The financial crisis in Germany and the Ukraine – Reasons, development and countermeasures

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Abstract

Both the matured West European and the emerging East European countries are currently facing an economic recession, preceded by a financial crisis triggered through different channels of contagion. The measures taken by the respective Central banks and governments to fight the crisis in Western and Eastern Europe differ substantially, however, depending on how developed the respective financial markets are and what exchange rate regime has been implemented. In line with EU recommendations, Germany - a member of the European Union and the Euro area – has chosen a comprehensive approach of state guarantees, public bank recapitalisation and stimulus spending going hand in hand with measures by the European Central Bank to provide liquidity to the markets,reducing the ECB policy rate to historical lows.

In the Ukraine, however, Central bank measures have until recently rather aimed at defending the exchange rate of the local currency, public recapitalisation of the banks has been slow and stimulus spending is restricted by conditions imposed by the IMF, having granted a Stand-by-facility to the Ukraine. Moreover, financial intermediation outside the banking sector is not very much developed. Thus, up to now, in the Ukraine these measures have rather had an ad-hoc-character predominantly trying to strengthen the Ukrainian Hryvnia and depositors' confidence in the banking system.

Since the second quarter 2009 the measures taken both in Germany and the Ukraine to overcome the crisis seem to unfold first impacts.

1. Introduction

If you want to escape long winter nights in Finland spending some of your leasure time being on an exciting cultural trip in continental Europe instead, a look at the timetable of most European airlines shows that a flight from Helsinki to Berlin takes approximately the same time as a flight from Helsinki to Kiev. If your flight is combined with business linked to financial markets, however, the direction you take makes a fundamental difference. In Germany, a member of the European Union and the Euro area with a stable political system, the capital markets – as an alternative to banking intermediation – are well developed. In the Ukraine, a country where it is still controversial with which country to

[1] The views expressed in this article are the authors' views only and do not necessarily represent official positions of Deutsche Bundesbank or National Bank of Ukraine.

cooperate closer – the EU or Russia – and a country with a de-facto peg of the local currency, the Hryvnia, to the US Dollar, intermediation is clearly dominated by banks, and financial markets are underdeveloped.

As we will see, these different institutional settings have advantages and disadvantages when it comes to prevent or later on to fight financial crises. For example, although both the countries of the European Union (Western matured countries) and the countries of East, central and southeastern Europe (CESEE countries) have been hit by a deep economic recession, the transmission mechanisms of the financial crisis preceding this economic crisis, and the measures to fight it are in general fundamentally different. This is also due to different financial intermediation channels.

Taking Germany and the Ukraine as an example for a developed Western and an emerging Eastern European country respectively, in the sections below we try to explain which factors triggered which crisis, by which mechanisms it got reinforced respectively and why the measures taken by the governments and the Central banks to stop the crisis are so different. In this respect we will also have a closer look at the implementation of the German and the Ukrainian 'rescue package'.

At the beginning we start with a brief overview of possible classifications for financial and economic crises and their interaction.

2. Some basic framework for analyzing crisis situations

Several authors have provided definitions of different types of crisis in order to classify them[2]. Below we will use the definition of Mishkin[3], according to which

[2] See for example Kaminsky/Reinhard (1999) or Duttagupta/Cashin (2008).
[3] Mishkin (1991).

a ‘financial crisis’ is characterized by a disruption to financial markets making them (by adverse selection and moral hazard problems) unable to efficiently channel funds to the most productive investment opportunities. Furthermore, we refer to the definitions of Bordo/Klingebiel[4], who define a ‘banking crisis’ as a period of financial distress that is severe enough to result in the erosion of most or all of the capital in the banking system, and a ‘currency crisis’ as a forced change in parity, an abandonment of a pegged exchange rate or an international rescue. A twin crisis is a combination of a banking and a currency crisis.

Finally, when we talk about an economic crisis we distinguish between a stage and a cyclic crisis (also called economic recession). Each market based economy is subject to cyclic economic development creating economic recessions sooner or later[5], but apart from these cyclic crises there are also stage crises, related to the transition of the economy and society in general from one stage to a higher level of development[6].

Contagion effects of crises initially developing in one specific country or region have been facilitated over time by diminishing restrictions for cross-border capital flows and the increasing use of modern information technologies. On the other hand this free flow of capital can contribute significantly to raising the living standards of the local population, inducing also foreign direct investments (FDI). However, the higher the share of foreign capital in relation to the Gross Domestic Product the more vulnerable the local economy gets to a crisis (initially) only affecting only the home countries of the foreign investors.

4 Bordo/Klingebiel (2001).

5 Samuelson/Nordhaus (1995).

6 The nature of such stage crises was investigated by G. Kondratiev in the early 20th century already (see Kondratiev (1926), p.618).

3. The financial crisis in the EU

The subprime crisis in the US has triggered a financial crisis in the EU, characterised by perturbances on the money market, the stock markets and the bond markets, in particular affecting banks' activities to get liquidity via wholesale funding. This financial crisis has caused a banking crisis now triggering an economic recession. That the crisis has affected the EU countries so hard is due to the unanticipated interaction between funding and market liquidity in crisis situations[7]. This interaction has triggered – as we shall see in the next section - a downward spiral of liquidity and bank equity.

3.1. „Liquidity“ and „Liquidity risk“

„Funding liquidity“ can be defined as the possibility of a bank to fund itself by borrowing money at third parties, either secured or unsecured. It is low if funding for the amount and maturity required can only be obtained under unexpectedly unfavourable funding conditions (e.g. higher interbank rates or high haircuts or margins under secured funding) or cannot be obtained at all. Funding liquidity is high as long as it is possible to get the required amount of money with the right maturity under the required conditions[8]. „Funding liquidity risk“ defined in this sense is typically caused by maturity transformation[9], and it is particularly relevant for institutions that rely on “wholesale” funding (volatile market based funding). These institutions get their liquidity predominantly from the capital or money markets by unsecured short-term funding or by issuing securities, like covered or uncovered bonds (including, for instance, Asset Backed Commercial Papers), and less from the rather stable retail deposits (retail funding).

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7 Not all the EU countries are affected equally by the financial crisis. Whereas the UK has been hit the hardest, Italy for instance has coped with the crisis quite well so far.

8 The ECB has recently contemplated about a narrower definition of funding liquidity risk and a concept for measuring this risk based on this definition (ECB (2008b), pp.64-66).

9 Brunnermaier (2008), p.22.

„Market liquidity“ is the possibility to fund itself by selling assets in the market. It is low, if selling an asset (typically securities) is possible only under high haircuts or not possible at all, and it is high, if selling is possible at any time without significantly influencing the price of this asset in the market[10].

