness of the tradable sector – possibly causing lasting damage even when inflows abate or reverse. The main worry from the financial fragility perspective is that large capital inflows may lead to excessive foreign borrowing and foreign currency exposure, possibly fueling domestic credit booms (especially foreign-exchange-denominated lending) and asset bubbles (with significant adverse effects in the case of a sudden reversal).

Analysis of recent studies and publications. In the economic literature much attention is paid to the study of the category «capital», the problem of development and regulation of capital has always been decisive in the activities of practitioners and theorists from the beginning of a new era. The study of capital as economic category was involved in the works of A. Smith, D. Ricardo, K. Marx, A. Marshall, J. Keynes, Joseph Schumpeter, Robert M. Solow, J. Hicks, U. Sharpa, R. Holta, D. Beyli, L. Gitmana, M. Dzhonka, J. Mayera, I. Blanka and others. Further development relating to contemporary conditions as about investment activity and stimulation of investment receipts, regulation of capital inflow is investigated in the works of L. Pashnuka, B. Malinyaka, T. Zatonatskoy, V. Osetskogo, V. Mironenka, V. Mironenka, V. Selskogo, V. Chayki, O. Gavriluka, M. Gerasimchuka, Z. Lutsishin, Y. Makogona, A. Ivashenka, M. Portera. Although a number of studies have examined the policy responses to capital inflows, they have focused mainly on the experience of a few countries during the 1990s. There have been fewer studies on recent episodes and fewer attempts at comprehensive cross-country examination of policy responses.

Methods. Theoretical and methodological basis of research is the dialectical method of knowledge and systematic approach to studying the issues of capital flow, scientific works of domestic and foreign scientists. This work uses general scientific methods of knowledge (analysis and synthesis, comparative, economic-mathematic, method of summing up of data, methods of approach, methods of abstract logic and historical comparison). Research formed on methodological basis of economic theory and theory of world economy, etc.

Setting the task. The strong increase in net private capital inflows to emerging market economies over the past few ten years has restored the "capital inflows problem" to a prominent place in policy debates. The purpose of the work is to review the lessons from the experience of large net private capital inflows over the past two decades, examines the macroeconomic implications of and policy responses to surges in large private capital inflows across some of emerging economies.

The basic material work. These capital flows and capital mobility more generally, allow countries with limited savings to attract financing for productive investment projects, foster the diversification of investment risk, promote intertemporal trade, and contribute to the development of financial markets. In this sense, the benefits from a free flow of capital across borders are similar to the benefits from free trade, and imposing restrictions on capital mobility means foregoing, at least in part, these benefits, owing to the distortions and resource misallocation that controls give rise to [1, p. 4]. While inflows are typically beneficial for receiving countries, inflow surges can carry macroeconomic and financial stability risks. This paper reviews the recent experience of EMs in dealing with capital inflows and suggests a possible framework for IMF policy advice on the spectrum of measures available to policymakers to manage inflows, including macroeconomic policies, prudential measures and capital controls. Illustrative applications of this framework suggest that it may be appropriate for several countries, based on their current circumstances, to consider prudential measures or capital controls in response to capital inflows.

Policymakers often seek to attract external resources on the assumption that they will finance savings gaps and promote growth and economic development. However, evidence of the growth potential of capital account openness is mixed. Moreover, significant increases in capital in-

flows can make the financial system more vulnerable and overheat the economy. Lending booms, which often follow increased capital inflows, increase financial system vulnerability (a) by exacerbating maturity mismatches between bank assets and their liabilities, and in some cases mismatches between the currencies in which banks lend and borrow, and (b) through associated asset price bubbles. Macroeconomic overheating can be provoked by accelerated economic growth and inflation, and particularly by appreciation of the real effective exchange rate (REER) [2, p. 3]

Although capital flows to emerging market countries are generally welcome – providing lower-cost financing and indicating market confidence in the fundamentals of the economy – sudden surges can complicate macroeconomic management and create financial risks. On the macroeconomic front, the concern is that the surge will lead to an appreciation of the exchange rate and undermine competitiveness of the tradable sector – possibly causing lasting damage even when inflows abate or reverse. The main worry from the financial fragility perspective is that large capital inflows may lead to excessive foreign borrowing and foreign currency exposure, possibly fueling domestic credit booms (especially foreign-exchange-denominated lending) and asset bubbles (with significant adverse effects in the case of a sudden reversal) [3, p. 62]

Aggregated total capital flow is the sum of public and private flows, using data from the World Economic Outlook. We focus on private capital flows which are based on the nature of the recipient sector. That is, only changes in foreign assets and liabilities of the domestic private sector—as recorded in the IMF's Balance of Payment (BOP) database — are taken into account, independently of the nature of the foreign counterpart. The main difference compared to a "source" concept of private inflows is the exclusion of sovereign borrowing (specifically, the changes in the government's assets and liabilities vis-à-vis the foreign private sector) and the inclusion of private borrowing from external official sources. While this difference may be relevant for the early to mid-1990s, it is less likely to be relevant over the recent past, given the decline in sovereign borrowing and official lending.

The net private capital inflows series used in the work are constructed in five steps [4, p. 10]. First calculate (net) foreign direct investment (FDI) taking direct investments into the recipient country and subtracting direct investments abroad. Second, need to strip out assets that are classified under the monetary authority and the general government for each of the remaining categories: portfolio investments, financial derivatives, and other investments. Then do the same for liabilities, in effect yielding assets and liabilities that are private in nature. Third, these series of private assets and liabilities are netted, yielding net inflows for the three categories. Fourth, add FDI to the net private portfolio investment, financial derivative, and other investment categories, yielding our definition of net private capital inflows. Fifth, and finally, need to scale the total net private capital inflows by GDP to get the net private capital inflows-to-GDP ratio.

Private capital flows are the sum of four elements: direct investment in the reporting economy from abroad (FDI), including debt-creating liabilities to foreign investors and direct investment in the form of equity; portfolio investment (PIL), which is the sum of debt instruments issued by the domestic private sector (corporate bonds and other private debt securities) and foreign purchases of equities of domestic companies; current private transfers (PRT); and liabilities to foreign banks (LFB).

The pattern of current account balances across emerging economies has become much more diverse in recent years than during the early 1990s, particularly between emerging Asia and Europe. Most of emerging Asia (especially after the 1997–98 crisis), the Middle East, and some

members of the Commonwealth of Independent States have reported large current account surpluses, while large current account deficits are observed mainly in emerging Europe and other countries [5, p. 492].

