



**CONSULTATION ON A POSSIBLE RECOVERY AND RESOLUTION FRAMEWORK FOR FINANCIAL INSTITUTIONS OTHER THAN BANKS**

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<sup>1</sup> [http://europa.eu/transparency-register/index\\_en.htm](http://europa.eu/transparency-register/index_en.htm)

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## Executive summary

Financial institutions other than banks offer a range of useful and essential services for various participants active in financial markets. These include clearing and settlement, asset management, insurance, trading of various financial instruments etc. Many of these services constitute vital components for the orderly functioning of the financial system, without which socio-economic welfare would suffer.

Like banks, these institutions need to be suitably regulated in view of the public interest at stake. The EU regulatory framework governing the functioning of financial markets aims to ensure that their business sustains and furthers the smooth and orderly functioning of financial markets in all respects. This framework also minimises the risks which their business can, either individually or collectively, represent for other market participants, investors, policyholders, and financial stability in general.

Like banks, these institutions can nonetheless end up in severe financial or operational difficulties which can result in their failure. Regulation can minimise the likelihood of this occurring but it can never preclude it entirely. The event of failure can, depending on the entity, assume varying proportions. For example, the failure of a clearing house amid overwhelming financial tensions in case its members default on their dues can severely impact financial stability.

This consultation paper focuses on these cases. First, it looks to ascertain how and when the failure of a financial institution other than a bank can threaten financial stability. The main institutions considered in this respect are financial market infrastructures, such as central counterparties and central securities depositories, and systemic insurance companies. Second, it considers what arrangements could be needed to prevent their failure from compromising financial stability.

However, in this context it does not delve into the regulation applicable to the daily operations of these institutions, which is covered in other work streams. The focus here is on the extraordinary measures which could be necessary to contain the fallout from failure, not on the regulation which is necessary to mitigate the risks and negative externalities inherent in their business. In other words, the focus is on what is variously termed crisis management or recovery and resolution, not on prudential or market conduct rules.

The principles agreed at the G20 and the Financial Stability Board (FSB) seek to ensure that no financial institution, whether a bank or another financial actor, should be too big to fail. Currently, faced with an imminent failure of a significant financial institution, existing tools available to public authorities may not always be sufficient to enable an orderly recovery or resolution of the situation. In such cases, authorities may have no choice but to provide public support at taxpayer expense to prop up the ailing institution. The alternative – the threat of mass disruption to the financial system and to the economy – would be even more costly.

Contrary to banks, which while not identical tend to fail in similar ways, the question of when the failure of a nonbank financial institution can threaten financial stability is less evident. With the exception of central counterparties and central securities depositories which operate transactions for vast market segments, it is arguably more difficult to establish in advance which other nonbanks are likely to be systemically relevant at the point of failure than it is in the case of banks. However, like banks, this is very likely to be closely linked to how extensive, interconnected and/or substitutable their business is in ordinary times. Furthermore, a nonbank failure of systemic proportions may plausibly take different forms, materialising either in the shape of a serious solvency problem, an overwhelming technical malfunction, or combination of the two.

Still, the financial crisis has demonstrated that the sources and possible channels of contagion of systemic risk can vary significantly. During an institution's lifetime, it is not always possible to foresee its systemic relevance at the point of demise. This consultation therefore looks broadly at how different nonbank financial institutions can fail and cause systemic problems, and what should be done about it. While this consultation paper focuses on the nonbank institutions the failure of which could most clearly cause financial instability (central counterparties, central securities depositories, systemic insurance companies), it also asks questions whether some other institutions could be systematically relevant in this context and, if so, whether and how recovery and resolution mechanisms could also be applied to them.

## Consultation on a possible recovery and resolution framework for financial institutions other than banks

### 1. INTRODUCTION

Among the numerous regulatory and market failures exposed by the financial crisis, one of the most prominent concerns the difficulty of managing large financial institutions in distress. The bankruptcy of Lehman Brothers has heightened awareness of the devastating socio-economic effects which a disorderly failure of a significant financial institution can cause. Faced with a threat of massive economic disruption, authorities have had no alternative but to prop up ailing institutions with unprecedented public guarantees and funds.<sup>2</sup>

In response, the G20 has agreed that new tools are required to deal with financial institutions in difficulty.<sup>3</sup> In November 2011, they endorsed<sup>4</sup> the recommendations of the Financial Stability Board (FSB) that these tools should be designed to safeguard financial stability, ensure the continuity of any critical financial services, avoid any unnecessary destruction of value, and minimise costs for taxpayers.<sup>5</sup>

The imperative of improving the arrangements for such orderly "recovery and resolution"<sup>6</sup> is most acute for banks and large investment firms. The Commission has recently adopted its proposal in this respect.<sup>7</sup> However, as stated in its Communication of 20 October 2010, "*the Commission will carry out further work on resolution of other financial institutions, (considering)...in particular, what crisis management and resolution arrangements, if any, are necessary and appropriate for other financial institutions, including insurance companies, investment funds, and central counterparties*".<sup>8</sup>

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<sup>2</sup> According to the IMF estimates, crisis-related losses incurred by European banks between 2007 and 2010 are close to €1 trillion or 8% of the EU GDP. Between October 2008 and October 2011, the Commission approved €4.5 trillion (equivalent to 37% of EU GDP) of state aid measures to financial institutions, of which €1.6 trillion were used in 2008-2010 (equivalent to 13% of EU GDP). Guarantees and liquidity measures account for €1.2 trillion, or roughly 9.8% of EU GDP. The remainder went toward recapitalization and impaired assets measures amounting to €409 billion (3.3% of EU GDP). See: European Commission, State Aid Scoreboard, Autumn Update 2011 [COM(2011)848]

<sup>3</sup> <http://www.g20.org/images/stories/docs/eng/washington.pdf>;  
<http://www.g20.org/images/stories/docs/eng/pittsburgh.pdf>;  
[http://www.financialstabilityboard.org/publications/r\\_101111a.pdf](http://www.financialstabilityboard.org/publications/r_101111a.pdf)

<sup>4</sup> <http://www.g20.org/images/stories/docs/eng/cannes.pdf>

<sup>5</sup> "Key Attributes of Effective Resolution Regimes for Financial Institutions"  
[http://www.financialstabilityboard.org/publications/r\\_111104cc.pdf](http://www.financialstabilityboard.org/publications/r_111104cc.pdf)

<sup>6</sup> The term "recovery" is taken to cover actions undertaken by the institution itself in order to overcome financial or operational problems and restore its viability. "Resolution" refers to actions undertaken by authorities if the problems cannot be overcome with recovery or other measures, and failure to act would jeopardise financial stability.

<sup>7</sup> COM(2012) 280

<sup>8</sup> COM(2010) 579

Taking note of the evolving work at international level applicable to sectors other than banks,<sup>9</sup> this consultation aims to further a coherent understanding of the risks for the financial system posed by the failure of different nonbank financial institutions. Failure is considered in this consultation to be the occurrence or imminent threat of a debilitating financial event due for example to insurmountable losses or overwhelming technical problems. The term nonbank financial institution in this consultation refers to financial institutions not subject to the Commission's proposal on recovery and resolution for banks and investment firms.

Concentrating on threats for financial stability arising from the potential failure of key nonbank financial institutions complements the important steps already taken to protect their customers and mitigate risks in their daily operations and in the functioning of key markets.<sup>10</sup> Once fully implemented, many of these measures are foreseen to greatly reduce the likelihood of risks building up in these institutions in the first place. However, the possibility of a failure cannot be excluded.

Finally, the focus of this consultation is complementary to the Commission's recently adopted Green Paper on shadow banking, which considers the degree to which the regulation of such entities and activities should be reinforced.<sup>11</sup> The perspective in this consultation, on the other hand, is whether the failure of a nonbank financial institution (including potentially a shadow bank, where relevant) could have similar effects as those of a bank and whether a resolution framework should thus exist to mitigate them.

Therefore, this consultation aims to help ensure that, in line with the principles adopted by the G20 and the FSB, all nonbank financial institutions the failure of which could threaten financial stability are capable of being resolved in an orderly manner and with minimal cost to taxpayers. It thus discusses and requests input on: (i) the ways in which the failure of different financial institutions can threaten financial stability and economic welfare in general; and (ii) the possible need for improvements regarding recovery and resolution arrangements.

The paper is structured as follows. Section 2 offers a broad analytical and conceptual framework for analysing the threats for financial stability posed by the failure of financial institutions and the reasons to mitigate them. Sections 3 and 4 are factual and interrogative, focusing on the main nonbank financial institutions covered here — financial market

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<sup>9</sup> See e.g. work by the Committee on Payment and Settlement Systems (CPSS) and the International Organisation of Securities Commissions (IOSCO) on recovery and resolution of financial market infrastructures and by the International Association of Insurance Supervisors on identifying global systemically relevant insurers (<http://www.bis.org/publ/cpss103.pdf>; <http://www.iaisweb.org/index.cfm?pageID=918>)

<sup>10</sup> E.g. Regulation (EU) No 236/2012 of the European Parliament and of the Council on short selling and certain aspects of credit default swaps [OJ L 86, 24.3.2012, p.1.]; Directive 2009/138/EC of the European Parliament and of the Council of 25 November 2009 on the taking-up and pursuit of the business of Insurance and Reinsurance (Solvency II) [OJ L 335, 17.12.2009, p. 1]; Regulation (EU) 648/2012 of the European Parliament and of the Council on OTC derivatives, central counterparties and trade repositories (EMIR) [OJ L 201, 27.7.2012, p. 1]; and Commission proposals on market abuse [COM(2011) 651, COM(2011) 654]; on markets in financial instruments [COM(2011) 652, COM(2011) 656]; on improving securities settlement in the European Union and on central securities depositories [COM(2012) 73]

<sup>11</sup> Green paper on shadow banking, COM(2012) 102

infrastructures such as central counterparties and central securities depositories, and systemically relevant insurance companies. These sections consider whether their failure should be buttressed by recovery and resolution arrangements similar to those applicable to banks. Considering the differences and specificities of these sectors in terms of business, risks and regulatory aims, they are discussed separately. In this context, an important starting point is that whereas FMIs are largely considered a priori to be systemic, insurance companies are generally not unless they engage in certain "non-traditional" practices. Finally, section 5 considers whether payment systems and payment institutions merit specific focus from a recovery and resolution perspective and inquires about whether the reflection should extend to any other nonbank financial institutions.

Responses should be sent to [markt-nonbanks@ec.europa.eu](mailto:markt-nonbanks@ec.europa.eu) by 28/12/2012. They will be published on the Commission website unless confidentiality is specifically requested. For administrative purposes please clearly state, in the email text, the following information:

- Name of your organisation/person;
- If you are registered with the Commission as an "interest representative"<sup>12</sup> your identification number;
- Relevant contact details; and
- Confirmation that you acknowledge that your response will be published.

The purpose of this public document is to consult market participants, regulators and other stakeholders. Respondents should substantiate their answers with detailed arguments and, where possible, concrete data. Responses to this consultation will provide important guidance for the Commission services in preparing formal Commission proposals, which could be adopted in 2013. Any possible proposals would be accompanied by an impact assessment.

## **2. SYSTEMIC RISK IN THE CONTEXT OF FAILURE**

- (a) What does systemic risk mean in the context of the failure of a financial institution?

Systemic relevance and risk refer broadly to the impact the failure of an institution can have on financial stability and the wider market. While prudential regulation is concerned with the solvency and financial soundness in the context of the daily business of the individual institution, the purpose of this paper is to examine and address the systemic effects which an institution's failure may have on financial stability.

There is no single commonly agreed definition of systemic risk in the context of financial markets and institutions. However, most academic and empirical accounts converge on a number of key elements. First, systemic risk implies a significant threat of disruption of all or of vital parts of the financial system impeding its core role of ensuring efficient allocation of capital. Second, the financial disruption or threat thereof is of a size sufficient to have negative effects for economic growth and welfare. Third, the risk may materialise either from failures within the financial system itself or result from outside events or broader economic

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<sup>12</sup> <https://webgate.ec.europa.eu/transparency/regrin/welcome.do>

developments, and be transmitted via inter-connections, correlations and concentrations in exposures across diverse financial actors. Fourth, the failures usually take the form of insurmountable losses, possibly precipitated by serious operational problems. Fifth, the systemic risk embodied by institutions or markets is not fixed but fluctuates over time due to market movements, cyclical trends, herd behaviour, regulation etc. Sixth, its effects are potentially magnified by the increasing speed, integration and complexity of today's financial markets. Finally, it may be relevant on different levels: global, regional or national.<sup>13</sup>

Regarding the question of when an institution represents a possible source or vehicle of systemic risk, analyses point to a series of key identifying factors. Chief among these are size, inter-connectedness and the degree to which an entity's critical services are substitutable and readily available elsewhere on the market.<sup>14</sup> Thus, whether or not an entity is systemically relevant may hinge either on its core function (e.g. banking, custody, fund management, brokerage, clearing, etc.), or its ancillary or non-traditional business activities, depending on how big, inter-connected or substitutable either of these are.