Another helpful distinction in this respect refers to original and derived Liquidity risks. Derived liquidity risk occurs when an asset can only be sold at a price lower than expected (e.g. due to unfavourable developments in the stock market) or funding might only be obtained at higher costs because of an unexpected widening of the spread curve of the institution. Derived Liquidity risk is therefore linked to the profit and loss of the institution and is balance-sheet based[11]. Original liquidity risk refers to the possibility that a bank might not be able to meet its payment obligations at any time and is therefore cash-flow based. Original and derived Liquidity risks are both – ceteris paribus - higher under wholesale than under retail funding.

3.2. The vicious circle of market and funding liquidity

The interaction between funding and market liquidity in crisis situations has triggered a downward spiral of liquidity, where disturbances of market liquidity had negative repercussions on funding liquidity and on individual funding costs.

At the beginning the impacts of the subprime crisis were particularly painful for institutions

- predominantly relying on wholesale funding
- making extensive use of maturity transformation or having provided liquidity support to Structured vehicles (SPVs)

[10] Deutsche Bundesbank (2008b), p.60.
[11] Schierenbeck (1994), p.716.

- showing little diversification in their funding structure

However, even if these problems were restricted to a limited number of institutions, and even if these problems were not really representing an international financial crisis at that time, they started a downward spiral (a vicious circle) of declining values of financial instruments, market disturbances and eroded equity (own funds), restricting the institutions' access to funding liquidity in the end. Under the new IFRS rules, these declining values caused losses in the banks' balance sheets which in return also decreased their equity (own funds)[12].

The continuous reduction of capital cushions and the deterioration of confidence in former counterparties affected also the markets for interbank lending. The price for unsecured short term funding, the Euribor, was rising sharply (see figure 1), since the institutions started to hoard liquidity instead of lending it to their counterparties. As a result, the spread between Euribor and Eurepo (price for secured short term funding) widened significantly, putting institutions without sufficient collateral under additional liquidity pressure, both under the perspective of original and derived liquidity risk.

As a consequence of the equity problems of banks their funding spreads widened in the bond markets. Due to the unfavourable funding conditions caused by this the issuance of covered and uncovered bonds had declined sharply[13]. While at the beginning of the crisis it was predominantly original liquidity risk concerning the market participants (and the supervisory

[12] The impacts of IFRS on the valuation of securities are described in more detail by ECB (2008a), p.95-97. It has to emphasised at this point that up to now the losses displayed are mostly unrealised losses. If and up to what extent they will be transformed into realised losses will only be visible in some years, if not some decades (given that the securities will be held-to-maturity and, in the case of ABS for instance, depending on whether or not the actual defaults in the end will be higher or lower than currently expected by the market).

[13] ECB (2008a), p.87.

authorities) it was after a certain point of time derived liquidity risk starting to play a role at least as important.

Figure 1: Spread between Euribor und Eurepo

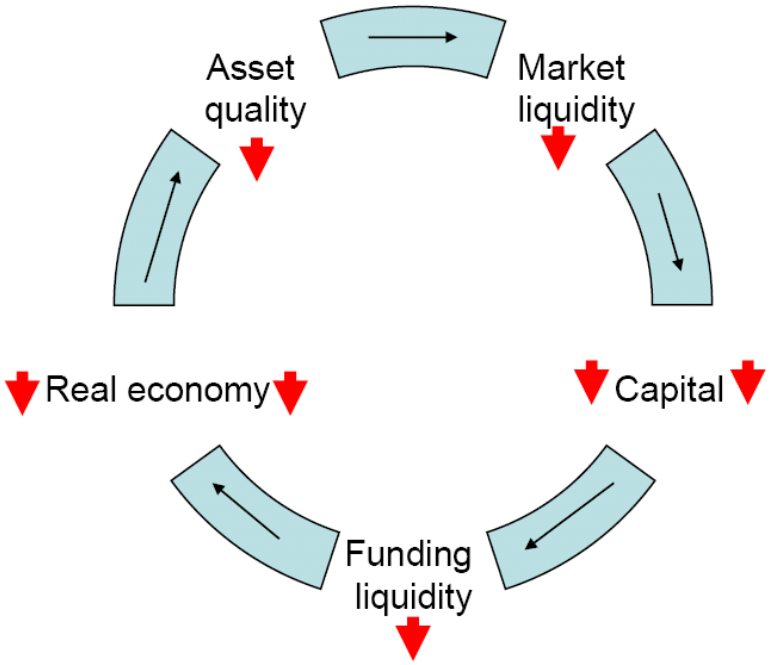
Source: Deutsche Bundesbank (2009), p.31

Up to now most banks obviously still had a sufficient liquidity buffer allowing for cheap collateralised short-term Central bank funding to avoid liquidity gaps. Without funding costs on capital markets returning to normal conditions, however, and without the unsecured interbank lending market being restored, it is uncertain for how long institutions relying on wholesale funding will renounce on deleveraging[14]. With deleveraging further losses at the institutions have to be expected since their business will be reduced. This means more problems with their equity, meaning less favourable funding conditions, and entering a further round in the vicious circle described in Figure 2.

In the end in the EU the prevailing financial crisis has effected the money market, the stock markets and the bond markets, in particular restricting banks' possibilities for wholesale funding. Between the beginning of 2007 and the end of 2008 the Euro and US financial stocks lost on average about 60% of their value, single stocks (like Lehman Brothers or Washington Mutual) even up to 99.9%[15].

[14] ECB (2008b), p.15.
[15] Atkinson et al. (2008), p.12.

Figure 2: The vicious circle between market and funding liquidity



Source: Huertas (2008), p.3

The EU countries also suffer from a banking crisis, since several (systemically relevant) banks have incurred large financial losses, reducing significantly their capital buffers. For example, the Royal Bank of Scotland lost 27 billion Euro in 2008 (the largest company loss in british history)[16], and although the average percentage change of tier 1 capital of 15 large and complex banking groups in the Euro area between 2007 and 2008 is slightly positive, the total loss of supplementary (tier 2 and tier 3) capital was 28%[17]. As a result, according to the European Central Bank economic growth in the Euro area will decline by approximately 4.6% in 2009[18].

16 Frankfurter Allgemeine Zeitung (27.2.2009), p.1.
17 ECB (2009a), p.90.
18 Frankfurter Allgemeine Zeitung (5.6.2009), p.7.