The divergent current account patterns in emerging Asia and Europe have revived the long-standing debate over the connection between economic development and capital flows – the Lucas paradox. Theory predicts that growth should lead to current account deficits for two reasons. On one hand, high growth and the resulting profitable investment opportunities should make the country attractive to foreign capital. On the other hand, if individuals want to smooth their consumption over time, prospects of continued high growth should lead to higher consumption today because income and consumption can be expected to rise further in the future. Traditional economic theory tells us that financial capital should, on net, flow from richer to poorer countries. In principle, this movement of capital should make poorer countries better off by giving them access to more financial resources that they can then invest in physical capital. Such investment should improve their levels of employment and income. It is natural to expect that as financial globalization – cross-border flows of various forms of financial capital – picks up steam, these flows from industrial to developing countries will increase, making all countries better off. It is right only for emerging Europe, but not for emerging Asia after 1997–98.

The past two decades have witnessed three waves of large capital inflows sweeping through many emerging market economies. The first wave commenced in the early 1990s and ended with the Asian crisis in 1997. The second one was building since 2002 and started in 2003, then accelerated in 2007, and ebbed in 2008 in the wake of the global financial crisis (figure 1). Third wave has started in the end 2009 year and last to present day.

While capital inflows often help deliver the economic benefits of increased financial in-

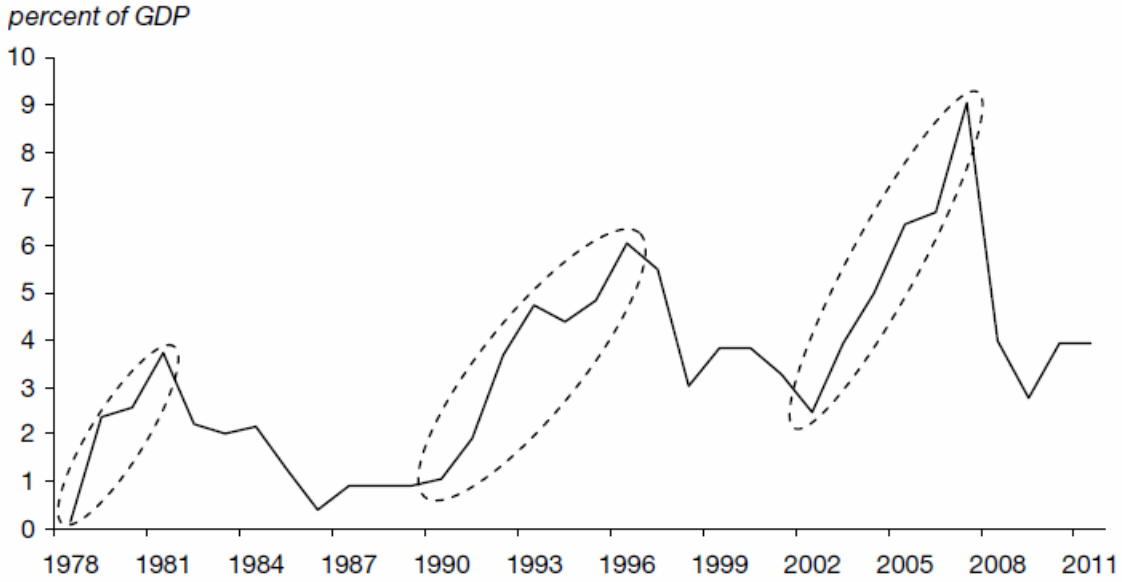

Figure 1. Private Capital Flows Cycles, Net

tegration, they also create important challenges for policy-makers because of their potential to generate over-heating, loss of competitiveness, and increased vulnerability to crisis. Also identify 109 episodes of large net private capital inflows since 1987; 87 of these were completed by 2006.

Looking at the nature and composition of the inflows reveals some interesting differences between the second wave of capital inflows and the one in the 1990s [6, p. 7]. In particular, the latest wave was taking place in the context of much stronger current account positions for most

(but not all) emerging market countries, and a substantial acceleration in the accumulation of foreign reserves. The second surge in private capital inflows was also accompanied by a sharp increase in outflows, in line with the global trend toward the increasing diversification of international portfolios. Another important feature of the second wave of net capital inflows to emerging markets – which differentiates it from the 1990s – is the predominance of net foreign direct investment (FDI) flows relative to net "financial" flows (portfolio and other flows) in all four regions (Latin America, emerging Asia, emerging Europe and the Commonwealth of Independent States, other emerging markets). This reflects the continued strength in FDI inflows, together with the rapid increase in financial outflows from emerging markets which has largely offset the acceleration of financial inflows in most of these countries. In sum, the second cycle of capital inflows was different from the previous one, as it involved a larger set of countries, was underpinned by generally more solid current account positions (with the notable exception of emerging European countries), and took taking place in a more financially integrated world economy, where significant financial outflows were at least partially offsetting the inflows of capital to emerging markets (figure 2) [7, p. 8].

Viewed from a regional perspective, these episodes show several interesting patterns, bro-