Various more refined indicators or models have also been developed to help identify when institutions concretely may breach specific critical thresholds and achieve systemic relevance.<sup>15</sup> However, these measures and indicators are most refined primarily in relation to banks. Furthermore, the determination of an institution's systemic relevance, especially at the point of failure, will always contain a considerable degree of discretion by authorities. As it also may not be possible to identify a systemic firm ex ante, it is therefore necessary to have a framework that allows for application of measures to any systemic firm, both if identified as such ex ante and after an event of failure. Therefore, this consultation does not use a specific indicator of systemic risk in relation to nonbanks but rather relies on this broad conceptual framework.

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<sup>13</sup> See e.g. "Guidance to assess the systemic importance of financial institutions, markets and instruments: Initial considerations," Joint report to the G20 Finance Ministers and Central Bank Governors by IMF, BIS and FSB staff [http://www.financialstabilityboard.org/publications/r\\_091107c.pdf](http://www.financialstabilityboard.org/publications/r_091107c.pdf); "The Concept of Systemic Risk" in ECB Financial Stability Review December 2009 (p.135ff) <http://www.ecb.int/pub/pdf/other/financialstabilityreview200912en.pdf?b3c600e182ca52883707093144bf71c6>; "Mitigating Systemic Risk - A Role for Securities Regulators, Report of the Technical Committee of IOSCO" <http://www.iosco.org/library/pubdocs/pdf/IOSCOPD347.pdf>

<sup>14</sup> Ibid. Note that, depending on the sector, other factors can also be considered equally important, e.g. the scale of cross-border activities and complexity of Global Systemically Important Banks (G-SIBs) "Global systemically important banks: assessment methodology and the additional loss absorbency requirement," Basel Committee on Banking Supervision <http://www.bis.org/publ/bcbs207.pdf>

<sup>15</sup> See e.g. the US Financial Stability Oversight Council's final rule on the "Authority to Require Supervision and Regulation of Certain Nonbank Financial Companies" as well as previous notices of proposed rulemaking regarding the topic: <http://www.treasury.gov/initiatives/fsoc/Documents/Nonbank%20Designations%20-%20Final%20Rule%20and%20Guidance.pdf>; <http://www.treasury.gov/initiatives/fsoc/Pages/notices-of-proposed-rulemaking.aspx>; "Systemic Risk Methodologies" in ECB Financial Stability Review June 2011 (p.141ff) <http://www.ecb.int/pub/pdf/other/financialstabilityreview201106en.pdf?1c1bfa1f87da6b27fac0c1a8487fece>; "CoVaR: Federal Reserve Bank of New York Staff Reports," Tobias Adrian, Markus K. Brunnermeier, Staff Report no. 348 [http://www.newyorkfed.org/research/staff\\_reports/sr348.pdf](http://www.newyorkfed.org/research/staff_reports/sr348.pdf); NYU Stern systemic risk rankings <http://vlab.stern.nyu.edu/welcome/risk/>



- (b) Why deal with failures of systemic financial service providers through a recovery and resolution framework?

While traditionally discussions of systemic risk relate primarily to banks, the same or similar potential risks exist in relation to nonbank financial institutions. This is because nonbank financial institutions can bear all the hallmarks of a systemic institution i.e. large size, be extremely interconnected and be providers of services which are difficult to substitute.

Nonbank institutions are also liable to the same or similar exogenous and endogenous risks as banks and investment firms. Extending similar powers to regulators in respect of systemic nonbank institutions is thus a valid public policy objective. This has been reflected in the work of IOSCO, CPSS and IAIS. They have all worked on identifying causes and potential transmission of systemic risk in their respective industries. This has taken place in the context of the above mentioned work at G20 level under the aegis of the FSB. The FSB "Key Attributes of Effective Resolution Regimes for Financial Institutions" (Key Attributes) may not all apply in totality to all nonbank financial institutions, but they give a good starting point to examine the potential systemic risk of nonbanks.

It is clear that institutions which are so big, inter-connected or irreplaceable that their failure would disrupt financial and economic activity along the above lines require appropriate attention. At a minimum, authorities must be equipped with tools to prevent the systemic damage caused by disorderly failure of such institutions.

These tools should minimize the reliance on taxpayers to cover the losses and costs arising from failure. Indeed, removing implicit guarantees of public support is necessary to reduce moral hazard and strengthen market discipline and competition.<sup>16</sup> This should not be seen as undermining or replacing current prudential regulation but instead as creating an extra layer of protection and as serving the public interest in orderly and stable financial markets.

Furthermore, recent experience shows that the normal workings of market forces cannot always be relied upon to manage the systemic risk posed by institutions which become critically relevant, especially in the context of a broader crisis. Rather, once present, it can linger on or build up in the balance sheets of affected institutions, unless they take mitigating actions<sup>17</sup> or it is shrunk by the actions of public authorities.<sup>18</sup> Simply waiting for the next economic upturn to dissipate it is not a viable option.

Also, ordinary insolvency law is unsatisfactory for managing the failure of a systemic financial institution. Insolvency procedures can disrupt the provision of such an institution's critical services for a long time. Being oriented towards satisfying creditors, it is not ideally suited for preserving financial stability in the (usually) short timeframe available. Franchise value of an entity can also be needlessly destroyed.

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<sup>16</sup> See e.g. "Stability and competition in EU banking during the financial crisis: the role of state aid control," Gert-Jan Koopman, *Competition Policy International*, Volume 7, Number 2, Fall 2011

<sup>17</sup> E.g. recapitalisation, sale of assets or liabilities, etc.

<sup>18</sup> E.g. public guarantees, capital injections, liquidity support measures, asset relief, macro-economic stimulus measures, taxes etc.

An effective resolution framework mitigates this before the critical and essential services of a systemic financial institution become unavailable and disrupt the normal functioning of financial markets. It also allows for all non-essential parts of the business and non-critical services to be wound down or restructured in the process. In other words, it saves taxpayers the cost of bailing out entire institutions by preserving only those functions which are vital for financial stability and liquidating those which are not.

Finally, a credible set of resolution tools is important in preserving the integrity and efficiency of the Single Market. Without the in-built safeguards against systemic risk and the spread of contagion which it provides, national authorities may pursue ad hoc stabilisation measures which, while not necessarily designed as such, may force cross-border institutions to withdraw from other markets or to set aside nationally ring-fenced shock absorbers. Such fragmentation is inconsistent with the logic of cross-border efficiency and free movement of the Single Market.

Therefore, if a nonbank financial institution acquires a profile either in terms of its core function or its secondary activities which is big, inter-connected or irreplaceable enough to cause, at the moment of failure, risks for financial stability and the wider market along the lines identified above, the institution should be subject to an appropriate recovery and resolution framework<sup>1920</sup>.

### **3. FINANCIAL MARKET INFRASTRUCTURES: CENTRAL COUNTERPARTIES AND CENTRAL SECURITIES DEPOSITORIES**

#### **3.1 Introduction – How can the failure of financial market infrastructures threaten financial stability?**

Financial market infrastructures (FMIs), notably central counterparties (CCPs) and central securities depositories (CSDs) for the sake of this report<sup>21</sup> are at the heart of the functioning

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<sup>19</sup> This is without prejudice to the on-going review of Regulation 1346/2000 on insolvency proceedings, which inter alia, is examining extending the scope of the regulation to cover various pre-insolvency proceedings introduced in many Member States to address financial problems of a company at a stage before insolvency, thereby increasing the chances of a successful turnaround.

<sup>20</sup> It is to be noted that some of the possible restructuring/resolution measures discussed below can involve a form of state intervention, which would require that they be consistent with the EU state aid framework. In this respect, any recourse to public support to assist in the resolution of failing institutions would have to be notified to the Commission and be assessed in accordance with the relevant state aid provisions in order to establish its compatibility with the internal market. Namely, in return for any state aid measure aimed at restructuring an ailing firm, aid beneficiaries must demonstrate their future viability without continued state support. Moreover, measures to limit distortions of competition caused by state aid as well as burden sharing requirements are normally imposed.

<sup>21</sup> For the purpose of the CPSS-IOSCO "Principles for Financial Market Infrastructures" of April 2012, FMIs include CSDs, Securities Settlement Systems (SSSs), CCPs, Trade Repositories (TRs) and systemically important Payment Systems (PSs). PSs are addressed separately, in section 5.1 while the limited experience with TRs does not, at this stage, give reason to consider them a priori systemic in the sense described in section 2 and on a par with the critical market infrastructures taken as priorities here. Unless otherwise stated, references to FMIs in this paper are thus to be read as referring to CCPs and CSDs.

of financial markets, providing services that underpin the activities of markets and financial intermediaries. FMIs may be the sole provider of such services, or with a low degree of substitutability, and are thus often seen as essential utilities providing a service of common interest. Given their central and critical role in the functioning of financial markets, regulations aim to ensure that FMIs have strong risk management tools. Despite robust controls, the daunting scenario of the failure of an FMI cannot be excluded. The failure of an FMI that occupies a critical size or position in a market could have immediate systemic implications: some segments of financial markets might just cease to operate, and its disorderly collapse would lead to considerable losses or uncertainty for other financial institutions. In addition, FMIs are characterized by interdependencies with other financial institutions or between themselves which imply that the contagion of a failure would spread rapidly.

Different types of FMIs face different risks and can thus lead to different types of problems in the event of failure. The joint Report on Principles for Financial Market Infrastructures by the Committee on Payment and Settlement Systems (CPSS) and the International Organisation of Securities Commissions (IOSCO)<sup>22</sup> lists the risk classifications to which FMIs are exposed as follows: legal, credit, liquidity, general business, custody/investment, and operational.

However, FMIs have very different risk profiles. Not all FMIs are subject to all types of risks. For example, CSDs that do not offer credit are not exposed to liquidity or credit risk, while CSDs that offer credit and CCPs are exposed to such risks. The materialization of these risks may result in different types of failure scenarios: for example, credit or liquidity risk could result in the failure of a FMI that occurs over a short timeframe, due for instance to the default of one or several participants, while the incidence of operational, investment or business risk would normally be expected to result in the failure of the FMI over a longer timeframe.

The following subsections look in more detail at the risks which the FMIs considered here are exposed to, how their failure to cope with them could threaten their financial or operational viability, and how this in turn could undermine financial stability.

(a) Central Counterparties (CCPs)

A CCP is an entity that interposes itself between counterparties to contracts traded in one or more financial markets in order to assume their rights and obligations, acting as the buyer to every seller and the seller to every buyer and thereby ensuring the performance of open contracts. By their nature, CCPs play a central role in managing systemic risk but they also *concentrate* a significant level of financial risk. The implementation of the G20 reforms, with the mandatory clearing of all standardized OTC derivatives, will further increase their systemic importance. According to the latest data from the Bank for International Settlements (BIS), the total notional amounts outstanding of OTC derivatives amounted to \$648 trillion at end-2011, of which more than \$128 trillion were cleared on a CCP. Assuming that only a third of OTC derivatives would be standardized enough to be cleared via a central counterparty, CCPs would, in this low-bound future scenario, concentrate more than \$216 trillion worth of OTC derivative contracts.

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<sup>22</sup> See <http://www.bis.org/publ/cpss94.pdf>

Among FMIs, CCPs are exposed to the greatest variety of risks that could threaten their viability (according to the CPSS-IOSCO risk classification mentioned above, CCPs face legal, credit, liquidity, investment and operational risks). The risks of a CCP becoming insolvent stem mainly from the potential default of a clearing member, potential losses on the CCP investment portfolio, or other business risk.

A typical scenario where a CCP could be exposed to credit and liquidity risks is when one or more of its major members default. The inability of the CCP's member(s) to meet its/their obligations put the CCP itself under financial stress. This stress is exacerbated by the fact that CCPs generally must perform their obligations to their members under tight timeframes. CCPs financial resources are normally designed and calibrated to cope with such extreme events. However, the market conditions prevailing at the time of a major participant's default could lead to heightened volatility and high margin calls on members. As a result, other members of the defaulting CCP could be subjected to funding pressures as a result and this could, in extreme market conditions, lead to a cascade of defaults. Therefore, due to the nature of the interconnectedness between a CCP and its users, the risks can spread easily and widely across other markets and thus affect financial stability as a whole. Default funds and initial and variation margins, are two key means for CCPs to mitigate counterparty credit risks. However, during highly volatile market conditions, the value of the collateral may sharply decline, may become illiquid, and thus the CCP might become unable to absorb losses – or the amounts held in the default fund and initial margins might not suffice to cover the losses of a member's default if they have not been calibrated to withstand such highly volatile markets conditions.

