EUROPEAN CENTRAL BANK

EUROSYSTEM

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COMMISSION'S GREEN PAPER ON SHADOW BANKING

THE EUROSYSTEM'S REPLY

1. Background

Shadow banking has been identified as one of the main possible sources of financial stability concerns in the international policy debate. The financial stability concerns on shadow banking relate to (i) possible financial stability implications stemming from activities undertaken in the segment of the financial system not adequately regulated and (ii) possible regulatory arbitrage. The wide-spread concerns on shadow banking triggered work of the Financial Stability Board (FSB), in cooperation with international standard setting bodies, to develop recommendations to strengthen the oversight and regulation of the shadow banking system.

Against this background the Eurosystem welcomes the publication by the Commission of a Green Paper aiming at launching a wide-ranging discussion about the main issues posed by shadow banking and how shadow banking can be properly monitored and supervised in Europe. The ECB/Eurosystem is very interested on shadow banking for its importance for the financial stability of the euro-area. Moreover the policy debate under way includes policy option concerning the structure and functioning of the repo market, which is of great importance for monetary policy transmission. In this context, the Eurosystem's contribution, after having addressed topics in the order followed in the Green paper (Sections 2, 3 and 4), focuses on policy issues concerning the repo and securities financing markets (Section 5).

2. Definition and main risks related to shadow banking

The activities of shadow banking before the crises were widely mentioned as triggers or factors contributing to the financial crisis. These activities can be largely traced back to the prevalence of the originate-to-distribute banking model, which gave the possibility to transfer part of the balance sheet and the related regulatory requirements from the regulated to the unregulated part of the financial sector. In addition to the structural changes in the banking sector, a main driver of shadow banking activities, in particular before the crisis, was the availability and use of financial innovation, in particular securitisation activity. Securitisation activity provided a means to transform illiquid assets in very liquid securities which could in turn be used by shadow banking entities to access market financing. At the same time, these securities also provided a convenient way for regulated banks to partly circumvent bank capital requirements, creating a self-reinforcing mechanism which resulted in a substantial amplification of the importance of shadow banking.

An important role was played in this context by the "search for yield" on the part of market participants which, especially in the years before the start of the financial crisis, fuelled a large demand for "very safe" assets yielding high returns. Asset-backed securities produced by shadow banking entities, whose quality was enhanced by rating agencies, provided a large supply of this kind of assets. The search for yield resulted from the combination of high levels of global liquidity - the major central banks around the world kept nominal and real rates at very low levels - and the enforcement of regulatory requirements for large part of the financial sector (including institutional investors) where fixed income assets with high rating were treated with very low risk weights.

In terms of definition, the FSB's work on shadow banking refers to activities related to credit intermediation and involving liquidity and maturity transformation and leverage that take place outside the regular banking system. Maturity transformation broadly relates to the use of short-term liabilities to fund investment in long-term assets. This often, but not necessarily, goes hand-in-hand with liquidity transformation, i.e. investing in illiquid assets while acquiring funding through more liquid liabilities. The Eurosystem notes that the financial institutions and segments of the financial sector within this broad definition may include finance companies, hedge funds and investment funds, entities that are involved in various activities related to securitisation, credit insurers and financial guaranty insurers and, on the funding side, the repo and securities lending markets and money market funds (MMFs). The shadow banking system is not static and may vary according to jurisdictions and regulatory developments.

Differently from the U.S., in continental Europe lending activity per se is seldom moved outside the regulated financial system. Also, securitisation activities in Europe and in the euro area never attained the level observed in the U.S., notwithstanding the large drop in US issuance after the financial crisis. On the funding side, main components of shadow banking are the secured financing markets, particularly the repo market. In the United States, the money market funds are usually included in the shadow banking sector and were an important source of funding for other shadow financial institutions, like securitisation vehicles, via the purchases of their short-term debt. They are much less important in the euro area. However, in this respect, the relevance of their intermediation activity varies across countries and they are more closely tied to banks, therefore providing a powerful link between the shadow and the regulated banking sector.

Based on this definition and the available data, recent estimates published by the ECB put the value of the assets of shadow banking in the euro area to about one half of the assets of the banking system[1]. In the euro area there is a certain degree of heterogeneity and most importantly, there is a high degree of interconnectedness between the European banking sector and the shadow banking. Some segments of the shadow banking provide funding to the regulated banks and the liabilities of financial vehicles set up outside the balance sheet of banks may actually be guaranteed in some form by the originator banks.