4. Measures to break the vicious circle in the EU

The measures taken by most national governments within the EU after Lehman insolvency aim at restoring market confidence and at reviving the dried-up liquidity markets, trying to break the vicious circle described above. Before Lehman insolvency it was primarily the ECB trying to compensate the lack of interbank lending by direct (collateralised) Central bank loans to the institutions. The ECB instruments to support the institutions were (in coordination with other Central banks outside the Euro area like the Bank of England) interest rate cuts, the extension of eligible collateral and available liquidity facilities (longer maturities, higher volumes, additional currencies)[19]. Finally, since May 2009 the ECB has also gone for 'credit easing' (purchase of securities of other issuers than the government like banks or corporates), starting with the purchase of covered bonds. However, due to the institutions' problems not only with liquidity but also with equity the ECB could only alleviate the problem, but not really solve it[20].

After the insolvency of Lehman ad-hoc measures like the bailing out of some systemically relevant institutions (e.g. Fortis und Dexia in October 2008) were replaced by a more systematic and comprehensive approach of state aid, aiming at

- Securing the retail deposits by raising the minimum amount of deposits covered by the respective deposit guarantee schemes
- Reviving the short and medium term liquidity markets
- Improving the capital cushion by recapitalising the institutions

[19] For more details on the respective actions of the Fed and the ECB see Sachverständigenrat (2008), p.129-139.

[20] Sachverständigenrat (2008), p.117.

In total 18 EU member states have implemented these comprehensive rescue packages. They show similar features based upon experiences with recent financial market crises like in Sweden and are comprised of

- State guarantees for debt obligations issued by the institutions
- Recapitalisation by public participation
- Swapping problematic, worthless securities („toxic waste“) against government bonds[21]

Part of the rescue packages is also the temporary suspension of the IFRS rules, based upon a corresponding EU Directive adopted in October 2008[22]. By this further writedowns can be avoided in many cases.

In June 2009 the institutions in the EU have used approximately 50% of the amount of government guarantees offered and about one third of the budget reserved for recapitalisation, which in total accounts for 3.7 billion € or 30% of the annual GDP of the EU[23].

As the stock, the money and the bond markets show first signs of recovery since the beginning of the second quarter 2009 the rescue packages seem to have reached their aim (at least partly). Indicators for this are (i.a.):

- the significant narrowing of the CDS spreads in Europe (the CDS index itraxx fell from about 1100 bp at the end of 2008 to about 700 bp in June 2009)
- the recovery of the European stock markets since February 2009
- the rising issuance activities on primary bond markets

21 Sachverständigenrat (2008), p.117.
22 Sachverständigenrat (2008), p.152.
23 Frankfurter Allgemeine Zeitung (10.6.2009), p.11.

- the narrowing of the 3 month Eurepo/Euribor spread to about 50 basis points end of May 2009[24].

5. The situation in Germany

The banking sector in Germany is basically comprised of three pillars, the savings banks, the cooperative banks and the commercial banks, including the large German cross-border groups like Deutsche Bank and Commerzbank. In total, at the end of 2008 there were approximately 2200 banks operating in Germany, about 450 from the savings banks sector, around 1250 cooperative banks and 500 commercial banks, with the private banks representing a market share of approximately 42% (savings banks about 45 and cooperative banks about 13%).. Whereas the savings and cooperative banks as well as the smaller private banks predominantly rely on retail funding, wholesale funding is most important for the large private banks.

Due to the well developed German financial markets the wholesale funding business model worked well until Germany was hit by the crisis in summer 2007. At that time the ABCP Conduit 'Rhineland-funding' of the German bank IKB drew the IKB liquidity facility which the bank actually couldn't provide. Bankruptcy could only be prevented then by public subsidies. Being in a similar situation with its own conduit („Ormond Quay") the state bank ('Landesbank') SachsenLB could only be saved from bankruptcy by the state bank of Baden-Württemberg taking it over.

IKB and SachsenLB being a good example for this, also in Germany the institutions most affected by the crisis are the ones having invested largely in subprime exposure (like other state banks), having gone for extensive maturity

[24] ECB (2009b), p.35.

transformation, and following poorly diversified wholesale funding. Besides increasing the original liquidity risk, such a business model also makes the institutions vulnerable to derived liquidity risks, since rising risk premia and money market rates directly affect the funding costs.

Another institution pursuing this business model was Hypo Real Estate[25], for which the German state has provided public guarantees of 102 Billion Euro until end of April 2009 (not only coming from the SOFFIN – see below)[26]. The situation at Hypo Real Estate, which is systemically relevant for the German covered bonds market, has also triggered a discussion about possible expropriations, shouldn't it be possible for the state to gain influence on the operational or strategic business of a bank in another way.

Savings banks and cooperative banks in Germany and their business model (retail banking) are commonly seen as the winners of the financial crisis[27]. In 2007 retail deposits accounted for almost 70% of their funding, whereas the issuance of debt obligations and interbank deposits contributed about 30% (aggregated figure for cooperative and savings banks). In contrast to this, retail deposits accounted for 35% of commercial banks' funding and the issuance of debt obligations and interbank deposits for almost 60%[28].

After IKB, SachsenLB and Hypo Real Estate, the financial crisis did not hit another German institution in particular, but affected the money, the stock and the corporate bond markets in general. The situation aggravated, however, after Lehman insolvency in September 2008. As a consequence, the German government and the German parliament adopted in record time (only 10 days) a comprehensive public rescue package for the banks with the following features:

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25 Sachverständigenrat (2008), p.123.

26 Börsenzeitung (27.2.2009), p.3.

27 However, the savings banks are affected by the crisis due to their role as shareholders of the state banks.

28 See Deutsche Bundesbank (2008), p.59.

A Financial markets stabilisation fund (SOFFIN), managed by a public authority, the "Finanzmarktstabilisierungsanstalt", which is supervised by the Federal Ministry of Finance can – for a limited period of time - provide

- up to 80 Billion Euro for the recapitalistion of German banks or for „repoing" their „Toxic waste" (in general not more than 10 Billion Euro for the recapitalisation of a single bank and not more than 5 Billion for repoing its assets)

- up to 400 Billion Euro state guarantees for bonds issued by the institutions (initially maximum maturity of 36 months, in the meantime 60 months (applicable for one third of the total amount of guarantees[29]); 20 Billions of these are reserved in the federal budget in case a guarantee should be drawn.

