FSB FINANCIAL STABILITY BOARD

Strengthening Oversight and Regulation of Shadow Banking

Policy Framework for Strengthening Oversight and Regulation of Shadow Banking Entities

29 August 2013

Preface

Strengthening Oversight and Regulation of Shadow Banking

The Financial Stability Board (FSB) is publishing final policy documents on Strengthening Oversight and Regulation of Shadow Banking.

The FSB has focused on five specific areas in which policies are needed to mitigate the potential systemic risks associated with shadow banking:

(i) to mitigate *the spill-over effect between the regular banking system and the shadow banking system*;

(ii) to reduce the susceptibility of *money market funds (MMFs)* to "runs";

(iii) to assess and align the incentives associated with *securitisation*;

(iv) to dampen risks and pro-cyclical incentives associated with *securities financing transactions such as repos and securities lending* that may exacerbate funding strains in times of market stress; and

(v) to assess and mitigate systemic risks posed by *other shadow banking entities and activities*.

The documents published on 29 August 2013 comprise:[1]

- **An overview of policy recommendations**,[2] setting out the FSB's approach to addressing financial stability concerns associated with shadow banking, actions taken to date, and next steps.

- **Policy framework for addressing shadow banking risks in securities lending and repos.**[3] This document sets out recommendations for addressing financial stability risks in this area, including enhanced transparency, regulation of securities financing, and improvements to market structure (ref. (iv) above). It also includes consultative proposals on minimum standards for methodologies to calculate haircuts on non-centrally cleared securities financing transactions and a framework of numerical haircut floors.

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1 As for area (i) above, the Basel Committee on Banking Supervision (BCBS) will develop policy recommendations by end-2013, with the exception of the work on the scope of prudential consolidation which is expected to be completed in 2014. Some of the proposed policy recommendations have been published for public consultation. Please see *Supervisory framework for measuring and controlling large exposures* (http://www.bis.org/publ/bcbs246.pdf) and *Capital requirements for banks' equity investments in funds* (http://www.bis.org/publ/bcbs257.pdf). As for areas (ii) and (iii) above, the International Organization of Securities Commissions (IOSCO) has developed final policy recommendations in its reports *Policy Recommendations for Money Market Funds* (http://www.iosco.org/library/pubdocs/pdf/IOSCOPD392.pdf) and *Global Developments in Securitisation Markets* (http://www.iosco.org/library/pubdocs/pdf/IOSCOPD394.pdf).

2 http://www.financialstabilityboard.org/publications/r_130829a.pdf.

3 http://www.financialstabilityboard.org/publications/r_130829b.pdf.

- **Policy framework for strengthening oversight and regulation of shadow banking entities.** This document sets out the high-level policy framework to assess and address risks posed by "Other Shadow Banking" entities and activities (ref. (v) above).

Background

The "shadow banking system" can broadly be described as "credit intermediation involving entities and activities (fully or partially) outside the regular banking system" or non-bank credit intermediation in short.[4] Such intermediation, appropriately conducted, provides a valuable alternative to bank funding that supports real economic activity. But experience from the crisis demonstrates the capacity for some non-bank entities and transactions to operate on a large scale in ways that create bank-like risks to financial stability (longer-term credit extension based on short-term funding and leverage). Such risk creation may take place at an entity level but it can also form part of a complex chain of transactions, in which leverage and maturity transformation occur in stages, and in ways that create multiple forms of feedback into the regular banking system.

Like banks, a leveraged and maturity-transforming shadow banking system can be vulnerable to "runs" and generate contagion risk, thereby amplifying systemic risk. Such activity, if unattended, can also heighten procyclicality by accelerating credit supply and asset price increases during surges in confidence, while making precipitate falls in asset prices and credit more likely by creating credit channels vulnerable to sudden loss of confidence. These effects were powerfully revealed in 2007-09 in the dislocation of asset-backed commercial paper (ABCP) markets, the failure of an originate-to-distribute model employing structured investment vehicles (SIVs) and conduits, "runs" on MMFs and a sudden reappraisal of the terms on which securities lending and repos were conducted. But whereas banks are subject to a well-developed system of prudential regulation and other safeguards, the shadow banking system is typically subject to less stringent, or no, oversight arrangements.

The objective of the FSB's work is to ensure that shadow banking is subject to appropriate oversight and regulation to address bank-like risks to financial stability emerging outside the regular banking system while not inhibiting sustainable non-bank financing models that do not pose such risks. The approach is designed to be proportionate to financial stability risks, focusing on those activities that are material to the system, using as a starting point those that were a source of problems during the crisis. It also provides a process for monitoring the shadow banking system so that any rapidly growing new activities that pose bank-like risks can be identified early and, where needed, those risks addressed. At the same time, given the interconnectedness of markets and the strong adaptive capacity of the shadow banking system, the FSB believes that policies in this area necessarily have to be comprehensive.

[4] Based on such features, some authorities or market participants prefer to use other terms such as "market-based financing" instead of "shadow banking". The use of the term "shadow banking" is not intended to cast a pejorative tone on this system of credit intermediation. However, the FSB is using the term "shadow banking" as this is the most commonly employed and, in particular, has been used in the earlier G20 communications.

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Introduction and Summary

This document sets out the final policy framework to address shadow banking risks posed by non-bank financial entities other than money market funds (MMFs) ("other shadow banking entities").[5] It is based on a careful consideration of more than 50 responses received on the Consultative Document published on 18 November[6], which set out the high-level policy framework that would allow authorities to: detect and assess the sources of shadow banking risks in the non-bank financial space from a financial stability perspective; and apply appropriate policy measures if necessary to mitigate any financial stability risks identified. In general, the respondents supported the FSB's efforts to address the potential risks posed by other shadow banking entities based on the five economic functions, but asked for closer coordination among the different shadow banking workstreams[7] as well as with other regulatory initiatives, and for clearer definitions and more precision for the policy toolkits for the five economic functions before they could be applied.

In developing the policy framework, the FSB, through its workstream on other shadow banking entities (hereafter WS3), assessed the extent to which non-bank financial entities other than MMFs are involved in shadow banking. WS3 first completed a categorisation and data collection exercise for a wide range of non-bank financial entities. After casting the net wide, WS3 conducted a two-step prioritisation process to narrow the scope to certain types of entities that may need policy responses: first looking at "size" and "national experience" (authorities' judgement) to derive a list of entity types ("filtered entities"); then assessing their shadow banking risk factors (e.g. maturity/liquidity transformation and leverage). As part of the process, WS3 met with industry representatives to exchange views and obtain additional information. It also commissioned a separate study providing a detailed assessment of commodities traders.