Moreover, market conditions prevailing after the default may impede the CCP to liquidate defaulter's positions. The CCP may have to carry illiquid positions during a long period and keep paying to non-defaulting clearing members variation margins linked to these positions. At some point, the CCP will have exhausted the resources included in its default waterfall and will have to rely on its own resources to perform these payments. In such a scenario, the likelihood of the CCP becoming insolvent will greatly increase if no other actions are taken.

The operational<sup>23</sup> risks which a CCP is exposed to can also result in direct financial losses, and, in time, severely hit the CCP's capital. The financial losses may also result indirectly from the operational incident for example through compensation to its counterparties as a result of lawsuits arising from the CCP's operational failure. Moreover, operational failure can itself directly trigger systemic effects, namely in the financial condition of its members and users. If a CCP suffers an operational risk event, members' and clients' trades and collateral may be in limbo until the problem is resolved, which would certainly cause disruptions to financial markets. To mitigate this risk, CCPs are subject to the obligation to set-up adequate contingency arrangements (EMIR Article 34). The viability of the CCP depends on its ability to address the source(s) of the operational risk in a continuous manner.

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<sup>23</sup> Operational risk refers to the risk of failure from operations caused by a variety of factors such as deficiencies in information systems or internal processes, human errors, management failures, unavailability of critical services provided by major outside service providers, fraud, computer crime or disruptions from external events like natural disasters (e.g. major earthquake) or cyber attacks.

CCPs also face significant credit and market risk via their investment activity. This activity mainly consists of the investment of the collateral received from the CCP's clearing members. The conditions under which CCPs may practice this activity are strictly regulated. Pursuant to EMIR Article 47, CCPs shall only invest in 'highly liquid financial instruments', in order to ensure that the CCP will be able to liquidate these assets quickly after the default of a clearing member with minimal market losses. For that purpose, CCPs are also required to apply conservative haircut policies to the collateral they receive. Apart from its impact on CCP default management, the liquidity of the investments of the CCP ensures that it will be able to return without delay collateral to clearing members that decide to close or reduce their net position.

Despite these safeguards, a CCP may however face situations where its investment policies have not been adequately calibrated, and where the liquidation of its investments generates market losses. In normal circumstances, this may prevent the CCP from returning the amounts of collateral owed to its clearing members in due time. The occurrence of such a situation after the default of a clearing member may significantly increase the losses incurred by the CCP on the liquidation of the defaulter's position and lead the CCP to tap its default funds or, in last resort, its capital.

Failure of a CCP along the above lines would imply that their members would suddenly face very significant counterparty credit risk and replacement costs on trades that were guaranteed by the CCP. If there is a lack of alternatives for performing the same functions as the financially ailing or operationally malfunctioning CCP, the financial stability of the whole system could be at risk – all the more when the uncertainties surrounding the scale and distribution of losses borne by the CCP would damage market confidence and disrupt even further the functioning of financial markets.<sup>24</sup>

The materialization of risks impacting CCPs are likely to trigger contagion effects. CCPs are strongly inter-connected with other FMIs in the post-trading chain, like securities settlement systems and payment systems or interoperated CCPs, thus creating a high risk of contagion, as well as with financial institutions acting as clearing members<sup>25</sup>. As clearing members of a CCP are often also clearing members in other CCPs, the failure of a CCP which would cause losses to its clearing members could indirectly impact other CCPs if these losses would trigger a default of the clearing members. The failure of a CCP could therefore trigger a significant chain reaction in the financial markets. Therefore, intervention of public sector authorities may be necessary to preserve order and function in the market. In this respect, as mentioned above, the forthcoming mandatory clearing through a CCP of standardized OTC derivatives will further increase CCPs' systemic relevance as greater transaction volumes increase their size and concentration of risk. A failing CCP clearing eligible derivatives could also seriously hamper the ability to transact in those products since it could require significant time to find an alternative entity given the quasi-monopoly of certain CCPs on certain market segments and the lack of substitutable service providers.

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<sup>24</sup> For example, historical examples of CCP near-failures (Paris 1974 and Hong-Kong 1987) have led authorities to close the markets they were covering during several days and forced costly bail-outs.

<sup>25</sup> See CPSS (June 2008) for a comprehensive analysis of "Interdependencies of payment and settlement systems." <http://www.bis.org/publ/cpss84.pdf>

## (b) Central Securities Depositories (CSDs)

Most CSDs have three core functions: they record issuances of securities in a book entry system, they maintain securities accounts and they operate securities settlement systems, which ensure the settlement of securities transactions and transfers of collateral. In addition, some CSDs provide currently a number of ancillary services, some of which do not involve additional types of risks other than operational risk – such as the administration of corporate actions and redemptions, and others which involve additional types of risks – such as banking-type of services (granting intraday credit for settlement and taking deposits). The most notable providers of settlement banking services are the two International CSDs (ICSDs), Euroclear Bank and Clearstream Banking Luxembourg. Overall, CSDs play a central role in the settlement of securities transactions and transfers of collateral. EU CSDs handled 930 trillion Euro of settlement volumes in 2010 and were holding 39 trillion Euro of securities at the end of 2010.

Based on the core functions of CSDs, the principal risks they are exposed to are operational and legal risks. Legal risks are particularly relevant in a cross-border context, if the CSD's rules for example regarding settlement finality and netting are not enforceable in other jurisdictions. Specific examples of operational risks relevant to CSDs include: inadequate record keeping or safekeeping of securities, inadequate safeguarding of information, leading to the disclosure of confidential information on securities accounts, system problems, inadequate internal control procedures and fraud.

CSDs which provide banking-type of ancillary services to their participants are subject to specific liquidity and credit risks<sup>26</sup>. These risks are currently mitigated, to some extent, by the scope of such services being limited essentially to intraday deposits and credits related to securities settlement, and by strict requirements for such services, including full collateralisation of credit. However, while the services are limited in scope, the amounts handled are very significant.<sup>27</sup> Furthermore, current risk mitigation measures do not completely eliminate credit and liquidity risks and the possibility of insurmountable financial problems, particularly in a stressed market scenario where collateral loses significant value or is difficult to use.

If managed in a disorderly fashion, the failure of a CSD could have considerable effects on the financial system. It could mean that the securities held in the CSD could not be transferred, at least temporarily. This could spread uncertainty to the finality of settlement instructions entered into before the default of the CSD, and hence the ownership of the securities. The interconnection of CSDs with payment systems, CCPs and other CSDs would contribute to block the settlement of interbank payments. Moreover, as CSDs are used by central banks for the transfer of collateral in monetary policy operations, a CSD failure would impact the ability of central banks to inject liquidity in the banking system. Finally, the very low degree of substitutability of CSD services would make the transfer of activity of a failing CSD to another provider very challenging. To avoid such a scenario, public intervention in

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<sup>26</sup> This applies also to CSDs with securities settlement systems that operate on a deferred net settlement basis and provide guarantees to participants.

<sup>27</sup> For instance, one of the two biggest CSDs in Europe provides each day 80 to 100 billion Euro of intraday credit.

the form of direct financial support, guarantees, or other extraordinary measures may be required.

### 3.2 Possible recovery and resolution tools

At the EU-level, the activities of CCPs are governed by the Regulation on OTC derivatives, central counterparties and trade repositories (EMIR). Among other things, EMIR introduces comprehensive organisational rules for the safe and efficient functioning of CCPs across the EU and requires standardised OTC derivatives to be centrally cleared in a CCP. As for CSDs, the Commission proposal for a Regulation on improving securities settlement in the European Union and on CSDs introduces, among others, common rules for CSDs, which should improve the safety and soundness of CSDs and of securities settlement systems.

However, assessing the adequacy of existing and forthcoming measures in mitigating the likelihood of failure is not the purpose of this paper. As indicated, failure is not fully precluded, for example when the management of risks goes badly wrong. Notwithstanding any provisions in existing and forthcoming legislation to ensure robust risk management and take corrective action in the event of problems, what is at stake here is whether possible extraordinary measures should be foreseen to mitigate the systemic and public consequences of a failure of a CCP or a CSD, ensure continuity of their essential services, and minimise costs for taxpayers<sup>28</sup>. The discussion and questions below focus on whether such a framework for CCPs and CSDs should be developed and what it should consist of.

#### 3.2.1 Discussion and questions

##### a) General

Following the general approach adopted by the FSB, suitable measures and powers should exist to make feasible the resolution of any financial institution without causing systemic disruption or exposing taxpayers to losses. In the case of CCPs and CSDs operating in the EU single market, these should ensure a level playing field among FMIs together with non-discriminatory treatment and legal certainty for their users who could be affected.

#### Questions:

1. *Do you think that a framework of measures and powers for authorities to resolve CCPs and CSDs is needed at EU level or do you consider that ordinary insolvency law is sufficient?*
2. *In your view, which scenarios/events might lead to the need to resolve respectively a CCP and a CSD? Which types of scenarios CCPs/CSDs and authorities need to be prepared for which may imply the need for recovery actions if not yet resolution?*

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In this respect it should be noted that the proposed framework for the recovery and resolution of banks will already provide a safer environment for numerous stakeholders including FMIs. In case of an imminent failure of a bank, the new tools will allow authorities to keep the critical parts of the bank in operation and ensure continuity of payments of margin and other key services. In this way the CCPs and other FMIs will face less risk that some of their members would default on their obligations and transmit problems to FMIs and its members and other clients.

3. *Do you think that existing rules which may impact CCPs/CSDs resolution (such as provisions on collateral or settlement finality) should be amended to facilitate the implementation of a resolution regime for CCPs/CSDs?*
4. *Do you consider that a common resolution framework applicable to CCPs and CSDs is desirable or do you favour specific regimes by type of FMIs?*
5. *Do you consider that it should only apply to those FMIs which attain specific thresholds in terms of size, level of interconnectedness and/or degree of substitutability, or to those FMIs that incur particular risks, such as credit and liquidity risks, or that it should apply to all? If the former, what are suitable thresholds in one or more of these respects beyond which FMIs are relevant from a resolution point of view? What would be an appropriate treatment of CSDs that do not incur credit and liquidity risks and those that incur such risks?*
6. *Regarding FMIs (some CSDs and some CCPs) that are also credit institutions, is the proposed bank recovery and resolution framework sufficient or should something in addition be considered? If so, what should the FMI-specific framework add to the bank recovery and resolution framework? How do you see the interaction between the resolution regime for banks and a specific regime for CCPs/CSDs?*

b) Objectives

Resolution should, consistent with the FSB principles, ensure the continuity of critical services, preserve financial stability, avoid contagion and an unnecessary destruction of value, and guard against losses for taxpayers. In the case of CCPs and CSDs, the most critical is the continuity of systemically important functions and services since financial market participants, central banks, and other institutions rely upon FMIs to conduct critical payment, clearing, settlement, and recording functions on a reliable and timely basis to process financial transactions, channel monetary policy, and transfer funds around the world.

In addition to the high level objectives, more operational objectives could also be set such as:

- Adequate preparation for failure of CCPs/CSDs,
- Ensure resolvability of CCPs/CSDs,
- Provide legal certainty and predictability about the triggering of resolution,
- Develop adequate resolution powers and tools for CCPs/CSDs,
- Develop coordination mechanisms among different jurisdictions and authorities to manage resolution of CCPs/CSDs in a way that considers the impact of actions on other FMIs and financial service providers.

*Questions:*

7. *Do you agree that the general objective for the resolution of CCPs/CSDs should be continuity of critical services?*
8. *Do you agree with the above objectives for the resolution of CCPs/CSDs?*
9. *Which ones are, according to you, the ones that should be prioritized?*
10. *What other objectives are important for CCP/CSD resolution?*



c) Recovery and Resolution plans

Ensuring that the objectives above can be met requires a series of preventive steps. These include plans setting out ways for institutions to restore their viability in the event of adverse developments (recovery plans) and plans for authorities to restructure an institution in order to ensure the continuity of its essential functions and preserve financial stability (resolution plans).

Recovery plans prepared by the FMIs should guide how to stabilise an FMI undergoing financial or operational stress. Resolution plans prepared by authorities should first assess the resolvability of FMIs (i.e. whether the objectives of resolution can be achieved within the timeframe available). Based on this assessment, authorities should have the power to request changes in the operation of FMIs to ensure and facilitate their resolvability. Second, resolution plans should provide a roadmap for authorities how the resolution of a failed FMI can be carried out in the most efficient way. Resolution plans of FMIs should in particular contain all the information necessary to preserve the essential functions of an institution in different stress-scenarios.

