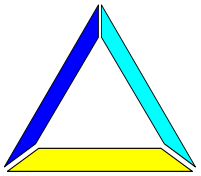
INSTITUTE FOR ECONOMIC RESEARCH AND POLICY CONSULTING
IN UKRAINE
GERMAN ADVISORY GROUP ON ECONOMIC REFORM
Reytarska 8/5-A, 01034 Kyiv,
Tel. (+38044) 278-6342, 278-6360, Fax 278-6336
E-mail: institute@ier.kiev.ua, http://www.ier.kiev.ua



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The international financial crisis: Risks and policy implications for Ukraine

Executive Summary

This paper assesses possible risks for Ukraine due to the international financial crisis and discusses the policy implications of such risks. While for the time being the effect of the international financial crisis on Ukraine has been very moderate, both policy makers and business alike are worried about potential negative effects in the near future.

In order to gain a better understanding of the crisis, we first analyse its origins in the US housing sector. Afterwards, we show how it evolved into a global problem via financial transmission channels and highlight potential risks for emerging markets, incl. Ukraine.

Broadly speaking, current risks can be divided into two groups. First, there is a risk for a worsening of Ukraine's access to international finance ("financial risk"). In such a case, the cost of foreign borrowing would increase, with negative consequences for domestic financial institutions and borrowers. But in our view, this risk is not very high as of today. Foreign banks have invested large amounts of money for acquiring domestic banks and will most certainly not stop financing their new subsidiaries. Besides, FDI is set to continue flowing at large scale into Ukraine. Second, Ukraine could be hurt in case of a global recession ("risk real sector"). The demand and the price for main Ukrainian export goods (especially metals) could drop and this could reduce economic growth and increase the already sizeable current account deficit.

Given the current overheated state of the economy, as demonstrated by rapidly rising inflation and current account deficits, some moderate increase in the cost of foreign borrowing ("moderate scenario") might in fact be welcomed. It would reduce foreign borrowing und contribute, under the current exchange rate system, to lowering inflation.

Unfortunately, as of today we cannot rule out that the real sector risk might materialise ("severe scenario"). The biggest problem regarding this risk is the lack of possibilities for a macroeconomic policy response in Ukraine. Monetary and fiscal policies are already expansive and should not be further expanded to counterbalance the potential negative shock. But also an active exchange rate policy (i.e. devaluing the currency) would be a bad idea in the context of a crisis. Fortunately, the NBU possesses large amounts of foreign reserves, which will certainly contribute to stability in case of a severe effect of the crisis.

The Ukrainian authorities should in our view draw some lessons from the international crisis for its own long-term policies regarding the financial sector. First, the country should not overstress foreign borrowing. For this to happen, domestic capital markets need to be further developed. Second, the origin of the crisis in the USA has shown the importance of proper regulation and supervision of mortgage lending for maintaining financial stability. This is of particular relevance for Ukraine today, given the current inflated housing prices.

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1 Introduction

The world is currently experiencing an international financial crisis. Financial institutions in many countries have incurred heavy losses and financial markets became highly volatile. Policy makers have reacted strongly in the hope of avoiding a recession. Central banks have reduced interest rates and finance ministries consider adopting fiscal policy measures such as tax cuts to support their economies.

The crisis, which started in the USA, has spilled over to other advanced countries and to some emerging economies. But so far, no significant negative effect could be observed on Ukraine. Under such circumstances, it is only logical that policy makers and business in Ukraine wonder whether Ukraine has been "lucky" and avoided contagion for good, or if significant risks still prevail for the near future.

In this paper we deal with such questions. In Part 2 we revise the origin of the crisis in the USA. This exercise is necessary for understanding the subsequent development into an international crisis. Besides, it also illustrates the importance of an appropriate regulation and supervision of mortgage lending and its refinancing for obtaining financial stability, a topic of relevance for Ukraine. In Part 3 we analyse and quantify the spill - over of the US crisis into the world economy. After reviewing the impact on advanced economies, we assess the effects on emerging markets. Furthermore, an explanation is provided for the moderate impact on Ukraine so far. In Part 4 we identify potential future risks for Ukraine. In particular, we study whether the access of Ukraine to international finance could be significantly restrained (financial risk) and whether a world - wide recession could hurt the country (real sector risk). In Part 5 our policy recommendations for Ukraine are presented. We discuss potential macroeconomic policy reactions, should the international crisis hurt Ukraine severely. Furthermore, we draw some lessons for structural policies regarding the financial sector of the country.

2 The origin of the financial crisis in the USA

Significant increases in US housing prices (“housing boom”) have taken place over quite some time, accompanying a long period of strong performance of the US economy after the 2001 recession. However, this boom was also fuelled by aggressive mortgage lending practices by financial institutions in the US. To understand the origins of the international financial crisis we are observing right now, it is important to stress the connection between these two factors, whose interdependency formed a spiralling effect in form of a "financial accelerator". An increase in housing prices increased the value of collateral for mortgage loans and led to the disbursement of further mortgage loans. This increased demand for housing further and led to another round of higher prices for housing.

A major regulatory reason for this spiral is rooted in the underlying evaluation procedures. In the US, the evaluation of property for lending purposes is done at market values, which creates a strong pro-cyclical effect. In Germany, for comparison, not the market value is taken, but a long-term value of property is used and prescribed as a base for lending. This creates an anti-cyclical effect, i.e. mortgage lending cannot fuel a housing price boom in the same way as it was observed in the US.

