

THE FINANCIAL MARKET CRISIS – BREAKING THE VICIOUS CIRCLE TO AVOID THE CREDIT CRUNCH?

T. DIETZ¹

*Университет прикладных наук Немецкого Федерального банка,
Германия*

INTRODUCTION

What started as the so-called subprime crisis in July 2007 has in only 18 months become the biggest financial market crisis since the Great depression. In October 2008 the International Monetary Fund (IMF) has estimated the potential global losses caused by this crisis at approximately 1,4 Trillion US Dollars². The crisis put an end to the era of pure investment banking in the United States and – at its current state - is even threatening the financial soundness of highly developed industrial countries.

At the climax of the crisis – the weeks after the insolvency of the investment bank Lehman Brothers – governments all around the world have implemented radical measures to stop its further spread. Even if these measures are supposed to be only of a transitory character they still reflect a change in the paradigm of how a market economy should work and what the role of the state in this economy should be. The measures taken are supposed to restore market confidence, i.a. by recapitalising the institutions, and to revive the dried-up liquidity markets by giving the institutions the possibility to issue state-guaranteed bonds.

Initially restricted to a small credit segment in the American housing market the subprime credit crisis has turned into a global liquidity crisis which may cause the banks to deleverage on a large scale. This – ironically - may trigger a global credit crisis pushing the global economy into a deep recession. First visible signs of this recession are given by the automotive industry and its struggle to survive.

That the crisis has come so far is due to the unanticipated interaction between funding and market liquidity in crisis situations. This interaction has triggered a downward spiral of liquidity, a vicious circle that the public measures taken since October 2008 are supposed to break.

In the sections below we shall investigate how exactly this downward spiral was triggered, by which mechanisms it got reinforced and how exactly the governments hope to break this circle, including some suggestions submitted by international bodies like the Basel committee on banking supervision or the G-20 summit on how to avoid future financial crises. Eventually we will have a closer look at the implementation of the German rescue package and whether or not we can say, that these measures have already broken the vicious circle mentioned above, and whether or not we are already facing a credit crunch.

FROM THE LOCAL CREDIT TO THE INTERNATIONAL LIQUIDITY CRISIS

There is no single definition for „Liquidity“ or „Liquidity risk“. These terms are multidimensional and defined differently according to the respective cognitive interest in business affairs, economics or law.

For the purposes of this article we define „funding liquidity“ as the possibility of an individual institution to fund itself by borrowing money at third parties, either secured or unsecured. Funding liquidity is high as long as it is possible to get the required amount of money with the right maturity under the required conditions³. Funding liquidity 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 risk“ defined in this

¹ The views expressed in this article are the author's views only and do not necessarily represent official positions of Deutsche Bundesbank.

² IMF (2008), p.15.

³ 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).

sense is typically caused by maturity transformation¹. It is particularly relevant for institutions that rely on volatile market based (also called “wholesale”) funding. These institutions get their liquidity less from the rather stable retail deposits (retail funding), but 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)².

„Market liquidity“ is the possibility to fund itself by selling assets in the market. It is high, if selling or buying an asset (typically securities) is possible at any time and if selling (or buying) the asset does not significantly influence the price of this asset in the market³. It is low, if selling is possible only under high haircuts or not possible at all.

Furthermore we have to distinguish between original and derived Liquidity risks. 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. Derived Liquidity risk is linked to the profit and loss of the institution and is balance-sheet based⁴. For example, an asset might only be sold at a price lower than expected (e.g. due to unfavourable developments in the stock market) or wholesale funding might only be obtained at higher costs because of an unexpected widening of the spread curve of the institution⁵. Original and derived Liquidity risks are both – ceteris paribus - higher under wholesale than under retail funding.

A popular tool to measure and to manage original liquidity risk is the so-called gap analysis, aggregating cash inflows and cash outflows over a predefined future period. Under this concept a liquidity gap describes the situation where at a certain point of time the cumulated cash outflows exceed the cumulated cash inflows. Without any countermeasures such a liquidity gap would cause insolvency. However, as table 1 shows, the institution typically has a whole set of funding sources to avoid this situation.