In total, in mid-April 2009 the SOFFIN had granted 152 Billion Euro of support measures (133 Billion for state guarantees and approximately 19 billion for recapitalisation[30]):

As table 1 shows, the SOFFIN has not granted support measures with respect to "toxic waste". This is due to a lack of interest of the institutions so far since these papers would have to be taken back by them from SOFFIN after 36 months the latest. This would apparently (in the point of view of auditors) be equivalent to the situation that the papers had never left the bank at all[31]. This started a discussion on the possible founding of one or several „Bad Banks" in Germany in order to really enable the banks to take these papers off the balance

[29] Börsenzeitung (19.2.2009), p.3.
[30] Börsenzeitung (10./11.4.2009), p.3.
[31] Börsenzeitung (10.12.2008), p.3.

sheet. Although the government has presented a corresponding proposal in May, the discussion on this topic was still on-going in mid-June 2009.

Table 1: SOFFIN support measures (mid-April 2009)[32]

	Guarantees (Billion €)	**Recapitalisation (Billion €)**
Hypo Real Estate	52	0,6
Commerzbank	15	18,2
HSH Nordbank	30	-
BayernLB	15	-
IKB	5	-
Aareal Bank	4	0,525
VW Bank	2	-
Sicherungseinrichtungsgesell-schaft deutscher Banken	6,7	-
Düsseldorfer Hypothekenbank	2,5	-

In addition to the measures already granted to the institutions, in mid-April 2009 there were more than 20 further queries and 15 further applications from other institutions for this support. Already in January 2009 four institutions had started to issue state guaranteed debt obligations with a total volume of 15 Billion Euro.

Depending on the respective support measure the institutions have to pay different fees for the state support and the state can excert different levels of influence on the institution's business. The Aareal bank, for instance, has to pay almost one percent on the face value of debt obligations issued under the state guarantee for maturities of more than one year (and 0.1% on the amount of the guarantee that has not been drawn), and a coupon of annually 9% on the recapitalisation amount[33].

[32] Börsenzeitung (4.2.2009), p.8, FAZ (1.4.2009), p.19 and Börsenzeitung (15.4.2009), p.3.
[33] Börsenzeitung (17.2.2009), p.4.

State influence is strongest when it has granted recapitalisation. In this case it can:

- Limit the salary of the board of directors to 500.000 Euro a year
- Prohibit the payout of dividends to other shareholders than the state
- Review the institution's remuneration structure
- Oblige the institution to take account of the demand for credit supply of the real economy, in particular by SMEs, and to grant this supply under 'adequate' conditions[34]

The basic design of the German rescue package is very similar to other rescue packages, e.g. in the United States or in Great Britain. However, whereas in Great Britain and the US banks have to tolerate recapitalisation measures, German banks are not forced to do this. Moreover the extent up to which Governments can influence the institution's business strategy differs[35].

Finally, conditions imposed by the European Union under European state aid control have to be taken into account, too. For instance, one of the preconditions to get state aid by the SOFFIN is a tier one capital ratio of at least 8%, which might be difficult to get for the institutions under the current market situation[36].

In addition to the rescue package under the umbrella of the SOFFIN other measures like improvements in the German deposit guarantee scheme have been announced and are supposed to be implemented soon. The main reason for this step was the fear, in particular after the insolvency of Lehman brothers, to lose the last stable source of funding for most of the banks, the retail deposits.

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34 Sachverständigenrat (2008), p.158.

35 The respective rescue packages are described in detail by Sachverständigenrat (2008), p.153-156 and ECB (2008b), p.85.

36 Börsenzeitung (10.12.2008), p.3.

In spite of all these measures the IMF has still forecasted a 5.6% decline of Germany's GDP in 2009. In order to mitigate the impacts of the economic recession, Germany has implemented two fiscal stimulus packages (approximately 120 billion Euro in total for 2009 and 2010), raising the deficit ratio from 0.1% in 2008 to probably 3.9% in 2009.

All in all, after a rather reluctant acceptance of the German rescue package compared to other states in Europe in the beginning, in the meantime there are first signs that the package might unfold its impact. It is certainly too early, however, to describe the current situation as a profound recovering of the German liquidity markets or a profound recapitalisation of the German banking sector. The vicious circle is therefore not really broken yet.

A profound assessment of whether or not the financial crisis has already triggered a credit crunch in Germany is not possible yet, either. According to some sources it has already become more difficult to get access to loans or to get them rolled over[37], whereas others don't see evidence for this at all[38]. However, the majority of market participants forecasts such difficulties for the near future, expecting (i.a.) higher margins, higher interest rates or higher requirements for documentation and disclosure as well as declining new or cutting back already committed credit lines.

6. The situation in the Ukraine

After its independence in 1991 the Ukraine, like many other transition countries from Eastern Europe, has gone through difficult times, with the economy really stabilizing only at the beginning of this decade. Financial deepening has proceeded quickly since then, also with the help of subsidiaries of parent banks sit-

[37] Deutsche Bundesbank (2009b).

[38] For the results of a corresponding study of the Kreditanstalt für Wiederaufbau (KfW) see Börsenzeitung (21.2.2009), p.9, and also the survey of Deutsche Bundesbank (2009b).

uated in Russia, the EU and the US. In March 2009 there were 185 banks in the Ukraine, 52 of them with foreign participation, and among these 17 were completely foreign owned. The foreign-owned banks' share in statutory capital equaled 37.6%. [39]

Given the developments described in section 3.2 one could argue that in the matured Western countries (including Germany) the subprime crisis triggered a financial crisis leading to a banking crisis that has affected the real economy (creating a cyclic crisis). The situation is different in the Ukraine (and also in other CESEE countries), however. Here the solvency of Lehman brothers triggered (or at least reinforced) a currency crisis which has caused a banking and an economic crisis at the same time, affecting the financial markets far less pronounced than in the EU. According to IMF forecasts the Ukrainian real GDP will decline by 8 percent in 2009 after already having contracted by some 8 percent in the last quarter of 2008[40].

In addition, one could argue, that the Ukraine also suffers from a stage crisis. For example, the Ukrainian steel industry is anachronistic and very energy consuming, by this reinforcing current account deficits due to rising energy prices.

Like all the CESEE countries the Ukraine shows a bank-based financial system, in which corporates and banks have so far only marginally made use of the capital market to raise capital. The issuance of debt securities is therefore negligible in most CESEE countries, whereas in the Euro area these instruments account for roughly one-third of banks' net assets. Funding in the Ukraine has therefore predominantly been deposit driven.

[39] IMF (2009a), p.33.
[40] IMF (2009a), p.4 and 12.

