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**"How Market Segments Changed over the Crisis  
– Challenges for Future Banking"**

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## 1 Introduction

Ladies and Gentlemen

I am delighted to be speaking at this year's European Supervisor Education (ESE) Conference. The idea of the ESE initiative is to bring together the experiences of practitioners and the theoretical knowledge of academic researchers. The Bundesbank has always considered this to be an important issue and has, as a founder member, supported this initiative from the beginning.

As most of you are experts in banking supervision, I will not try to tell you anything new about the recent regulatory changes. Instead, my focus will lie on the changing market conditions – partly triggered by new regulations – and their impact on banking, especially bank funding.

The challenges currently facing the European banking sector are reflected in the remarkable changes in the refinancing pattern of European banks on the capital and interbank money markets. As a central banker, I have a special interest in developments in the money markets, so this will be my first main topic. Subsequently, I will discuss some regulatory aspects such as the Liquidity Coverage Ratio and its possible impact on capital markets. Thereafter, I would like to describe some changes in the repo market and the ongoing trend towards clearing via central counterparties, followed by a discussion of developments in the market for covered assets. Before I summarise, I will cover the sovereign bond market.

## **2 Money market conditions before and since the financial crisis**

Up until 2007, the euro interbank money markets were characterised by small counterparty risk premia and highly liquid markets. Risk aversion was low, and there was significant trust in, and among, banks. As a consequence of the financial crisis and the sudden loss of confidence between counterparties, overall turnovers in the euro money market declined significantly, especially in the unsecured segment. Even today, unsecured trading in maturities longer than three months is very rare. At the same time, the importance of secured market activity has increased, reflecting heightened concerns about counterparty risk. At the current juncture, turnover in the secured segment is more than three times higher than in the unsecured segment. Secured trading can limit credit risk, as the lender will suffer a loss only if the counterparty and the pledged collateral default simultaneously. As limiting credit risk has become a fundamental concern

during the crisis, importance is increasingly being attached to the liquidity of collateral markets and the associated collateral pricing.

The growing share of secured trading via electronic trading platforms can be explained mainly by the increased turnover in the secured segment. These platforms offer clearing services through central counterparties (CCPs). CCPs limit counterparty credit risk and mitigate information asymmetry within the market. As the CCP guarantees the transaction and defines quality standards for both, participants and the accepted collateral, information about the individual counterparties becomes less important. By acting as an intermediary between the trading partners, the CCP enables them to trade anonymously on these platforms. This helped stressed market participants from peripheral countries to access the collateralised money market throughout the crisis. In spite of these positive effects, the increasing importance of CCPs harbours the risk of contagion effects. The default of one of these central and highly connected interbank participants might have serious impacts on markets effects.

The uncertainty involved with transactions between banks of different countries has another consequence. The Eurosystem has become the most important counterparty in the euro money market. Before the first tensions were felt, the Eurosystem generally ensured broadly balanced liquidity conditions. Credit institutions on aggregate were allotted as much liquidity as was needed under given autonomous factors. With the full allotment policy, liquidity provision increased sharply. As a consequence of very low market rates relative to the deposit facility and amid concerns over the credit quality of counterparties, a clear preference emerged for storing liquidity on central

bank accounts rather than lending it in the interbank market. In short, liquidity flows between banks were much smaller than before the crisis.

The Eurosystem's central intermediary role became even more evident when it started to supply long-term liquidity via one-year and three-year longer-term refinancing operations (LTROs). The three-year LTROs were introduced to support bank lending. Furthermore, they eased tensions in the sovereign bond markets of the peripheral countries, as banks intensified their government bond purchases. However, we have observed a strong preference on the part of banks to buy bonds issued by their home countries. This amplified the interdependence of the banking sector and the domestic sovereign bond market in certain euro-area countries and aggravated the existing geographical segmentation.