Table 1. Possible funding sources to close liquidity gaps (excerpt)

Assets	Liabilities
Selling, lending or repoing of liquid assets (Counterbalancing Capacity)	Deposits - Retail Savings and sight accounts - Deposits of institutional clients
Deleveraging by - No acquisition of new business - Cutting back the old business (e.g. by cancelling clients' committed credit lines)	Issuance of securities like - Asset Backed Commercial Papers (ABCP) - Commercial Papers - Asset Backed Securities - Covered Bonds - Uncovered Bonds
	Drawing of committed credit lines
	Raising of additional own capital

If in a stress situation some or even all of the funding instruments on the liabilities side should not be available anymore and if in addition the counterbalancing capacity is not sufficient to close a forthcoming liquidity gap the institution will be forced to deleverage its business. However, deleveraging might also be caused by derived liquidity risk, when funding becomes too costly.

The following section will describe how almost all of the funding sources listed in table 1 have indeed deteriorated in the course of the financial crisis and have thus raised the probability of a credit crunch because of deleveraging. This probability will rise further the longer the wholesale liquidity market cannot be revived and the longer the current funding costs remain at their high level.

The subprime crisis shows impressively how deeply the international financial markets have become integrated and what dramatic repercussions disturbances of the market liquidity can have on funding liquidity and on individual funding costs. Triggered by the subprime crisis and aggravated by interdependencies between market and funding liquidity it is a good – and up to now maybe the most striking – ex-

¹ Brunnermaier (2008), p.22

² Zeranski (2007), p.72.

³ Deutsche Bundesbank (2008b), p.60.

⁴ Schierenbeck (1994), p.716ff.

⁵ Moch (2008), p.10.

ample of how both original and derived liquidity risks can become virulent at the same time.

The reasons for the beginning of the subprime crisis and for its spill-over to other parts of the world, especially Europe, have been described extensively by other authors and do not need to be repeated at this point¹. We should rather investigate by which mechanisms a credit crisis initially restricted to a certain market segment in the US has become a global liquidity crisis.

At the beginning the subprime crisis primarily had impacts on institutions making extensive use of maturity transformation or having provided liquidity support to Structured vehicles (SPVs) with the same business model. These impacts were particularly painful for institutions that were predominantly relying on wholesale funding and that showed little diversification in their funding structure, but did not really represent an international liquidity crisis at that time.

However, this 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. The loss in value of financial instruments triggered additional and unforeseen liquidity needs at the institutions because of the following reasons:

- The Downgrade of several dozens of ABS-Tranches being backed by Subprime exposures in June and July 2007 did not only cause massive losses of value of these papers but quickly affected also other structured products (not related to the subprime market at all) since the market had lost its confidence in the general ability of the rating agencies to price structured products correctly. As a consequence the demand for ABS structures in the primary markets declined drastically².

- Another consequence was the breakdown of ABCP markets. Thereupon a lot of SPVs drew liquidity facilities committed by banks involved in the respective conduits. Since then the subprime crisis started to go around the world, showing the first crisis symptoms outside America in Germany in summer 2007³.

- After the insolvency of Lehman Brothers in September 2008 also the „normal“ Commercial paper Market broke down (see Figure 1)⁴.

The institutions partly tried to fund their liquidity needs by selling off securities. This was the reason for the decline of value of a lot of financial instruments in the markets. Due to these losses incurred financial market players like the US investment banks or hedge funds, which show a very high debt to equity ratio, and that typically want to keep their leverage ratio at a constant level, were forced to sell off further financial instruments. This put additional pressure on the price of securities, triggering a further sell-off wave, etc.⁵

As a result, under the new IFRS rules, many institutions had to show considerable losses in their balance sheets which in return decreased their equity (own funds)⁶. Later on, further losses due to the insolvency of Lehman Brothers or due to their exposure to Icelandic banks brought a further erosion of equity.

¹ See for example ECB (2008a) or Sachverständigenrat (2007).

² The total volume issued has not declined significantly, however. This, on first sight contradicting development is due to the fact that the most important Central banks around the world accept ABS under certain conditions as collateral in the repo business (minimum Rating of A, in fact mostly AAA). For more details see Anner/Cerveny (2008), p.15 and Brunnermaier (2008), p.17.

³ The ABCP Conduit of the German bank IKB (Rhineland-funding) 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 SachsenLB could only be saved from bankruptcy by the Landesbank Baden-Württemberg taking it over.