Before Lehman insolvency the CESEE countries were not really negatively affected by the financial crisis in the matured Western countries. On the contrary, given the negative market environment there since summer 2007 risk capital was transferred to emerging market economies like the Ukraine. As a consequence the Ukraine showed a positive balance of payments and the national Ukrainian currency, the hryvnia (UAH), appreciated repeatedly against the US dollar increasing Ukraine's international currency reserves significantly (from 14.4% of national GDP to 23.1% in 2007)[41]. For instance, starting from a de facto peg of the UAH to the US Dollar with an official exchange rate corridor between 5 and 5.06 (Hrv/US-$), the NBU had allowed the exchange rate to appreciate outside this band since March 2008[42]. Besides, the underlying fiscal position of the Ukraine was strong and sustainable (with about 15% Gross debt level in percent of GDP in 2007[43]), and the financial sector appeared to be well capitalized and profitable[44].

After Lehman insolvency, however, American, Russian and European banks started to withdraw their funds from CESEE countries since they needed both liquidity and capital in their home countries. Like for many other CESEE countries this was also a turning point for the Ukraine.

Lehman insolvency and its consequences

- triggered a currency crisis in the Ukraine, in the course of which the UAH depreciated by more than 40% between February 2008 and February 2009
- caused a massive withdrawal of deposits in local and foreign currency leading to funding and equity problems for the Ukrainian banks
- triggered massive losses on the Ukrainian stock markets (The Kiev stock exchange index (PFTS) lost 85 % of its value between October 2008 and

41 IMF (2008a), p.13.
42 NBU (2009a), p.178.
43 IMF (2008a), p.23.
44 IMF (2008a), p.13.

February 2009, ending up at an index level of 314 at the end of March 2009 after having multiplied by 13 between 2003 (index value 85.4) and 2007 (index value 1174)[45]).

- made a support mission of the IMF necessary to stabilize the Ukrainian banking system in the short run

6.1. The currency crisis – attempts to stop the depreciation of the UAH

Due to the withdrawal of foreign currency after Lehman insolvency the UAH started to depreciate severely in October 2008. In the fourth quarter of 2008, the financial account had registered large outflows of short-term capital, reflecting the conversion of hryvnia into foreign exchange cash, and the net year-to-date FDI fell nearly 50 percent[46].

However, besides the withdrawals following Lehman insolvency there are some additional factors explaining the depreciation of the Hryvnia, that were relevant already before:

- an overheated economy (with declining growth predictions) with an average real credit growth over the last 5 years of 47.5%[47]
- high annual inflation rates around 20% and of up to 30% in April 2008[48]
- falling prices for steel (the main Ukrainian export product) as well as rising prices for energy imports from Russia doubling the current account deficit to approximately 8% of GDP end of October 2008.
- Struggles within the government coalition followed by uncertainty about new elections

45 NBU (2009b), p.10.
46 IMF (2009a), p.6.
47 NBU (2009a), p.110.
48 IMF (2009d), p.15.

The depreciation of the Hryvnia started end-August 2008 losing 8% against the US dollar and causing a decline of Ukraine's foreign currency reserves by 5% (measured in Euro) by end-September 2008. From end-September to end-October, the Hryvnia depreciated by another 14% against the U.S. dollar.

After these developments emergency measures were taken to prevent the exchange rate from falling further, inter alia:

- restrictions on new foreign exchange denominated lending
- regulation of the exchange rates in commercial banks' business and shutting down of exchange offices
- the introduction of a tax on foreign exchange transactions[49]
- raising reserve requirements for foreign currency time deposits from 3 to 4 and for foreign currency sight accounts from 5 to 7 percent and introduced FX reserve auctions[50]
- limiting the amount (equivalent of UAH 75.000) per month on purchase of foreign exchange on the interbank market and on transfers for non-trade transactions by resident and non-resident individuals[51]
- introduction of an 'official' exchange rate in parallel to the market exchange rate[52] and later on also a ban on FX forward transactions until January 2010[53]

Already in late 2007 the NBU had imposed new reserve requirements on banks' foreign borrowing[54].

49 IMF (2008a), p.15
50 NBU (2009a), p.61
51 NBU (2009d), p.55.
52 NBU (2009d), p.17.
53 IMF (2009a), p.22.
54 NBU (2009a), p.61.

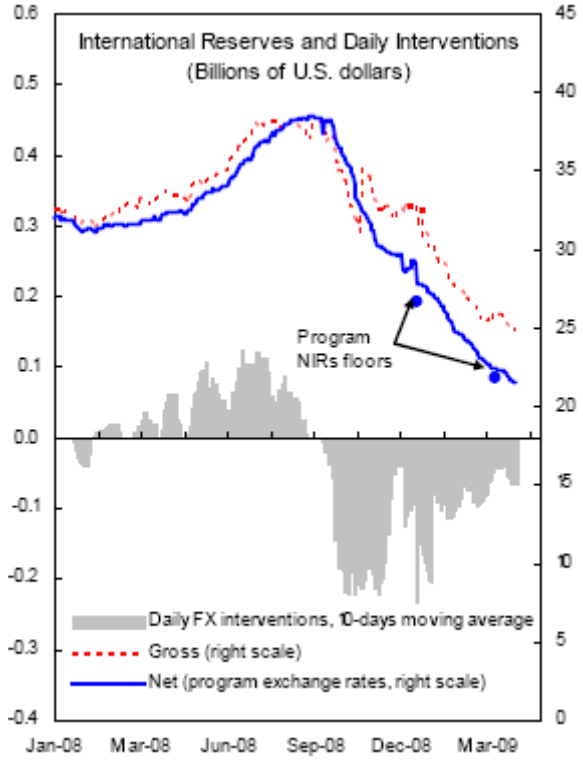
Trying to stabilise the exchange rate was not only a prestige project for the Ukrainian government. Like in a lot of CESEE countries the Ukrainian banking sector is characterised by a large share of foreign exchange exposures. In 2008 the loans in foreign currency accounted for 58.9% of total loans, the deposits in foreign currency for 44% of total deposits and the foreign currency loans for 275.5% of foreign currency deposits[55]. FX net positions of the banking sector accounted for approximately twice the Ukrainian currency reserves (37 Billion US-$), which represented about 150% of the total bank capital in 2008[56]. Thus, as a consequence of significant currency depreciation severe loan writedowns would have had to be expected, eroding the capital and asset quality of bank parents and their subsidiaries accelerating the withdrawal of capital.

In addition, the NBU had conducted FX market interventions continuously reducing their Dollar reserves from about 40 bn US Dollar in September 2008 to about 20 bn in March 2009 (see figure 3). Finally, from October 2008 to mid-December 2008 the UNB was raising the policy rate considerably (see figure 4)

However, between October 2008 and March 2009 the UAH had depreciated by a further 40% (see figure 5). Only since the exchange rate has shown signs of stabilisation at the beginning of 2009, the NBU has allowed to scale back interventions since March 2009[57], and some of the FX restrictions have been lifted in the meantime or are supposed to be lifted in the near future.