The filtered entities that WS3 identified were: (i) credit investment funds; (ii) exchange-traded funds (ETFs); (iii) credit hedge funds; (iv) private equity funds; (v) securities broker-dealers; (vi) securitisation entities; (vii) credit insurance providers/financial guarantors; (viii) finance companies; and (ix) trust companies. From its detailed assessment of these filtered entities, WS3 observed a high degree of heterogeneity and diversity in business models and risk profiles not only across the various sectors in the non-bank financial space, but also within the same sector (or entity-type). This diversity is exacerbated by the different legal and regulatory frameworks across jurisdictions as well as the constant innovation and the dynamic nature of the non-bank financial sectors. Together, these factors tend to obscure the

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[5] Policy recommendations for MMFs have been developed by a separate FSB shadow banking workstream (WS2) led by IOSCO in October 2012. See http://www.iosco.org/library/pubdocs/pdf/IOSCOPD392.pdf.

[6] FSB (2012) *A Policy Framework for Oversight and Regulation of Shadow Banking Entities* (hereafter November 2012 Consultative Document). See http://www.financialstabilityboard.org/publications/r_121118a.pdf. Responses received on the November 2012 Consultative Document are available at http://www.financialstabilityboard.org/publications/c_130129.htm.

[7] For details of the FSB shadow banking workstreams, please see FSB (2011) *Shadow Banking: Strengthening Oversight and Regulation*, 27 October (hereafter October 2011 Report) at http://www.financialstabilityboard.org/publications/r_111027a.pdf and FSB (2012) *Strengthening Oversight and Regulation of Shadow Banking: An integrated overview of policy recommendation* at http://www.financialstabilityboard.org/publications/r_121118.pdf.

economic functions conducted by these entities, and hence to complicate the evaluation of the regulations that do or should apply to them. WS3 therefore developed an economic function-based (i.e. activities-based) perspective for assessing shadow banking activity in non-bank entities.

The economic function-based perspective allows the extent of non-bank financial entities' involvement in shadow banking to be judged by looking through to their underlying *economic functions* rather than *legal names or forms*. Furthermore, this approach is forward-looking in that it will be able to capture additional types of entities that conduct these economic functions generating shadow banking risks. Over time, the FSB may revise the economic functions and add new ones if deemed appropriate.

This document also presents a menu of policy tools from which authorities can draw if necessary to mitigate the shadow banking risks inherent in each of the economic functions. The advantage of setting a menu of policy tools is to provide a certain degree of consistency across jurisdictions, while allowing national authorities to adopt policy tools[8] if necessary that in their view are more appropriate for the non-bank financial entities concerned, the structure of the markets in which they operate, and the degree of financial stability risks posed by such entities in their jurisdictions. It should be noted that some of these policy tools may be already in place. Moreover, policy recommendations from the other FSB shadow banking workstreams will have priority if they address the same shadow banking risks.

In order to maintain consistency across jurisdictions in applying the policy framework and to detect new adaptations and innovations in financial markets, authorities will set up an information-sharing process under the FSB. The FSB, through its WS3, will develop a detailed procedure in this regard by March 2014 so that the FSB would be in a position to start a peer review process of national implementation of the framework by 2015.

The high-level policy framework, based on economic functions, is presented in section 1. A more detailed definition of the economic functions and the policy toolkits are presented in sections 2 and 3, respectively. A discussion of the information-sharing process with regard to the implementation of the policy framework is presented in section 4.

[8] Policy tools adopted by national authorities may include existing regulatory/supervisory tools depending on their effectiveness.

1. High-level policy framework

In its October 2011 report, the FSB broadly defined shadow banking as the system of credit intermediation that involves entities and activities fully or partially outside the regular banking system, and set out a practical two-step approach in defining the shadow banking system:

- First, authorities should cast the net wide, looking at all non-bank credit intermediation to ensure that data gathering and surveillance cover all areas where shadow banking-related risks to the financial system might arise.
- Second, for policy purposes, authorities should narrow the focus to the subset of non-bank credit intermediation where there are: (i) developments that increase systemic risk (in particular maturity/liquidity transformation, imperfect credit risk transfer and/or leverage), and/or (ii) indications of regulatory arbitrage that is undermining the benefits of financial regulation.

In line with the above approach, the policy framework for other shadow banking entities consists of three elements. The first element is "the framework of five economic functions (or activities)" to which authorities should refer in determining whether non-bank financial entities other than MMFs in their jurisdictions are involved in non-bank credit intermediation that may pose systemic risks or in regulatory arbitrage. In other words, by referring to "the framework of five economic functions (or activities)", authorities should be able to identify the sources of shadow banking risks in non-bank financial entities in their jurisdictions from a financial stability perspective. The focus is on credit intermediation activities by non-bank financial entities that are close in nature to traditional banks (i.e. credit intermediation that involves maturity/liquidity transformation, leverage and/or credit risk transfer), while excluding non-bank financial entities that do not usually involve significant maturity/liquidity transformation and are not typically part of a credit intermediation chain (e.g. pension funds). Such credit intermediation activities by non-bank financial entities often generate benefits for the financial system and real economy, for example by providing alternative financing/funding to the economy and by creating competition in financial markets that may lead to innovation, efficient credit allocation and cost reduction. However, unlike other non-bank financial activities, these activities create the potential for "runs" by their investors, creditors and/or counterparties, and can be procyclical, hence may be potential sources of systemic instability. These non-bank credit intermediation activities may also create regulatory arbitrage opportunities as they are not subject to the same prudential regulation as banks yet they potentially create some of the same externalities in the financial system. In assessing the extent of shadow banking risks that may be inherent in the activities of a non-bank financial entity, authorities may refer to the suggested indicators listed in Annex 1.

The second element of the policy framework is "the framework of policy toolkits (hereafter policy toolkits)", which consists of overarching principles that authorities should apply for all economic functions and a toolkit for each economic function to mitigate shadow banking risks (that pose systemic risks) associated with that function. The overarching principles aim to ensure non-bank financial entities that are identified as posing shadow banking risks (i.e. other shadow banking entities) are subject to oversight by authorities. The toolkit meanwhile

presents a menu of optional policies from which authorities can draw, if necessary to mitigate financial stability risks, as they think best fits the non-bank financial entities concerned, the structure of the markets in which they operate, and the degree of financial stability risks posed by such entities in their jurisdictions. The appropriate policy tools to be adopted may already be in place or may need to be introduced. When implementing the policy tools, authorities should ensure that the tools are proportionate to the degree of risks posed by the non-bank financial entities, and should take into account the adequacy of the existing regulatory framework as well as the relative costs and benefits of applying the tools. In this regard, authorities may refer to the table in Annex 2 that sets out the focus and effectiveness of policy tools in addressing each shadow banking risk. In order for the policy toolkit to be effective, jurisdictions should have in place a basic set of pre-requisites, or policy measures that include data collection and basic oversight. Policy toolkits for each economic function do not include policy recommendations from the other FSB shadow banking workstreams as the latter will have priority if there is duplication in policies in addressing the same shadow banking risks.