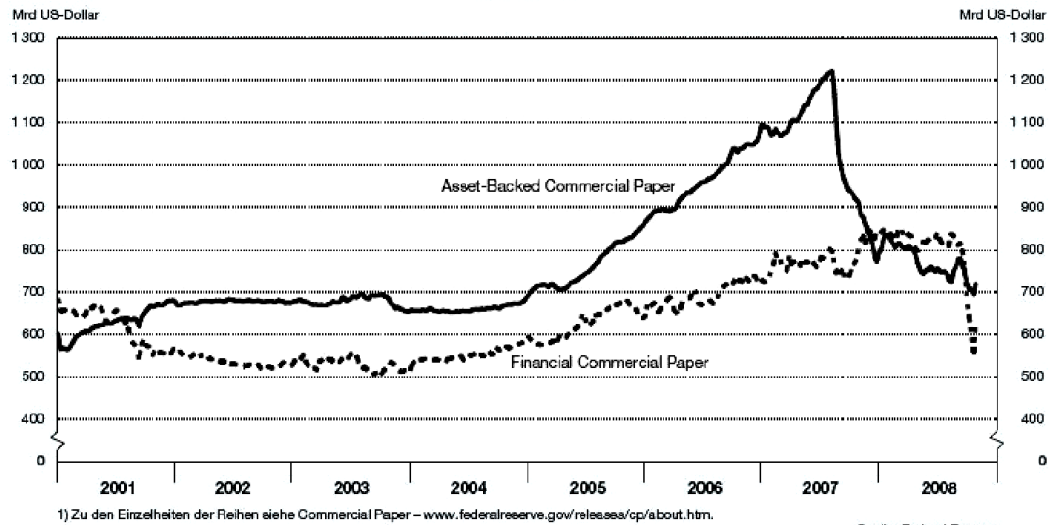
⁴ Sachverständigenrat (2008), p.123.

⁵ Sachverständigenrat (2008), p.123 and 127f. See also ECB (2008a), p.15, ECB (2008b), p.16 and p.44f.

⁶ The impacts of IFRS on the valuation of securities are described in more detail by ECB (2008a), p.95-97. It has to be 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).

**Entwicklung des Bestands der im Umlauf befindlichen
Asset-Backed Commercial Paper und Financial Commercial Paper¹⁾**

– Wochenwerte –



© Sachverständigenrat

Figure 1. Outstanding ABCPs and CPs Source: Sachverständigenrat (2008), p.122.

The continuous reduction of capital cushions left not only the banks with doubts about the solvency of current (and future) counterparties. This – in a next step - affected also the markets for interbank lending. The price for unsecured short term funding (one week up to three months), the Euribor, was rising sharply, since the institutions started to hoard liquidity instead of lending it to their counterparties. At the same time the spread between Euribor and Eurepo (price for secured short term funding) widened significantly. By this, institutions without sufficient collateral were put under additional liquidity pressure, both under the perspective of original and derived liquidity risk.

**Differenz der Geldmarktzinssätze im Euro-Raum:
EURIBOR zu EUREPO¹⁾ für 3 Monate**

Tageswerte

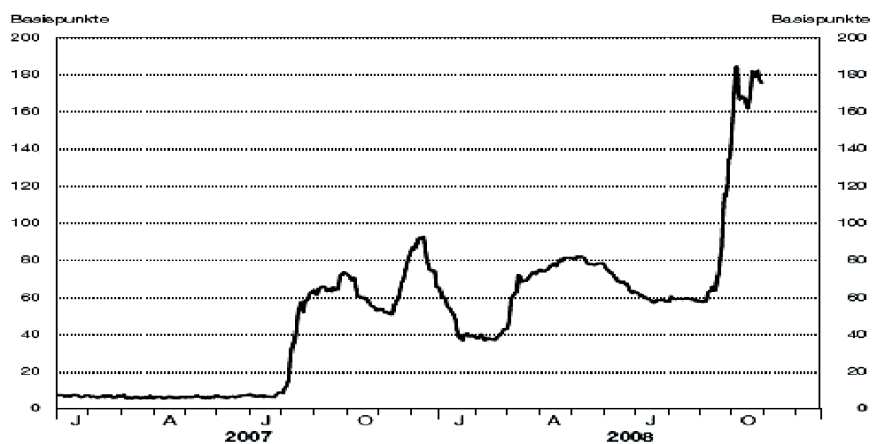


Figure 2: Spread between Euribor und Eurepo Source: Sachverständigenrat (2008), p.121.

In the meantime, the spread between Euribor and Eurepo has narrowed again (under one percent at the end of January 2009) since the Euribor has fallen sharply. However, there is still hardly any turnover in the unsecured interbank lending market.