This boom was further facilitated by rapidly evolving structured finance transactions in the US capital markets. Many of these loans for housing purchases were not kept at the banks' balance sheets, but sold immediately after origination to investors (off-balance sheet securitisation) in the form of (residential) mortgage-backed securities (MBS[1]). This implies also that the associated risks were sold to investors, including unregulated, highly leveraged and less transparent hedge funds. By doing so, the originating banks released their own underlying capital, which could then be used for originating new mortgage loans. At the same time, new and complex instruments were created and used for this risk transfer, e.g. credit derivatives like collateralized debt obligations (CDO's[2]). A feature that made these instruments very attractive from an investor's point of view was the fact that such instruments were positively rated by well-established international rating agencies and exhibited higher returns than comparable securities. This factor lowered the perceived risks of such securities for investors and increased their respective demand. However, another important feature of such instruments, as became clear in the following crisis, is their illiquidity in times of market stress, i.e. investors trying to sell these instruments didn't succeed in doing so.

The practise of selling these mortgage loans (including the risk) to the capital market contributed towards a lax checking of (low) creditworthiness of borrowers by the originators, and eliminated the incentives to monitor the borrower. In particular, the risk of higher interest rates (flexible rates!), and therefore of an increase in defaults on higher monthly mortgage payments was not sufficiently taken into account by the originators. Besides, also the borrowers were not sufficiently informed about the risk of higher interest rates and higher mortgage payments in the future. As a consequence, a high number of mortgages were disbursed to borrowers with weak credit profiles, so called "subprime" mortgages, with relatively high loan-to-value ratios.

When did these developments come to a halt, and when did the actual crisis break out? An important event in this respect was the development of policy interest rates, since a rise in rate implied that mortgage payments tied to this rate increased. Therefore, when the Federal Reserve (Fed) started its tightening cycle of monetary policy, mortgage payments (i.e. monthly payment of borrowers to the bank, or the vehicle that held now the mortgage) increased eventually and many borrowers were suddenly not able to service the loans anymore. At the same time, housing price growth started to slow down, eventually leading to a fall in prices. This deterioration in housing markets caused the following chain of reaction in the financial and real sector of the US economy.

Effects on the solvency of financial institutions

Depending on the form of concrete exposure to the subprime segment, the solvency of financial institutions was drastically affected. If banks kept such non-performing loans on their own balance sheet, a sharp decrease in the value of such loans led to significant write-downs, with a negative impact on their capital base. The same situation arose when banks had holdings of MBS, or MBS-derivatives whose value was affected.

Other financial institutions (e.g. hedge funds) holding MBS or MBS-derivatives were affected in a similar way. The value of the MBS dropped, write-downs followed and the capital base weakened. The fire-sale of such securities to met redemption requirements often met little or no demand, making these instruments effectively illiquid and difficult to value. Some institutions went bankrupt under this pressure. Banks which were exposed to such counterparties due to outstanding credits or own investments into such funds suffered further

[1] In the process of securitization, mortgages are packaged into pools of collateral, which form the basis of residential mortgage backed securities (RMBS). Different tranches of these RMBS are then sold to investors, with varying levels of priority on the cash flows generated by the underlying mortgage pool.

[2] A CDO is a security that is backed by pools of bonds, bank loans, or other assets. This may include asset-backed securities, RMBS, corporate bonds and other instruments. Again, these securities are divided into several tranches that have differing levels of credit tolerances.

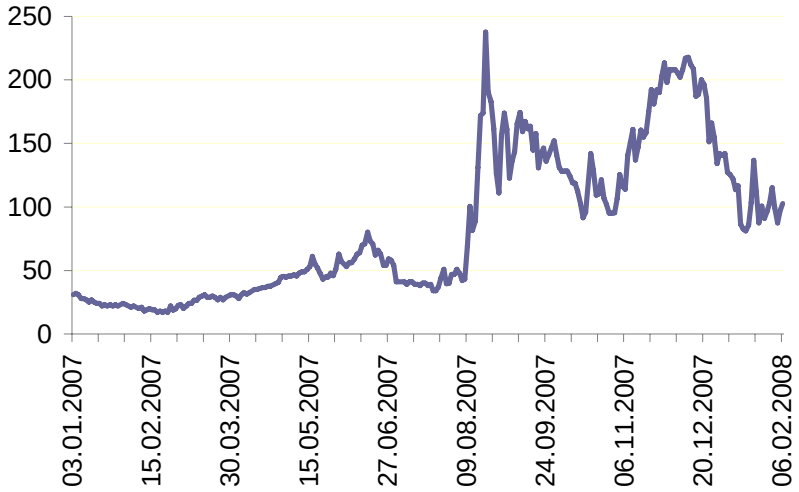
losses. As a consequence, many banks were forced to take measures in order to maintain their capital strength[3].

Effect on the liquidity of financial institutions

During the first months of the crisis, banks did not know to what extent they and other banks were exposed by their involvement in the subprime and related segments of the capital market. Some banks had to take off-balance sheet, structured investment vehicles on their own balance sheet after refinancing possibilities dried up, due to given guarantees providing liquidity support in such cases. This affected interbank lending operations in the money markets dramatically, as can be seen from **Figure 1**.

Figure 1

USD-LIBOR spreads over Treasuries (3-month maturity)



Source: Cbonds; Fed

Liquidity problems for some banks led to a spike in interest rates, which had to be partly solved by the Fed through emergency liquidity provision.