The third element of the policy framework is "information-sharing" among authorities through the FSB process, in order to maintain consistency across jurisdictions in applying the policy framework, and also to minimise "gaps" in regulation or new regulatory arbitrage opportunities. Moreover, such information sharing may be effective in detecting new adaptations and innovations in financial markets. Information should be shared on: (i) which non-bank financial entities (or entity types) are identified as being involved in which economic function[9] and (ii) where they have been used, which policy tool(s) the relevant authority adopted and how. As a next step, the FSB, through its WS3, will develop a detailed information-sharing procedure by March 2014 so that the FSB would be in a position to start a peer review process of national implementation of the framework by 2015.

Exhibit 1 provides a schematic overview of the policy framework for other shadow banking entities that includes the above three elements.

An important prerequisite for the implementation of the framework is the ability of authorities to collect relevant data and information. Improvement in transparency through enhanced data reporting and public disclosures is crucial for assessing the risks posed by shadow banking and in changing or reducing the incentives of market participants to arbitrage regulation at the boundaries of bank regulation. In this regard, the October 2011 Report recommended high-level principles for authorities to enhance their monitoring of the shadow banking system, including that the relevant authorities should have powers to collect all necessary data and information.

Another important prerequisite for the implementation of the framework is the need to review the adequateness of the five economic functions and the effectiveness of policy tools in the policy toolkits. Over time, the FSB will review each of the economic functions and the policy tools as necessary to reflect new financial innovations and adaptations.

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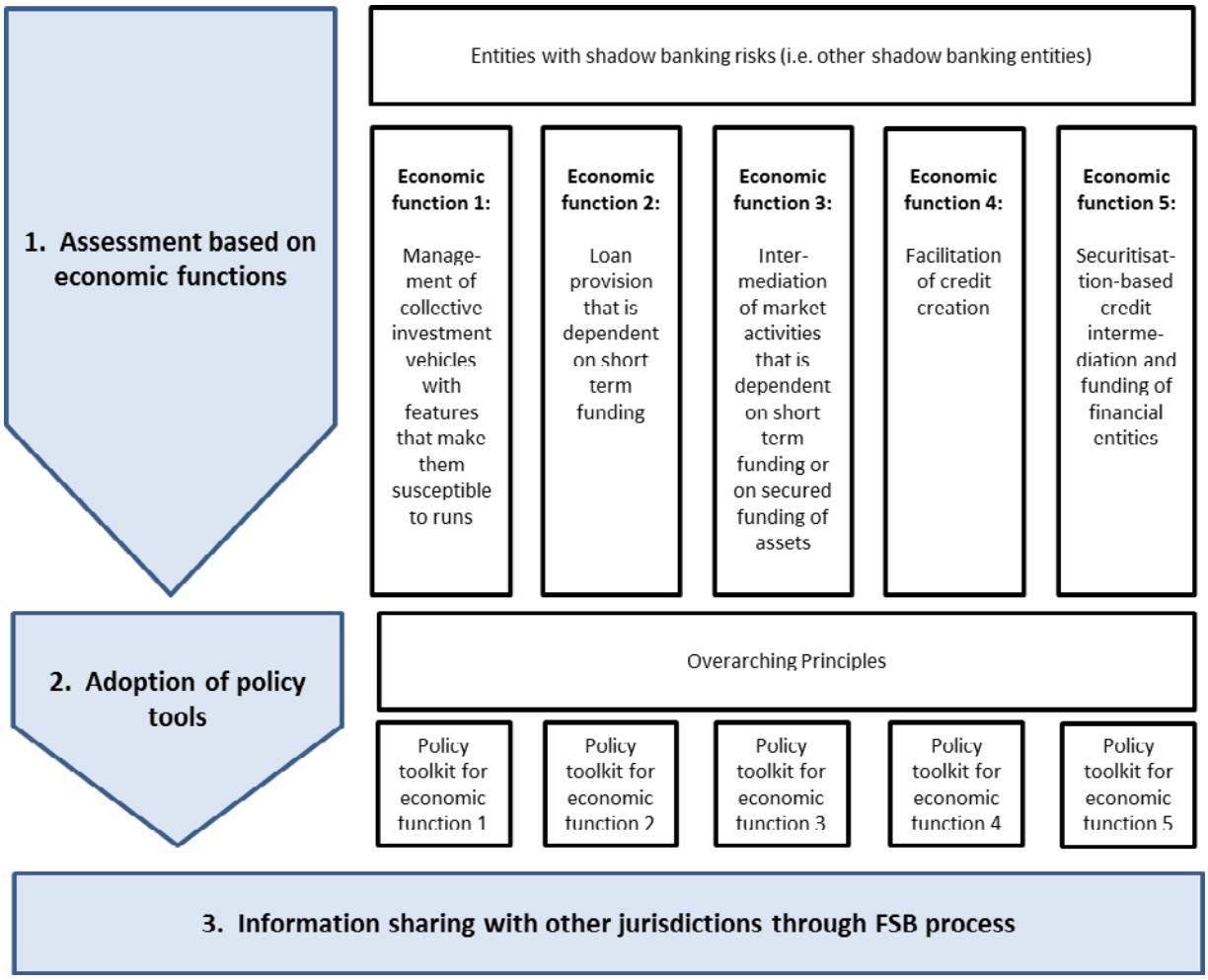
[9] This may include information on any material non-bank financial entities that are not identified as being involved in one of the five economic functions.

Exhibit 1: Schematic overview of policy framework for other shadow banking entities



2. Assessment based on the five economic functions

Drawing on the observations from its detailed assessment of the filtered entities, the FSB developed an economic-functions based framework for classifying other shadow banking entities. Authorities are expected to refer to the five economic functions set out below in assessing their non-bank financial entities' involvement in shadow banking. These economic functions will allow authorities to categorise their non-bank financial entities not by *legal forms* or *names* but by *economic function* or *activities*, and provide international consistency in assessing their risks.[10] In some cases, authorities may classify an entity into more than one type of economic function that gives rise to shadow banking risks if that entity undertakes multiple functions. Authorities will be able to capture new structures or innovations that create shadow banking risks, by looking through to the underlying economic function and risks of these new innovative structures.

The ways in which each of the economic functions gives rise to shadow banking concerns are described below in detail. Examples of possible entity types that fall within each economic function are also provided. Over time, the FSB will review each of the economic functions as necessary so as to better reflect new innovations and adaptations.