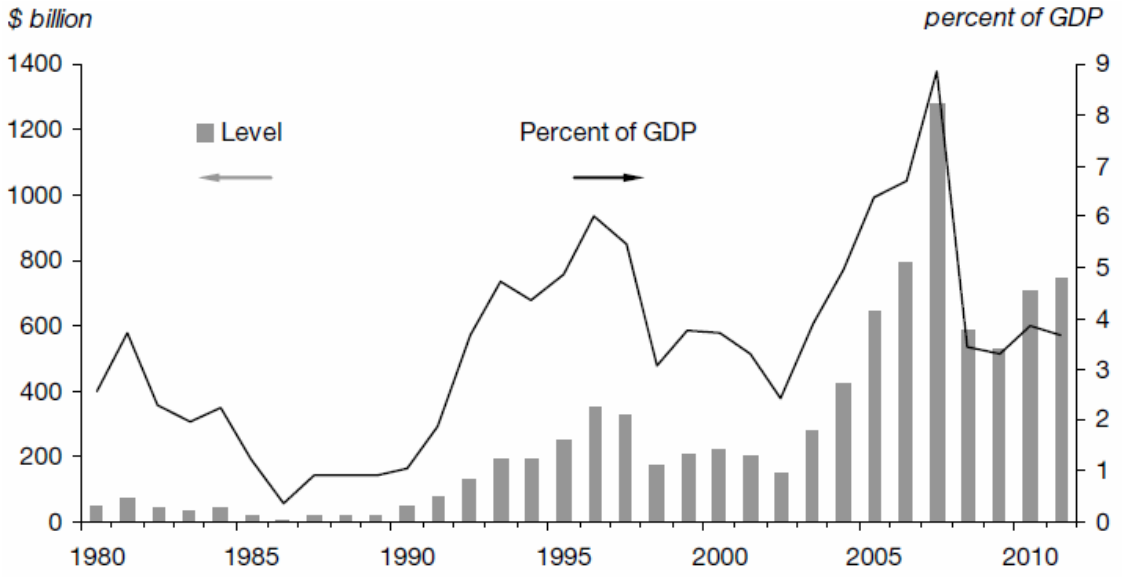

Figure 2. Emerging Market Private Capital Inflows, Net

adly in line with the stylized facts documented above: First, the incidence of episodes over time mirrors trends in net private capital inflows to emerging markets, with two waves of episodes of large capital inflows to emerging markets since the late 1980s – one in the mid-1990s and the recent one, starting in 2002. Second, episodes completed during the first wave (between 1987 and 1998) generally involved a smaller volume of flows relative to GDP, especially compared to episodes that were ongoing as of 2007; but they lasted longer than those that ended between 1999 and 2006. Third, Emerging Asian and Latin American countries dominated the first wave of episodes, while the more recent episodes in two last waves have been more concentrated in emerging Europe and other emerging market countries. Fourth, over one third of the completed episodes ended with a sudden stop or a currency crisis, suggesting that "abrupt" endings are not a rare phenomenon. In particular, of the 87 completed episodes, 34 ended with a sudden stop and 13 with a currency crisis. In 7 episodes, a sudden stop coincided with a currency crisis. Lastly, our findings also indicate that late and ongoing episodes are characterized by larger FDI flows, relative to the episodes completed in the 1990s.

In the last wave that has started in the end of 2009 year the portfolio debt flows have been

concentrated at longer maturities in most countries. Institutional investors from the United States and Europe such as pension funds and mutual funds – key players in the current rebound in inflows – have tended to enter into longer-term securities, particularly in Brazil, South Africa, and Asian sovereign bond markets. In addition, Brazil remains the largest recipient of funds from Japanese retail investors. Most of the flows have been intermediated through a few financial centers, mainly Luxembourg, resulting in limited flows coming directly from individual countries.

Today global activity is recovering at varying speeds, tepidly in many of the advanced economies but solidly in most emerging and developing economies. Cross-border financial flows from advanced to emerging economies have picked up, primarily reflecting a recovery from deep retrenchment in 2008. Both equity and bond flows have accelerated since the end of 2008, although syndicated loan issuance remains below precrisis levels. The growth in cross-border flows has come mostly from outside the banking sector, as banks continue to retrench their balance sheets. Key drivers behind the renewed capital flows include rapid growth in emerging economies, large yield differentials in their favor, and returning appetite for risk. The renewed flows have eased financial conditions in many emerging economies and prompted some authorities to be watchful of increasing property prices, in some cases taking measures to rein in domestic credit growth.

Foreign direct investment remains the single largest component of private capital flows to emerging economies (figure 3) [7, p. 12]. Emerging Asia remains the largest recipient of nonresident FDI ($156 billion) and China the single-largest recipient ($90 billion). All other regions enjoy healthy inflows, however, albeit well down from the peak years of 2007 and 2008, when real estate investment featured large in FDI flows. By sector, more FDI is now concentrated in the extraction industries. A number of mature market banks are bolstering the capital in their emerging market subsidiaries, and this is supporting FDI, especially in Emerging Europe. There is no obvious advantage of scale: the BRIC countries combined account for $188 billion of inward FDI flows in 2010, or 51% of the total of our 30 country sample. Remarkably, this is identical to their share of the combined GDP of the group.

In 2010 the recovery of cross-border flows has come with some real effective exchange rate

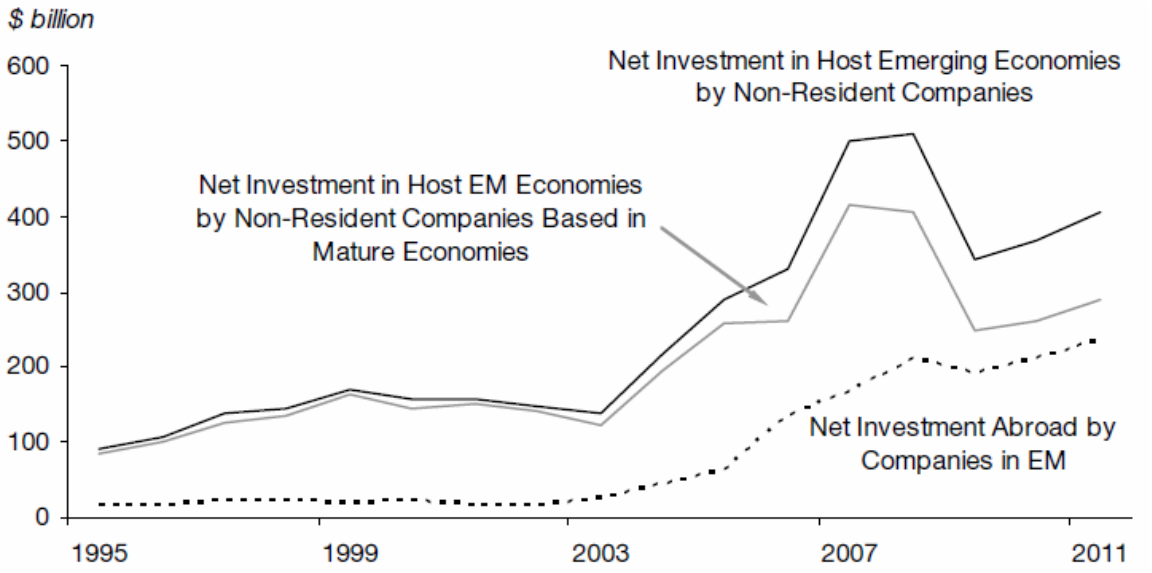

Figure 3. Net Foreign Direct Investment Flows

changes — depreciation of the U.S. dollar and appreciation of floating currencies of some other advanced and emerging economies, but compared with precrisis levels, changes have generally been limited. There are exceptions. The economies in the Middle East saw some significant appreciation, those in emerging Europe some signify cant depreciation, and the Japanese yen appreciated significantly. These changes were generally in line with the medium-term fundamentals for these economies. However, currencies of a number of emerging Asian economies remain undervalued, substantially in the case of the yuan, and the U.S. dollar and euro remain on the strong side relative to medium-term fundamentals.