[1] See ECB Occasional Paper n. 133, Shadow banking in the Euro area: an overview, April 2012.

3. Monitoring shadow banking

The Eurosystem supports the Commission's proposal of creating a permanent process at EU level for the collection and exchange of information concerning shadow banking. Considering the systemic risk implications, and that data would need to be gathered through both central banks and supervisory authorities, the ESRB seems to be a natural body where regular discussions of shadow banking developments concerning the EU financial system should take place, on the basis of regular data collection.

The Eurosystem stands ready to provide analytical and statistical support as regards the monitoring of shadow banking in the EU. Although there is little information available tailor-made to measure shadow banking entities and activities, existing macroeconomic and financial statistics compiled by the ESCB provide a comprehensive, consistent and harmonised source of information on financial intermediation across the euro area. Hence, this information can be used to derive a quantitative approximation of shadow banking as well as more granular statistics on many of the entities involved in shadow banking, in particular money market funds, investment funds (in particular hedge funds and exchange traded funds) and financial vehicle corporations undertaking securitisations. Furthermore, a number of initiatives are under way to enhance macroeconomic and financial statistics, which may further support the analysis of shadow banking entities and activities (see details in Annex).

In addition, the Eurosystem is launching initiatives to gain better knowledge of an important component of shadow banking, namely the securities financing and repo market. The Eurosystem has a keen interest in obtaining more information on repo market activity both for monetary policy implementation and financial stability considerations. But the activity on this market is difficult to observe in real time because there is no comprehensive source of information in Europe. At present, the data available on the repo market exhibit some shortcomings. First, market survey data (ICMA survey and the ECB money market survey) are not timely and hardly comparable in terms of coverage (they do not cover the non-bank segment) and frequency (bi-annually or annually). Second, current available data stemming from market infrastructures presents some limitations because they are fragmented, not complete, and also not easily retrievable for analytical purposes[2].

[2] First, available data is not complete. Repos that are settled in the books of custodian banks or in commercial bank money are not reflected, for instance in payment systems settling in central bank money, as TARGET. Furthermore, there is no link in TARGET data to the settlement of the securities leg of a repo transaction, therefore repo-related cash transfers cannot be separated from other payments. Analytical efforts are on-going to design algorithms that identify the repo-related payments indirectly, but this may not be enough for repo market monitoring purposes. Repo-related deliveries of securities for collateral purposes are not singled out from other instructions to deliver securities, for instance from outright trades. Furthermore, participants in payment and settlement systems are largely banks; therefore the shadow-banking dimension is not reflected in payment balances even when banks act as intermediaries for non-bank entities. Second, reflecting the European market and the post-trade landscape, data is fragmented across infrastructures and countries. The euro repo market relies on a variety of securities clearing and settlement systems (CCPs, CSDs and ICSDs, triparty agents, custodian banks) and data may be available only in different formats. Third, data is not easily available. Even in those cases where the national supervisors and overseers may have access to the repo data available at the local market infrastructure (for example at CCPs) this is not enough to build a complete picture and timely monitor developments in the market. A central view is indispensable to gain insight from the wider financial stability perspective.

Therefore, the Eurosystem sees a strong need to improve the data availability to monitor the repo market in a more effective way and close the data gap in terms of coverage and frequency. To do so, **the Eurosystem considers that a central database collecting data directly from infrastructures and custodian banks (to the extent that they internalise repo settlement in their own books) would have several advantages**: (i) the dataset would be based on a larger universe of transactions covering bank and non-bank participants in the repo market, and (ii) data would be collected at higher frequency. Repos transactions are to a large extent channelled through market infrastructures for clearing and settlement purposes like central securities depositories, central counterparties, triparty agents and custodian banks. A central database fed by these infrastructures and custodian banks would be the place for the much needed central view on repo market and its participants, both banks and non-banks. Nevertheless, this solution would have to be investigated from a technical point of view in particular regarding the identification of repo transactions among the whole set of securities transactions in the books of CSDs.

In that perspective, the Eurosystem considers that appropriate initiatives should be undertaken at EU level, as a joint effort by public authorities and the financial industry.