2.1 Management of collective investment vehicles[11] with features that make them susceptible to runs[12]

In many circumstances, collective investment vehicles (CIVs) can act as shock absorbers in the financial system by spreading losses from an entity's distress or insolvency or from adverse financial market conditions among a disparate group of investors. However, in extreme circumstances, some CIVs that are involved in credit intermediation with maturity/liquidity transformation and/or leverage can be susceptible to runs. These CIVs can face large scale redemption requests within a short time period and/or have to roll over positions if the vehicles come under stress or operate in stressed market environments as investors seek to redeem their shares to limit losses or engage in flights to quality. This can particularly be the case given that these vehicles tend to meet redemptions by selling their highest quality, most liquid assets first. A run can lead affected vehicles to engage in fire sales, which can spread the adverse effects of the run to other CIVs and the broader markets if the fire sales temporarily distort or dislocate market liquidity and/or pricing. Runs also can have systemic effects if they adversely affect other market participants or counterparties. If the CIV is leveraged, runs can also be instigated by lenders to the fund who can suddenly pull their financing if they become concerned about the risk exposure of the CIV. Since not all CIVs are susceptible to runs, authorities should consider the susceptibility of different types of CIVs to runs carefully, taking into consideration the regulatory setting and structure of the

[10] In assessing the extent of shadow banking risks in each of the five economic functions, authorities may refer to the suggested information items listed in Annex 1.

[11] Collective investment vehicles (CIVs) include investment vehicles/funds/accounts established for pooling client assets for one or more than one investors.

[12] Susceptibility to runs includes redemption risks by investors as well as roll-over risk by counterparties.

CIV, the markets in which the CIV operates, and the CIV's investor base, among other factors.

The risk and adverse effects of a run on a CIV (and related fire sales) can be amplified by factors such as:

- the CIV's investor base and their tolerance for absorbing losses;
- the complexity and liquidity of the CIV's portfolio and its ability to rapidly sell assets to meet redemptions without creating adverse pricing impacts on the CIV's portfolio;
- the extent of leverage of the CIV;
- the concentration of the CIV in market segments or counterparties particularly affected by a market shock; and
- the correlation between assets affected by the run and assets held by other CIVs or investors.

The following examples illustrate how the management of CIVs can make them more susceptible to runs:

- *Management of CIVs with a very low risk investment objective or relatively illiquid portfolio in times of stress where there are flights to quality or liquidity* – CIVs with a very low risk investment objective (or with very risk-averse investors) and/or a relatively illiquid portfolio, and that are fully redeemable upon demand or within a short timeframe, can face "run" risk in times of market stress from flights to quality or liquidity. This can particularly be the case if their investors fear a related deterioration in the quality or liquidity of the CIV's portfolio. Some CIVs of this type could maintain a relatively stable value through voluntary support provided by asset management firms or sponsoring banks, and be perceived as having an implicit guarantee. These CIVs may face serious run risk if their investors no longer perceive the investments as safe due to deterioration in the investment portfolio and/or the ability of the fund's sponsor to prevent losses in value.
- *Management of CIVs with substantial roll-over risk in their portfolios* – A CIV may be exposed to stress after deterioration in its portfolio if its portfolio presents significant roll-over risk where counterparties or, for a leveraged CIV, lenders could suddenly refuse to interact with the CIV. Such roll-over risk increases especially when a CIV is invested in long-term and/or complex financial instruments (thus, transforming maturity/liquidity) as such investment would make it more difficult and/or costly to liquidate in response to sudden stress on the CIV.

2.2 Loan provision that is dependent on short-term funding

This economic function captures lending or credit provision activity[13] conducted outside of the banking system that is funded with short-term liabilities. Such activity, for both retail and corporate customers, for any purpose (e.g. consumer finance, auto finance, retail mortgage,

[13] Credit provision includes provision of commitment lines.

commercial property, equipment finance), on a secured or unsecured basis, may give rise to maturity/liquidity transformation risks and/or excessive leverage. Entities that are engaged in these activities are likely to compete with banks or offer services in niche markets where banks are not active players. They often concentrate lending in certain sectors due to expertise and other reasons. This may create significant risks if the sectors they focus on are cyclical in nature (e.g. real estate, construction, shipping, automobiles, and retail consumers). Such risk may be exacerbated if these entities are heavily dependent on short-term funding or wholesale funding, or are dependent on parent companies for funding and the parent companies are in sectors that are cyclical in nature. In some cases, they may also be used as vehicles for banks to circumvent regulations.

Examples are as follows:

- *Deposit-taking by entities that provide credit but that are not subject to bank prudential regulation* – Entities that take deposits from retail and wholesale customers that are redeemable at notice or within a short timeframe are vulnerable to runs. These entities may also create regulatory arbitrage for banks to circumvent regulations. Examples are deposit-taking finance companies in New Zealand, whose rapid growth and then collapse created serious systemic risks in 2007-11.
- *Credit provision with funding heavily dependent on wholesale funding markets or short-term commitment lines from banks* – Entities with such a funding model may be vulnerable to runs if their funding is heavily dependent on wholesale funding such as ABCPs, CPs, and repos or short-term bank commitment lines. This run risk can be exacerbated if those entities are leveraged or involved in complex financial transactions.
- *Credit provision by non-bank financial entities that are dependent on funding by parent companies which operate in sectors that are cyclical in nature and/or are highly correlated with the portfolios of these entities* – Funding terms may be enhanced through explicit support from a parent company. The parental support allows entities to obtain funds from financial markets at costs that are sometimes less than banks. However, this may create serious risks if the activities financed this way and the parent company's own business are inter-linked or highly correlated. Examples are finance company arms of some automobile companies during the crisis.
- *Credit provision by non-bank financial entities funded heavily by banks that use these entities as a means to bypass regulation/supervision* – These entities may be used by banks as vehicles in circumventing regulations or banks' internal risk management policies. For example, banks may lend to finance companies that in turn will lend to borrowers to whom banks may not be able to lend directly due to their internal risk management policies or prudential regulatory requirements.

2.3 Intermediation of market activities that is dependent on short-term funding or on secured funding of client assets

Intermediation between market participants may include securities broking services (i.e. buying and selling of securities and derivatives on and off exchanges including in a market

making role) as well as prime brokerage services to hedge funds.[14] Non-bank financial entities engaged in these activities may be exposed to considerable liquidity risks (including intra-day liquidity risk) depending on their funding model. Where these entities are heavily dependent on funding that uses clients' assets (often via repos), such activities are economically similar to banks' collection and redeployment of deposits into long-term assets (i.e. bank-like activities).

Examples may include:

- *Market intermediation that is heavily dependent on wholesale funding markets or short-term commitment lines from banks* – Non-bank financial entities engaging in this activity may be vulnerable to runs if their funding is heavily dependent on wholesale funding such as CPs, repos or short-term bank commitment lines. Such run risk can be exacerbated if they are leveraged or involved in complex financial transactions. An example entity under this function is securities broker-dealers.
- *Market intermediation that is dependent on secured funding of client assets* – Non-bank financial entities in this area utilise clients' assets to raise funds for their own investment/business. Such use of clients' assets may take the form of, for example, repos or re-hypothecation. An example entity under this function is a prime broker who re-hypothecates client assets for the purpose of financing other client's long positions and covering short positions. Some securities broker-dealers may also use client assets to finance their own business.