The influx of large capital inflows has induced policy makers to adopt a variety of measures to prevent overheating and real currency appreciation, and reduce the economy's vulnerability to a sharp reversal of inflows. These measures include exchange rate intervention, sterilization, fiscal policy, and capital controls. A key policy decision for countries facing large capital inflows is to what extent to resist pressures for the currency to appreciate by intervening in the foreign exchange market.

One of the main motivations for intervention is the concern that massive capital inflows may induce a steep exchange rate appreciation in a short period of time, damaging the competitiveness of export sectors and potentially reducing economic growth. Moreover, if net capital inflows take place in the context of a current account deficit, the real appreciation could exacerbate the external imbalances, heightening the vulnerability to a sharp reversal of capital inflows [7, p. 3]. However, the accumulation of foreign reserves required to keep the exchange rate from appreciating may lead to excessively loose monetary conditions, thus creating the potential for overheating and financial system vulnerabilities. In this case, the real appreciation could occur via higher inflation, rather than through an increase in nominal exchange rates. Allowing the exchange rate to fluctuate could discourage short-term speculative capital inflows by introducing uncertainty on the changes in the value of the currency.

The "impossible trinity" paradigm of open economy macroeconomics – the inability simultaneously to target the exchange rate, run an independent monetary policy, and allow full capital mobility – suggests that, in the absence of direct capital controls, countries facing large capital inflows need to choose between nominal appreciation and inflation. In practice, however, given that capital mobility' is not perfect – even in the absence of direct capital controls – policy makers may have more scope to pursue intermediate options than this paradigm would suggest, and they have generally used the foil menu of available measures. When policy makers have intervened to prevent exchange rate appreciation, they have often sought to sterilize the monetary impact of intervention through open market operations and other measures (such as increasing bank reserve requirements or transferring government deposits from the banking system to the central bank). While the motives for sterilization are clear, its effectiveness is less so and it can entail substantial costs. As sterilization is designed to prevent a decline in interest rates, it maintains the incentives for continuing capital inflows, thus perpetuating the problem. Moreover, sterilization often implies quasi-fiscal costs, since it generally involves the central bank exchanging high-yield domestic assets for low-yield reserves. If sterilization is implemented by increasing unremunerated bank reserve requirements, this cost is shifted to the banking system, promoting disintermediation.

Fiscal policy is another instrument available to attenuate the effects of capital flows on aggregate demand and the real exchange rate during a surge of inflows and in its aftermath. Fiscal policy in emerging markets receiving capital inflows is typically procyclical, as a fast growing economy generates revenues that feed higher government spending, thus aggravating overheating problems. By contrast, greater restraint on expenditure growth has at least three benefits.

First, by dampening aggregate demand during the period of high inflows, it allows lower interest rates than otherwise and may therefore reduce incentives for inflows. Second, fiscal restraint alleviates the appreciating pressures on the exchange rate directly, given the bias of public spending toward nontraded goods. Third, to the extent that it helps address or forestall debt sustainability concerns, it may provide greater scope for a countercyclical fiscal response to cushion economic activity when the inflows stop. While discretionary fiscal tightening during a period of capital inflows may be problematic, due to political constraints and implementation lags, the avoidance of fiscal excesses – holding the line on spending – could play an important stabilization role. In particular, fiscal rules based on cyclically adjusted balances could help resist the political and social pressures for additional spending m the face of large capital inflows. In some cases, policymakers in emerging markets have tried to restrict the net inflow of capital by imposing controls on capital inflows or by removing controls on capital outflows. Countries employ such control measures to attain a variety of policy objectives, including discouraging capital inflows to reduce upward pressures on the exchange rate, reducing the risk associated with the sudden reversal of inflows, and maintaining some degree of monetary policy independence.

In dealing with the implications of the inflows, sterilized intervention was the most common response in many of the sample countries, though with mixed success. Foreign exchange (FX) interventions needed to keep the exchange rate targets were sterilized to limit the impact on money supply and inflation. Such interventions proved unsustainable over long time periods, as they kept interest rates high, attracting further inflows, and led to large quasi fiscal costs that could potentially undermine the financial position of the central banks. In the Baltic countries and Bulgaria where the authorities had no independent monetary policy under the hard peg regimes, reserve requirements have been the main tool for sterilization (through adjustments in the rate or the base of the requirement). The ability to sterilize the inflows was in general undermined by the lack of adequate monetary tools, high level of dollarization (euroization), relatively low level of financial sector development that hindered transmission of monetary policy and the presence of foreign banks with easy access to foreign funds. Except in Bulgaria and the Baltic's, exchange rate changes were a common response to the macroeconomic implications of the inflows. Greater exchange rate flexibility helped resolve the tension between various policy targets by letting the appreciation absorb the impact of the inflows. Flexible rates also helped discourage short-term inflows by reducing the implicit exchange rate guarantees provided by the targets. Step appreciations were also undertaken (e.g. in Poland in December 1995) as well as successive reductions in the periodic depreciation rate of the exchange rate bands, to accommodate the appreciation pressures (Hungary, Israel, Poland). In the Baltic's and Bulgaria, fiscal policy has been the main macro policy tool to mitigate the macroeconomic impact of the large inflows, given the lack of independent monetary policy.

A number of countries adopted measures to affect the size and composition of the net FX inflows. Croatia and the Czech Republic imposed some controls on capital inflows in response to a surge in short-term inflows. External trade and FX systems were liberalized by several countries, including through elimination of import surcharges, tariffs, and surrender requirements (Bulgaria (1997), Hungary (1995-96) and Poland (1995-97)). By encouraging imports and permitting FX revenues to stay outside the country, such measures aimed at reducing the net inflow of foreign exchange into the country. In addition, capital outflows were liberalized with a view to reducing the net inflow of foreign exchange into the domestic economy (Bulgaria from 2000. the Czech Republic from 1995, Hungary and Israel in the late 1990s). The liberalizations in Poland and the Czech Republic were in part mandated by their commitments under EU accession and OECD membership.