As a result of the developments described above a lot of funding sources to close liquidity gaps were not available anymore to the institutions (ABS, ABCPs, CPs, interbank lending).

The visible (and maybe even more the assumed forthcoming) equity problems of banks and corporates

caused a widening of funding spreads not only in the money market. Already in the course of 2007 the spreads of long term BBB rated corporate bonds in the EU had almost doubled¹, being even higher for sub-investmentgrade bonds². As a consequence the issuance of covered and uncovered bonds has declined sharply due to unfavourable funding conditions, restricting significantly the use of these two funding sources for closing liquidity gaps. While at the beginning of the crisis it was predominantly original liquidity risk concerning the market participants (and the supervisory authorities) derived liquidity risk now plays a role at least as important.

An alternative for closing liquidity gaps is the selling of liquid assets. However, they have been affected by the crisis as well. Due to the loss of value of a lot of securities their use as a source for generating liquidity (by selling them or by using them as collateral) was, if at all, only possible by incurring significant costs. Being sold, unrealised losses became realised losses and used as collateral, institutions had to pay higher haircuts or margin calls. According to Citibank data initial margins and haircuts were doubling between March 2007 and March 2008³.

At the moment most banks obviously still seem to have a sufficient liquidity buffer to avoid liquidity gaps. Without the unsecured interbank lending market being restored, however, and without funding costs returning to normal conditions, it is uncertain for how long they can renounce on deleveraging. This holds particularly true for institutions that rely on wholesale funding⁴. If there should be significant deleveraging further losses at the institutions have to be expected since their business will be reduced. Further losses, however, means more problems with their equity, which means less favourable funding conditions, etc., which means entering a further round in the vicious circle described in Figure 3.

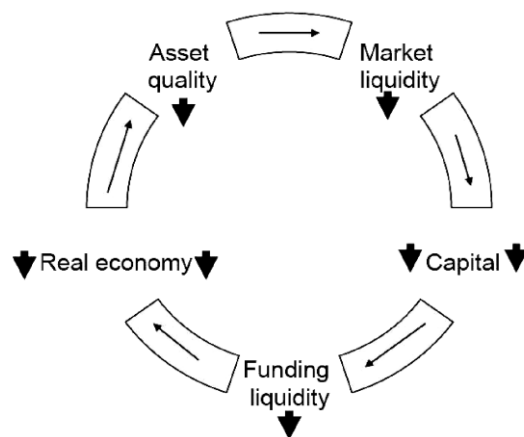


Figure 3: The vicious circle between market and funding liquidity Source: Huertas (2008), p.3

The measures taken by many national governments and the EU to contain the crisis, in particularly since October 2008, are trying to break this vicious circle. Before that time it were primarily Central banks trying to mitigate the crisis by replacing the lack of interbank lending by direct (collateralised) Central bank loans to the institutions. Their instruments to support the institutions were (coordinated) interest rate cuts, the extension of eligible collateral and available liquidity facilities (longer maturities, higher volumes, additional currencies (in particular due to the shortage of US-Dollars))⁵. However, due to the institutions' problems not only with liquidity but also with equity the central banks could only alleviate the problem, but not really solve it⁶.

At first state aid was provided on a case-by-case basis, bailing out systemically relevant institutions like Fortis und Dexia in October 2008 or the insurance company AIG in September 2008, which was heavily engaged in selling credit protection to the market. After the solvency of Lehman these ad-hoc measures were replaced by a more systematic and comprehensive approach, aiming at

¹ ECB (2008a), p.87.

² Deutsche Bundesbank (2008a), p.26.

³ ECB (2008a), p. 113.

⁴ ECB (2008b), p. 15.

⁵ For more details on the respective actions of the Fed and the EZB see Sachverständigenrat (2008), p.129-139.

⁶ Sachverständigenrat (2008), p.117.

- Reviving the short and medium term liquidity markets;
- Improving the capital cushion by recapitalising the institutions;
- Securing the retail deposits.

These rescue packages in about 30 states around the globe all 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 (already now or possibly in the future) almost worthless securities („toxic waste“) against government bonds.¹

Part of the rescue packages is also the temporary suspension of the IFRS rules. The SEC, for instance, now allows the banks - on a transitory basis and under certain conditions - not to capture their securities on a fair value basis any more. The EU Commission has adopted a corresponding Directive in October 2008². By this further writedowns will be circumvented.