55 IMF (2009a), p.33.
56 IMF (2008a), p.19.
57 NBU (2009c), p.3.

Figure 3: International reserves and daily interventions

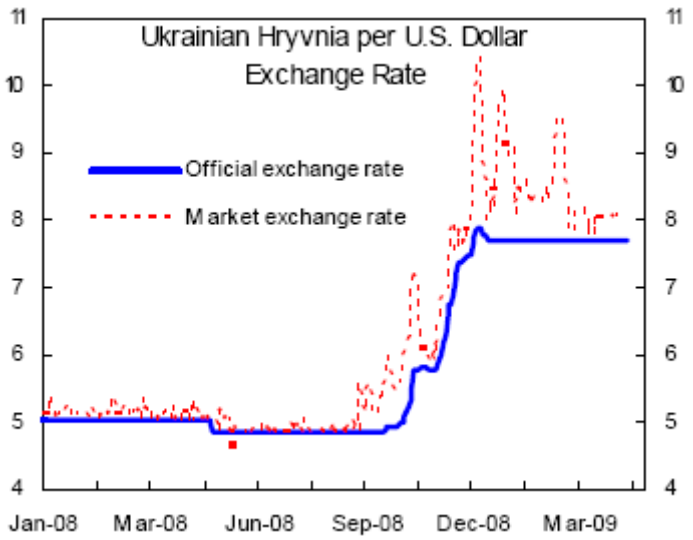


Source: IMF (2009a), p.19.

Figure 4: NBU refinancing rate

Source: IMF (2009a), p.19

Figure 5: Hryvnia per US Dollar exchange rate



Source: IMF (2009a), p.6.

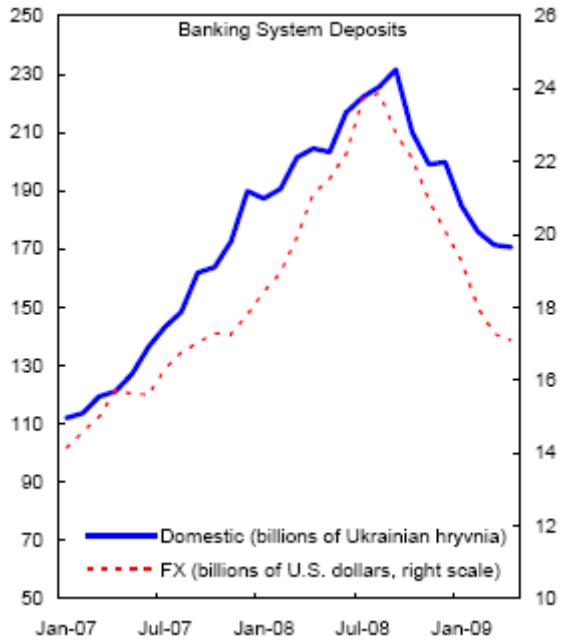
6.2. The banking crisis

As in October 2008 rumours spread about funding problems in the banking sector the depositors started a run on several banks in the Ukraine. After the central bank had to rescue a medium-sized bank by granting loans in early October, and after in late October the 6th largest bank Prominvestbank came under public ownership, some emergency measures were taken by the government to stop bank runs and to re-establish depositors' trust in the banking system like a ban on early withdrawals with respect to time deposits and an increase in the deposit guarantee scheme, doubling the deposits protected to 100.000 hryvnia (the equivalent to about 20.000 US Dollar).

However, these measures have not really been sustainable since both domestic and foreign currency deposits are still being withdrawn from the banking system (see figure 6). Only in the second quarter of 2009 deposits are projected to

increase again, reflecting a gradual restoration of confidence in the banking sector and resumption of credit growth in the second half of the year[58].

Figure 6: Banking system deposits



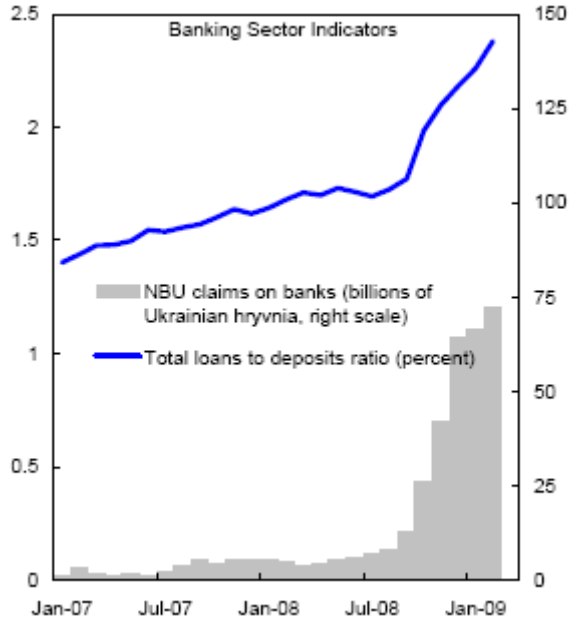
Source: IMF (2009a), p.11

The deposits being the main funding source for domestic banks and parent groups withdrawing their money from their Ukrainian branches and subsidiaries the UNB had to step in with money market operations to provide the banks with sufficient liquidity, as figure 7 shows.

The rising funding costs in connection with a severe deterioration of the loan portfolios also due to the UAH depreciation[59] caused problems with banks' equity. For example, the number of banks not meeting capital adequacy requirements for Tier 1 capital rose from 0 in 2007 to 8 in March 2009 and the number not meeting prudential regulations from 1 to 23[60].

58 IMF (2009a), p.12.
59 IMF (2009a), p.6
60 IMF (2009a), p.33.

Figure 7: NBU claims on banks



Source: IMF (2009a), p.11.

In the meantime there is a strong need for recapitalisation of Ukrainian banks although some details of the public recapitalisation program remain still unclear. As a first step the Ukrainian government and the NBU have undertaken a stock take on the equity situation within Ukrainian banks covering in a first phase 38 banks accounting for 85% of total assets. After completion of the first phase, the two state-owned banks in the Ukraine have been recapitalized with UAH 14.4 bn or $1.8bn (representing approximately 1.4% of GDP).

The private banks are supposed to bring in additional capital from the private sector first, before public recapitalisation can take place[61]. From the capital deficiency revealed in the first phase (3 percent of GDP or about $4bn), shareholders of all of the majority foreign-owned banks have agreed on a capital injection of about UAH 16.5 bn ($2bn), and most domestically-owned banks have committed themselves to a recapitalisation of UAH 5 bn ($625mn). However, seven of the domestically-owned banks (accounting for about 15

[61] IMF (2009a), p.20.

percent of total household and corporate bank deposits) were unable to raise additional capital[62]. Since these banks are systemically relevant[63], the Government has decided to recapitalize them by acquiring at least 75 percent+1 share/voting right in each of the seven banks. Until then, as a short term measure these banks have been put under temporary administration since March 2009[64].