The macroeconomic effects and policy implication of capital inflows have changed as most

sample countries moved to managed or freely floating exchange rates and adopted inflation targeting (IT) regimes as the alternative monetary framework [8, p. 46]. Contrary to the inflationary pressures associated with monetary expansion under a pegged exchange rate regime, capital inflows under flexible rates involve some potential for leading to an undershooting of official inflation targets. The current account in general deteriorates with the inflows through real exchange rate appreciation under both regimes, though via different channels (higher inflation under pegged rates and no or partial sterilization, or nominal appreciation with flexible rates). More flexible exchange rates accompanied by IT regimes have therefore added a new dimension to the challenges faced in responding to inflows. In principle, the following policy options were available in dealing with the macroeconomic implications of the inflows: allowing the exchange rate to absorb the impact of the inflows: intervening in the market to limit the extent of appreciation; reducing interest rates to discourage inflows; imposing administrative controls on the inflows, or tightening fiscal policy to reduce aggregate demand pressures. In practice, feasible policy options have been limited by the difficulty in determining the appropriate degree of monetary easing sufficient to discourage the inflows without undermining the inflation target, in gauging the appropriate role for intervention consistent with a float and an IT regime, and in maintaining fiscal surpluses on a permanent basis. Options have also been limited by the process of integration with the EU and international capital markets.

Several countries let the exchange rate appreciate in response to the inflows under the flexible exchange rate regimes. In these countries (the Czech Republic after 1993, Hungary after 2001, Israel after 1997, Poland since 1993, Romania after late 2004. and Turkey after 2001), more flexible rates allowed the exchange rate to absorb the impact of the inflows, supporting the inflation targets while also helping discourage speculative inflows by imposing FX risks on those market participants that were incurring the risks. Concerns about undershooting the inflation target and adverse implications for external balances at times made the authorities reluctant to allow significant appreciation; (sterilized) FX interventions were used to limit the extent of nominal appreciation (the Czech Republic."' Hungary. Israel, and Poland until June 1999). In cases where the exchange rate was not allowed to adjust fully, clear and consistent communication of interventions in the broader context of the monetary policy regime proved essential in preserving the credibility of the IT regime. Only those interventions motivated by meeting the inflation targets are consistent with a full-fledged IT regime. Intervening for other purposes, such as concerns about competitiveness or exchange rate targets, has undermined the credibility of IT regimes in a number of these countries (Hungary. Israel until 1997, and Romania until 2005). The experiences also show that interventions may be ineffective in countering persistent FX pressures that reflect changes in macroeconomic fundamentals (e.g. in the Czech Republic, Israel, Poland, and Turkey).

The central banks have also actively used interest rate policies in responding to capital inflows under their IT regimes. Several central banks lowered their key policy rates to deal with the threat of undershooting medium-term inflation targets, to discourage, and hence reduce the proportion of interest rate sensitive flows, and to limit the adverse consequences of exchange rate appreciation on the current account (the Czech Republic, Hungary, Poland, and Romania). Such monetary easing through interest rate cuts is consistent with the nature of the IT regime and is sustainable from a medium-term perspective as long as it is motivated by concerns about medium-term inflation targets. In Turkey, as well, interest rates were cut in 2003-05, but motivated mainly by the sharp downward trend in inflation following a successful macroeconomic stabilization.

Nevertheless, some countries experienced difficulties in reducing interest rates in the period

of strong capital inflows. The difficulties were associated with the problems in working out the monetary policy transmission mechanism (especially in the earlier stages of the IT regimes when significant structural shifts occurred), and therefore in gauging the appropriate degree of monetary easing that would be consistent with the inflation targets (Hungary, Poland, Romania, and Turkey). There were also concerns about the adverse implications of low interest rates on credit growth, which could fuel inflation pressures (Romania and Turkey). Finally, interest rate reductions could be ineffective in reducing the overall level of the inflows if the bulk of the inflows were in the form of interest insensitive inflows (Israel).

Interest rate reductions hence needed to be undertaken cautiously under IT and be guided by reliable projections of inflation following an interest rate move. In this connection, it would be important to have a predictable and a well-functioning transmission mechanism; well-developed financial markets to transmit the effects of interest rate changes to inflation; a reasonable capacity to forecast inflation; a good understanding and careful monitoring of market conditions and trends for signs of possible future movements in the exchange rate; and adequate capacity to analyze the nature of the inflows (e.g.. to assess how sensitive the inflows are to interest rate changes). The sample countries with flexible exchange rates and inflation targets resorted, to a very limited extent, to fiscal tightening in responding to the inflows. Only Turkey tightened fiscal policy in response to concerns about overheating pressures. In Hungary and Poland, there were no signs of fiscal tightening as a reaction to large capital inflows during most of the period from the mid-1990s. The Czech Republic tightened fiscal policy only subsequently. Loose fiscal policy in turn contributed to slower disinflation (Hungary) and large current account deficits (the Czech Republic), in some cases placing the burden of disinflation on monetary and exchange rate policies (Poland in the early 2000s and Hungary). In Romania as well, the fiscal and incomes policies were not sufficiently supportive of demand management efforts over the past few years, thereby putting the burden of disinflation on monetary and exchange rate policies.

The process of EU accession and membership with the OECD has also limited the available policy choices in responding to capital inflows. In particular, the scope for using administrative measures has been limited for those countries accessing the EU, since the adoption of the acquis has meant that the members had to abolish existing administrative systems for control and authorization of capital movements, and prepare a timetable for removing the restrictions on capital flows. Accordingly, there has been only a limited recourse to such measures in responding to capital inflows. Croatia and Romania took administrative measures in response to short-term inflows during 2004-06, but this was done more on account of concerns about macroeconomic stability and prudential risks associated with the rapid credit growth that had been increasingly funded by bank borrowing from abroad. In both countries, capital inflows and rapid credit growth have persisted.

While the other sample countries did not impose new capital controls, some used the possibility of delaying the liberalization of certain transactions depending on the intensity of capital inflows and developments in international markets. Under the EU accession commitments, the timetables for liberalization would typically allow for some transactions to be liberalized after the entry following an initial mass of liberalizations carried out before entry. Such strategies helped offset potentially destabilizing inflows to some degree, although the slowdown in the liberalization process caused by such sequencing led to tensions in the context of EU accession or OECD membership commitments (e.g. the Czech Republic in 1998).