The geographical segmentation is reflected in European banks' reliance on Eurosystem refinancing. After the Lehman insolvency, this reliance initially increased in most countries as risk aversion rose. Later, segmentation developed differently across countries, reflecting the perceived riskiness of each country. More recently, the Eurosystem policy to mitigate market segmentation and to safeguard an appropriate monetary policy transmission, namely by announcing Outright Monetary Transactions (OMTs), is mirrored in reduced country differences. But this is no justification for the OMTs. It has eased market tensions, especially redomination risk. Nonetheless, the Bundesbank's concerns are still extremely relevant.

Country differences regarding the reliance on Eurosystem refinancing remain large, as indicated by the share of banks' balance sheets that is financed by

Eurosystem liquidity. This has also become obvious in the structure of early repayments of the three-year LTROs. It has mainly been banks located in the core countries that have reduced outstanding volumes. Furthermore, the reliance on national counterparties has increased. Over the last few years, euro-area cross-border activity has declined constantly.

### **3 Regulatory changes as reaction to the crisis and their impact on market structure and banking**

The experience of the recent financial crisis has triggered regulatory changes, especially in the banking sector. The new Basel III banking standards will address some of the root causes of the financial crisis and aim to prevent another build-up of liquidity and solvency risks. The Basel III framework for liquidity risk regulation encompasses two ratios – the Liquidity Coverage Ratio (LCR) and the Net Stable Funding Ratio (NSFR). Both will have an impact on how banks manage their business activities. As the LCR will be introduced earlier and the details are far more developed, I will discuss its impact on euro money markets. However, the LCR might yet be revised before its final implementation.

With regard to the assets side of a bank's balance sheet, a bank will primarily purchase High Quality Liquid Assets (HQLA) to improve LCR compliance. Holding these assets outright will improve the LCR. Demand for these assets is likely to increase, potentially causing them to trade at a premium. This regulatory-driven additional demand might reduce appetite for lower-quality liquid assets.

Turning to the liabilities side, banks with an LCR of below one will need to substitute short-term for longer-term funding. This could reduce the volume in the short-term unsecured interbank market, though banks will probably continue to engage in significant short-term unsecured trading for daily liquidity management purposes, as they will still need to fulfil reserve requirements. Central banks will have to monitor the impact the new liquidity regulations have on monetary policy implementation.

Unlike interbank funding, central bank refinancing over a 30-day horizon would not count as an outflow in the LCR, as it always benefits from a 100% rollover rate. This could increase demand for central bank refinancing. If non-HQLA are used as collateral, there would be no reduction in the numerator and, therefore, the LCR would rise. Banks may therefore choose to boost their cash reserves at the central bank (which count as HQLA) by increasing their central bank refinancing that is backed with non-HQLA as collateral. While this also depends on the opportunity cost of obtaining liquidity from the Eurosystem, there may be a number of banks with large amounts of collateral that is not classified as liquid under Basel III but that is eligible for monetary policy operations.

However, the interaction of LCR with monetary policy operations and the money markets has been acknowledged. In January 2013, changes to the LCR were announced. In particular, the timetable for fully phasing in the LCR requirement has been extended from 2015 to 2019. Additionally, the list of HQLA has been broadened and punctual recalibration of the net cash outflows will give banks more time to recover from the crisis and to implement the LCR in a more orderly manner. This will likely reduce the level

of market fragmentation that might otherwise have arisen had all banks had to meet the LCR 100% requirement by 2015.

In general, Basel III is the right answer to the lessons learned from the crisis. Nonetheless, its impact on market patterns and banking behaviour has to be monitored carefully to prevent undesirable developments.

#### **4 Repo market**

The net impact on a bank's liquidity position of increasing its level of repo funding is somewhat more complex, but overall it tends to improve the LCR and encourages a greater level of secured funding, irrespective of duration. However, the higher demand for good and liquid assets may reduce the supply for repo markets – potentially reducing liquidity in the secured repo markets and adding to market volatility, particularly in times of stress.