Effect on the real economy

If we take the problems of the US housing market as the starting point, a number of different transmission channels to the real economy can be identified. First, there is a negative direct impact of the sector recession on economic growth, as new building starts decreased sharply and housing construction investments plunged. This in itself has already dampened aggregate output. Furthermore, the associated fall in house prices could lead to negative wealth effects, as housing is an important part of household wealth in the US, and spending has started to react to such changes in wealth.

Second, the solvency problems in the financial sector described above have led to a tightening of lending standards and observably higher corporate bond spreads. This implies that there is less room for new loans ("credit crunch") to enterprises, resulting in higher cost of capital. The result of this increase is a dampening effect on investment and consumption, i.e. on some of the main components of domestic aggregate demand.

The most likely outcome due to these channels is a recession in the US in 2008, which currently seems quite likely. While the expected duration and magnitude is still subject to debate, the fact in itself seems irrevocable. However, the extent of a future recession depends to some degree on policy reactions, which are already under way. Here, the two main macro-policies are currently actively applied, i.e. monetary and fiscal policy. While the Fed lowered rather aggressively policy interest rates in consecutive steps, also fiscal policy is expansionary

[3] This includes the issuance of new equity, a cut in dividends (or share buybacks programmes), the sale of non-core assets or – as mentioned previously – a cutback in new lending, leading to a "credit crunch".

due to recently agreed tax cuts. Therefore, only the near future will tell if the economy will respond to these policy stimuli in a positive way, preventing a deep and long recession.

3 Spill - over of the financial crisis to the global economy

The crisis that had its origins in the US spilled over the course of the second half of 2007 quickly over to other developed markets, in particular in Western Europe. Emerging markets were at this stage not directly concerned, but rather weathered this financial storm – with few exceptions - quite successfully. The transmission of the financial crisis seems therefore conceptually quite different. We will in the following sections assess the different channels of transmission to developed and emerging markets (including Ukraine) separately.

3.1 Impact on developed markets

In developed markets (i.e. mainly Western Europe and to some extent Japan), many financial institutions invested in vehicles that were exposed to MBS or CDOs issued in the US, or a substantial share of their business activities in the US were related to such instruments[4]. The reasons for investing into these instruments by foreign institutions were the search for higher yields in comparison to standard instruments, on which interest rates were very low.

Due to this direct involvement in those US market segments where the crisis had its origin, the impact of the crisis on the solvency of single institutions and on the liquidity of the global financial sector has therefore spread in a pattern quite similar to the one observed in the US. While it is difficult to quantify the absolute impact of the subprime-crisis on the solvency of institutions, some lessons can be drawn from the amount of subprime-related write-downs by global banks. Even though this list is by far not complete yet (the Financial Stability Forum estimates potential losses for banks up to USD 400 bn), the massive impact on banks' financial conditions can be seen in Table 1:

Table 1

Write-downs of subprime-related instruments in the global banking system[5] (as of 31 January 2008)

Institution	Announced write-downs (USD bn)
Merrill Lynch	22.4
Citigroup	19.9
UBS	16.4
Morgan Stanley	9.4
HSBC	7.5
Bank of America	5.7
Deutsche Bank	3.2
Wachovia	3.1
CIBC	2.8
Mizuho Financial	2.8
Total Top Ten	**98.9**
Overall Total Losses	**120.9**

Source: Wall Street Journal (wsj.com)

As can be seen, also major European players with significant US-exposure have been hit by the crisis. This includes also smaller, less well-known banks which had to announce relatively big (in relation to their business) losses. In Germany, some banks (e.g. IKB, some "Landesbanken[6]" like Sachsen LB) surprised with the announcement of high losses due to their

[4] The latter point concerned e.g. globally active investment banks, which structured, underwrote, sold and traded such complex products actively.

[5] This list includes only banks where publicly disclosed financial reports are available. Privately held financial institutions (like most hedge funds) etc. are therefore not included.

[6] „Landesbanken" are central banks for the savings banks in a specific region.

involvement in the US-subprime segment, which led to regulatory intervention and the rapid organization of a bail-out or a takeover by other banks.

Accompanying these solvency issues, a considerable tightening of liquidity conditions in money markets was observed. Banks' mistrust of each other due to the (unknown) counterparty involvement in the subprime crisis made them reluctant to lend to each other, creating funding pressure for some banks. This preference for liquidity due to an increase in risk aversion made money market rates increase sharply. In response to these problems, major central banks around the globe were forced to provide punctually emergency liquidity to calm down market disruptions and to decrease interest rates.

The transmission described so far has focused only on the financial sector, i.e. involved only financial institutions which had direct or indirect links to the US market. However, a further spill-over to the real economy is also possible in the future. This spill-over could take place due to two main channels: higher cost of capital due to a credit crunch, or at least a sharp tightening in lending activities, or via trade channels if the US falls into a recession, a view that currently more and more experts subscribe to.

The first transmission channel, higher cost of capital, seems currently at play, as credit conditions are observably being tightened. This could lead to a fall in interest-sensitive investment and consumption decisions by private agents and dampen real economic activity. At the same time, growth in the developed markets (ex-US) is still relatively robust and fears that this might lead to a recession in other major economies seem currently not substantiated by the facts. On the contrary, the financial conditions of real sector enterprises are fundamentally sound and a certain re-pricing of risk in the financial markets seems overdue. The second channel, via trade, is potentially much more dangerous, as all major economies are quite open to trade and a recession in the US would lower export demand and hurt growth via a fall in exports. The question here is how long and severe a recession in the US would be, which also depends on the right policy responses. Currently, there is a high degree of uncertainty on this issue and a clearer picture of this will evolve in the near future, even though risks are now more on the downside.