*Questions:*

11. *What should be the respective roles of FMIs and authorities in the development and execution of recovery plans and resolution plans? Should resolution authorities have the power to request changes in the operation of FMIs in order to ensure resolvability?*
12. *To what extent do you think that CCPs/CSDs in cooperation with their users would be able to define efficient recovery and resolution plans on the basis of amendments to their contractual laws?*

d) Resolution triggers

Resolution should be initiated when a firm is no longer viable or likely to be no longer viable, and has no reasonable prospect of becoming so. A condition for resolution is that its failure and the disruption of its services would have systemic implications for other parts of the financial sector and the economy. Otherwise, normal insolvency procedures should apply.

There is a need for flexibility in the triggering decision as it is very difficult to predict in advance the conditions which will justify recourse to resolution. However it is also important to ensure predictability for stakeholders given the potential impact of resolution powers on these entities. To this end certain key indicators might need to be selected even if their triggering value is not pre-defined. Depending on the FMI, authorities, the FMIs themselves, and the affected stakeholders could benefit from meaningful triggers in terms of when an FMI's solvency, systems, risk management controls, and operations are poised to fail imminently and pose a risk to financial stability.

Considering the systemic nature of many FMIs, the framework could also enable authorities to intervene, if necessary, when an entity is in breach of its regulatory requirements, but before any resolution triggers are affirmatively hit. Such action could involve, for example, requiring the FMI to adopt changes to its contractual terms. This could be a way to mitigate

the worsening of an ailing FMI's situation, return it to a healthier state, and avoid the need for resolution.

*Questions:*

13. *Should resolution be triggered when an FMI has reached a point of distress such that there are no realistic prospects of recovery over an appropriate timeframe, when all other intervention measures have been exhausted, and when winding up the institution under normal insolvency proceedings would risk causing financial instability?*
14. *Should these conditions be refined for FMIs? For example, what would be suitable indicators that could be used for triggering resolution of different FMIs? How would these differ between FMIs?*
15. *Should there be a framework for authorities to intervene before an FMI meets the conditions for resolution when they could for example amend contractual arrangements and impose additional steps, for example require unactivated parts of recovery plans or contractual loss sharing arrangements to be put into action?*

e) Resolution powers

Authorities need special powers to carry out effective resolution of entities meeting the above conditions. These involve extensive and comprehensive powers of intervention in the management and corporate structure of the institution, in order to preserve the functioning and viability of critical functions. In the context of the resolution tools (discussed in the next part below), for the resolution of some FMIs, these powers could consist of the following:

- Remove and replace the senior management;
- Appoint an administrator;
- Operate and resolve the entity including taking commercial decisions to restructure or wind down the entity's operations;
- Transfer or sell specified assets or liabilities to a third party entity;
- Establish a temporary bridge institution to take over certain critical functions;
- Separate non-performing assets into a distinct vehicle;
- Recapitalise an entity by amending or converting the terms of specified parts of the balance sheet of the entity in order to allow for the continuity of essential functions;
- Override rights of shareholders of the firm in resolution;
- Temporarily stay the exercise of early termination rights;
- Impose a moratorium on payment-flows<sup>29</sup>;
- Effect the closure and orderly wind-down of the entity.

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<sup>29</sup>

The Key Attributes state that resolution authorities should have the power to impose a moratorium with a suspension of payments, except for payments to CCPs and those entered into payment, clearing and settlement systems. This exception is important since a moratorium on payments in a CCP, payment system or SSS would mean a full or partial stoppage of the system, which is against the objective of continuity of critical functions. However, there may be rare circumstances where a moratorium may buy time to stabilise the situation, especially for FMIs that do take credit risk. A moratorium on their credit activity may avoid that losses linked to this activity build up. For those FMIs that do not take credit risk, the benefit of such a moratorium does not seem warranted.,

In the case of FMIs, some of the above resolution powers are especially relevant. The objective of continuity of essential services and functions would for instance require other companies in the same group or an acquiring entity to cooperate in an overriding sense to guarantee those essential services. A FMI's main mission is to continuously provide services to the rest of the financial system by facilitating the conclusion and central handling of transactions. A temporary stay on the exercise of early termination rights that may otherwise be triggered upon entry of a firm into resolution or in connection with the use of resolution powers could also be relevant, in order to prevent users or counterparties from closing out or amending contracts and hamper the viability and value of the resolved FMI in a way counter to the objectives of resolution.

*Questions:*

*16. Should resolution authorities of FMIs have the above powers? Should they have further powers to successfully carry out resolution in relation to FMIs? Which ones?*

*17. Should they be further adapted or specified to the needs of FMI resolution?*

*18. Do you consider that temporary stay on the exercise of early termination rights could be a relevant tool for FMIs? Under what conditions? How should it apply between interoperated FMIs? How should it be articulated with similar powers to impose temporary stays in the bank resolution framework?*

*19. Do you consider that moratorium on payments could be a relevant tool for all FMIs or only some of them? If so, under what conditions?*

f) Resolution tools

(a) Reorganisation tools

Authorities should have a variety of ways to carry out resolution, depending on the nature of the entity and crisis in question. CPSS-IOSCO has considered to what extent the resolution tools developed by the FSB can be applied to FMIs, taking into account the inherent specificities of FMIs. The report underlines that an FMI should be subject to resolution regimes "in a manner as appropriate to FMIs and their critical role in financial markets", therefore proposing FMI-specific approaches to recovery and resolution. In relation to the main resolution tools outlined in the proposed Directive on bank recovery and resolution, the following remarks can be made.

- The transfer of all or part of operations to a healthy market player could be an effective resolution tool for FMIs. This way the continuity of FMI services could be maintained. However, the transfer of certain FMI-functions to other service providers may not be carried out easily and quickly due to the specificities of this sector. Finding a private sector purchaser for an FMI may be more difficult than for a bank due to the fewer number of firms in the industry (e.g. especially OTC derivatives CCPs) and the different nature of the FMI's assets and liabilities. Even if a substitute provider is available, operational constraints such as system incompatibility (e.g. IT

infrastructures, accounts identification) may be an obstacle to effecting such a transfer<sup>30</sup>. Moreover, many FMIs are mutually-owned by their members and, for competition reasons it may not be desirable to transfer their ownership to a single private purchaser.

- Due to the difficulties in transferring FMIs promptly to other market players, the establishment of a bridge institution could be particularly useful for failed FMIs. The FMI or critical parts thereof could be operated in a temporary bridge institution for example at cost-recovery basis, effectively as a utility. This tool would give time for authorities to find a private sector acquirer and until then ensure the continuity of systemic services.
- The core assets of an FMI (its technical facilities and processes, infrastructure, know-how etc.) are different from those of banks. They are also less likely to cause losses in a way that transferring certain 'bad' assets to a separate asset management company would be useful. Therefore this tool would possibly be less used in an FMI resolution but could also present advantages in certain cases.

(b) Loss allocation and refinancing tools

Consistent with the FSB approach of ensuring that the owners and creditors of financial institutions bear losses before the commitment of public funds, loss allocation tools should also be envisaged in order to recapitalise an FMI. Writing down the debt of failed institutions or converting debt to ownership in the entity (bail-in) could be applied in a modified way for FMIs than for banks. Since FMIs typically do not issue debt as such, there is no instrument giving rise to a liability to haircut or convert to equity. However, losses can be spread among members in a way which, from an economic point of view, can amount to the same thing. Similar arrangements already exist for certain FMIs (e.g. default funds for CCPs in the event of a member default, or loss-sharing agreements between members) and are particularly relevant for FMIs that take principal exposures to their participants. However, for now these arrangements are primarily designed for managing the losses arising from the default of a participant in a CCP, not for recapitalising the CCP to keep it in business. If an FMI goes into insolvency (for reasons other than a member default), or where the losses exceed the ex ante funds or loss-sharing capacity available, these additional losses will need to be allocated and might require ex ante arrangements.

More specifically, to resolve and allocate losses of a CCP, the following options have been raised:

(i) applying haircuts to initial margins: the advantage of this approach is that it would apply haircuts to resources already available at the CCP and can therefore be immediately used. However, initial margins would need to factor this possibility in, and could need to be raised. If used, they would then also need to be replenished, which would imply liquidity calls on the clearing members. Unlike specific liquidity calls on CCP members or ex post allocation to

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<sup>30</sup> This should be analysed in the resolution plans of FMIs.

recover, the replenishment of initial margins could however be smoothed over time to mitigate its countercyclical impact.

(ii) applying haircuts to variation margins: CCPs could use the variation margins paid by the clearing members with positions 'out-of-the-money' and would not transfer this sum to the clearing members 'in-the-money'. The advantage of this solution is that liquidity is actually available since these payments are anticipated by the clearing members who have to pay these margins anyway. Furthermore it does not have pro-cyclical effects for the members who pay. The disadvantage is that it can have a pro-cyclical effect for members who do not receive the payment of variation margins. In addition, random allocation of losses between the clearing members would necessitate ex-post adjustments.

(iii) specific liquidity calls on CCP members: such arrangements would have the advantage to avoid the random allocation of losses implied by the previous arrangement. However it might potentially be more pro-cyclical since this solution involves an unanticipated call of funds on all members.

(iv) the use of resolution funds with an ex-ante insurance mechanism: such mechanism avoids the negative countercyclical impact, since resources would be available ex-ante. However, to be efficient, it would need to be adequately calibrated. The management of such funds and its opportunity cost would also need to be carefully assessed,

(v) converting CCPs' debt to equity; CCPs could issue specific capital instruments convertible into equity on resolution. Contrary to the previous tools, the burden would not only rely on clearing members.

For CCPs, the industry has considered some financing tools compatible with current contractual arrangements and applicable national insolvency laws. The main options which have been considered are the application of a haircut on variation margins to finance the positions held by the CCP after a default when the resources included in its waterfall have been exhausted. As a last resort, it is also contemplated that the CCP could terminate ('tear-up') the illiquid contracts that the CCP has not been able to liquidate<sup>31</sup>.

To be sure, any loss-sharing and recapitalisation arrangements would need to reflect the hierarchy of creditors in insolvency, subject to any contractual agreements between the FMI and its owners and creditors deviating from this. They should also further and carefully balance the objectives of ensuring efficient central clearing and robust internal CCP risk management together with controlling against moral hazard and an excessive build-up of uncontrolled risk.

*Questions:*

*20. Which reorganisation tools could be appropriate for resolving different types and CSDs and CCPs? What would be their advantages and disadvantages?*

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<sup>31</sup> More precisely, as the objective of the CCP is to return to a balanced net position, it would terminate contracts with non-defaulting clearing members for an amount equivalent to the contracts held on behalf of the defaulter.

21. Which loss allocation and recapitalisation tools could be appropriate for resolving different types of CSDs and CCPs? Would this vary according to different types of possible failures (e.g. those caused by defaulting members, or those caused by operational risks)? What would be their advantages and disadvantages?

22. What other tools would be effective in a CCP/CSD resolution?

23. Can resolution tools based on contractual arrangements be effective and compatible with existing national insolvency laws?

g) Group resolution

The failure of one of the CCPs or CSDs within a group could spill-over to other group entities, even in the absence of direct exposures between them. Therefore it is likely that the effects of the resolution of one of the CCPs or CSDs within the group would impact others in the group. For instance, in a group comprising several CCPs, the default of one CCP might spill over on the other CCPs. The same issue could also arise within a group composed of a CCP and a CSD, the failure of the CCP might have contagion effects on the activities of the CSD.

*Questions:*

24. Do you consider that a resolution regime for FMIs should be applicable to the whole group the FMI is a part of? What specific tools or powers for the resolution authorities should be designed?

h) Cross border resolution

Many CCPs and CSDs operate across borders<sup>32</sup>, either via different legal entities in other countries, via links with other FMIs or simply by dealing in multiple currencies, time zones and jurisdictions. For example, CCPs operate across borders on a global basis, with clearing members from different countries. Interoperable links between CCPs can also lead to cross-border transfers of risk.

There are two main CSD groups in the EU, which are present in several jurisdictions; most other CSDs have nevertheless a cross-border element to their operations by having established links with CSDs in other countries, i.e. arrangements for opening accounts with another CSD to allow participants to settle securities issued in that CSD.

The failure and potential resolution of such cross-border FMIs could affect multiple EU Member States and third countries. Resolution of FMIs operating within the EU and those having operations outside of the EU could be carried out under different cooperation frameworks.

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<sup>32</sup> The FSB has developed 4 safeguards aimed at facilitating the development of cross-border central clearing: multilateral cooperative oversight arrangements, liquidity provision, resolution of CCPs and access.

National resolution authorities could cooperate in a college format with the participation of and, in the event of disagreements<sup>33</sup>, mediation function of the European Supervisory Authorities (ESAs). Existing supervisory colleges which have been set up for certain FMIs (e.g. CCPs) could be built on. Colleges could be involved on recovery and resolution plans, measures to ensure resolvability of FMIs and on triggering and executing a resolution.