Secured transactions, especially transactions via CCPs, have reanimated the money market in times of high uncertainty. This is also reflected in the fact that the share of international counterparties on trading platforms such as GC Pooling increased during the crisis. One reason is that it became apparent during the financial crisis that big and well-established counterparties, too, can become illiquid or insolvent. Under these circumstances, collateralisation has become more important. However, there is a growing gap: the importance of collateral quality has risen sharply, and at the same time, high quality and liquid collateral is becoming a limiting



factor. Furthermore, the ability to increase debt funding through repo transactions will also be limited by regulatory changes in the future.

Additionally, the ample liquidity provided by the Eurosystem, especially via the two three-year LTROs, together with the enlarged collateral framework for Eurosystem refinancing has led to reduced activity in this market segment, too. The decisive question for market participants now is whether the Eurosystem will stick to or reduce its non-standard monetary policy measures such as the full allotment policy and the enlarged collateral framework.

Given declining excess liquidity related, in particular, to the early repayments of the three-year LTROs, new business models may arise in the medium term as banks' funding needs will pick up again. It is therefore up to market participants to find a new balance between risks and benefits in relation to cross-border lending.

Furthermore, the importance of banks' collateral management will be further enhanced as a consequence of the crisis. Credit institutions should aim to manage their collateral more efficiently without taking on additional risks. CCPs and the use of trading platforms can contribute to this.

Another important factor on the repo market of the future will be the planned financial transaction tax (FTT). In its current design, it may harm the short-term repo market segment, as even a low tax rate of 0.1% for trading a sovereign bond represents a high burden to short-term and revolving repo transactions. To illustrate the problem, I would like to give you an example:

for an over-night repo transaction with a current interest rate of 0.04% and a volume of EUR 10 million, a total of EUR 10,011 (ie EUR 11 in interest and EUR 10.000 in FTT) has to be paid. The tax-free use of the marginal lending facility of the Eurosystem involves a payment of EUR 278 in interest. Funding via the repo market would be 36-times more expensive than central bank refinancing. Such a financial transaction tax would probably reduce repo market activity and encourage Eurosystem refinancing. That is not desirable.

## **5 Market for covered assets**

Turning to longer-term funding instruments, I would first like to mention that EU banks' total issuance of debt funding dropped by 12% year on year in the first half of 2013 to its lowest level since 2002. Besides the ample liquidity provided by the Eurosystem, which reduces banks' demand for additional funding, the regulatory changes resulted in banks seeking to reduce their reliance on wholesale funding in favour of deposits from retail and small business customers. The decrease in borrowing also reflects pressures facing banks, such as the need for smaller, more robust balance sheets, and concerns among investors about "bail-in" rules. Consequently, banks may face higher funding costs as investors demand more compensation for the increased risk of losing their money.

In addition, higher asset encumbrance has an impact on unsecured bank creditors. The more bank assets are used for secured funding, the less

remain to secure investors in unsecured instruments in the case of insolvency. They will price in a risk premium for this form of bank funding.

As in the money market, we observe fragmentation between core and peripheral countries in Europe. The perceived risk of financial sectors in the periphery and in the core euro area started to diverge back in 2010 when the financial crisis turned into a sovereign debt crisis. Still, the individual quality of banks' balance sheets influences investment decisions significantly. Banks located in peripheral countries have reduced their issuance to a higher degree. Developments in their home economies have stressed their balance sheets, namely by the share of non-performing-loans. Furthermore, the nexus of sovereign and financial sector credit risks has made funding a lot more expensive, if not impossible, for them. Therefore many of these banks are still highly dependent on Eurosystem funding.

The lower demand has also made itself felt in the volumes of secured instruments issued, although markets have, since the crisis, displayed a preference for secured funding.