3.2 Impact on emerging markets, including Ukraine

Until recently the emerging economies were considered to be far less exposed to the current financial turmoil[7], as their financial institutions did not have large holdings of the US asset-backed securities to be downgraded or written-down as losses. Moreover, some of the sovereign-wealth funds of the emerging countries de-facto helped to sustain the first wave of the crisis providing the troubled banks in the US with much needed equity. The developed countries financial groups including Merrill Lynch and Citigroup received nearly USD 69 bn infusions from the developing world savings in the past ten months, according to Morgan Stanley[8].

The theory of decoupling, that is the notion of emerging market economies has become far less dependent on the growth rates of the developed world due to improved fundamentals (sound fiscal policy, high international reserves, strong domestic demand, etc.), was one of the key reasons for keeping rather optimistic world economic growth forecasts[9].

Indeed, over the second half of 2007 when the financial markets in developed countries struggled to overcome the liquidity crisis (*see Section 3.1*), the emerging market stock market indices continued to grow. For instance, the MSCI Emerging Markets Index[10] measuring the equity market performance of the global emerging markets increased by 20% between June and December 2007.

Though, at the beginning of 2008 the turbulence spread over the emerging markets as well. At the beginning of January, the MSCI Emerging Markets Index plummeted by 18% compared to

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[7] "Decoupling 1: Emerging Asia. An independent streak". The Economist, January 26, 2008. – www.economist.com

[8] "Asset-backed insecurity" The Economist, January 19, 2008. – www.economist.com

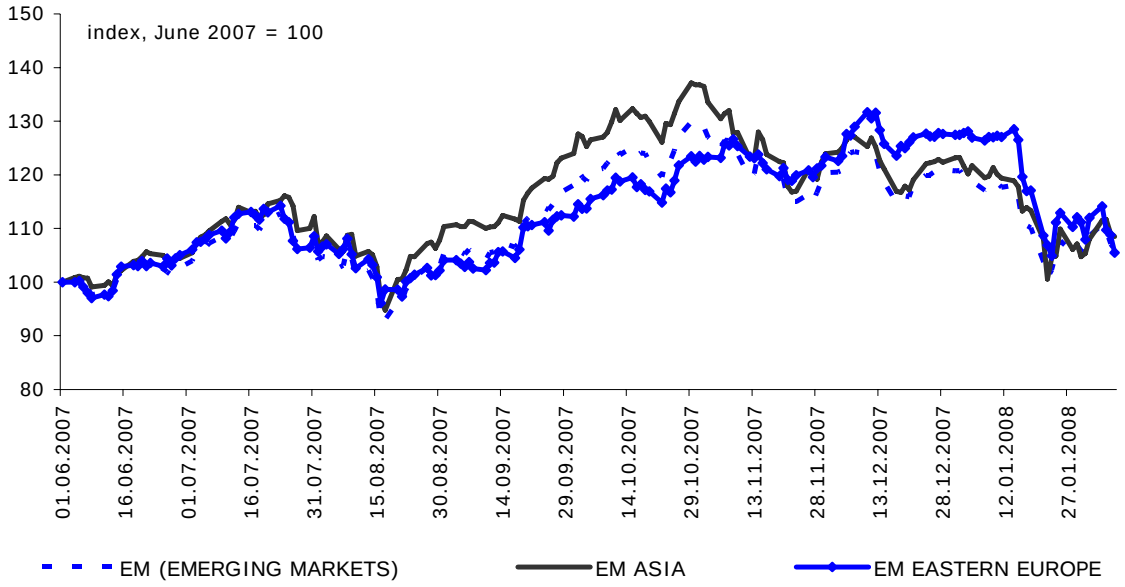
[9] See, for instance, IMF (2007) World Economic Outlook October 2007. Globalization and Inequality. – www.imf.org

[10] The MSCI Emerging Markets Index is an index created by Morgan Stanley Capital International (MSCI) and designed to measure equity market performance in global emerging markets. The Emerging Markets Index is a float-adjusted market capitalization index. As of February 2008, it consisted of indices in 25 emerging economies: Argentina, Brazil, Chile, China, Colombia, Czech Republic, Egypt, Hungary, India, Indonesia, Israel, Jordan, Korea, Malaysia, Mexico, Morocco, Pakistan, Peru, Philippines, Poland, Russia, South Africa, Taiwan, Thailand, and Turkey.

its peak reached in the end of October 2007, raising the question whether the decoupling theory is in fact valid.

Figure 2

The MSCI Emerging Markets Index



Source: MSCI Inc.

What are the transmission channels of the current financial crisis into the emerging economies? The direct hit through sub-prime mess has been rather limited, though Chinese bank shares dropped in mid-January on the reports that they would have to make larger write-downs of their holdings of US sub-prime securities[11]. Still, other transmission channels seem to be more important.

Outflow of foreign capital from emerging markets. The liquidity and solvency problems usually result in the outflow of foreign capital from the emerging markets, as the investors close riskier positions and opt for safety and proven quality.