**Cross-border cooperation** is crucial to address the potential effects of the resolution of an FMI beyond its home-country. Given the conditions of market stress under which a resolution would be triggered, a **swift decision-making process** is also key to the success of resolution. **Cooperation arrangements should therefore be organized** to accommodate the objectives of an appropriate consultation of non-domestic authorities and efficiency in taking the decisions. To avoid possible undesirable effects for the ordinary functioning of FMIs, the interaction between any divergent insolvency and resolution laws applicable to FMIs and their members should also be clear.

Cooperation with third country authorities could be executed under bilateral cooperation agreements which would ensure an efficient exchange of information between the various relevant authorities involved in the resolution.

Finally, a key-condition to the efficiency of recovery/resolution relates to the enforceability on a cross-border basis of the decisions taken by the resolution authority. A cross-border recognition regime is indeed needed between jurisdictions where FMIs are active - especially when an FMI is registered under multiple jurisdictions.

#### *Questions:*

- 25. In your view, what are the key elements and main challenges to take into account for the smooth resolution of an FMI operating cross-border? What aspects and effects of any divergent insolvency and resolution laws applicable to FMIs and their members are relevant here? Are particular measures needed in the case of interoperable CCPs or CSDs?*
- 26. Do you agree that, within the EU, resolution colleges should be involved in resolution issues of cross border FMIs?*
- 27. How should the decision-making process be organized to make sure that swift decisions can be taken? Alternatively, do you think that responsibility for resolving FMIs should be centralised at EU-level?*
- 28. Do you agree that a recognition regime should be defined to enable mutual enforceability of resolution measures?*
- 29. Do you agree that bilateral cooperation agreements should be signed with third countries?*

#### i) Safeguards

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<sup>33</sup> Consistent with e.g. ESMA's mandate as per Article 19 of Regulation (EU) No 1095/2010

Pursuant to the 'no creditor worse off principle', resolution should be carried out in such a way that the creditors of the resolved entity would not be in a worse position than would have been the case upon application of a normal insolvency procedure. Appropriate means could be designed to allow for compensation when this is not the case. The normal hierarchy of claims in insolvency and equal treatment of creditors of the same class should also apply to the extent possible. Some solutions which could be envisaged for loss allocation in the case of CCPs in order to safeguard financial stability might depart from this principle. For instance, solutions based on haircutting initial or variation margins imply that the losses would be borne by the members of the CCP while others like the shareholders of the CCP would be less impacted.

*Questions:*

30. *Do you agree that the resolution of FMIs should observe the hierarchy of claims in insolvency to the extent possible and respect the principle that creditors should not be worse off than in insolvency?*

#### **4. INSURANCE AND REINSURANCE FIRMS**

##### **4.1 Introduction – how can the failure of insurers threaten financial stability<sup>34</sup>?**

It is usually acknowledged that insurers tend generally to create fewer risks for the stability of the financial system than banks. Unlike in banking where losses are normally generated and transmitted through the financial system very quickly, traditional insurance business is less prone to contagion effects than banks. It is also less likely to see sudden redemption of policies compared to withdrawals of deposits from banks. Moreover the business involves mainly idiosyncratic risks on the liabilities side, does not use extensive leverage, is normally less exposed to liquidity risk, and is generally substitutable for policyholders. However, insurers may also create risks for financial stability, for example when they are highly interconnected to the rest of the financial system, or when they are highly interconnected to the real economy and are not readily substitutable.

The International Association of Insurance Supervisors (IAIS) discusses what systemic risk means for insurers at a global level in their paper "*Insurance and Financial Stability*".<sup>35</sup> They accept the applicability of the three assessment criteria proposed by the FSB, IMF and BIS, namely size, interconnectedness and substitutability, and suggest adding timing as a fourth criterion in an insurance context since the speed of a shock determines how well the financial system can absorb it<sup>36</sup>. The IAIS is currently developing a methodology for identifying individual global systemically important financial institutions (G-SIFIs), based on the FSB's

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<sup>34</sup> [The discussion on the insurance sector is focused primarily on systemically relevant insurers. However, the criteria for what constitutes a systemic insurer are not discussed in detail. These are being developed at international level \(http://www.iaisweb.org/Consultations-918\) and are not prejudged here. The possible framework of measures set out in this section nonetheless anticipates that this instrumental work will be concluded, after which its findings will help inform the appropriate scope of any future work on recovery and resolution.](http://www.iaisweb.org/Consultations-918)

<sup>35</sup> [http://www.iaisweb.org/temp/Insurance\\_and\\_financial\\_stability.pdf](http://www.iaisweb.org/temp/Insurance_and_financial_stability.pdf)

<sup>36</sup> International Association of Insurance Supervisors (2009): *Systemic Risk and the Insurance Sector*



definition, and relevant policy measures taking into consideration the specificities of the insurance business.

The IAIS and other international bodies distinguish in their assessment of systemic risk between traditional insurance activities, non-traditional insurance activities and non-insurance activities. Below we explore the common features of these three types of activities in relation to systemic risk.

#### 4.1.1 Traditional Insurance

There is no clear-cut definition of traditional insurance business but it generally involves underwriting large diversified pools of mostly idiosyncratic risks, funded by premiums paid upfront. The following features of traditional insurers can be argued to make them less vulnerable to systemic shocks and less likely to be a source of contagion through the financial system in the event of failure.

##### a) Funding model

Policyholders pay premiums upfront and contractual payments are generally only made when an insured event has occurred. Although policyholders may have the choice to surrender their policy prematurely, they would not generally receive any repayment of premiums. While there are some exceptions, such as certain life insurance products with demand deposit features, these generally come with surrender penalties that provide a disincentive to policyholders to cash in their policies early. A large majority of insurance liabilities are thus not prone to sudden withdrawals.<sup>37</sup> Also, since insurance business is mostly self-funded through premium income, other market participants do not tend to have large holdings of securities issued by insurers or be otherwise heavily exposed to them<sup>38</sup>.

##### b) Idiosyncratic risks in liabilities

Insured events are usually idiosyncratic. Insurers generally aim to diversify risks over lines of business, geography and time. Insurance claims are thus not likely to significantly increase in times of financial turmoil. However, a catastrophic event may result in a large amount of unexpected claims, especially for non-life insurers. Nonetheless, these tend to be settled over an extended period<sup>39</sup>. During this period, insurers usually continue to receive premiums, reducing the need for fire sales of financial assets to provide liquidity. In addition, losses from catastrophic events tend to be significantly less than losses associated with the failure of a major bank<sup>40</sup>, and be spread over several insurers and reinsurers<sup>41</sup>.

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<sup>37</sup> Where insurers have failed in the past, "runs" on traditional insurance business have been few and on a much smaller scale than runs in the banking sector.

<sup>38</sup> Some banks have begun to provide derivative protection for insurance products but this is not currently widespread.

<sup>39</sup> For example, according to data from the Reinsurance Association of America, it took seven quarters for the settlement of reinsurance claims attributed to the loss of hurricane Katrina (2005) to reach 60% and 11 quarters for the settlement of the losses of the World Trade Centre (2005) to reach 60%.

<sup>40</sup> Geneva Association (2010): *Systemic Risk in Insurance: an analysis of insurance and financial stability*, Exhibit 33 During the 2007-2009 financial crisis, losses in the insurance industry were only one sixth of the size of those in the banking industry, and insurers raised only one ninth the amount of

c) Asset-liability management

On their asset side, insurers are exposed to risk that is correlated with the business cycle through their holdings of fixed income and equity securities. This is particularly the case for life insurers which rely on investment returns to fulfil their obligations. They can be affected by falls in equity or bond markets, falls in interest rates and increased volatility<sup>42</sup>. Nevertheless, to the extent that insurers successfully manage the risks and duration of their assets and liabilities, they can be less at risk from market fluctuations than banks.

d) Orderly wind-down

If an insurer were to fail, in most cases the business could be run off in an orderly way. Insurance liabilities normally mature over time and insurance failures often extend over several years. This generally allows the insurer to recover the fair market value of its assets, avoiding fire sales. In addition, policyholders cannot easily withdraw money from an insurer (due to the surrender penalties) so there is no immediate need for liquidity as in a bank failure. Instead, claims can usually be settled in the normal way.

e) Substitutability

While the policyholders of a failed insurer may lose out, also potentially very severely in case of life insurers, as most insurance markets tend to be competitive with low barriers to entry policyholders would nonetheless be able to find cover elsewhere for the future<sup>43</sup>.

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new capital. Measured as a proportion of shareholders' equity, losses in the insurance sector were 2.6 times smaller than those in the banking industry, and new capital raised was 3.5 times smaller.

<sup>41</sup> Nevertheless, government intervention has been seen in both the UK and US in the terrorism insurance market. In the UK, following the Baltic Exchange Bomb in 1992 insurers stopped including terrorism cover in their commercial insurance policies due to the high potential losses and lack of any reliable method of estimating what the future loss experience might be. Since the lack of availability of terrorism cover could have adverse consequences for the UK economy, the UK government and the insurance industry set up Pool Reinsurance Company Limited, a mutual reinsurance fund for terrorism insurance backed by the UK government. While no government funds have been needed to date, the explicit government guarantee was considered necessary for the terrorism insurance market to function. See for example <http://www.telegraph.co.uk/finance/2864584/OFT-launches-probe-into-Pool-Res-competitiveness.html>. However, it is worth noting that this government intervention was triggered not by the failure of an insurer but the repricing of risk following a major terrorist attack.

<sup>42</sup> In the recent financial crisis, for example, life insurers have experienced losses mainly from a fall in equity values and a widening of spreads on corporate bonds. Some important European insurers have reported particularly severe losses and have been forced to inject large amounts of new capital. For example: Allianz, losses of 7.3 billion USD and a capital injection of 2.0 billion USD; Aegon NV, losses of 7.9 billion USD and a capital injection of 4.1 billion USD; AXA, losses of 1.8 billion USD and a capital injection of 2.0 billion USD. Source: European Commission staff working document (2010): *Impact Assessment accompanying document to the White Paper on Insurance Guarantee Schemes*, Figures 17, 18 and 19

<sup>43</sup> For example, after Hurricanes Katrina, Rita and Wilma on the US Gulf coast in 2005 reduced capacity in the market, rates on commercial property insurance in the US rose for only two quarters before continuing their downward trend. Source: The Council of Insurance Agents and Brokers However, even if insurance failures seldom cause funding pressures on wholesale markets, this is not to downplay their significant disruptive effects on individual policyholders. Savings tied up in life insurance policies can be hit hard if the insurer fails. Wealth tied up in homes can be lost if, say, a natural disaster damages the

For the reasons described above, the IAIS concludes that "The characteristics of the insurance business model...make it very unlikely for traditional insurance to be systemically relevant" at a global level<sup>44</sup>. It could be concluded that even a large traditional insurer is less likely to be interconnected, funded or indispensable in a way which would be systemically important or damaging in the event of failure. However, there may be a higher risk that traditional insurance could be systemically important at a regional or national level. For example, if economic losses are large relative to the size of the local economy or an insurer is dominant in a local market, a government might come under pressure to use public funds to protect consumers and/or the economy

#### 4.1.2 Insurance that is highly interconnected with the rest of the financial system

While traditional insurance is less risky for the rest of the financial system, some types of activities conducted by insurers are more inter-connected and may risk being a source of financial contagion. Financial innovation and widespread use of financial instruments transferring risks have amplified this trend. A contributing factor to the financial crisis was the growing interconnectedness among market participants (banks, hedge funds, brokers), including insurance companies, which amplified shocks into systemic events. These types of activities are explored below.

##### a) Non-traditional insurance activities

While the line between traditional and non-traditional insurance is not clear-cut, some types of insurance have non-standard characteristics that make them more interconnected with the rest of the financial system. For example, firms may insure risks that are more correlated with the business cycle rather than being idiosyncratic. For example, bond insurance is tightly connected to the real economy and major banks that have large exposures to bond markets<sup>45</sup>. While bond insurance business is small in terms of premiums, it covers USD 2.3 trillion of financial assets and some providers have a large market share<sup>46</sup>. This segment of the industry has experienced severe difficulties in the past few years, and these products are becoming less substitutable due to a reduction in new bond insurance being written.

##### b) Non-insurance activities

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assets and causes insurers to fail. While the channel of contagion on the economy operates differently, collectively such individual losses can even generate system-wide effects.

<sup>44</sup> International Association of Insurance Supervisors (2011): "*Insurance and Financial Stability*" p16. Indeed, during the 2007-2009 financial crisis, while the inter-bank lending market froze and the cost of credit for businesses and consumers increased, insurance markets remained open and premiums stable. Most insurance firms weathered the financial crisis without severe losses, and those that ran into trouble were affected mainly through their non-traditional or non-insurance business.