Apart from the public rescue packages that are supposed to mitigate the impacts of the crisis and in the end to stop it, some recommendations have been published to avoid similar future crises. These recommendations, for instance from the Basel Committee on Banking Supervision or the G 20 summit are related either to the general architecture and regulation of financial markets or focus explicitly on the institutions' liquidity risk management. The recommendations submitted by the various international und European fora are quite consistent and reflect clearly the lessons learnt from the subprime crisis. They call (i.a.) for:

- Improving the transparency for market participants and supervisory authorities in particular by disclosing exposures in complex financial products and disclosing ties (e.g. committed credit lines) to structured vehicles like SPVs or SIVs.
- Adapting international Reporting standards, notably for structured securities and for times of stress, for example by complementing the Fair-Value-accounting by a balance, that shows only realised profits.³
- Revisiting the incentive structures in the financial sector (in particular the rules for paying bonuses) in order not to remunerate excessive short term risk taking.
- Regulating the Rating agencies.
- Raising the minimum capital requirements for securities positions and curtailing the pro-cyclical effects of Basel II. One suggestion in this respect is the introduction of a leverage ratio (a fixed relation between balance-sheet exposures and own funds of a bank), institutions should have to comply with in addition to the solvency ratios under Pillar I.

Some international committees have also submitted proposals on how to improve the liquidity risk measurement and management practices of the institutions. Table 3 shows the most important recommendations of the BCBS, CEBS (Committee of European Banking Supervisors) and the European Commission in this respect.

These proposals reflect the fact that the financial crisis was basically caused by a failure or at least by severe shortcomings of the internal risk management procedures of some of the banks, otherwise huge ABS or CDO positions could never have been build up. Consequently, according to findings of an international working group of senior supervisors („Senior supervisors group“⁴) it is in particular a group of institutions with efficient institution-wide communication structures, with an independent and prudent valuation of structured products and with good management information systems that have coped quite well with the crisis so far⁵.

The proposals listed below elaborate on some of the principles based provisions under Pillar II of Basel II for risk management. Pillar II and its supervisory review process has only come into force on 1st January 2008⁶. Consequently, the supervisory authorities have not had the chance to apply the Pillar II provisions earlier in order to prevent the financial crisis or at least parts of it. Being far from giving the

¹ Sachverständigenrat (2008), p.117.

² Sachverständigenrat (2008), p.152.

³ Sachverständigenrat (2008), p.118.

⁴ Senior supervisors group (2008).

⁵ ECB (2008b), p.135f.

⁶ For the institutions using an IRB model already on 1 January 2007, however.

impression that under Basel II the crisis would definitely have been prevented, it is on the other hand not fair to argue that Basel II has failed in this respect. Instead the motto should be: „Give Basel II a chance“.

Table 2. Recommendations of the Basel Committee on Banking Supervision (BCBS), CEBS and the European Commission

Recommendation	BCBS	CEBS	COM
identification and measurement of the full range of liquidity risks, including contingent (off-balance sheet) liquidity risks	5	8+13	14+15
Sufficient diversification of funding sources	7	17	18
adequate level of liquidity (including appropriate liquidity buffers (liquid assets))	12	16	14+16
robust stress tests (institution-specific, market wide and in combination)	10	14	19+20
Implementation and regular testing of contingency funding plans	11	15	22
allocating liquidity costs, benefits and risks to all significant business activities, including adequate New Product process (at CEBS proportionality principle applies)	4	2	14
Efficient management of intraday liquidity risk and collateral	8	9-12	14
public disclosure in promoting market discipline, e.g. diversification of bank's funding sources (qualitative information) or size and composition of bank's liquidity cushion (quantitative information)	13	18	- ¹
Board of Directors is ultimately responsible for an institution's liquidity risk strategy and risk tolerance, [...] taking into account all liquidity risks, including intra-day and contingent risks, as well as potential constraints on cross-border and intra-group flows	2	1 + 4	14a+17
Appropriate responsibilities and incentives, in line with long-term objectives, should be set by senior management	3	3 + 5	- ²

Source: Own compilation based on BCBS (2008), CEBS (2008), and Europäische Kommission (2008)

In Germany the public rescue package for the banks has the following features: A Financial markets stabilisation fund (SOFFIN), managed by a public authority, the “Finanzmarktstabilisierungsanstalt”, which is supervised by the Federal Ministry of Finance can provide

- up to 80 Billion Euro for the recapitalisation 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)³); 20 Billions of these are reserved in the federal budget in case a guarantee should be drawn.