As a necessary step for this recapitalisation some legal amendments will have to be adopted to enable the "dilution of shareholder capital, transfer of assets and liabilities without prior approval of creditors, simplifying and accelerating the process for bank mergers and acquisitions, and enabling the government to provide funds for banks under resolution by the NBU"[65].

The technical details of recapitalisation (which requirements will banks need to fulfil, how much will they have to pay for government support, when do they have to pay the capital back, etc.) are unclear at the moment. Their elaboration will be the task of a high-level council consisting of representatives from the NBU, Ministry of Finance and Ministry of Economy, supported by a newly created recapitalization unit within the Ministry of Finance, and a Problem Bank Unit within the NBU. In total the IMF estimates that 5% of GDP will be needed for bank recapitalization[66].

The recapitalization of the foreign banks is supported by the European Bank of Reconstruction and Development (EBRD). For instance, it has granted a US $ 75 million subordinated loan to Raiffeisen Bank Aval. EBRD is providing capital support in the form of equity, quasi-equity and subordinated debt[67].

62 IMF (2009a), p.20.
63 Twenty-six out of 180 banks are considered systemically relevant (representing at least 2 percent of total deposits and 1 percent of total assets) (IMF (2009a), p.21).
64 IMF (2009a), p.49.
65 IMF (2009a), p.49.
66 IMF (2009a), p.17.
67 EBRD (2009).

With the banking system still in a fragile condition and with confidence not having returned to the system, it would be difficult for the authorities in the Ukraine to finance recapitalization by borrowing from domestic sources, if needed. In this respect external support is coming from the International Monetary fund (IMF) (see section below).

6.3. IMF support

At the end of October 2008 the IMF arranged a 2-year stand-by-facility of USD 16.5 billion with the Ukrainian government in an amount equivalent to 11 billion special drawing rights (about US$ 16.5 billion). However, since it was not clear whether the Ukraine would comply with all the IMF requirements for this three-tranched loan, rumours in the markets about a possible state bankruptcy did not stop until March 2009.

In the meantime, as partly mentioned before, concerns about the stability of the banking system, the exchange rate volatility, and the introduction of controls on withdrawal of time deposits ahead of maturity date and led to the outflow of over 20 percent of deposits between October 2008 and March 2009. Lower consumer demand and reduced funding had brought credit growth to a halt, with sharp contractions in the mortgage and consumer lending sectors. At the same time, the depreciation of the currency significantly deteriorated the repayment of loans[68].

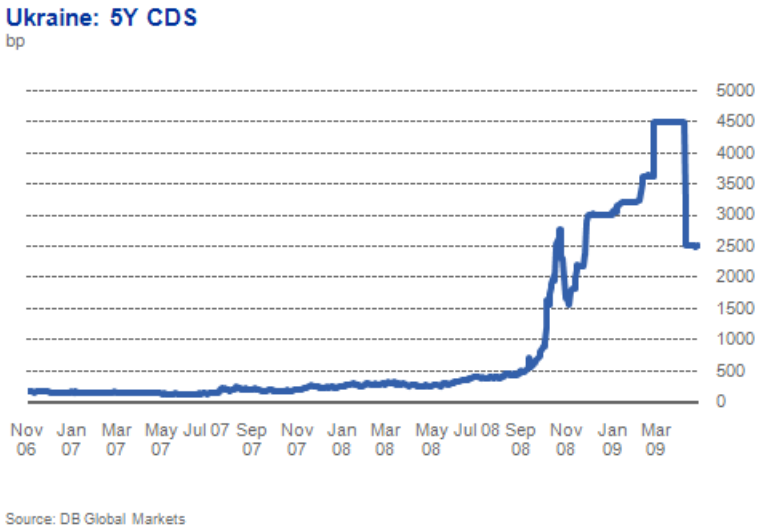
Furthermore, between October 2008 and February 2009 the yield for Ukrainian government bonds tripled and the CDS premia for these bonds multiplied by 9 up to about 4500 basis points. Industry production fell in December 2008 for more than 26% compared to the same month one year ago due to the decrease of demand for steel (since August 2008 the steel price on the world market had

[68] IMF (2009a), p.6.

decreased by 56 %). In mid-October 2008 the three big rating agencies (Fitch, Standard & Poor's and Moody's) downgraded the Ukraine for the first time, end of February a second time down to a Moody's rating of only CCC+[69].

However, the final agreement on the IMF support in March 2009 has reduced CDS -Spreads significantly and has also helped stabilising the UAH exchange rate significantly (see also figure 8).

Figure 8: CDS premia for Ukrainian government bonds



Source: Deutsche Bank research

The Executive Board of the International Monetary Fund (IMF) completed the first review of Ukraine's economic performance under the 2-year Stand-By Arrangement (SBA), and on 8 May approved the immediate release of the second tranche under the arrangement equivalent to SDR 1.9 billion (about US$2.8 billion).

The arrangement with the IMF stipulates the requirement of a restrictive monetary and fiscal policy as well as wide-ranging structural reforms (including

[69] Boersenzeitung (26.2.2009), p.17.

stabilizing the banking sector). The aim of the agreement is strengthening the currency reserves and recapitalisation of the banking sector. This includes

- limiting Ukraine's deficit spending to 4% of the national GDP
- the implementation of a flexible exchange rate and inflation targeting
- strengthening the independence of the NBU[70]
- implementing a transparent NBU intervention strategy in the money markets including the specification of the the conditions for extension of liquidity financing to solvent banks with adequate collateral[71]
- The lifting of the administrative measures to limit exchange rate flexibility
- the alignment of the official exchange rate and the average transaction-weighted market exchange rate of the previous day[72]

As far as banking supervision and banking regulation is concerned, the IMF asks for

- strengthening consolidated supervision and introducing supplementary supervision of financial conglomerates
- increased transparency of bank ownership
- encouragement to banks to enhance their risk management capabilities
- guidance to banks on their stress testing
- intensified on-site examinations
- greater risk weights for assets that pose higher credit risk (notably unhedged foreign currency loans)
- stronger prudential requirements for banks with deteriorating liquidity positions
- the definition and disclosure of ultimate controllers of banks[73]

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70 According to the IMF, the NBU's efforts have been hampered so far by political interference, as well as numerous and, at times, conflicting public statements by various officials, about what the exchange rate should be (IMF (2009a), p.2). Furthermore, the IMF sees necessary measures in strengthening the NBU's governance structure (including the reform of the 'politicized' NBU council), and its accountability framework.