<sup>45</sup> Bond insurers tend to have highly concentrated and undiversified portfolios, high leverage ratios and a high dependence on their own credit rating. This means that the downgrade of a bond insurer could have a systemic impact because the holders of securities they have guaranteed immediately face a devaluation of the securities and mark-to-market losses, forcing them to reduce their exposures or suddenly commit more capital to holding lower-rate assets. This means that losses are transmitted very quickly through the financial system. This was seen in 2008 when bond insurers such as Ambac and MBIA lost their AAA credit rating.

<sup>46</sup> Geneva Association (2010): *Systemic Risk in Insurance: an analysis of insurance and financial stability*, p59-60

Non-insurance activities are sometimes undertaken in a group together with insurance activities. This may be through a non-insurance subsidiary of an insurance group or of an insurance-led financial conglomerate.

While insurance and non-insurance activities are undertaken through different legal entities, they are nevertheless connected through a common parent. While operations in different financial sectors in the same group can provide diversification, they can also mean that an insurance entity can be a source or recipient of financial contagion for the other entities in the group, for instance through intra-group transactions,<sup>47</sup>

Directive 2002/87/EC<sup>48</sup> (FICOD) sets out requirements on the prudential supervision of entities in a financial conglomerate in order to identify manage and monitor group risks including contagion, concentration and the complexity of managing different legal entities. A more fundamental review of the FICOD is expected to take place in the coming years (a draft report is to be published by the Commission by the end of this year), with the aim to ensure a more thorough group supervision<sup>49</sup>. While the fundamental review is to assess the need to widen the scope of group supervision and thus include also risk stemming from non-financial and non-regulated entities this is not intended to specifically capture systemic risk or address possible consequent steps in terms of recovery and resolution.

Another example of a non-insurance activity undertaken by some insurance groups that could be systemically relevant is writing derivatives, including credit default swaps (CDSs). Insurers are net sellers of CDS protection but usually through unregulated entities within a group since insurance entities are prohibited from using derivatives for purposes other than hedging or efficient portfolio management. However, if the parent company is guaranteeing the trade, this poses a risk to the whole group, including the insurance entity<sup>50</sup>.

c) Short-term funded insurers

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<sup>47</sup> One example is ING, an insurance-bank conglomerate which faced difficulties in 2008 due to the exposures of its banking operations to mortgage-backed securities. In October 2008 the group received a capital injection from the Dutch government of €10 billion, of which €2.8 billion was in ING Insurance. Source: International Association of Insurance Supervisors (2011): "*Insurance and Financial Stability*" p38

<sup>48</sup> Directive 2002/87/EC on the supplementary supervision of credit institutions, insurance undertakings and investment firms in a financial conglomerate.

<sup>49</sup> The report will assess a number of areas among which the scope of application (enlargement of the perimeter), the supervisory powers and the enforcement provisions.

<sup>50</sup> A well-known example of this is the failure of AIG in 2008. The activities of its largely unregulated non-insurance subsidiary, AIG Financial Products (AIGFP), in providing CDSs brought the whole group to the point of failure. USD 440 billion in CDSs written by AIGFP were guaranteed by AIG Holding. Although AIG did not post collateral when it wrote the contracts it agreed to post collateral if the value of the underlying securities dropped, or if AIG's long-term debt ratings were downgraded. Following downgrades of US subprime securities in 2007, AIG received cash collateral demands from counterparties. Coupled with unrealised market valuation losses, this put pressure on AIG's own credit rating, which was subsequently downgraded, triggering further collateral calls. As the firm's financial situation deteriorated, its trading partners unwound USD 24 billion of securities lending business transactions in a matter of days, creating a large liquidity shock. In September 2008 the firm was unable to meet collateral calls and was bailed out by the U.S Treasury. By the end of 2009, AIG had received USD 182 billion of government support.

Some insurers use their credit-worthiness to issue short-term funding notes such as commercial paper, and reinvest the funds in assets offering a higher return. Others use securities from their investment portfolios to obtain short-term funding, lending them to counterparties such as short sellers or banks in return for stock collateral or cash, or by using them as collateral to secure funds through repos or loans. These kinds of activities can generate profits with low residual risk. However, they could be systemically risky if used to an excessive extent and with inadequate liquidity and collateral management. A sudden of short-term funding could trigger forced sales of illiquid assets, driving down asset values. If the insurer were to default on its obligation to return cash or collateral this would cause losses for the holders of those securities, which are often banks<sup>51</sup>.

d) Reinsurers

Reinsurers provide insurance for primary insurance firms. Although they are classed as traditional insurance, they are highly inter-connected with the rest of the insurance industry because their clients are insurers. The failure of a reinsurer could affect primary insurance firms. However, inter-linkages between reinsurers and also between primary insurers are comparatively limited, so that reinsurance shocks would in any case be limited to the reinsurer's direct customers<sup>52</sup>.

*4.1.3 Insurance that is highly interconnected with the real economy and is not readily substitutable*

Most types of insurance are readily substitutable due to competitive markets and low barriers to entry. However, there are certain types of insurance which have more concentrated markets and on which the real economy relies to carry out business. If one of these insurers were to fail and exit the market at short notice, the market might not be able to absorb the extra capacity quickly enough to meet the needs of the real economy. Some examples of these types of insurance are given below.

a) Compulsory insurance

Examples of compulsory insurance are motor insurance, employers' liability insurance, professional indemnity insurance and warranty insurance.. To be potentially considered systemically important, a provider of compulsory insurance would have to be large enough that the remaining insurers in the market would not have the capacity to take on the policyholders of the failed insurer within a short time frame. It is unlikely that the global

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<sup>51</sup> This was demonstrated by AIG which invested more than 60% of its securities-lending collateral in mortgage-backed securities. When securities-lending transactions stopped, AIG was unable to liquidate its assets and return the collateral. See also FSA proposed guidance on liquidity swaps (July 2011) [http://www.fsa.gov.uk/pubs/guidance/gc11\\_18.pdf](http://www.fsa.gov.uk/pubs/guidance/gc11_18.pdf) and the Commission's Green Paper on Shadow Banking [COM(2012) 102]

<sup>52</sup> This is in line with the IAIS conclusion in their Reinsurance and Financial Stability paper: "The findings are in line with the IFS paper: traditional reinsurance is unlikely to cause, or amplify, systemic risk." <http://www.iaisweb.org/Media-and-Surveillance-51>

insurance market would be significantly disrupted, but it is possible that part of the EU market could be.<sup>53</sup>

b) Trade credit insurance

Another example is trade credit insurance, which is the means by which a business receives protection against losses incurred by late payment or failure to pay by its buyers. Trade credit insurance is important for the real economy because it protects businesses against potentially crippling losses and because it enables businesses to obtain bank credit which they might not otherwise be able to obtain. It is very widely used in the EU<sup>54</sup>.

The risks insured by trade credit insurers are correlated with the business cycle rather than idiosyncratic. In the recent financial crisis, major credit insurers reduced their exposures to certain countries, sectors and buyers as their loss ratios rose, leaving some suppliers with reduced levels of coverage or no coverage at all. The trade credit insurance sector is heavily concentrated with three main players dominating the global market, and smaller providers were not able to fill the gap. This made it harder for businesses to manage their credit risks and to obtain bank credit. Concerns about the ability of businesses to survive led to calls for government intervention in some countries<sup>55</sup>. The failure of a large trade credit insurer could have a similar impact on the real economy if the market was not able to absorb the extra capacity in a short period of time.

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<sup>53</sup> An example of a failure that caused significant disruption at a domestic level is HIH, Australia's second largest insurer and a major provider of compulsory warranty insurance cover for the building industry, in 2001. When it collapsed, builders found it difficult to replace the cover in some states, leaving them unable to operate. The HIH Royal Commission stated that "The cost to the building and construction industry alone has forced state governments to spend millions of dollars of public money to prevent further damage to the industry" (The HIH Royal Commission, *The Failure of HIH Insurance*, Volume 1, A corporate collapse and its lessons, Canberra 2003). The IAIS note that while "the demise of HIH did not have systemic impacts on a global scale, one could argue that developments with respect to economic losses, contagion and substitutability displayed certain features of domestic systemic importance" (International Association of Insurance Supervisors (2011): "*Insurance and Financial Stability*" p.47).

<sup>54</sup> For example, in Spain 60% of GDP is reported to involve the extension of trade credit to buyers, with credit insurance coverage estimated to be 30% of the total volume of trade credit, or roughly EUR 200 billion. In France, credit insurance covered, roughly one quarter of company receivables in 2008, or approximately EUR 320 billion. In the U.K., in 2008, credit insurers insured over £300 billion of turnover, covering over 14,000 UK clients in transactions with over 250,000 U.K. businesses. Sources: "Unas 45.000 empresas se beneficiarán de los avales de seguro de crédito del Consorcio de Compensación", Europa Press, 27 March 2009, from [www.lukor.com](http://www.lukor.com) and "Consorcio de Compensación de Seguros avalará operaciones de seguro de crédito, con un mínimo del 5%", Europa Press, 27 March 2009, from [www.lukor.com](http://www.lukor.com) Communiqué de presse, "Dispositif de soutien et d'accompagnement à l'assurance crédit", 27 novembre 2008 (from [www.minefe.gouv.fr](http://www.minefe.gouv.fr)) OECD (2011): "*The Impact of the Financial Crisis on the Insurance Sector and Policy Responses*"

<sup>55</sup> For example, the UK government set up a £5 billion emergency fund for trade credit top-up, although take-up turned out to be low. See for example The Guardian (July 2009): *Government trade credit protection scheme flops* at <http://www.guardian.co.uk/business/2009/jul/26/government-trade-credit-protection-scheme>

## 4.2 Possible recovery and resolution tools

Existing EU level regulation for insurance companies does not provide recovery and resolution tools. Directive 2001/17/EC on the reorganisation and winding-up of insurance undertakings provides in fact only that, upon insolvency, the winding up process will be governed exclusively by the proceedings initiated in its home country. Policyholders in different countries will thus receive the same protection and the procedure will be faster and less costly than in the case of multiple insolvency procedures<sup>56</sup>.

European and national legislations for the recovery and resolution of insurance companies is primarily designed to protect policyholders, but is not designed to contain other wider fallout effects of their distress<sup>57</sup>. For example, once Directive 2009/138/EC will fully be applicable (Solvency II, which will ensure effective prudential supervision of individual insurers and insurance groups, while also repealing the insurance winding-up directive) insurers will have two levels of capital requirements: a Solvency Capital Requirement (SCR) and a lower Minimum Capital Requirement (MCR). If a firm breaches its SCR, it must within 2 months submit a realistic recovery plan for approval by the supervisor. The plan should set out how the firm intends to comply with the SCR within 6 months of non-compliance. If a firm breaches its MCR, it must within 1 month submit a realistic recovery plan for approval by the supervisor. The plan should set out how the firm intends to comply with the MCR within 3 months of non-compliance. If the solvency position continues to deteriorate, the supervisor has the power to take all proportionate measures necessary to safeguard the interest of policyholders. If the supervisor considers that the firm's plan to comply with the MCR is manifestly inadequate or the firm fails to comply with the plan within 3 months of non-compliance with the MCR, the supervisor must withdraw the firm's authorisation.

For its part, the IAIS sets out a list of core principles of insurance supervision<sup>58</sup>. While non-binding, these supervisory standards are accepted by almost all supervisory authorities in the EU-EEA. They stipulate that there should be an effective framework for early supervisory intervention to prevent insolvency, a resolution framework which aims to protect policyholders, and cross-border co-operation between supervisors in managing crises<sup>59</sup>.

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<sup>56</sup> The Commission has also been involved, from a state aid perspective, in several cases of rescue and restructuring of ailing insurance (bank-insurance) companies since the breakout of the financial crisis (Insurance: Decisions N569/2008 and - N372/2009 – AEGON (The Netherlands); SA.33023 – Restructuring of Quinn Insurance Ltd through the contribution of the Insurance Compensation Fund (Ireland); NN57/2008 and N 256/2009 – Ethias (Belgium); Bank-insurance: N611/2008 and N371/2009 – SNS REAAL (The Netherlands); C10/2009 – ING (The Netherlands); N602/2008 – KBC)

<sup>57</sup> This is consistent with the IAIS Insurance Core Principles, Standards, Guidance and Assessment Methodology (October 2011)  
[http://www.iaisweb.org/\\_temp/Insurance\\_Core\\_Principles\\_Standards\\_Guidance\\_and\\_Assessment\\_Methodology\\_October\\_2011.pdf](http://www.iaisweb.org/_temp/Insurance_Core_Principles_Standards_Guidance_and_Assessment_Methodology_October_2011.pdf)

<sup>58</sup> IAIS Core Principles, Standards, Guidance and Assessment Methodology (October 2011)  
[http://www.iaisweb.org/\\_temp/Insurance\\_Core\\_Principles\\_Standards\\_Guidance\\_and\\_Assessment\\_Methodology\\_October\\_2011.pdf](http://www.iaisweb.org/_temp/Insurance_Core_Principles_Standards_Guidance_and_Assessment_Methodology_October_2011.pdf)

<sup>59</sup> ICP 10: The supervisor takes preventive and corrective measures that are timely, suitable and necessary to achieve the objectives of insurance supervision.  
ICP 12: The legislation defines a range of options for the exit of insurance legal entities from the market. It defines insolvency and establishes the criteria and procedure for dealing with insolvency of

Other early intervention and resolution tools exist but are not harmonised across Member States. In relation to early intervention, and depending on national law, authorities can for example require the firm to submit a recovery plan, report additional elements to the supervisor, require the firm to de-risk its asset portfolio, introduce additional capital requirements, prohibit the free disposal of assets, ban certain operations or restrict new business, remove senior management or transfer the powers of the board to a special commissioner.