A number of countries have retained the possibility of imposing new controls under their FX laws, but have not done so in practice (the Czech Republic, Hungary and Poland) [8, p. 65]. The countries in general feared that such measures would be considered a significant step back in

their economic development and liberalization process, jeopardizing the financial integration processes. However, the mere possibility of such measures may have had a disciplining effect on markets through moral suasion. In Israel as well, the Chilean type of capital controls were considered on various occasions, but were ruled out to avoid policy reversals that could damage the hard-won credibility. The authorities also considered that such controls would be largely circumvented and hence would prow ineffective. Similarly in Turkey, the authorities have resisted the use of capital (or credit) controls given their EU aspirations, as well as the realization that any such control would be easily circumvented in the presence of a significant offshore market for the lira.

In a number of countries, capital account liberalization was carefully sequenced with the evolution of exchange rate regimes, development of financial markets, and improvements in prudential regulation:

– Capital account liberalization was better coordinated with greater exchange rate flexibility, with long-term inflows liberalized usually before short-term, and liberalization of the latter taking place in tandem with a gradual increase in flexibility. Some countries also used FDI promotion policies to lengthen the maturity of the inflows, which also helped in linking the inflows to the investment needs of their economies (Hungary, Poland, and the Czech Republic after late 1990s). Liberalization of capital outflows helped reduce the pressure from the inflows (Bulgaria, Czech Republic, Hungary, Israel, and Poland).

– Improvements in prudential supervision and regulation have helped enhance the capacity to absorb the inflows (Bulgaria, the Czech Republic, Hungary, Israel, and Poland, as well as the Baltic's). Prudential and supervisory systems were strengthened with a view to increasing the resilience of the financial systems to risks. The process of bringing prudential regulations in line with international standards has been gradual, accelerated through harmonization with EU legislation during EU accession. From the early stages, the prudential frameworks in all countries have allowed banks to manage open currency positions and develop internal risk management systems.

– Countries also took steps to promote the development of their financial markets, thereby also helping to increase the capacity to absorb and manage the inflows. Financial sector reforms (e.g. reform of the nonbank financial supervision from 1998-99 and harmonization of the legislation with the EU in 2004-06 in Bulgaria, and improved access to FX markets in Croatia) improved the intermediation of capital inflows and broadened FX markets, facilitating better management of FX risks.

Some countries also used a variety of debt management measures to cope with the implications of the inflows on the liquidity in the financial system. The authorities shifted from foreign to domestic borrowing sources (Bulgaria. Croatia, Hungary, Poland); bought back outstanding Brady discount bonds (Bulgaria and Poland): used the inflows to over-borrow and moved to medium and long-term domestic borrowing (Turkey); and used part of the privatization receipts to repay international financial organizations (Hungary), m some countries, government deposits were transferred to the central bank and the Deposit Insurance Fund was instructed to invest its cash balances and maturing repos in government debt to deal with the liquidity impact of inflows (Bulgaria).

Given the limited scope for administrative measures and the potentially adverse effect of FX interventions on the credibility of IT regimes, some countries also resorted to indirect intervention practices to limit the exchange rate impact of the inflows. Special accounts for government FX revenues (e.g., from privatization) were set up at the central bank with proceeds converted into domestic currency off the market via the central bank (the Czech Republic and Poland).

These accounts were established after a public agreement between the central bank and government, having also a signaling effect. Moral suasion tools were also used (in Hungary, e.g., if a bank's on-balance sheet open position exceeded 30 percent of its capital the central bank reduced reserves remuneration and warned of stricter reserve requirements to stem inflows). Representing covert operations, such interventions raised at times question of consistency with IT and a floating exchange rate.

The policy responses that provide different emerging countries in different period of time of large capital inflow not always described its effectiveness. All of these measures in each case have different results. For example, in Brazil the empirical evidence suggests that the IOF (a tax on inflows) measures did not have a clear, long-lasting effect on the exchange rate at least relative to its level at the time the various IOF measures were introduced, although they may have eased appreciation pressures when compared with other commodity currencies [9, p. 58-65]. This was apparent from the behavior of the exchange rate in the aftermath of the three episodes when the IOF was introduced or tightened, in March 2008, October 2009, and October 2010. During the first two IOF episodes (March 2008 and October 2009) there was an initial depreciation in the exchange rate, which was however rapidly reversed; in the latest episode (October 2010), only after the tax rate was hiked for a second time (to 6 percent) was there a reversal in appreciation pressure, but again this was short-lived. Broadly similar conclusions can be drawn when the real response is set against the behavior of currencies in other EMs countries during the same period. This may have been due to the fact that the introduction of the IOF did not trigger a significant reduction in nonresidents' positioning in the futures market. With regard to other asset markets, the IOF may have had some impact on local currency debt markets, as the entire local nominal yield curve shifted upwards following its tightening in October 2010. Moreover, despite the IOF relatively less penalizing the investments held for longer periods, adjustment may have been more pronounced at the long-end of the curve, where nonresident investors are more active. This suggests that, at the very least, the tax may have had low incidence on nonresident investors, as higher yields have offset the tax. Market participants have also expressed concerns that the IOF could reduce liquidity in the longer end of the yield curve and in the interest rate swap market.

The IOF may have had an impact on the composition of inflows. While difficult to distill formal empirical evidence owing to the short samples, the difficulty of constructing a counterfactual scenario and other concomitant factors at play there is anecdotal evidence that the IOF had some impact in containing short-term or speculative capital inflows, possibly because of the increased uncertainty about other potential measures that it generated. The IOF has recently been complemented by macro-prudential measures. The carry trade delineated above relies on the resident banks' ability to increase their short spot position in the FX market (that is, to borrow in FX) as a hedge to their positions in the futures market. The new measure is expected to reduce the return to local banks from providing a bridge to nonresident investors investing in the futures market. By affecting its cost, this measure is thus expected to affect an important channel for carry trades that was left open in the original design of the IOF while reducing potential vulnerabilities in the banking sector. This measure has many similarities, both in terms of design and goals, with the macro-prudential measure aimed at limiting external indebtedness linked to carry trades introduced in Korea in June 2010.