So far, the evidences are mixed. On the one hand, after the optimism of 2007, increased fears of the recession in the USA pushed investors to start pulling out of the emerging stock funds. According to the Emerging Portfolio Fund Research, an international fund-flow tracking firm, the first week of February was the eighth consecutive week of net outflow from Asian equity funds (excluding Japan)[12]. Also, investors started to leave stock markets in Brazil. On the other hand, some equity funds were attracted by Russia, African and Middle East countries[13]. Also, the JPMorgan Emerging Markets Bond Index (EMBI) continued to rise even as stock markets slumped[14].

The increased volatility on stock markets in emerging economies was accompanied by the steady inflow in money market and the US bond funds, confirming thereby the shift in demand for less risky securities.

Thus, so far the capital outflow was comprised by mostly closing the liquid positions on stock markets, and has not featured a massive flight out of the countries' economies.

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[11] "Decoupling 1: Emerging Asia. An independent streak". The Economist, January 26, 2008. – www.economist.com

[12] Nishanth Vasudevan "Bulls may have to bear more pain". Economic Times(India), 11 February 2008.

[13] "Investors Shift From Equities Into Cash, US Bonds – EPFR", Dow Jones International News, 4 February 2008.

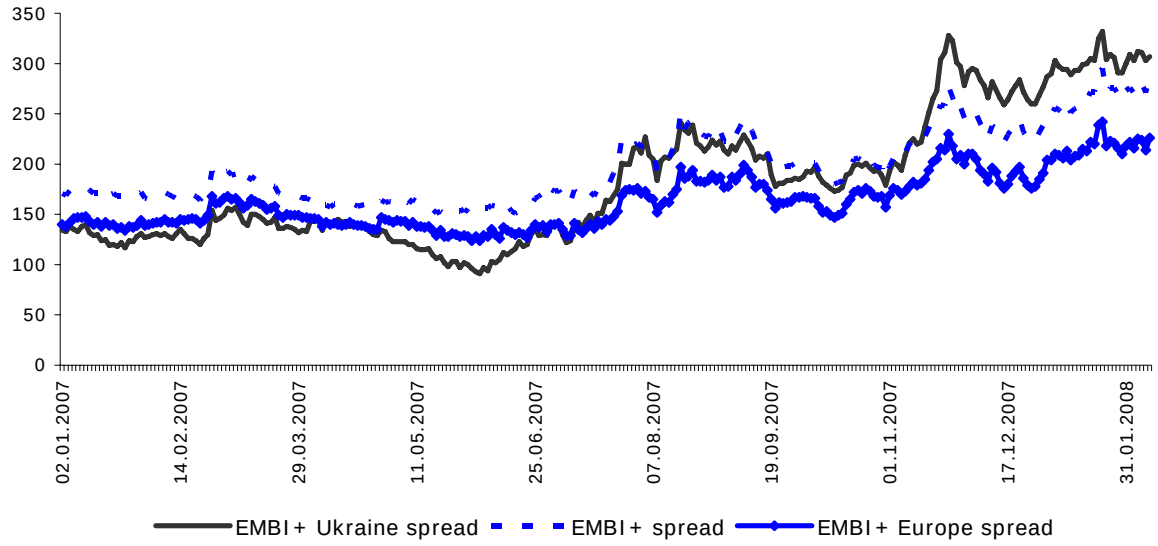
[14] Thornton, P. (2008)"Emerging markets break the rules as government bonds' prices soar" The Business. February 9.

Less and more expensive foreign capital inflow into emerging markets. The reduced appetite for risk produce higher risk premiums, resulting in increased interest rates and lower volumes of external borrowings for emerging economies.

Indeed, the cost of risks has significantly increased for emerging markets since November 2007 (**Figure 3**). Though, no major breakdowns in availability of funds were noticed.

Figure 3

Increase in the cost of risk at emerging economies (EMBI+ spreads)



Source: Cbonds

The overall drop of external borrowing could result in significant financial and economic problems in the country. Higher interest rates exert the pressure on all economic agents in the economy, causing the deceleration of consumption and investment activity. Also, if the exchange rate is fixed, the outflow of foreign capital or the reduced inflow not sufficient to cover the deficit of the current account create the depreciation (devaluation) pressure on national currency, resulting in central bank interventions and loss of reserves. In the worst case, a full-fledged currency crisis could develop.

The sensitivity of emerging markets to the world credit squeeze could be different for different countries. The exposure is determined by the level of dependency on external financing by the country's banking system, budgets of different level, and non-financial corporations. Also, the duration (short-term or long-term) and inherent mobility of received external financing is important. Moreover, macroeconomic fundamentals play a significant role, including the size of current account and fiscal deficits, the outstanding external debt, the level of dollarisation in the economy, the exchange rate regime, etc.

Also, if the growth of developed economies is affected, as seems to be the case in the USA and to a lesser extent the EU, the real economy channels are to enter the picture. Here, the reliance on foreign trade and the share of exports to countries hit by the crisis is important.