If the solvency position of the insurer continues to deteriorate, some or all the following tools may be available to the resolution authority in various forms, depending on national law.

(1) Run-off

Closing to new business reduces the insurer's capital requirements and removes any associated new business expenses. It enables the insurer to fulfil its contractual obligations in an orderly manner according to original or amended insurance policies. If an insurer goes into run-off well before it becomes insolvent, policyholders are likely to receive their full entitlements and there would be no systemic disruption.

For run-off to be an effective resolution tool, the insurer's contracts must not be likely to be cancelled. Otherwise, those with high insurability would be more likely to cancel than those with low insurability, leaving the insurer with a portfolio of higher-risk contracts. In addition, the assets corresponding to the insurance liabilities would need not to be impaired and policyholders would need to be assured of this fact. This can usually be achieved if the corresponding assets are ring-fenced so that they are separate from the insurer's own funds.

(2) Portfolio transfer

An insurer may sell all or part of its insurance portfolio along with its assets to another insurer subject to approval from supervisors. If the insurance portfolio is sold well before the quality of the corresponding assets is severely impaired, policyholders are likely to receive their full entitlements. Portfolio transfer would also be available to insurers in run-off. For portfolio transfer to be an effective resolution tool, the insurer's contracts must not be likely to be cancelled and the insurance liabilities and corresponding assets must be easily separated from the insurer's other liabilities and assets.

(3) Insurance guarantee scheme

An insurance guarantee scheme can either secure continuity of insurance policies by having them transferred to a solvent insurer or by taking them over directly (portfolio transfer) or compensate policyholders or beneficiaries for their losses (compensation of

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insurance legal entities. In the event of winding-up proceedings of insurance legal entities, the legal framework gives priority to the protection of policyholders and aims at minimising disruption to the timely provision of benefits to policyholders.

ICP 26: The supervisor cooperates and coordinates with other relevant supervisors and authorities such that a cross-border crisis involving a specific insurer can be managed effectively.



claims). The guarantee scheme requires funds to cover its losses and these generally come from ex-ante or ex-post contributions from the insurance industry.

Today, national insurance guarantee schemes exist to ensure the payment of claims to policyholders or to provide temporary financial support to ensure continuity of services to policyholders in a few Member States. In July 2010 the Commission published a White Paper consulting on the possibility of introducing a Directive on insurance guarantee schemes<sup>60</sup>. The Directive would require each Member State to set up insurance guarantee schemes with minimum standards.

#### (4) Bridge institution

Some institutions allow insurance liabilities and corresponding assets to be referred to a bridge institution on a temporary basis if more time is needed to find a buyer. In some Member States, an insurance guarantee scheme plays the role of a bridge institution. The bridge institution can temporarily acquire the business as a subsidiary and divide it into a viable part to be revitalised and an unviable part to be wound up. A prerequisite for this would be that the insurance business is easily separated into different parts.

#### (5) Restructuring of liabilities

A restructuring of liabilities involves a company amending its contracts with its policyholders and/or creditors to reduce its liabilities. This may be done through a court proceeding (e.g. a Scheme of Arrangement) or with approval from the supervisor. In both cases the aim is to ensure that losses are distributed fairly among policyholders/creditors and that the company is restored to viability.

#### (6) Compulsory winding-up

If no other resolution tool is available, an insurer can be wound up at the order of the courts and/or the supervisor. In winding-up proceedings, the present value of the claims of policyholders, beneficiaries and creditors are paid in a specific order until the funds run out. The aim is to ensure the fair treatment of claimants participating in the winding-up proceeding. However, policyholders and beneficiaries will not receive continuity of cover.

In the context of traditional insurance business, these tools are generally considered to be effective in conserving the value of the insurer's assets and protecting policyholders from unnecessary losses. If an insurer is struggling to meet its capital requirements, it can usually sell its insurance portfolio or go into run off well before it becomes insolvent. If it becomes insolvent, it may restructure its liabilities and/or receive funding from an insurance guarantee scheme. These arrangements minimise the losses borne by policyholders and ensure that any losses they do bear are distributed fairly.

However, the failure of a systemically important insurer might cause significant disruption in financial markets or the real economy more widely if not resolved in a much shorter timeframe than traditional tools allow. In this instance, the traditional tools above might not

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<sup>60</sup> COM(2010) 370

be sufficient. For example, as indicated above, a non-insurance subsidiary writing CDSs with intra-group guarantees could incur large losses in a short space of time and risk contagion via the subsidiary's counterparties, as in the case of AIG in 2008. The downgrade of a bond insurer could force the holders of securities they have guaranteed to immediately face mark-to-market losses. The collapse of a large provider of compulsory liability insurance could leave its clients immediately unable to carry out business. In these instances the authorities would need to intervene quickly to resolve the institution before contagion spreads. Alternative tools might therefore need to be considered which aim to contain systemic risk more broadly, beyond the protection of policyholders.

#### *4.2.1 Discussion and questions*

##### a) General

As indicated at the beginning of this section, international-level work is on-going towards developing globally consistent standards for assessing the systemic relevance of insurers and appropriate policy measures. This consultation does not prejudge this work. However, apart from the first question below, the following discussion and accompanying questions are to be understood as referring to possible recovery and resolution arrangements for systemically relevant insurers, in anticipation of but without prejudice to how exactly these may ultimately be designated.

Following the general approach adopted by the FSB, suitable measures and powers should exist to make feasible the resolution of any financial institution without causing systemic disruption or exposing taxpayers to losses. In the case of systemically relevant insurance companies operating in the EU single market, these should ensure a level playing field among firms together with non-discriminatory treatment and legal certainty for their policyholders and counterparties who could be affected. In EU Member States, national resolution authorities could be tasked with the resolution of systemic insurance companies. Member States could appoint e.g. supervisors, central banks, the court, etc. for this purpose, also taking into account the expectation that cases of insurance companies requiring resolution are likely to be few.

##### *Questions:*

- 1. Are the resolution tools applicable to traditional insurance considered above adequate? Should their articulation and application be further specified and harmonised at EU-level?*
- 2. Do you think that a further framework of measures and powers for authorities, additional to those already applicable to insurers, to resolve systemically relevant insurance companies is needed at EU level?*
- 3. In your view, which scenarios/events might lead to the need to resolve a systemically relevant insurance company? Even before that, which types of scenarios systemic insurers and authorities need to be prepared for which may imply the need for recovery actions if not yet resolution?*

##### b) Objectives

Resolution should, consistent with the FSB principles, ensure the continuity of critical services, preserve financial stability, avoid contagion and an unnecessary destruction of value, and guard against losses for taxpayers. In the case of systemic insurers, the most critical service to preserve would remain the continuity of policyholder protection. However, a broader objective of preserving financial stability could also be mooted in the case of systemic insurance companies.

*Questions:*

4. *Do you agree with the above objectives for resolution of systemic insurance companies? What other objectives could be relevant?*

c) Recovery and Resolution plans

Ensuring that the objectives above can be met requires a series of preventive steps. These include plans setting out ways for institutions to restore their viability in the event of adverse developments (recovery plans) and plans for authorities to restructure an institution in order to ensure the continuity of its essential functions and preserve financial stability (resolution plans).

Recovery plans prepared by systemic insurers could guide how to stabilise them in the event of financial or operational stress. Resolution plans prepared by authorities could first assess the resolvability of systemic insurers (i.e. whether the objectives of resolution can be achieved in the timeframe available). Based on this assessment, authorities could have the power to request changes in the operation of systemic insurers to ensure and facilitate their resolvability. Second, resolution plans could provide a roadmap for authorities how the resolution of a failed insurer can be carried out in the most efficient way. Resolution plans of insurers could in particular contain all the information necessary to preserve the essential functions of an institution in different stress-scenarios.

*Questions:*

5. *Do you think that recovery plans should be developed by systemic insurers and resolution plans by resolution authorities? Do you think that resolution authorities should have the power to request changes in the operation of insurers in order to ensure resolvability?*

d) Resolution triggers

Resolution should be initiated when a firm is no longer viable or likely to be no longer viable, and has no reasonable prospect of becoming so. A condition for resolution is that its failure and the disruption of its services would have systemic implications for other parts of the financial sector and the economy. Otherwise, normal insolvency procedures should apply.

As with FMIs, there is a need for flexibility in the triggering decision as it is very difficult to predict in advance the conditions which will justify recourse to resolution. However it is also important to ensure predictability for stakeholders given the potential impact of resolution powers on these entities. Possible detailed triggers in terms of when a systemic insurer's solvency, systems, risk management controls, and operations are poised to fail imminently and pose a risk to financial stability could be studied.

*Questions:*

6. *Do you agree that resolution should be triggered when a systemic insurer has reached a point of distress such that there are no realistic prospects of recovery over an appropriate timeframe, when all other intervention measures have been exhausted, and when winding up the institution under normal insolvency proceedings would risk causing financial instability?*
7. *Should these conditions be refined? For example, what would be suitable indicators that could be used for triggering resolution of systemic insurers?*

e) Resolution powers

Authorities need special powers to carry out effective resolution of entities meeting the above conditions. These involve extensive and comprehensive powers of intervention in the management and corporate structure of the institution, in order to preserve the functioning and viability of critical functions. In the context of the resolution tools (discussed in the next part below) for the resolution of systemic insurers, the powers could be aligned with those for banks and FMIs and consist of the following:

- Remove and replace the senior management;
- Appoint an administrator;
- Operate and resolve the entity including taking commercial decisions to restructure or wind down the entity's operations;
- Transfer or sell specified assets or liabilities to a third party entity;
- Establish a temporary bridge institution to take over certain critical functions;
- Separate non-performing assets into a distinct vehicle;
- Recapitalise an entity by amending or converting the terms of specified parts of the balance sheet of the entity in order to allow for the continuity of essential functions;
- Override rights of shareholders of the firm in resolution;
- Temporarily stay the exercise of early termination rights;
- Impose a moratorium on payment-flows;
- Effect the closure and orderly wind-down of the entity.

*Questions:*

8. *Do you agree that resolution authorities of insurers could have the above powers? Should they have further powers to successfully carry out resolution in relation to systemic insurers? Which ones?*
9. *Should they be further adapted or specified to the specificities of insurance resolution?*

f) Resolution tools

In addition to the "traditional" resolution tools listed above (run off, portfolio transfer, insurance guarantee scheme, bridge institution, restructuring of liabilities, compulsory winding up) authorities could need to have a variety of alternative ways to carry out resolution, depending on the nature of the entity and crisis in question. In order to achieve the objective of ensuring the continuity of critical functions, authorities may need to separate the

systemically important non-traditional activities of the insurer from the traditional activities, the failure of which can be dealt with through the existing traditional resolution tools. This is easier where the systemically important business is carried out from a different legal entity than the traditional insurance business, for example in the case of a non-insurance subsidiary or of an insurance group or of a financial conglomerate.

Where the systemically important business is carried out from the same entity as traditional insurance business, the resolution authority could either apply the resolution tools designed to contain systemic risk at the entity level or try to separate the systemic business from the traditional business and apply different resolution tools to the different parts. For example, in an asset separation "bad" assets are transferred into a separate legal entity to prevent the core functions of the institution from being contaminated. They can then be managed by a publicly owned legal entity to maximise the value of the assets through eventual sale.

Another possible tool is debt write-down, or "bail-in". This would involve recapitalising the insurer by writing down the debt owed to creditors and converting claims to equity, either in a bridge institution or in the original firm. This avoids disruption to critical services and gives authorities time to reorganise the institution or wind down parts of its business in an orderly manner. Bail-in could potentially apply to any liabilities of the institution not backed by assets or collateral, and not to insurance policies, client assets, or liabilities such as salaries, taxes or payments due to commercial partners.

*Questions:*

*10. Would the tools mentioned above be appropriate for the resolution of systemic insurers? What other tools should be considered and why?*

g) Group and cross-border resolution

In the EU, groups operate across borders through subsidiaries, branches or via the free provision of services. Since Member States and third countries have different insolvency laws, the need for resolution could be triggered at different times and in different ways in different parts of a cross-border group. The insurance winding up directive provides that when an EU insurer with branches in other EU countries fails, the winding up process will be governed exclusively by the proceedings initiated in its home country. This prevents there being multiple and potentially conflicting winding-up processes.