In Korea the measures aimed at the banking system vulnerabilities appear to have succeeded in preventing banks' external debt from returning to pre-crisis levels [9, p. 71-74]. In particular, the limits on forward contracts relative to underlying commercial transactions, and ratios on derivatives to bank capital, appear to have contributed to a sizable reduction in outstanding

external short-term debt of banks. However, the decline in demand for currency forwards from shipbuilders, due to a smaller order book post-crisis, has also been a contributory factor. Moreover, the measures to limit forward contracts between banks and corporate apply only to onshore entities, allowing corporates to engage in contracts off-shore using non-deliverable forward contracts (NDFs). Offshore banks would still able to offset their short KRW (South Korean won) positions resulting from the NDFs by investing in the onshore government bond market. The impact of the new measures on capital inflows is likely to be marginal. Even with the imposition of the withholding tax as of early 2011, the impact on portfolio debt flows is likely to be limited for reasons elaborated above. Moreover, the macroprudential stability levy is also likely to have a minimal impact, given the relatively low magnitude of the levy as being currently discussed.

In Peru the main aim of central bank's intervention was to limit FX volatility [9, p. 75-79]. This would help reduce the possibility of a negative impact on balance sheets from destabilizing outflows (and consequent exchange rate overshooting), which in turn could also have an impact on macroeconomic stability. The nominal exchange rate has been among the most stable in the region. The authorities have intervened heavily in the market and sterilized the intervention to maintain the overnight rate in line with the policy rate, limiting appreciation spikes and volatility. Measures implemented to limit carry trade operations have been effective. Carry trade operations were done mainly by purchasing central bank short-term paper and through short term deposits in local currency at local banks.

The application of reserve requirements, not only to deposits but also to FX liabilities, helped stabilize credit growth. Credit growth declined from 40 percent before the crisis to 20 percent during 2010. Besides, the measures also helped in extending the maturity of FX liabilities in the financial system. However, the authorities are aware that these measures have their own limitations as they can lead to financial circumvention [10, p.4].

Measures implemented with the purpose of limiting foreign investors' exposure to local-currency-denominated assets were partially effective. Investors shifted from short- to longer-term government bonds following the increase of the fee on central bank certificate of deposits (CDs), thus the measures did not discourage the flows to debt markets. Overall, the imposition of reserve requirements for financial institutions on nonresident deposits as well as the shift of sterilization instruments from CDs to time deposits closed a window for nonresidents to gain exposure to short-term central bank paper.

Recent years have seen substantial changes in the use of these various policy responses, compared with the 1990s. The recent wave of capital inflows has been associated with strong exchange market pressures in all regions, which have been resisted through the accumulation of foreign reserves while also allowing some upward movement in exchange rates. This pattern is significantly different from the earlier wave of net capital inflows, when, for most emerging market countries, pressures on exchange rates were negative, reflecting large current account deficits. During this wave, exchange rates typically depreciated. Emerging Asia was one region that experienced positive exchange market pressures over 1994-1996, but these pressures were absorbed through reserve accumulation.

The fact that foreign exchange reserves increased during the 1990s may indicate an asymmetry in the response to exchange rate pressures, with a tendency to intervene to prevent the appreciation of the currency but not to stem a depreciation (except when the pressures became extreme in a financial crisis, as shown by the large reduction of reserves in 1997 in emerging Asia and, in 2001, in Latin America and other emerging markets) [11, p. 111]. Over the past three years, there has been substantial exchange rate appreciation in the face of high and rising

positive exchange market pressures, reflecting the trend toward increasing exchange rate flexibility in many countries, especially in emerging Asia. Nevertheless, the relatively high values of the resistance index over the recent past in all four emerging market regions considered in this chapter reflect a continued, widespread desire to limit the extent of exchange rate appreciation. At the same time, the degree of sterilization has increased over the past few years in emerging Asia, and more moderately in Latin America and emerging Europe and the CIS. The high values of the index in the early 1990s and the early 2000s – the beginning of the two waves of large capital inflows – suggest an aggressive sterilization effort when capital began to pour in. This index subsequently tapered off, perhaps indicating that as intervention continued, the authorities became increasingly conscious of its cost. The pattern of real government expenditure reveals that in the emerging market countries considered in this chapter, real government expenditure growth accelerated over the past few years, especially in Latin America and emerging Europe and the CIS. Finally, the indices of capital controls in emerging market regions suggest that controls on capital inflows have been relaxed since the late 1990s, although in the aggregate the changes have been relatively slow. Emerging European and the CIS countries have relaxed these controls the most, with emerging Asian countries remaining quite restrictive. Restrictions on residents' capital outflows have also been progressively loosened in emerging Europe and the CIS, and other emerging market regions, and only more recently in emerging Asia and Latin America, which started from a relatively more open position.

The main findings are as follows:

– Episodes of large capital inflows were associated with an acceleration of GDP growth, but afterward growth often dropped significantly.

– Fluctuations in GDP growth have been accompanied by large swings in aggregate demand and in the current account balance, with a strong deterioration of the current account during the inflow period and a sharp reversal at the end.

– Consistent with the literature on capital outflows, the end of the inflow episodes typically entailed a sharp reversal of non-FDI flows, whereas FDI proved much more resilient.

– The surge in capital inflows also appears to be associated with a real effective exchange rate appreciation, but the lack of statistical significance in the difference between median appreciation before and during the surge in capital inflows reflects the considerable variation across country experience.

– The mechanism generating real appreciation during an episode has not, on average, been higher inflation. This reflects the fact that for a significant group of episodes, the surge in capital inflows occurred in the context of inflation stabilization plans In light of these findings, an important test of the effectiveness of policies during the inflow period is whether they helped a country achieve a soft landing, that is, a moderate decline in GDP growth after the inflows abated.

– Episodes characterized by a sharper post inflow decline in GDP growth tend to experience a faster acceleration in domestic demand, a sharper rise in inflation, and a larger real appreciation during the inflow period. These episodes also lasted longer, as shown by the much higher cumulative size of the inflows. Hence, the sharper post-inflow decline in GDP growth seems to be associated with persistent, expansionary capital inflows, which compound external imbalances and sow the seeds of the eventual sharp reversal.