To date, the analysts remain quite optimistic regarding the ability of the emerging economies to withstand the world credit squeeze, although the growth rates forecast are downgraded and future severe financial turbulence could not be excluded[15]. So far, Kazakhstan appeared to face the hardest hit from the change of foreign investor's sentiment as Kazakh banking system showed over-reliance on foreign funding. For other emerging markets, so far the major impact was the increased stock market volatility as discussed above. Though, taking into account the increased uncertainty and high likelihood of the recession in the USA, the international

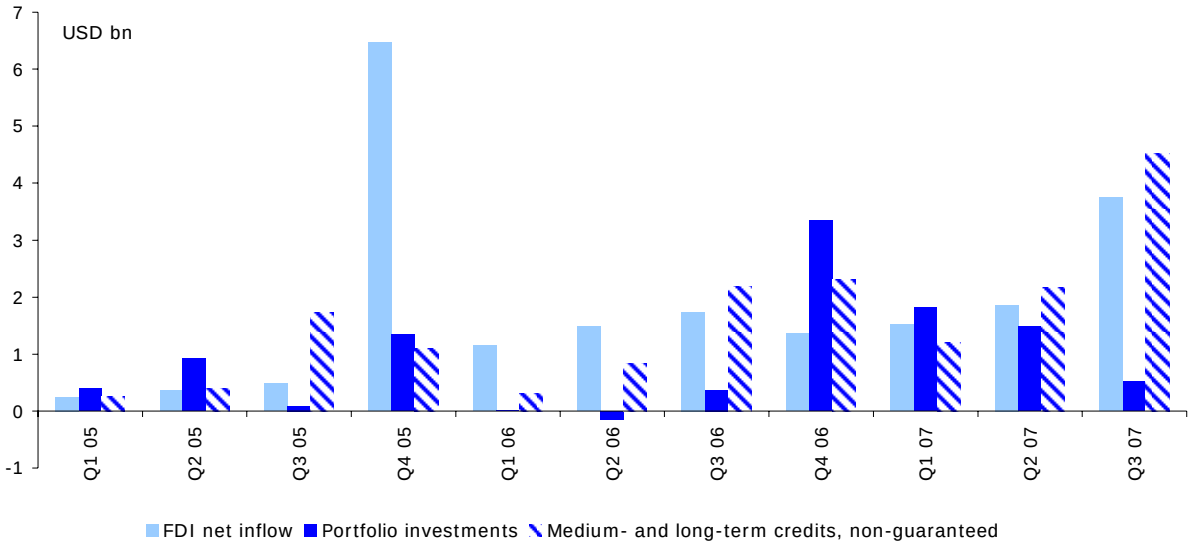
[15] Information obtained from publications of and consultations with representatives of the EIU, EBRD, UniCredit Group, UBS, and Raiffeisen Bank.

experts[16] revised downwards the perspectives of the emerging market economies growth in 2008. The most serious revision concerned Central and Eastern European countries, the real GDP growth perspective of which was reduced by 0.6 percentage point to 4.6% by the IMF[17].

The impact of international financial crisis on **Ukraine** so far has been rather limited, despite the significant increase in the country's involvement into international financial flows[18]. According to the NBU, in the third quarter – the first quarter of the crisis – Ukraine received the record high inflow of foreign capital, both in the form of foreign direct investments (FDI) and borrowings, although portfolio investments seduced. The monetary review for the year 2007 released by the NBU put financial account surplus for eleven months at USD 13.6 bn.

Figure 4

Net foreign capital inflows



Source: NBU

One of possible reasons for low sensitivity could be the fact that many external loans in banking sector have been provided to the Ukrainian subsidiaries of foreign banks, which want to expand lending in Ukraine (Table 2). According to the NBU, banks attracted 52% of all net foreign credits in the first nine months of the year.

Table 2

Foreign ownership in the statutory capital of banks in Ukraine, % of total

2000	2001	2002	2003	2004	2005	2006	2007
13.3	12.5	13.7	11.3	9.6	19.5	27.6	35.0

Source: NBU

Also in the fourth quarter, despite higher risk premium (Figure 3), the external borrowings remained considerably high. For instance, the Government managed to conduct a placement of Eurobonds worth USD 700 m.

[16] IMF, UBS.

[17] World Economic outlook update, January 2008, IMF, http://www.imf.org/external/pubs/ft/weo/2008/update/01/index.htm

[18] See Policy Paper W9 "Private foreign borrowing and credit growth in Ukraine: Trends and policy recommendations" by Giucci/Kirchner/Poletaeva (2007). - www.ier.kiev.ua.

Also, the successful purchase of Ukrinbank by an Israeli bank and the announced sale of Pravex-bank to Banca Intesa in early 2008 signify the still high interest in Ukraine's financial market.

In the end of 2007 the NBU turned from the net purchases into net sales of foreign currency to sustain the USD/UAH exchange rate, and the net sales were continued in January 2008. So far this dynamic is mostly attributed to accelerated imports and seasonal factors driving the supply of foreign currency down at the beginning of the year. But the increased global uncertainty and expected deceleration of the economic growth in developed countries could add to purely seasonal factors, posing potential risks for the Ukrainian economy in the near future.

4 Potential risks for Ukraine in the near future

The international financial crisis could affect both financial and real sectors of Ukraine. Below we document the current impact and discuss the potential risks for Ukraine in the near future.

Banking system

In 2007 the share of banking sector liabilities to other financial institutions (mostly foreign) increased Increase from 22% to 29%. Generally, high reliance of banking system on foreign funds to finance credit expansion could be rather dangerous. If the inflow seduced, banks would be forced to reduce the speed of crediting, and increase the credit interest rate.

In turn, slower credit expansion (households credits outstanding increased by 97.8% yoy in 2007) would hinder the growth of final households consumption, decelerating the real GDP growth, though reducing the demand pressure on prices. In 2007 the net loans received during the year reached approximately 16.4% of disposable income of households, suggesting that credit expansion became crucial for sustaining real final consumption growth at over 15% yoy.