Finally, in the context of a global initiative coordinated by the Committee on the Global Financial System (CGFS), the ECB, together with a few other central banks of the Eurosystem, is about to launch a quarterly survey on credit terms and conditions in euro-denominated securities financing (referring to lending collateralised by securities) and over-the-counter (OTC) derivatives markets. This survey is driven in particular by a need to monitor developments in securities financing and OTC derivatives markets, as well as in shadow banking more generally. The survey will provide information about changes in credit terms applied by largest banks for lending against euro-denominated security collateral and for OTC derivatives transactions with key counterparty types, as well as about main reasons behind the changes in those terms. This makes it a valuable monitoring and potentially early warning tool to support risk surveillance work.

4. Regulatory issues relevant for shadow banking

The Green Paper mentions a number of existing regulatory initiatives that may help addressing shadow banking entities and activities. In general, the Eurosystem notes that any regulatory initiative at EU level should be consistent with the work under way by the FSB to ensure a level playing field and avoid regulatory arbitrage, involve a balanced use of direct and indirect regulation and, in line with Commission's practices, be accompanied by proper costs-benefit analysis. In this context, the Eurosystem would like to offer the following considerations for further reflection by the Commission as regards some of the regulatory issues mentioned in the Green Paper.

(i) Banking regulation

The Green Paper mentions that several issues are being examined with the aim to identify the channels of exposures, limit excessive exposure to shadow banking entities and improve the disclosure requirements of banks towards exposures to such entities.

The Eurosystem recognises the efforts made by the European Commission to indirectly address shadow banking issues. In this regard, new requirements in respect of originator or sponsor risk retention, additional disclosure rules, or strengthening the treatment of liquidity facilities go in the right direction. The Eurosystem considers that there is a need for a more consistent approach on the Large Exposure regimes at international level. In this context, the Eurosystem supports the work being developed to identify and mitigate systemic risks associated with the shadow banking system at international level. In particular, the Eurosystem expects progress in some key aspects related to the transactions between banks and prudentially non-consolidated shadow banks, such as the treatment of intra-group transactions, connection and opacity.[3] In addition, the Eurosystem supports further developments of policy options related to appropriate limits for banks' exposures to shadow banking entities; for instance, aggregate limits on the sum of the exposures that pose more risks for financial stability could be explored. Given the wide scope of the definition of shadow banks and the potential changes in the range of activities undertaken by these entities, the Eurosystem considers that collecting information and monitoring this type of exposures should be a minimum requirement from a financial stability perspective.

Moreover, the Eurosystem supports the work under way by the Commission as regards the possible extension of certain provisions of CRD IV to non-deposit-taking finance companies with the aim to limit the scope for future regulatory arbitrage for providers of credits. In this context, and given that prudential consolidation is largely based on accounting concepts, the Eurosystem deems it crucial to implement a sound approach to consolidation of shadow banks for accounting purposes.[4]

(ii) Asset management regulation

The Green Paper mentions possible initiatives concerning Exchange Traded Funds (ETFs) and MMFs in the context of shadow banking. For the latter, the main concerns identified relate to the risks of runs that could seriously affect financial stability.

As regards ETFs, it has to be noted that while the growth in ETF markets is at an early stage in a number of countries, the speed and breadth of financial innovation has been substantial in some large financial systems over the past five years, and has brought elements of complexity and opacity into

[3] For instance, it is common for shadow banking entities such as ABCP conduits and SIVs to rely on the parent firm's explicit and/or implicit credit and liquidity support for the viability of their business model. Likewise, funding problems in one vehicle are likely to spread to the others due to their shared dependence on the parent firm.

[4] The new IFRS 10 provides for a single consolidation model that applies to all entities (incl. structured entities/special purpose entities, for example entities which perform liquidity and/or maturity transformation). Under IFRS 10, the determination of whether an entity is to be consolidated would be based solely on the concept of "control". The change introduced by IFRS 10 in respect to the accounting for structured entities will not always result in more consolidation. In some cases, structured entities will no longer be consolidated.

this standardised market. The high growth rates as well as the increasing complexity and opacity of certain ETFs require a close monitoring and the development of appropriate policy measures at the EU level, in coherence with the recommendations formulated internationally (IMF, FSB, BIS, IOSCO[5]). In particular, the Eurosystem notes that when considering regulatory initiatives the following key aspects should be assessed (i) **opacity and disclosure**, as the quality of investor due diligence on collateral selection and arrangements depends on the level of transparency of ETF providers; (ii) **Counterparty risks**, given the very strong growth of collateralised structured operations in the context of synthetic ETFs and physical ETF-based securities lending. In this regard, it might be appropriate to assess how ETF providers deal with a failure of their parent bank/swap counterparty, with a view to minimising the disruption to their operations, and to the ETF market as a whole; (iii) **Liquidity and funding issues**, as ETFs could serve as a funding source for sponsoring banks and have an impact on the liquidity of underlying markets. From this standpoint, it might be appropriate to assess whether the liquidity buffers for banks actively involved in ETFs adequately take account the contingent liquidity risk from their ETF business, also in the light of the BCBS principles for sound liquidity management. Further, the potential for using certain ETFs structures for liquidity regulatory arbitrage and improving artificially the bank's position under the Liquidity Coverage Ratio (LCR) should be considered.