Covered bond issuance volumes declined given an ample liquidity supply by the Eurosystem and a tendency towards balance-sheet deleveraging. In the first seven months of 2013, the volume of newly issued covered bonds denominated in euro decreased by 38%. Issuance volume has therefore reached its lowest level since 2009. Given that the volume of matured Covered bonds significantly exceeds issues, the resulting excess demand has narrowed covered bond spreads against Bunds. The US tapering discussion, which started at the end of May, led to a widening of spreads,

especially of peripheral issuers. The overall improvement in market sentiment regarding the European sovereign debt crisis has enabled banks located in peripheral countries to step up issuance. The share of issues with volumes of between EUR 500 million and EUR 1 billion, so called “mini-Jumbos”, has grown. This development can be attributed to the growing importance of better asset-liability management as a result of regulatory changes that require, amongst others, a better maturity match.

Another secured funding market, the ABS market, is still suffering from the financial crisis, which was partly caused by its own excessive developments. Therefore, the stricter regulatory rules regarding ABS are important to prevent similar developments in the future. However, we should bear in mind that the ABS market is quite heterogeneous. “Plain vanilla” ABS backed by high-quality assets are fairly safe investments which have wrongly got a bad reputation. To increase investor confidence, the Eurosystem has supported the ABS market by promoting the “Loan Level Data Initiative”, which has significantly improved transparency regarding underlying assets. In turn, this has allowed the Eurosystem to relax collateral requirements for ABS recently.

ABS are one the most prominent asset classes used as collateral for Eurosystem refinancing operations. However, recently, covered bonds and government bonds have gained importance. Nearly half of ABS issues were placed publicly in the first half of 2013 compared to one-third in the second half of 2012. This shows some improvement in this market.

Spreads on the secondary market have also narrowed significantly in the last 12 months. However, the Portuguese government crisis in June demonstrated that political incidents influence ABS spreads directly. Although Portugal is a relatively small country, developments there had a strong impact on the spreads of ABS backed by assets originated by banks from other peripheral countries, especially Spain.

In terms of the different types of ABS, residential mortgage-backed securities (RMBS) still represent by far the biggest share of the market. While ABS backed by loans to small and medium-sized enterprises (SME ABS) represent a sizeable share of the market, many issues are retained and used directly as collateral for Eurosystem refinancing operations. However, the Eurosystem believes that SME ABS could and should represent a sizeable source of bank financing. They could encourage lending to SMEs and foster the transmission of monetary policy by indirectly easing lending conditions to SMEs. In the press conference held on 2 May, ECB President Draghi therefore announced a consultation with other European institutions on “initiatives to promote a functioning market for asset-backed securities collateralised by loans to non-financial corporations”. This statement was further backed by the announcement on 18 July that the ECB will continue to investigate the possible acceptance of certain guaranteed mezzanine tranches of SME ABS.

Another structured instrument I would like to mention are contingent convertibles (CoCos), which could complement banks’ various refinancing instruments. As it is a fairly new instrument with a lot of different arrangements, it is difficult to estimate the exact scope of this market

segment. CoCos are a useful instrument to increase the capital base in times of stress. They automatically turn into core tier 1 capital if the trigger – mostly the core capital rate – is undershot. Investors have to be compensated for this extra risk alongside default risk and subordination risk in case of insolvency. Recently, this additional spread has shrunk as a consequence of the increased “search for yield” in the low interest rate environment. Consequently, CoCos may become established as a funding instrument although they bear the risk of being converted or even written down to zero.

As I approach the end of my speech, I would like to focus on a market which has changed a lot during the crisis and also plays a prominent role in central bank politics: the sovereign bond market.

## **6 Sovereign bond market**

Government bond markets have suffered during the ongoing banking crisis, especially as it turned into a sovereign debt crisis. They are no longer considered a homogeneous, risk-free asset class.

Investors’ willingness to take risk diminished sharply. Volatility and liquidity became the most important topics for market participants. Bond buyers exercised greater scrutiny and a series of rating downgrades prompted investors to re-evaluate their belief that European government bonds are risk-free assets. This led to a differentiated perception of European government bonds and diverging yields for the individual countries. To a certain degree, the increased spreads seem to be justified. They reflect

diverging fundamentals in different countries – ie the different economic situation and levels of public debt. It is questionable whether the convergence of yields in the years before the crisis reflected the right assessment of the various risks underlying these investments.