71 IMF (2009a), p.3.

72 IMF (2009a), p.39.

– strengthening non-bank supervision to foster the development of capital markets[74]

At the same time the introduction of Basel II is considered to be a key element of the improvement of banking supervision in Ukraine. In this respect, in 2008, as maturities on foreign borrowing shortened, the authorities had already introduced new capital requirements on banks' maturity gaps and higher risk weights to riskier asset classes[75].

One of the reasons for a necessary strengthening of banking regulation and supervision is not only the fact that banks could expand their loans on a broad scale without supervision intervening (at least making the banks improving their poor lending standards), but also that some institutions having received ad-hoc support from the state invested this money in currency speculation, by this aggravating the depreciation pressure on the local currency.

7. Conclusion

Given the developments described in the sections above our friend from Helsinki would fly back from continental Europe with the same fully packed shopping bag, irrespective of whether he had stayed in Berlin or in Kiev (the bag being labeled with "economic recession"). The contents would be fundamentally different, however. The bag from Berlin would tell a story about a domestic-owned banking system, a stable currency and strongly developed financial markets, the latter enabling the subprime crisis to start a vicious circle of funding and market liquidity (the financial crisis) triggering a banking crisis.

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73 IMF (2009a), p.24.
74 IMF (2008a), p.15.
75 IMF (2008a), p.12.

The bag from Kiev would be filled with a banking system dominated by foreign-owned banks (playing an important role for financial deepening, but also being one of the most important channels of contagion), a far less pronounced financial crisis (due to poorly developed capital and money markets limiting contagion effects from there), but a big twin crisis.

Even though the necessary recapitalisation of the banking system in the Ukraine seems to be manageable in the short run (either with the help of the parent banks or with the help of the IMF), getting the foreign exchange problem under control seems to be crucial for fighting the banking crisis in the long run and for avoiding a similar crisis in the future. In this respect, also the framework for domestic financial markets needs strengthening, including a reform of banking supervision and legislation.

Finally, in contrast to the EU, it might not be enough to describe the situation in the Ukraine as simply an economic recession. It is probably also a stage crisis, related to the transition of society from the industrial to the 'postindustrial' stage of social and economic development. In this case, the measures discussed above would only be a part of the solution of the problem.

In this respect the crisis in the Ukraine also offers chances. An innovative strategy would not only allow to overcome the stage crisis but also to minimize the duration of the cycle crisis. Such a strategy would require beside the strengthening of market mechanisms also stipulating infrastructure investments and the acceleration of scientific and technical progress.

References

Allen, Franklin/Gale, Douglas, An introduction to financial crisis, paper prepared for the international library of critical writings in economics, Pennsylvania/New York, August 2007

Bordo, M./Eichengreen, Barry/Klingebiel, Dieter, Is the crisis problem growing more severe?, in Economic policy, April 2001, p. 53-82.

Brunnermeier, Markus, Deciphering the 2007-08 Liquidity and Credit Crunch, in: Journal of economic perspectives, i.E. (preliminary version presented at the Imperial College conference "Liquidity: Pricing and Risk Management" on 23./24.6.2008 in London)

Deutsche Bundesbank (2008), Liquidity risk management at credit institutions, in: Monthly report September, 2008, p.59-74.

Deutsche Bundesbank (2009a), Annual report 2008**,** Frankfurt am Main 2009

Deutsche Bundesbank (2009b), Bank lending survey: an interim assessment and current developments, in: Monthly report January, 2009, p.15-32.

European Bank for Recovery and development (2009), Ukraine. Recent EBRD activities, London, April 2009

European Central Bank (ECB) (2008a), Financial Stability Review June 2008, Frankfurt, Juni 2008.

European Central Bank (ECB) (2008b), Financial Stability Review December 2008, Frankfurt, December 2008.

European Central Bank (ECB) (2009a), Financial Stability Review June 2009, Frankfurt, June 2009.

European Central Bank (ECB) (2009b), Monthly bulletin June 2009, Frankfurt, June 2009.

Huertas, Thomas, Model Myopia, Presentation at the Annual Risk Minds Conference, Geneva, 8 Dezember 2008.

International Monetary Fund (IMF) (2008a), Ukraine. 2008 Article IV consultation, IMF country report No. 08/227, Washington July 2008.

International Monetary Fund (IMF) (2008b), Global Financial Stability Report October 2008, Washington 2008

International Monetary Fund (IMF) (2009a), Ukraine. First Review under the Stand-by arrangement, requests for waivers of nonobservance of performance criteria, and rephrasing of purchases under the arrangement, IMF country report no. 09/173, Washington May 2009.

International Monetary Fund (IMF) (2009b), Economic Outlook Update, Washington April 2009

International Monetary Fund (IMF) (2009c), Global Financial Stability Report April 2009, Washington 2009.

Kondratiev, Nikolai D., Die langen Wellen der Konjunktur, in: Archiv für Sozialwissenschaft und Sozialpolitik (Vol.56), 1926, pp.573-609.

Mishkin, Frederic, Anatomy of a Financial Crisis, NBER Working Paper No. W3934, December 1991.

National Bank of Ukraine (NBU) (2009a), Bulletin of the National Bank of Ukraine (Official edition), Kiev, March 2009.

National Bank of Ukraine (NBU) (2009b), Monetarnyi oglyad **(**Monetary Review, Analytical materials), Kiev, March 2009.

National Bank of Ukraine (NBU) (2009c), Visnik NBU **(**Herald of the National Bank of Ukraine, Official edition), Kiev, June 2009.

National Bank of Ukraine (NBU) (2009d), Diyi NBU v period finansovoyi kryzy (Actions of the National Bank of Ukraine during financial crisis, Analytical materials, Report), Kiev, 2009.

Sachverständigenrat zur Begutachtung der gesamtwirtschaftlichen Entwicklung (Sachverständigenrat), Die Finanzkrise meistern - Wachstumskräfte stärken, Jahresgutachten 2008/09, Wiesbaden 2008.

Samuelson, Paul A., Nordhaus, William D., Economics. McGraw-Hill, 1995

Schierenbeck, Henner, Ertragsorientiertes Bankmanagement: Controlling in Kreditinstituten, 4.Aufl., Wiesbaden 1994.

Protsyk, T. The financial crisis in Germany and the Ukraine – Reasons, development and countermeasures [Text] / T. Dietz, T. Protsyk // World financial crisis: causes, consequences, ways of overcoming, 2010. – P. 96-121.