Against this background, the Eurosystem notes that EU regulatory initiatives potentially impacting the ETF market (such as the MiFID review, the PRIPS initiative, the review of the UCITS framework) should be conducted in a coordinated and consistent manner, taking into account the specific risks arising from these financial instruments.

As regards MMFs, the Eurosystem agrees with the Commission that they would require further consideration, as the financial crisis highlighted specific financial stability concerns.

First, MMFs, particularly in the US have become subject to massive runs by investors redeeming their shares. Investor redemptions were triggered by the realisations of liquidity and credit risk, which led to losses and to the illiquidity of money market fund assets. Money market funds in some jurisdictions offer fixed (constant) net asset value shares (CNAV) to investors, creating the perception that shares in money market funds are a close substitute for bank deposits.[6] More specifically, MMF shares offer the preservation of principal and immediate liquidity while offering investors a return from credit, maturity and liquidity risk. However, unlike banks, MMFs are not subject to capital regulation making the maturity transformation and credit risk taking of money market funds inconsistent with promise to offer deposit like investments. This inconsistency is perceived as a critical element which facilitated runs on MMFs.

Second, the massive and rapid reduction in MMF assets due to investor redemptions has also highlighted the importance of MMFs as funding source for financial sectors and particularly for banks. As a result of the runs, the liquidity provision of MMFs to the financial sector dried up and revealed

[5] See IOSCO Consultation Report "Principles for the Regulation of Exchange Traded Funds", March 2012.

[6] CNAV MMFs represent the majority of funds globally with a market share of around 80 percent while in Europe the market share amounts to 40 percent.

the dependence of banks on short-term funding. The close interconnection between the MMFs and the financial sector lead to contagion effects amplifying the already on-going distress in the banking sector. Against this background, the Eurosystem would like to make the following considerations as possible regulatory options.

A mandatory move to variable net asset value (VNAV) may be considered as helpful to limit the risk of runs on money market funds to the extent that it removes the illusion that money market fund shares are like deposits. A variable NAV fund which values all assets at marked-to market would provide price transparency to investors and thus reduce the first mover incentive which contributes to runs. However, the financial crisis has also shown that runs on VNAV money market funds can also occur.[7] Therefore, the Eurosystem considers that any regulating initiative mandating the move to VNAV should be complemented by additional measures limiting maturity transformation and credit risk. Such measures have already been introduced in the EU and the US. The alternative of imposing bank-like capital and liquidity requirements to MMFs that promise constant NAV could also be contemplated.

With regard to the interconnectedness between MMF and the banking system, the Eurosystem notes that **Basel III specifies liquidity regulation** as a new element of the regulatory framework for banks. More specifically, the Liquidity Coverage Ratio requires banks to maintain a minimum level of high-quality liquid assets to withstand an acute stress scenario lasting for 1-month. In the current draft proposal, funding for less than 30 days from MMFs would receive a 100 percent drawdown factor and thus does not have a net effect on banks' LCR. This treatment reflects the underlying assumption of a stress situation in which those short-term funds received from MMFs would be fully withdrawn. Such regulatory initiatives should be taken into account in the reflections concerning possible new regulation directed at MMFs. It should also be emphasised that the different regulatory initiatives to regulate the risks stemming from MMFs may have a significant impact on the financial sector.[8]

(iii) Credit risk transfer

Restoring the securitisation market in EU, on sustainable grounds, and sound credit risk transfer should be a priority for the regulatory community. The initiatives already put in place - such as the retention requirement provided in the CRD - are useful; however an even more stringent prudential treatment of these products should be welcomed. We believe that greater standardization and simplicity of asset-backed securities and their efficient handling by market infrastructure should be encouraged, since it facilitates the development of the secondary market, and hampers the placement of mispriced products. Therefore, the penalization from a regulatory point of view of re-securitisation has been greeted as a right step towards the goal of encouraging simplicity.