Solvency II will facilitate cooperation among supervisory authorities in a group in requiring the appointment of a group supervisor responsible for the coordination and exercise of group supervision and also the setting up of supervisory colleges, where supervisors should share information, cooperate for the purposes of group supervision and plan how they would coordinate should a cross-border resolution be necessary<sup>61</sup>. The IAIS core principles of

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<sup>61</sup> Under Solvency II, groups are considered as economic entities and have to meet a number of requirements (in terms of capital, governance, reporting) and a coordinated supervisory approach is envisaged. All the entities belonging to the group (e.g. subsidiaries carrying out non-insurance activities, special purpose vehicles) are subject to group supervision. Individual supervisors must share information and coordinate supervisory actions via a supervisory college. Insurance groups must also

insurance supervision also state that there needs to be effective cross-border co-operation between supervisors in managing crises<sup>62</sup>.

In the context of a group, where the systemically relevant activity in a subsidiary has a serious and imminent impact on the solvency and financial stability of the whole group, it might be appropriate to apply resolution tools to the parent undertaking as well as the legal entity concerned. For example, this might be the case where there are serious failures of the coordination and management activities of the parent entity that would amplify the systemic risk of the group in the case of the failure of an undertaking, or where an undertaking in the group is a source of systemic risk which may seriously affect the solvency of the group. In this situation, the supervisor might impose the prior authorisation of any intra-group transaction as an early intervention measure.

Further, the decision of whether to apply resolution tools at group or entity level would need to take into account the possibility that different entities within the group might be better resolved using different types of tools if the group comprises both traditional insurance and systemically relevant business.

Finally, cooperation with third country authorities could be executed under bilateral cooperation agreements which could ensure that decisions of third country authorities could be enforced in the EU and vice versa.

*Questions:*

- 11. Do you think that, within the EU, resolution colleges should be set up and involved in resolution issues of cross border insurance groups?*
- 12. How could the decision-making process be organized to make sure that swift decisions can be taken? Should this be aligned with the procedures already set out in Title III of Directive 2009/138/EC?*
- 13. Alternatively, do you think that responsibility for resolving systemic insurers should be centralised at EU-level?*
- 14. Do you think that a recognition regime should be defined to enable mutual enforceability of resolution measures?*
- 15. Do you think that to this end bilateral cooperation agreements could also be signed with third countries?*

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publish an annual report on the solvency and financial condition of the group to provide relevant information to stakeholders, including investors.

<sup>62</sup> IAIS Core Principles, Standards, Guidance and Assessment Methodology (October 2011) [http://www.iaisweb.org/\\_temp/Insurance\\_Core\\_Principles\\_Standards\\_Guidance\\_and\\_Assessment\\_Methodology\\_October\\_2011.pdf](http://www.iaisweb.org/_temp/Insurance_Core_Principles_Standards_Guidance_and_Assessment_Methodology_October_2011.pdf)

## 5. PAYMENT SYSTEMS AND OTHER NONBANK FINANCIAL INSTITUTIONS/ENTITIES

### 5.1 Payment systems and institutions

In relation to payments, there are two entities to consider: Payment Systems (such as the Eurozone's TARGET2 or UK's CHAPS), and Payment Institutions (PI) and Electronic Money Institutions (EMI).

Payment systems are systems to transfer funds with standardised and common arrangements and rules for the processing, clearing and/or settlement of payment transactions. Payment systems are a crucial part of the financial industry as they are the means by which funds are transferred between banks. This means that payment systems are a major channel by which shocks can be transmitted across domestic and international financial systems and markets. Consequently, it is critical to the proper functioning of the financial sector and for financial stability that payment systems are robust and secure.<sup>63</sup>

The CPSS has outlined a number of risks applicable to payment systems<sup>64</sup>: credit risk, liquidity risk, legal risk and systemic risk. Systemic risk can be caused when due to one of the aforementioned risks or due to an exogenous event a payment system ceases to be able to function. This means that if a participant cannot meet its obligations or there is a disruption to the whole system, liquidity or credit problems would arise. These would then spread to all the constituent participants.

Under Article 127 of the Treaty on the Functioning of the EU, the European System of Central Banks (ESCB) has the responsibility "to promote the smooth operation of payment systems". Consequently, the ESCB and European Central Bank (ECB) have an important role to play in exercising oversight notably by setting requirements in relation to risk management and mitigation as well as collateral for the privately run (by major EU banks via the Euro Banking Association) common EU payment clearing and settlement system. Even where the payment system is partly operated outside central bank control, the ESCB exercises a close oversight role.

PI and EMI on the other hand are relatively new financial institutions which anecdotally represent only a small share of the overall payments market. The ECB ("Blue Book")<sup>65</sup> collects data on payments but a common methodology for collecting data on payments carried out by PI and EMI is still being developed. Completion is expected in 2013. Consequently, it is not possible to give a precise figure for their payments volume. However, at most this is likely to be only a couple of per cent of the total payments market.

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<sup>63</sup> The systemic nature of payment system is expounded by size, either in terms of individual payment size or in aggregate value. For example, in 2010 Target 2, run by EUROSISTEM handled total transactions of €633 825.8 billion worth of and the UK's CHAPS £ 56 720.8 billion of credit transfers. (Source: CPSS Red Book available at <http://www.bis.org/publ/cpss99.pdf>)

<sup>64</sup> CPSS, Core Principles for Systemically Important Payment Systems, available at <http://www.bis.org/publ/cpss34e.pdf>

<sup>65</sup> <http://www.ecb.int/paym/intro/book/html/index.en.html>

Further, while subject to prudential and other regulatory requirements, PI and EMI do not enjoy guaranteed access to payment systems designated under Directive 98/26 on settlement finality in payment and securities settlement systems. The latter constitute the vast majority of all payment systems and in particular, by definition, any systemically important payment system is likely to be designated.

Finally, PI and EMI do not take deposits. An EMI cannot create money since all electronic money issued requires being fully pre-funded. While a PI may grant credit in relation to certain payment activities, this credit is ancillary and must be granted exclusively in connection with the execution of a payment transaction<sup>66</sup>. While it is true that a PI may engage in hybrid activities within the same legal entity (no principle of specialisation), in such cases the funds of payment service users have to be safeguarded (either basically deposited in a separate account in a bank and insulated from other creditors of the PI under national insolvency law or covered by an insurance policy or some other guarantee). A hybrid PI is required to provide separate accounting information which is subject to an auditor's report.

A situation in which a PI could potentially create major financial problems is if it was to seek to withdraw money through a massive series of immediate fraudulent direct debits. However, in such circumstances, two defence mechanisms would come into play. Given that PIs today only have indirect access to the payment system for clearing and settlement, the risk management systems of the (bank) direct member of the payment system would almost certainly spot and stop these payments in time. A further back-stop would be provided by the risk management system of the clearing and settlement system itself. However, mitigating strategies regarding the risk of fraud, e.g. the strengthening of the risk management of the clearing and settlement system, might need to be further considered if PIs were granted direct access to payment clearing and settlement, an issue which is currently under consideration in the context of the Commission Green Paper on card, internet and mobile payments<sup>67</sup>.

Given the vital nature of payment systems, and their specific relationship with and oversight by central banks, it is doubtful whether payment systems should merit further consideration in this context. Equally, as regards PIs and EMIs considered in their own right, a preliminary analysis would indicate that neither an operational nor financial failure on their part is likely to represent a significant risk from a systemic point of view. At this time, neither would thus require further special consideration from a resolution perspective.

## **5.2 Other nonbank financial institutions**

There is a range of financial institutions, other than those captured by the proposed EU framework for the recovery and resolution of banks and investment firms<sup>68</sup> and those discussed in the previous chapters of this consultation that could, under certain circumstances, contribute to the build-up or transmission of risks that may, should they fail, have systemic

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<sup>66</sup> The duration of the credit is limited to 12 months. In particular, unlike a credit institution, a PI may not grant credit from the funds received or held for the purpose of executing a transaction.

<sup>67</sup> COM(2011)941 final

<sup>68</sup> COM (2012)280 [http://ec.europa.eu/internal\\_market/bank/crisis\\_management/index\\_en.htm](http://ec.europa.eu/internal_market/bank/crisis_management/index_en.htm)



consequences. These include, for example, investment funds and trading venues of various kinds.

Arguably these circumstances are likely to be no different or very similar to those for banks, investment firms, insurance companies and other entities captured by this consultation. Thus, the potential for these other nonbank entities to assume systemic importance converge around the same key factors including the overall size of the particular entity, its interconnectedness especially with the banking system, and its inherent economic importance (or substitutability). Other factors which can add to their systemic relevance include the degree to which their business relies on or is exposed to leverage and pro-cyclicality, performs maturity and liquidity transformation, or suffers from a lack of transparency regarding underlying exposures.

Thus, how to set up an appropriate regulatory framework to mitigate the effects of the services of these institutions becoming critically disrupted is a valid question. Separately, the micro and macro-prudential regulatory framework applicable to these entities continues to be developed with a view to protecting investors and other market participants from negative externalities or conflicts of interest inherent in their business.<sup>69</sup>

Yet the relationship between these other nonbank financial institutions and overall financial stability has not been fully articulated. As seen elsewhere in this paper, the transient nature of the concept of systemic risk itself makes it difficult to define in advance precise qualitative or quantitative thresholds for when these and other nonbank financial institutions may attain systemic relevance. This is compounded by the fact that the approaches and tools for the measurement of financial instability and financial distress are better developed for banks (and to some extent also for insurance companies or pension funds) but analogous data, tools and measurement techniques are not yet fully available for the other nonbank entities.

The question remains, though, whether and when their failure, or imminent threat thereof, should be buttressed by specific recovery and resolution provisions and which precise tools could be effectively used. This question arises especially in light of the fact, that contrary to banks, investment firms and insurance companies, these other nonbank financial institutions are not subject to any specific type of framework at EU level governing their insolvency.<sup>70</sup> The application of ordinary insolvency law is thus not only all that is available (save public bailout) for these entities for managing their failure in the EU, it can also give rise to uncertainty and parallel procedures across borders.

### *Questions*

- 1. Do you agree with the above assessment regarding payment systems, payment institutions and electronic money institutions? Alternatively, do you consider that either (or both) would merit further consideration as to their ability, first, to give rise*

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<sup>69</sup> For example, reviews of UCITS and MiFID and new domains such as alternative investment funds and shadow banking.

<sup>70</sup> See consultation on the future of European insolvency law [http://ec.europa.eu/justice/newsroom/civil/opinion/120326\\_en.htm](http://ec.europa.eu/justice/newsroom/civil/opinion/120326_en.htm)

to systemic risk and, second, the need for possible recovery and resolution arrangements in response?

2. *Besides those covered in previous sections of this paper, which other nonbank financial institutions can become systemically relevant and how? Depending on the type of institutions, what are the main channels through which such systemic risks are transmitted or amplified?*
3. *In your view, what could be meaningful thresholds in relation to the factors of size, interconnectedness, leverage, economic importance or any other factor to determine the critical relevance of any other nonbank financial institution?*
4. *Do you think that recovery and resolution tools and powers other than existing insolvency rules should be introduced also for other nonbank financial institutions?*
5. *In your view, what could then be meaningful points of failure at which different types of other nonbank financial institution could be considered to fulfil the conditions for triggering:*
  - a) *The activation of any pre-determined recovery measures; or*
  - b) *Intervention by authorities to resolve the entity?*
6. *With respect to possible preventive and preparatory measures:*
  - a) *Do existing regulatory frameworks applicable to other nonbank financial institutions provide for sufficient safeguards, in particular with respect to their governance, structures, market/counterparty/liquidity risk management, transparency, reporting of relevant information and other etc.?*
  - b) *Are supervisors equipped with sufficient powers to be able to collect information and monitor the various types of risks existing or building up in the particular nonbank financial sector/institution?*
  - c) *Are additional supervisory powers needed to ensure de-risking and prevent overly complex and interlinked operations?*
  - d) *Would recovery and resolution plans be necessary to be introduced for all or only some of these institutions? Why?*
7. *With respect to possible early intervention powers and measures:*
  - a) *Do existing regulatory frameworks applicable to other nonbank financial institutions provide for effective early remedial actions of supervisors aimed at correcting solvency or operational problems at an early stage?*
  - b) *What other early intervention powers could be introduced?*
8. *With respect to possible resolution measures and tools:*

- a) *Should administrative, non-judicial procedures and tools for the restructuring or managed dissolution of other failing nonbank financial institutions be introduced?*
- b) *Depending on the entity, what could be the appropriate and specific resolution tools to be used? For which institutions are certain resolution tools or techniques not relevant? Why?*