2.4 Facilitation of credit creation

The provision of credit enhancements (e.g. guarantees) helps to facilitate bank and/or non-bank credit creation, may be an integral part of credit intermediation chains, and may create a risk of imperfect credit risk transfer. Non-bank financial entities that conduct these activities may aid in the creation of excessive leverage in the system. These entities may potentially aid in the creation of boom-bust cycles and systemic instability, through facilitating credit creation that may not be commensurate with the actual risk profile of the borrowers, as well as the build-up of excessive leverage. Credit rating agencies also facilitate credit creation but are outside the scope as they are not financial entities.

Examples may include:

- *Facilitation of credit creation through writing insurance on financial products (e.g. structured finance products) and consequently facilitate potentially excessive risk taking or may lead to inappropriate risk pricing while lowering the cost of funding of the issuer relative to its risk profile.* – For example, entities that insure or guarantee financial products may write insurance on structured securities issued by banks and other entities, including asset-backed securitisations, often in the form of credit default swaps. While not all structured products issued in the years leading up to the financial crisis were insured or guaranteed, the insurance or guarantees of structured products helped to create

[14] On the other hand, activities such as pure foreign exchange or stock brokerage services that are not involved in maturity/liquidity transformation and are not part of a credit intermediation chain in the system will be outside the scope of this economic function.

excessive leverage in the financial system. In this regard, the insurance or guarantee contributed to the creation of large amounts of structured finance products by lowering the cost of issuance, and providing capital relief for bank counterparties through a smaller capital charge for insured structures than for non-insured structures. Because of large losses on structured finance business, these entities have in some cases entered into settlement agreements with their counterparties under which, for the cancellation of the insurance or guarantee, the counterparties accepted some compensation from the entities in lieu of full recovery of losses. In other cases, these entities have been unable to pay losses on insured or guaranteed structured obligations when due. These events exacerbated the financial crisis.

- *Facilitation of credit creation by non-bank financial entities whose funding is heavily dependent on wholesale funding markets or short-term commitment lines from banks* – Entities may provide credit enhancements to loans (e.g. credit card loans, corporate loans) provided by banks as well as non-bank financial entities. Such entities may be vulnerable to "runs" if their funding is heavily dependent on wholesale funding such as ABCPs, CPs, and repos or short-term bank commitment lines. Such run risk can be exacerbated if they are leveraged or involved in complex financial transactions.
- *Facilitation of credit creation through providing credit enhancements to mortgages and consequently facilitate potentially excessive risk taking or inappropriate pricing while lowering the cost of funding of the borrowers relative to their risk profiles* – Entities may provide a first loss insurance coverage for lenders and investors on the credit risk of borrower default on residential mortgages. These entities can play an important role in providing an additional layer of scrutiny on bank and mortgage company lending decisions. However, such credit enhancements may aid in creating systemic disruption if risks taken are excessive and/or inappropriately reflected in the funding costs of banks and mortgage companies.

2.5 Securitisation-based credit intermediation and funding of financial entities

Provision of funding to related-banks and/or non-bank financial entities, with or without transfers of assets and risks from banks and/or non-bank financial entities, may be an integral part of credit intermediation chains (or often the regular banking system). Depending on the activities performed within the chains and the respective funding profiles, shadow banking risks may arise from securitisation to varying degrees.[15] It is also acknowledged that some term securitisations are match-funded [16] up to a point and therefore might involve maturity/liquidity transformation and leverage to a lesser extent than other, more complex, forms of securitisation. In some cases, however, securitisation may possibly facilitate or aid in the creation of excessive maturity/liquidity transformation, leverage or regulatory arbitrage in the system. Such activities may provide other functions but are also used by banks and/or non-bank financial entities for funding/warehousing as well as to reduce their capital

[15] For a more detailed description of the different steps, entities and funding techniques involved in the credit intermediation chains, see Stijn Claessens et. al. (2012) *Shadow Banking: Economics and policy*, IMF Staff Discussion Note, and Zoltan Pozsar et. al. (2010) *Shadow Banking*, FRBNY Staff Report No. 458.

[16] Match funded refers to so-called "term securitisation" that is typically backed by self-liquidating asset pools.

requirements in bank regulations. This was particularly the case leading up to the crisis, where this form of arbitrage was widespread. Consequently, many securitisation markets saw significant contractions in activity or were essentially "frozen". Since then, many securitisation markets, especially for the more opaque and more complex products, have been very slow to recover. At the same time, regulatory "loopholes" have been closed, making regulatory arbitrage motivated structures less viable.[17] While facilitating the recovery of sound, robust and transparent securitisation activities are important in financing the real economy, regulators need to be alert to a potential resumption of large-scale activity, especially of innovative and complex structures.

Examples may include:

- *Securitisation that is used to fund long-term, illiquid assets by raising shorter-term funds* – Securitisation entities may purchase or provide credit enhancements to a pool of loans provided by banks and/or non-bank financial entities, and issue ABCPs and other securities that are backed by such loan pool. Banks usually provide liquidity facilities to allow securitisation entities to reduce costs of funding. This, however, would create maturity/liquidity transformation and leverage in the system, as well as increasing interconnectedness between the banking system and non-bank financial entities. Under Basel I, securitisation entities were also used by banks to circumvent capital regulation as liquidity facilities were treated as 0% risk weights.
- *Funding by banks (or non-bank financial entities) through investment funds or other similar structures to finance illiquid assets by raising funds from markets* – Certain exchange traded products (ETPs),[18] for instance, may be used by banks and/or non-bank financial entities to raise funding against an illiquid portfolio on their balance sheet that cannot otherwise be financed in the wholesale funding market through, for example, repos. For synthetic ETFs, this might be achieved through total return swaps, while economically similar results may be achieved by physical ETFs, or other investment funds, where they provide a bank with a pool of lendable securities to be used for repo financing.

3. The framework of policy toolkits

Shadow banking risks arise from each of the economic functions in different ways; hence the FSB has developed a set of overarching principles and a policy toolkit for each economic function. Some tools are set out as overarching principles that the relevant authorities should apply to non-bank financial entities in all economic functions (as set out in Section 3.1) while other measures can, if necessary, be applied selectively as appropriate (as set out in Section

[17] Under the 2009 enhancements to the Basel II framework (known as Basel 2.5), eligible liquidity facilities with an original maturity of one year or less under the standardised approach of the securitisation framework received a 50% credit conversion factor (from 20%), thus eliminating the different treatment of eligible liquidity facilities with maturity less than one year and more than one year.

[18] ETP is a generic term and may encompass a number of specific products such as exchange traded funds (ETFs), exchange traded commodities (ETCs) and exchange traded notes (ETNs). The focus is on those products where collateral may be swapped or otherwise exchanged with counterparties that are banks and other financial entities. This may be the case in ETFs, but is not limited to them.