Also, it would make refinancing credits less attractive and less available, thus aggravating the problem of bad credits and the stability of the banking system as such. For producers, higher costs of credits would be also painful, although so far the most of enterprises rely on their own funds to finance investments. According to the Derzhkomstat, only around 14% of capital investments are financed via borrowings.

At the same time, smaller foreign capital inflows would make the domestic deposits the main source of funding for Ukraine's banking system. Thus, deposits rates should increase, further reducing the demand pressure on consumer markets and thus inflation.

So far, in Ukraine there are no signs of significant problems with financing the credit expansion. According to the NBU, in January 2008 credits outstanding increased by 2.2% (mostly thanks to high retail credits) compared to 0.1% reduction in the same period of 2007. Observed slight increase in deposit rates could be attributed largely to tighter monetary policy and higher inflationary expectations, rather than to considerably seduced external financing.

Also, the interviews with bankers showed that in general foreign parent banks are expected to finance Ukrainian subsidiaries, although the inflow could decelerate somewhat compared to the previous year.

Though, the risk remains that if the mother companies are significantly hit by the international financial crisis, they will be unable to provide expected financing.

Stock market

Although the Ukrainian stock market is generally responding to major international financial markets shocks, its volatility seems to have rather limited pass-through on the economic situation in the country as a whole. It is explained by relatively limited number of companies that are listed and still small number of retail stock market investors.

As foreign investors are playing the major role on the market, the sudden flight of foreign capital could significant negatively affect the market.

Other assets

One of the asset bubbles observed now in Ukraine is a housing bubble[19]. Though, there is no evidence that there is a significant share of foreign capital in this market[20]. The foreign capital is dominating the markets of commercial real estate, and is not expected to flow out, as the assets are rather immobile and the perspectives of future profits remain high due to insufficient supply on the market.

Real sector

To judge about Ukraine's real sector decoupling from international financial crisis and likely slowdown of global economic growth, it is necessary to examine the fundamentals. The stylised facts are the following:

- The economy relies heavily on foreign trade, with exports to GDP ratio at 48% in the nine months of 2007.
- Geographically, the trade is sufficiently diversified, and commodity exports to the USA comprise only 2% of total exports in 2007.
- Though, the commodity diversification of exports remains relatively small, with around 40% of exports being ferrous metals. The demand for iron and steel is driven mostly by emerging economies, although Ukraine sells a significant share of metals to the EU as well. The reduction in price and/or demand for metals (for instance, due to the deceleration of the EU economic growth or the lower emerging markets demand because of decreased exports to developed countries) could negatively affects Ukraine's exports as it happened in 2005.
- For the second year in a row, Ukraine has a current account deficit that is estimated to stay in 3-4% of GDP range in 2007. Almost 40% increase in the import gas price at the beginning of 2008 is expected to increase imports, and thus the trade and current account deficits. The sustainability of the deficit depends to a large extent on the stable inflow of long-term foreign capital.
- As of the January 1, 2008 international reserves are at 4.7 months of future imports, providing sizable protection from devaluation.
- Domestic demand remained strong for the last five years, and has been sufficient to balance-off the negative net exports if the structure of the real GDP growth is considered.
- High inflationary pressure in the country as in January 2008 the consumer price index increased by 19.4% yoy.
- The central fiscal deficit is reported at 1.7% of GDP in 2007. The most of central fiscal expenditures are recurrent.

Thus, if the external conditions significantly worsen and the country faces the sharp reduction in net foreign capital inflows or capital outflow, there are risks of increased devaluation pressure on the national currency and the deceleration of the real GDP growth.

5 Policy implications for Ukraine

It is sensible to distinguish between two types of policy implications of the international financial crisis on Ukraine. First, we will discuss possible short-term macroeconomic policy reactions, should the impact on Ukraine become severe. Second, it is possible to draw important long-term lessons concerning financial markets in Ukraine.

[19] For more details see policy paper W4 "Housing prices in Ukraine: Trends, analysis and policy implications" by Giucci/Kirchner/Yuzefovych/Suchok (2007) – www.ier.kiev.ua.

[20] Interviews with real estate companies.

5.1 Macroeconomic policy implications

As explained above, so far the impact of the international financial crisis on Ukraine has been rather limited. Consequently, there is no need for a macroeconomic policy reaction so far. But things might change and Ukraine might be negatively affected by the crisis in the near future. Thus, it is necessary to discuss possible reactions for such an eventuality. We will discuss possible reactions in case of a moderate and of a severe negative impact.

Moderate negative impact (moderate scenario)

The Ukrainian economy is currently overheated (i.e. aggregate demand for goods and services surpasses aggregated supply), as manifested by the very high rate of inflation, which reached 19.4% yoy in January 2008, and by a growing current account deficit). The excessive aggregate demand growth is partly due to large capital inflows, which create an excessive supply of foreign currency on the foreign exchange market and force the NBU (under the current exchange rate regime) to intervene on the market. As a result of net purchases of foreign currency by the NBU, money supply increases, thus creating inflationary pressures.[21]

Because of the international financial crisis, capital inflows into Ukraine might decelerate or even decrease slightly (moderate scenario).[22] In such a case, the excessive aggregate demand growth described above would decrease and this would in turn contribute towards lower inflation. Consequently, policy makers should not worry about moderate negative effects. On the contrary, some slight "negative" (i.e. decelerating) impact should be welcomed, as it puts economic development on a more sustainable basis.