From a policy perspective, it is striking that hard landings have also been associated with a strong increase in government spending during the inflow period, whereas expenditure restraint helps reduce upward pressures on both aggregate demand and the real exchange rate and facilitates a soft landing. By contrast, a higher degree of resistance to exchange rate changes during

the inflow period and a greater degree of sterilization were unable to prevent real appreciation and were generally unsuccessful in achieving a soft landing. These findings suggest that a smaller real exchange rate appreciation in response to large capital inflows may help reduce an economy's vulnerability to a sharp and costly reversal.

Conclusions. Although countries' responses to a surge of capital inflows depend on the specific nature of the inflows as well as on various aspects of their particular circumstances and objectives, some overall patterns nonetheless emerge from a systematic review of inflow episodes. First, countries with relatively high current account deficits have been more vulnerable to a sharp reversal of capital inflows, because they have been particularly affected by the increase in aggregate demand and the real appreciation of their currencies. Second, there is a clear policy message that public expenditure restraint during such episodes can contribute to both a lower real exchange rate appreciation and better post-inflow GDP growth performance. Third, a policy of resistance to nominal exchange rate appreciation has generally not been successful in preventing real appreciation and has often been followed by a sharper reversal of capital inflows, especially when these inflows have persisted for a longer time. Fourth, the article suggests that restrictions on capital inflows have in general not facilitated lower real appreciation and a soft landing at the end of an episode.

The inflows were often helpful in promoting economic and financial development, but also complicated macroeconomic management and put a high premium on prudent policies. Policy tensions often arose since the authorities in many countries still sought to pursue multiple policy objectives even when opening the capital account. As a result, capital inflows led to rapid monetary expansion, a slowdown in the disinflation process, and wider current account deficits. These tensions have been relieved by the adoption of more flexible exchange rates and IT regimes, but continued capital inflows have still required a careful mix of interest rate and intervention policies to avoid disorderly exchange rate adjustments, while preserving the credibility of IT regimes. Inflows also posed risks to financial stability to the extent their intermediation resulted in a rapid growth of bank credit and maturity and currency mismatches in private sector balance sheets. Institutional improvements have helped strengthen the policy responses to capital inflows. Instead of capital controls, countries have been able to combine macroeconomic policy tools, to the extent available, with efforts to strengthen prudential regulation and supervision of financial systems, develop financial markets, better monitor capital flows, and adopt various debt management measures and some indirect intervention schemes. The review of experience with the policy responses may provide useful lessons for countries in similar situations experiencing large capital inflows.

These findings imply that the stabilization challenges from large capital inflows are most serious for countries with substantial current account imbalances, which currently include many emerging European countries. The most effective tool available to policymakers to avoid overheating and output instability is likely to be fiscal restraint, especially in the context of relatively inflexible exchange rate policies. This article also suggests that even if a central bank initially intervenes to resist nominal exchange rate appreciation when capital inflows begin, this stance should be progressively relaxed if the inflows persist. This is because it becomes less likely that such a policy will succeed in preventing real appreciation and a painful end to the inflows. In addition to the macroeconomic policy instruments discussed in this article, the authorities have other tools at their disposal, which have not been analyzed systematically – notably, financial supervision and regulation, but also a wider range of policies such as labor and product market reforms. The role of such policies in responding to capital inflows would be an important topic for future research.

References

1. Capital Inflows: The Role of Controls [Electronic resource] / Jonathan D. Ostry, Atish R. Ghosh, Karl Habermeier, Marcos Chamon, Mahvash S. Qureshi, and Dennis B.S. Reinhardt // International Monetary Fund, Research department. – February 19, 2010. – SPN/10/04. – P.30. // Access mode: http://www.imf.org/external/pubs/ft/spn/2010/spn1004.pdf
2. Capital Flows, Exchange Rate Flexibility, and the Real Exchange Rate [Electronic resource] / Jean-Louis Combes, Tidiane Kinda, and Patrick Plane // African Department, IMF Working Paper – January 2011. – P.34. // Access mode: http://www.imf.org/external/pubs/ft/wp/2011/wp1109.pdf
3. Capital Inflows: Macroeconomic Implications and Policy Responses [Electronic resource] / Roberto Cardarelli, Selim Elekdag, and M. Ayhan Kose // Asia and Pacific Department and Research Department, IMF Working Paper – March 2009. – P. 62. // Access mode: http://www.imf.org/external/pubs/ft/wp/2009/ wp0940.pdf
4. Moiseev S. Современный контроль над движением капитала: цели и задачи [Electronic resource] / S.Moiseev. – 2000. – № 12. – P.10. // Access mode: http://www.mirkin.ru/_docs/articles03-009.pdf
5. Financial globalisation and emerging market capital flows [Electronic resource] // Monetary and Economic Department – December 2008. – Bank for International Settlements Papers № 44. – P.492. – Access mode: http://www.bis.org/publ/bppdf/bispap44.pdf
7. Vasilyeva E. Analyse forms and instruments of government regulation the inflow and outflow of capital (in Russian) / E. Vasilyeva // Belarussian journal of international law and international relations. – 1998. – № 3. – P. 6-13.
8. Capital Flows to Emerging Market Economies / Philip Suttle, Robin Koepke, Julien Mazzacurati // The Institute of International Finance, Inc., Research Note. – October 4, 2010. – P.1-24.
9. Coping with Capital Inflows: Experiences of Selected European Countries [Electronic resource] / İnci Ötker-Robe, Zbigniew Polański, Barry Topf, and David Vávra// Monetary and Capital Markets Department, IMF Working Paper – July 2007. – P.46 – Access mode: http://www.imf.org/external/pubs/ft/wp/2007/ wp07190.pdf
10. Recent Experiences in Managing Capital Inflows—Cross-Cutting Themes and Possible Policy Framework [Electronic resource] / Prepared by the Strategy, Policy, and Review Department // IMF. – February 14, 2011. – P.97 – Access mode: http://www.imf.org/external/np/pp/eng/2011/021411a.pdf
11. Capital is again flowing to emerging economies [Electronic resource] / World economic outlook. Rebalancing growth // World economic and financial surveys, IMF. – April 2010. – P.4-6. – Access mode: http://www.imf.org/external/pubs/ft/ weo/2011/01/index.htm
12. Managing large capital inflows [Electronic resource] / World economic outlook. Globalization and Inequality // World economic and financial surveys, IMF. – October 2007. – P.111-140. – Access mode: http://www.imf.org/external/pubs/ft/weo/2007/02/index.htm