3.2). For the latter, authorities should select the appropriate policy tool(s) from the policy toolkits if necessary to mitigate shadow banking risks of non-bank financial entities in their jurisdictions from a financial stability perspective and should apply them in a consistent and effective manner. The appropriate policy tools to be adopted may already be in place or may need to be introduced. When implementing the policy tools, authorities should ensure that the tools are proportionate to the degree of risks posed by the non-bank financial entities, and should take into account the adequacy of the existing regulatory framework as well as the relative costs and benefits of applying the tools. In this regard, authorities may refer to the table in Annex 2 that sets out the focus and effectiveness of policy tools in addressing each shadow banking risk. That said, authorities should give priority to policy recommendations from the other FSB shadow banking workstreams if they address the same shadow banking risks as the policy tool(s) in the policy toolkits.[19]

The detailed design of overarching principles and each option should be guided by the five general principles for regulatory measures in the October 2011 Report. They are namely:

- ***Focus:*** Regulatory measures should be carefully designed to target the externalities and risks the shadow banking system creates.
- ***Proportionality:*** Regulatory measures should be proportionate to the risks shadow banking poses to the financial system.
- ***Forward-looking and adaptable:*** Regulatory measures should be forward-looking and adaptable to emerging risks.
- ***Effectiveness:*** Regulatory measures should be designed and implemented in an effective manner, balancing the need for international consistency to address common risks and to avoid creating cross-border arbitrage opportunities against the need to take due account of differences between financial structures and systems across jurisdictions.
- ***Assessment and review:*** Regulators should regularly assess the effectiveness of their regulatory measures after implementation and make adjustments to improve them as necessary in the light of experience.

With the establishment of an information-sharing process among members through the FSB (which is described in the next section), this global policy framework for other shadow banking entities will help ensure consistency in the policy actions applied, as they are designed by looking to the underlying economic functions rather than legal forms and structures, and offer a standard set of options to address the shadow banking risks arising from each underlying economic function.

[19] Thus, the policy tools in Section 3.2 do not include policy recommendations from other FSB shadow banking workstreams. For example, if the entities covered under the scope of these economic functions give rise to shadow banking risks (e.g. maturity/liquidity transformation and leverage) through their involvement in securities lending and repos, they should be subject to policy recommendations on securities lending and repos (or FSB workstream on securities lending and repos (WS5)).

3.1 Overarching principles

Non-bank financial entities that are identified as posing shadow banking risks through their involvement in one or more of the economic functions described in section 2 (i.e. other shadow banking entities) should be subject to oversight. In this regard, authorities should refer to the following overarching principles:

Principle 1: Authorities should define, and keep up to date, the regulatory perimeter.[20]

In order to effectively address the shadow banking risks arising from the activities of certain non-bank financial entities, especially where strict policy measures (e.g. capital and liquidity buffers) are required, the relevant authorities should bring the relevant entity into regulatory and supervisory oversight in their jurisdiction, if necessary, to ensure financial stability. In this regard, as a key prerequisite to addressing the systemic risks of other shadow banking entities through policy tools, authorities should have a regime to define, expand, and keep up to date the regulatory perimeter where necessary to ensure financial stability.

Principle 2: Authorities should collect information needed to assess the extent of risks posed by shadow banking.

Once an entity is identified as having the potential to pose risks to the financial system arising from its involvement in shadow banking, information should be collected for authorities to be able to assess the degree of *maturity/liquidity transformation* and use of *leverage* by other shadow banking entities, to allow authorities to decide on the appropriate rectification measures. Authorities should put in place the systems, processes and resources to collect and analyse such information. Authorities should also exchange appropriate information both within and across the relevant jurisdictions on a regular basis to be able to assess the risks posed by other shadow banking entities.

Principle 3: Authorities should enhance disclosure by other shadow banking entities as necessary so as to help market participants understand the extent of shadow banking risks posed by such entities.

Enhanced market disclosure and transparency (e.g. overall firm risk exposures, interconnectedness, funding concentration and aggregated maturity profiles of asset and liabilities) will help market participants to better monitor the entities, absorb any news/developments in a timely manner, and make informed decisions, hence avoiding sudden loss of confidence that may lead to runs.

Principle 4: Authorities should assess their non-bank financial entities based on the economic functions and take necessary actions drawing on tools from the policy toolkit.

Authorities should put in place the high-level policy framework for other shadow banking entities that consists of: (i) regular assessment of non-bank financial entities' involvement in credit intermediation that may pose systemic risks or in regulatory arbitrage based on the five economic functions; (ii) adoption of policy tool(s) from the policy toolkit if necessary to

[20] This is in line with the high-level principles for monitoring the shadow banking system set out in the October 2011 Report available at http://www.financialstabilityboard.org/publications/r_111027a.pdf. In particular, see paragraph 2.1(iii).

mitigate the financial stability risks identified; and (iii) sharing of information with other authorities to provide for a level of international consistency. Its implementation will allow authorities to identify sources of shadow banking risks in the non-bank financial space; mitigate the risks identified; and minimise any "gaps" in regulatory approaches.

3.2 Policy toolkits

3.2.1 Management of collective investment vehicles with features that make them susceptible to runs

Tool 1: Tools for managing redemption pressures in stressed market conditions

Tool 1a: Redemption gates

Redemption gates allow collective investment vehicles (CIVs) to manage redemption requests. By using gates, CIVs constrain the redemption amounts to a specific proportion on any one redemption day. Thus, gates are a measure for CIVs to manage maturity or liquidity mismatches by prolonging the term of CIVs' liabilities. They can ease redemption pressures and thus restrain a "run" or other "herding" behaviour. Authorities may require the relevant CIV to utilise such gates under appropriate circumstances to mitigate the impact of redemption pressures. However, the imposition of gates can send negative market signals leading to pre-emptive runs and can lead investors to redeem from similar CIVs out of fear that they may in turn also try to impose gates (although the beginnings of a run may trigger the gate and thus "self-correct" any run).

Tool 1b: Suspension of redemptions

Suspension of redemptions is another tool that can be used to mitigate the impact of redemption pressures. The suspension of redemptions would achieve the same purpose (i.e. mitigating maturity and liquidity transformation) as redemption gates, albeit in a stronger manner. It is an exceptional measure supposed to allow sufficient time for the manager to assess the situation, see if it can be remedied and decide whether to reopen the CIV for redemptions or arrange for an orderly liquidation. It places a significant liquidity restriction on CIV investors who would normally expect to be able to redeem fully and promptly. As with gates, investors may interpret the news of a suspension negatively and react by redeeming or liquidating other investments with the same asset manager or from similar types of CIVs. If perceived as a sign that the CIV has great difficulties, it may also create an incentive for a "run" once the CIV is reopened. Nonetheless, in some situations suspensions have been an effective means to mitigate runs and scope to be able to impose suspensions could be included in the regulatory framework and in individual fund contracts with investors.