In total at the beginning of February 2009 the SOFFIN had granted 182 Billion Euro of support measures (45 Billion of which had already expired at that point of time), the most important (publicly known) ones being the following:

Table 3. The biggest SOFFIN support measures (as of beginning of February 2009)⁴

	Garantuees (Billion €)	Recapitalisation (Billion €)
Hypo Real Estate	30	-
Commerzbank	15	18,2
HSH Nordbank	30	-
BayernLB	15	-
IKB	5	-
Aareal Bank	4	0,525

¹ Not in Annex V.

² Not in Annex V.

³ Bärnszeitung (19.2.2009), p.3.

⁴ Bärnszeitung (4.2.2009), p.8

As table 4 shows, the SOFFIN has not granted support measures with respect to “toxic waste”. This may be due to a lack of interest of the institutions since these papers would have to be taken back by them from SOFFIN after 36 months the latest, which might – e.g. in the point of view of auditors – be equivalent to the situation that the papers had never left the bank at all¹. 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 sheet. This discussion is still on-going, however.

In addition to the measures already granted to the institutions above there are currently (as of beginning of February) more than 20 further queries and 15 further applications from other institutions for this support. In January 2009, four institutions had already issued 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 exert 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 amount².

The strongest state influence on the institutions can be exerted if the state has granted recapitalisation. In this case it can:

- Review the institution's remuneration structure;
- 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;
- Oblige the institution to take account of the demand for credit supply of the real economy, in particular for SMEs, and to grant this supply under 'adequate' conditions.³

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 differs⁴. 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 situation⁵.

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.

Also in Germany the institutions most affected by the crisis are the ones with excessive maturity transformation in connection with 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. One institution that was pursuing this business model was Hypo Real Estate⁶, for which the German state has provided public guarantees of 102 Billion Euro up to now (not only coming from the SOFFIN)⁷. 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 crisis⁸. In 2007 retail deposits accounted for almost 70% of their funding, whereas the issuance of debt obligations and interbank deposits contributed only by 20% (cooperative banks) or 5% (savings banks) respectively. In contrast to this, retail deposits accounted for

¹ Bärsezeitung (10.12.2008), p.3.

² Bärsezeitung (17.2.2009), p.4.

³ Sachverständigenrat (2008), p.158.

⁴ The respective rescue packages are described in detail by Sachverständigenrat (2008), p.153-156 and ECB (2008b), p.85.

⁵ Bärsezeitung (10.12.2008), p.3.

⁶ Sachverständigenrat (2008), p.123.

⁷ Bärsezeitung (27.2.2009), p.3.

⁸ However, the savings banks are affected by the crisis due to their role as shareholders of the state banks.

40% of wholesale banks' funding only and the issuance of debt obligations and interbank deposits for 15%¹.

As a consequence of the crisis some banks might concentrate again on the classical retail funding². This does not mean that wholesale funding automatically leads to insolvency. Institutions pursuing this funding strategy should invest, however, (i.a.) in:

- a sufficient diversification of the funding sources (products and counterparties)
- an efficient collateral management
- a sufficient amount of highly liquid assets

All in all, after a rather reluctant acceptance of the German rescue package compared to other states in Europe or the US 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 over³, whereas others don't see evidence for this at all⁴. 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.

The recommendations of the BCBS on liquidity risk management are likely to be implemented quite quickly, since minor changes in the German principles based framework on risk management (Minimum requirements for risk management) (MaRisk) will most likely suffice for this purpose. In this respect the crisis will leave – in the medium term – a strengthened internal liquidity risk management. The banks should therefore at least have the necessary tool kit to avoid similar crises in the future. It is up to them, to banking supervision and to the government to make sure that they really make use of it.

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¹ See Bundesbank (2008), p.

² ECB (2008a), p.109.

³ Bundesbank (2009), p.61.

⁴ For the results of a corresponding study of the Kreditanstalt für Wiederaufbau (KfW) see Börsenzeitung (21.2.2009, p.9).

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T. DIETZ

Summary

The article is devoted to the financial market crisis, which started in July 2007 and how it became the biggest financial crisis since the Great Depression. The article submits the information about the impacts of the crisis all over the world and the role of central banks and governments in fighting the crisis. It also gives some suggestions for stabilizing financial markets in the future.

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