Currently, refinancing conditions for the peripheral countries have improved notably. The spread between ten-year Spanish government bonds and German government bonds has shrunk to the lowest level since July 2011. Hence, OMT will hopefully never have to be activated.

However, market sentiment can change very quickly. In January 2010, Greece received offers of about EUR 25 billion for its five-year government bond issue with a volume of EUR 8 billion. A couple of weeks later, Greece was no longer able to refinance its liabilities via the capital market. Although there are currently small improvements in GDP growth in several European countries, the risk of renewed tensions in sovereign debt markets is still alive given low growth and the slow implementation of reforms on the one hand and the expected tapering of the Fed's quantitative easing programme on the other hand.

Lower investor confidence, besides sending European government bond yields and CDS premia higher in the secondary markets, has also impacted the primary markets. The space left by external creditors was occupied by domestic investors such as banks, who increased their investments particularly following the introduction of the three-year LTROs.

The trend towards renationalisation is a development that needs to be monitored. It reinforces the interdependence of the sovereign sector and the domestic banking system. European banks often only invest in the sovereign bonds of their home countries.

Credit institutions must increase their risk awareness in terms of sovereign bonds. On the one hand, banks should have credit limits for individual countries. This would reduce dependencies on certain debtors. On the other hand, these bonds have to be secured by a sufficient level of equity. In the medium term, government bonds should be treated like corporate bonds. Experience has taught us that sovereign bonds are not a risk-free asset. Furthermore, risk-appropriate treatment would lead to increasing yields of countries with unsound finances. Therefore, market regulation would provide an incentive for fiscal discipline.

The current initiative to establish an effective Single Supervisory Mechanism is a step in the right direction. It will help us to identify risks at an earlier stage and is therefore also important for disentangling the critical link between sovereign and bank funding. However, the banking union, consisting of a sound Single Supervisory Mechanism and Single Resolution Mechanism, is a future project to prevent future problems. Existing burdens have to be treated separately. They arose under national responsibility and should not be mutualised. Therefore, the planned financial inventory of banks' balance sheets is crucial and needs a close examination. Banks which do not have a sustainable business model should not be kept alive with public financial support.



## 7 Closing remarks

Overall, stress levels in the markets for European government bonds and bank refinancing have diminished significantly since the summer of 2012. Nevertheless, the question whether the interbank market will return to its former integrated status remains open. Secured trading in connection with the use of CCPs may play a crucial role in the changing environment as it reduces counterparty risk and helps to improve collateral management.

The ongoing repayments of the three-year LTROs reduces excess liquidity in the money market and could be interpreted as suggesting that market participants no longer need as much access to central bank liquidity as before. But let me be unequivocal about one thing: this development has been induced by the markets, it has not been triggered by the Eurosystem.

Furthermore, banks should focus on achieving a reasonable mix of short-term funding and refinancing via longer-term repos and bond issues. This could help alleviate the current tendency of some banks to leave their cash reserves in the ECB's deposit facility rather than offering them in the interbank market. This would be an important step towards re-establishing a well-integrated money market in the euro area.

The regulatory steps undertaken with Basel III go in the right direction, but their impact on the markets has to be carefully considered.

In the banking sector, business models need further adjustments, which should ultimately result in a more resilient and diversified sector with a more

sustainable risk-return profile. In the current low interest rate environment, it is surely no easy task to increase earnings. However, developments so far go in the right direction as eg German banks' average equity base has improved considerably since the beginning of the crisis. For the twenty biggest credit institutions, the core capital rate has doubled on average.

Nonetheless, the interconnectedness between banks and their home country has to be monitored closely as it holds a strong contagion risk.

Thank you for your attention.

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