Severe negative impact (severe scenario)

The likelihood of a severe negative impact of the international financial crisis on Ukraine is in our view not very high as of today. But such a severe scenario cannot be excluded, especially if the crisis continues for a long time and if it leads to a global recession.

The standard macroeconomic reaction to a severe negative shock would entail easing of monetary and fiscal policy. In recent weeks, the Fed has decreased interest rates and President Bush has requested Congress to approve tax cuts to support private spending by households. But in the case of Ukraine the use of such instruments is questionable. Monetary policy has been very expansive in the past and Ukraine faces high inflation. Therefore, a policy tightening would be needed here, something that authorities have already begun to implement by various measures. Besides, monetary policy is subordinated under exchange rate policy. But also fiscal policy is already expansionary and there is practically no room for further expansion.

The only remaining macroeconomic instrument is the exchange rate. But here again, it is doubtful whether an active exchange rate policy should play an important role in managing an external shock. Generally speaking, a devaluation can contribute to absorb the negative effects of a shock. But in the concrete case of Ukraine today, a "forced" devaluation would have very negative effects, especially taking into account the high level of exchange rate stability since 2000 and of dollarisation in the economy. Consequently, we recommend the use of the extensive reserves of over USD 30 bn to support the hryvnia, if needed. Such support should be prolonged, as long as the shock is not considered as a permanent one (e.g. a long-term change in terms of trade due to a fall in metals prices following a global recession) and the end of the crisis is foreseeable.[23] This recommendation does not contradict our fundamental proposal for a more flexible exchange rate policy in Ukraine.[24] A forced

[21] The description of an overheated economy partly due to large net purchases of foreign currency by the NBU does not preclude short-term periods, in which the NBU acts as net seller of foreign currency, as was the case in December 2007 and January 2008.

[22] In fact, this might be already occurring. But so far not enough data is available to support this view.

[23] We provided a similar advise to the NBU during the currency "crisis" that took place at the time of the "Orange Revolution" in December 2004 and January 2005.

[24] For more details see policy paper V10 " Exchange Rate Policy in Ukraine: Why and how to float the hryvnia" by Kirchner/Giucci/Kravchuk.

devaluation in times of a crisis should not be considered as a move towards exchange rate flexibility.

To sum up, given the current macroeconomic situation in the country, an expansive policy response would aggravate the present problems of high inflation and current account deficit. Consequently, we see little or no room for an active monetary, exchange rate and fiscal policy response to a severe impact from the international financial crisis.

5.2 Structural policy lessons for the financial sector

The international financial crisis has made clear that conducting structural reforms in Ukraine's financial sector is of paramount importance. In our view, two main lessons can be drawn: the need for further developing domestic capital markets and for creating a stable system of mortgage lending.

Further development of domestic capital markets

The international financial crisis has shown (once again) that emerging markets should not rely too heavily on foreign borrowing, especially on short-term borrowing. The access of emerging markets to international finance and the conditions for such finance can worsen very rapidly, independently from the economic performance of the country. In order to reduce potential exogenous shocks, it is necessary to develop domestic capital markets. In the case of Ukraine, this involves both the bond as well as the stock market. Regarding the bond market, the government should issue a significant part of bonds in local currency[25] and introduce a system of primary dealers.[26]

Establishment of a stable system of mortgage lending

The origin of the international financial crisis lies in an appropriate regulation and supervision of mortgage lending and its refinancing in the USA. Since mortgage lending is on the rise in Ukraine and will most likely develop rapidly in coming years, some lessons should be drawn from these events. First, the regulator has to make sure that today's mortgage loans are provided in such a way that they do not become "bad loans" in the future, since this could destabilise the financial sector. In particular, the regulator should avoid that banks contribute to a "housing price bubble" by lending on the basis of rising and unsustainable housing prices. To avoid this, the valuation of housing for the purpose of mortgage lending should be conducted by independent experts, which do not work for the lending bank. So far, this is not the case in Ukraine. Besides, lending should be based on the long-term value of housing, and not on the current market prices. As in Ukraine today, markets prices might be inflated and not sustainable. Lending based on the long-term value, as practised in Germany, has shown to be very stable for many decades. Second, the refinancing of mortgage lending using capital markets should be conducted in a simple and transparent way. More concrete, the instruments issued by banks to refinance mortgage lending should be simple and standardised. Market participants should recognise without much effort the risks entailed in traded securities. In our view, the German/continental mortgage bonds ("Pfandbriefe") fulfil such requirements and should thus become the standard instrument for refinancing mortgage loans in Ukraine in the near future[27]

Authors: Ricardo Giucci/Robert Kirchner/Veronika Movchan/Vitaliy Kravchuk

Lector: Igor Burakovsky

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[25] For a detail analysis see policy paper V19 "The currency structure of government debt in Ukraine: Why the share of hryvnia bonds should be increased" by Trebesch/Giucci/Kravchuk.

[26] For concrete recommendations see our policy paper W1 "A Primary Dealer System for Government Bonds in Ukraine. Why and How it Should be Introduced" by Trebesch/Giucci/Kravchuk.

[27] See also our policy paper T3 "Mortgage lending in Ukraine: Three strategic questions and answers" by Giucci/Eremenko.