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[7] See Jank and Wedow (2008), "Sturm und Drang in money market funds: When money market funds cease to be narrow", Deutsche Bundesbank Discussion Paper No. 20.

[8] Besides regulation of the shadow banking sector this includes UCITS and the Basel liquidity regulations.

5. Policy issues related to repo and securities financing markets

The Green Paper mentions as area for possible regulatory intervention securities lending and repurchase agreements markets, the latter of great importance for monetary policy transmission. The Eurosystem notes that, in line with the current work of the FSB, it is important to assess whether repo and securities lending transactions would create "excessive" leverage and maturity/liquidity transformation and therefore be a potential source of systemic risk. Taking into account the discussion under way at international level, the Eurosystem would like to express some preliminary considerations as regards some key policy issues of particular importance from a central banks' perspective: 1) the procyclical nature of margin requirements used in securities financing transactions; 2) the extent to which central clearing counterparties (CCPs) should be involved in repo markets; 3) the risks related to the rehypothecation and re-use of clients' assets.

(i) Procyclicality and margin requirements

Recent analytical studies (largely based on empirical studies on US markets) and international reports have highlighted that margin requirements in repo markets (as well as securities lending terms) are pro-cyclical. Several regulators or bodies, including the latest FSB interim report, thus propose that minimum haircuts could be applied permanently as a means of limiting system leverage or used temporarily in response to overheated market conditions as a macro-prudential tool. In particular, the FSB considers that reducing the pro-cyclicality of haircuts in the context of centrally-cleared transactions may be an option to explore given the central and growing role of central counterparties in repo markets globally. Several factors should be considered when considering such an approach.

First, it should be noted that both the level of the haircuts and the level of market prices for collateral which can be irrationally high in a boom and correspondingly low amidst fire sales in a crisis can be procyclical factors.

Second, and importantly from the ECB point of view, the proposals to impose minimum haircuts will also need to be carefully assessed as regards their impact on the functioning of the money market and in particular with regards to the possible effect on monetary policy implementation and the transmission mechanism. It should be ensured that any such imposed framework on the haircut and margin conditions in market repos does not apply to the repos and other forms of collateralised lending used by central banks in implementing monetary policy. This is because the central bank should remain fully independent for setting the rules as regards the collateral accepted and maintain full flexibility in determining the "collateral value" of the assets accepted in its credit operations, i.e. the amount of credit that can be drawn by a counterparty using a particular type of asset as collateral. This collateral value is determined by a combination of the pricing of the asset by the central bank and the application of appropriate haircuts. The pricing approach could be either based on market prices for the asset, to the extent that the asset is traded in the market, or on theoretical valuation techniques. The haircuts applied on the other hand should reflect the risk characteristics of the various assets in a consistent manner, i.e. other things being equal, riskier assets should require higher haircuts. Pricing and haircut practices are an integral part of the operational framework of central banks and should serve exclusively the implementation of monetary policy.

(ii) Encouraging the use of CCP for repo markets

During the recent financial crisis, repo markets in general proved to be a less reliable source of funding liquidity than expected and the volume of repos declined. This can be attributed to several features of the non-cleared repo market like insufficient transparency, and the inability of some counterparties to liquidate repo collateral rapidly[9]. In the euro repo market, the decline in repo volumes was counterbalanced by a good performance of CCPs, which could be explained by the fact that a CCP solution by design addresses effectively most of these vulnerabilities. Some CCPs even saw an increase in their business at a time when counterparty-risk adverse market participants turned to safer avenues. This happened because CCPs can provide effective protection against counterparty risk by interposing themselves between the original repo parties. The Eurosystem considers that strengthening the infrastructures of the repo market would provide more stability in this market which is an important source of funding for the financial sector.

From a financial stability perspective, the Eurosystem is of the view that properly supervised and overseen CCPs act as a firewall against the propagation of default shocks and can mitigate counterparty credit risk, enhance market transparency, facilitate collateral liquidation, and foster standardisation of repo terms and eligible collateral. The recent adoption of international standards,[10] by the CPSS and IOSCO is an important step to harmonise and strengthen regulatory requirements on CCPs at global level, and in the European context the forthcoming EMIR will further contribute to strengthen CCPs supervision in Europe. While such regulatory initiatives are not specifically aimed to the repo market CCPs, by enhancing safety and efficiency of CCPs they will bring advantages also to the centrally-cleared repo market segments as well. In addition to the achievement of a sound risk management framework, the Principles address other aspects such as the procyclicality of margins and haircuts which is particularly relevant for the repo market as seen in the current shadow banking debate. In the euro area, the CCP model works, having already gained half of the repo market. Therefore, the Eurosystem strongly believes that encouraging the move of repo transactions toward CCPs seems to be an appropriate solution.