Tool 1c: Imposition of redemption fees or other redemption restrictions

A further tool to counter a run caused by maturity/liquidity transformation and leverage to be considered is the introduction of redemption fees that would make investors bear liquidity costs in times of stress and otherwise restrain redemptions. Unlike the tools aimed at managing redemption pressures, redemption fees would offer investors the benefit of having a choice over whether to redeem immediately (albeit at a cost) or remain invested in the CIV (and avoid the fee). Fees may be applied at all times or be imposed depending on market contingencies. In the case of trigger-based redemption fees, however, there is a risk that the

fear of fees being imposed can send a negative signal to the market and lead to a pre-emptive run (although the beginnings of a run may trigger the fee and thus "self-correct" any run). Authorities may also want to consider if there are any significant practical difficulties that CIVs may have in implementing different kinds of redemption fees.

Tool 1d: Side pockets

Side pockets are a tool for CIVs to manage maturity/liquidity risks by legally separating the impaired or illiquid portions of an investment portfolio to prevent them from impacting a CIV's returns. Typically, these may be put into place when a portion of a portfolio cannot be properly valued as a result of adverse market circumstances affecting one or more of its individual components. As a result of this segregation, a CIV would continue its normal operations by satisfying redemptions, generating returns from the higher quality portion of its portfolio, and avoiding an increase in redemption demands, while waiting for market conditions to stabilise. Once market conditions stabilise, the manager may be able to adequately value and liquidate the impaired or illiquid assets. There are nevertheless potential drawbacks to allowing side pockets. There may be conflicts of interests if a manager is allowed to determine whether to use side pockets. Side pockets can tie up some portion of investors' assets for a significant period of time. Accordingly, activation of side pockets may send negative market signals and thus exacerbate the risk of a "run", or can lead investors to redeem from similar CIVs. Furthermore, side pockets would only be effective when the redemption pressure is triggered by a problem related to specific assets. It cannot address a widespread run.

Tool 2: Tools to manage liquidity risk

Tool 2a: Limits on investments in illiquid assets

This tool may take the form of a quantitative limit on the proportion of portfolio assets that could be invested in illiquid assets, such as those with no observable market prices (i.e. no secondary markets). The larger the proportion of illiquid assets, the more difficult or costly it may be to unwind positions in order to meet redemptions that may increase as the extent of liquidity transformation becomes larger. CIVs facing redemption pressures caused by maturity/liquidity transformation and leverage typically will sell their most liquid assets first, creating a first-mover advantage for early redeemers. If investors understand this, a run can develop when there are adverse market conditions affecting the CIV's investments. Appropriate restrictions may therefore lessen "fire sale" risks and consequent "runs". Possible drawbacks are the likely reduction of investment opportunities, a possible change in the CIV's risk-return profile, and reduced yield.

Tool 2b: Liquidity buffers

CIVs typically meet redemptions through cash on hand and by selling their most liquid assets. In times of stress, asset sales may create liquidity costs that may create first mover advantage for early redeeming investors. Authorities may reduce this liquidity risk by imposing requirements for liquidity buffers (e.g. as a proportion of an invested portfolio) so as to mitigate the impact of increased redemptions in an event of market stress. Liquidity buffers comprised of highly liquid cash or near-cash instruments would provide internally generated liquidity to satisfy redemptions and thus reduce the need for CIVs to engage in fire-sales in the face of heightened redemptions or a "run". The size of such buffers should be calibrated

based on the nature of the CIV, its risk-return profile, and the types of stresses it may face. Liquidity buffers may be appropriate, for example, for CIVs with very illiquid portfolios that offer on demand redemptions or for CIVs perceived as very low risk and for CIVs used for cash management, which can have higher redemption levels and volatility. However, authorities should also consider that this tool can only be effective in containing a certain level of redemption pressures and should consider the CIV's advertised risk-return profile, as liquidity buffers may lower the CIV's returns. Furthermore, there could be a shortage of liquid assets in certain jurisdictions which could present challenges in implementing this tool.

Tool 2c: Limits on asset concentration

Limits on asset concentration (e.g. quantitative limit on the proportion of portfolio assets that may be invested in any one issuer/sector) may be imposed by authorities to manage risk. The higher the asset concentration of a CIV's portfolio, the more likely a CIV will be adversely affected by any particular holding or sector exposure and the more difficult or costly it may be to unwind positions in order to meet redemption pressures. Furthermore, where adverse market conditions affect a particular market segment, managers concentrated in that segment may have difficulty liquidating their positions to meet redemption requests. Restrictions on concentrations in particular credit market segments/industries could thus lessen the risk of large-scale "runs" in adverse market conditions. However, limits on asset concentration can significantly affect a CIV's investment strategy and risk-return profile. Accordingly, it may not be appropriate for some CIVs. In such situations, other effective safeguards should be in place.

Tool 3: Limits on leverage

Certain CIVs may employ leverage to enhance their returns. However, such leverage may become a threat to financial stability especially if employed by a large CIV or if they create risk by the CIV's interconnectedness to banks. Where appropriate, authorities may consider limiting the amount of leverage that can be employed by certain CIVs or require them to maintain a sufficient buffer of liquid assets to meet the potential pressures from creditor runs. These measures could mitigate the pro-cyclicality of market movements, especially in the event of market distress, reduce any implicit "government safety net" attached to highly leveraged CIVs and lead to more prudent risk management of the entity. Possible disadvantages for regulators to consider before imposing any such limits include impediments to a CIV's portfolio investment flexibility and potential difficulty in calibrating the limits for different investment strategies (i.e. some strategies are only "efficient" if they operate on a highly leveraged basis).

Tool 4: Restrictions on maturity of portfolio assets

Restrictions on the maturity of portfolio assets help mitigate the risks arising from maturity and liquidity transformation created by CIVs, particularly when the underlying markets for the CIVs' portfolios are not very liquid. Examples of such restrictions are limits on the duration or weighted average maturity of the fund's portfolio and limits on the residual maturity of portfolio securities. Some CIVs also ladder the maturity profile of at least a segment of their portfolios as a liquidity risk management tool. Any such restrictions would need to be tailored to reflect the level of risk expected by the CIV's investors and associated with its investment objective. In considering such restrictions, regulators would want to

balance the systemic risk-reduction benefits that such restrictions could provide against the limitations that such restrictions create on the CIV's yield and risk-return profiles. Such measures would mainly be relevant for CIVs offered as very low risk.

3.2.2 Loan provision that is dependent on short-term funding

Tool 1: Impose bank prudential regulatory regimes on deposit-taking non-bank loan providers

If non-bank financial entities that provide loans (non-bank loan providers) raise funds through deposits, the *maturity/liquidity transformation* and the *leverage* they create may have exactly the same effect as banks. Thus, to mitigate these financial stability risks (and protect depositors), non-bank loan providers which raise funds through deposits should be subject to prudential regulations that are equivalent to those for banks, or alternatively such entities should be prohibited from taking deposits.