The Eurosystem recognises that CCPs are not the only solution to mitigate the risks in the repo market and that other market solutions, such as tri-party repos service providers, are available to address some of these risks. Tri-party repo service providers support the adoption of safe collateral management practices in bilateral repos, deploy sophisticated risk management practices and can increase the safety and efficiency of collateral usage (in the euro area, about 10% of repos are tri-party).

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[9] For more details, see "Strengthening repo clearing and settlement arrangements", CPSS Publications No 91, September 2010.

[10] See "Principles for financial market infrastructures, assessment methodology and disclosure framework", CPSS Publications No 101, April 2012.

(iii) Re-use and rehypothecation of collateral

Certain practices in the financial markets such as the rehypothecation by prime brokers and re-use of collateral by dealers may trigger risks relevant for financial stability and be a source of systemic risk. An appropriate regulatory response should be inspired by a broader macro-prudential perspective in combination with legal and accounting best practices. The Commission should consider the introduction of a harmonised EU framework, aiming at a minimum at promoting a clear and transparent legal and accounting treatment in order to also prevent excessive leverage in the financial system and requiring regular reporting to relevant authorities by intermediaries on collateral re-used. Finally, quantitative limits to collateral rehypothecation by prime brokers, similar to those existing in the U.S., might be introduced after a due assessment of its relevance with the rehypothecation practices observed in the EU.

Annex - ESCB Statistical data relevant for financial stability monitoring

Macroeconomic statistics are compiled within the framework of the European System of Accounts 1995 (soon to be replaced by ESA 2010). In fact, the grouping other financial intermediaries (OFI) sector in ESA 95 comprises all financial institutions other than those included in the sectors monetary financial institutions (MFIs) and the insurance corporations and pension funds (ICPFs). Hence, this includes many of the entities that could be involved in shadow banking activities. Most of the intermediation activities comprised in the shadow banking perimeter are indistinguishably covered in the comprehensive and integrated quarterly *euro area accounts*, compiled by ECB and Eurostat, under the grouping other financial intermediaries (OFIs). The *monetary and financial statistics* produced and disseminated by the ESCB offer high frequency and fully harmonised data at a high level of granularity that permit to shed more direct light on shadow banking entities and activities. In particular, there are harmonised statistics on money market funds as a separate sub-category of the MFI sector as well as on some institutions that are part of the OFI sector: investment funds, including separate identification of hedge funds and (though not yet separately identified) exchange traded funds (available since end-2008), and financial vehicles corporations engaged in securitisation (FVCs; available since end-2009). In addition, statistics on insurance corporations and pension funds are available (though not fully harmonised) since 2008, with plans for a harmonised data collection now being assessed.

Using these statistical sources a first quantification of the size of shadow banking, and its different components, was carried out in the ECB Occasional Paper No. 133, according to which assets linked to shadow banking activities at the end of 2011 are €10.9 trillion, representing 28% of total bank and shadow bank assets. This approach to develop a first approximation of shadow banking activity making use of a mix of data from the financial accounts framework and more granular monetary and financial statistics is fully in line with the approach proposed by the FSB. Whereas these statistics provide a good first approximation of the size of shadow banking entities and activities, the classification system used for statistical purposes is based on economic criteria that do not always allow an identification of whether the entity is regulated, and if so within the EU or elsewhere. These statistics do not permit to identify entities in the OFI sector which may belong to banking groups. Furthermore, shadow banking carried out by offshore entities but on behalf of residents is not covered. Hence, ESCB statistics would need to be complemented by information that may become available to regulatory authorities, in particular the European Supervisory Authorities and would benefit from international data collection initiatives undertaken under the initiative of the G20. They will also benefit from a register of financial institutions currently being set up and for which close cooperation with ESAs would increase accuracy and minimise costs. A more in-depth assessment of the activities of shadow banking would require an improvement in the availability and the scope of statistical data. In this regard, comprehensive Securities Holding Statistics (SHS) are being developed which will facilitate the provision of information on securities holdings by all economic sectors with details on all

securities including residual maturity and of a from-whom-to-whom breakdown. Initiatives are also under way to potentially provide in the long run granular information on loans through the utilisation of existing credit registers.