Tool 2: Capital requirements

An appropriate level of capital is crucial for entities that provide loans so that they can absorb the losses that may reasonably be expected to result from these activities. It is also crucial in incentivising such entities to manage credit risks associated with loans, so that their loan provision would not result in excessive leverage in the financial system. Thus, authorities should require these entities to hold capital that is sufficient to cover potential losses from the risks taken. Such capital should be set with a long-term time horizon in mind. These entities, as with banks, may have a procyclical effect on credit availability and hence on the real economy by expanding their businesses and facilitating the creation of credit in boom times where risk appetite is high and credit costs and losses are low, and scaling down their businesses in turbulent times. Therefore, the requirements should, where appropriate, be designed and calibrated to be countercyclical. The implementation challenge is in the calibration of the capital level/ratios as well as determination of the eligible capital instruments to suit the sectoral and jurisdictional specificities of these entities, especially when they are likely to exhibit higher heterogeneity in business/risk profiles across jurisdictions compared to banks. Whatever capital instruments that are determined to be eligible should have sufficient loss absorbing capacity.

Tool 3: Liquidity buffers

To counteract potential stress and run risks from short-term liabilities, and to address the risks arising from *maturity/liquidity transformation*, authorities may impose liquidity regulation based on requiring liquidity buffers of a certain size and composition. Such requirements may also help safeguard the entities against stress arising for reputational reasons where an entity is highly interconnected to other entities within its parent group. However, the size of the buffers and types of eligible liquid assets may have to be calibrated and tailored to the characteristics of the entities, which may differ from banks, especially where the entities do not take deposits.

Tool 4: Leverage limits

To mitigate the potential risks arising from the entities' use of *leverage*, especially where the entities' leverage is at a level where it may pose a threat to financial stability, authorities should impose leverage limits on the entities as appropriate. This will help curtail pro-

cyclicality in non-bank entities that may not be otherwise prudentially regulated in a sufficient manner. As with the other quantitative prudential requirements, any such constraints on leverage should be calibrated to suit the specificities of the entities. For example, the appropriate level of leverage may differ depending on the market they are involved in (e.g. retail versus wholesale) and the significance within the financial system (e.g. size, inter-connectedness). Authorities should nevertheless bear in mind the potential regulatory arbitrage with banks that are under the Basel III leverage ratio regime.

Tool 5: Limits on large exposures

The risks arising from *maturity/liquidity transformation* as well as *leverage* can be exacerbated when an entity has significant asset concentration to specific counterparties. In such circumstances, authorities may impose limits on claims to a particular obligor. These limits, however, may need to be tailored to an entity's specific business model or operations, to avoid affecting disproportionately smaller specialised lenders in naturally concentrated markets, while at the same time containing excessive risk concentrations.

Tool 6: Restrictions on types of liabilities

A direct restriction on the types of liabilities will eliminate or reduce the risks such as run risks, associated with particular liability types such as ABCPs. Such restrictions may include prohibiting the use of funding instruments like ABCPs in cases where entities do not have appropriate securitisation and risk management processes in place. Also it may involve concentration limits on the particular lender/sector/instrument. They will help mitigate the risks arising from *maturity/liquidity transformation*.

3.2.3 Intermediation of market activities that is dependent on short-term funding or on secured funding of client assets

Tool 1: Impose prudential regulatory regimes equivalent to those for banks

The *maturity/liquidity transformation* being carried out, and the *leverage* used by these non-bank market intermediaries may lead to them having the same risk profile as banks, including susceptibility to runs especially by lenders and other counterparties in wholesale funding markets, although long-term assets used as collateral may be highly liquid in normal times. This creates concerns from a financial stability perspective. It also creates regulatory arbitrage opportunities. In such cases, authorities could subject these entities to prudential regulatory and supervisory regimes that are functionally equivalent to banks. However, this may be a rather blunt requirement for entities that do not take deposits and do not make long-term loans.

Tool 2: Liquidity requirements

Depending on the extent to which these non-bank market intermediaries involved in the activity transform liquidity, authorities could impose liquidity requirements on the entities to mitigate risks associated with *liquidity transformation*. The objective is to ensure proper liquidity risk management and a sufficient buffer of liquid assets to cover expected net flows in order to, ultimately, increase the resilience of these entities to runs, which may trigger systemic crises, either directly due to the collapse of a counterparty, or indirectly through an erosion of market confidence, which may spread across the financial system. Such liquidity measures should be similar in spirit to the Basel III liquidity requirements, although the exact

form should be tailored to the specificities of the entities and/or jurisdictions. Authorities may also limit the entities' reliance on certain types of funding (e.g. repos).

Tool 3: Capital requirements

Authorities may impose minimum capital requirements to mitigate excessive use of *leverage* as well as procyclicality associated with their funding structure. Such requirements may take the form of a minimum capital ratio (including risk-adjusted capital ratios) or minimum levels of liquid net capital. Such requirements can increase broker-dealers' resilience to credit shocks (e.g. counterparty defaults, mark-to-market (MTM) write downs on assets). The minimum requirement may be calibrated to the level of risk. The benefits of such requirements may also have to be balanced with any potential impact on market intermediation and market liquidity.

Tool 4: Restrictions on use of client assets

Non-bank market intermediaries may at times hold client assets, for example, in their roles as prime brokers. If these entities use client assets to fund their own longer term assets, the entities are essentially carrying out maturity/liquidity transformation similar to banks that collect short term deposits to fund long term loans.

To mitigate the run risks arising from *maturity/liquidity transformation*, client monies and unencumbered assets should not be used to finance the entities' own account activities. Client assets may be re-hypothecated for the purpose of financing client long positions and covering short positions, but only entities subject to adequate regulation of liquidity risk should be allowed to engage in such re-hypothecation of client assets.[21] Sufficient disclosure to clients in relation to re-hypothecation of assets should also be provided so that clients can understand their exposures in the event of a failure of the entity. This could include, daily, the cash value of: the maximum amount of assets that can be re-hypothecated, assets that have been re-hypothecated and assets that cannot be re-hypothecated, i.e. they are held in safe custody accounts. In cases where regulatory regimes permit re-hypothecation or clients may agree to arrangements where they allow the entities to re-hypothecate their assets held as collateral, authorities may impose limits on re-hypothecation, which helps to reduce leverage. These restrictions may reduce the likelihood of client runs on the entities, but the benefits will need to be balanced against any potential impact on market intermediation, market liquidity and the availability of liquid, collateral-eligible assets in the system as a whole.

3.2.4 Facilitation of credit creation[22]

Tool 1: Capital requirements

An appropriate level of capital is crucial for entities that may facilitate credit creation through providing financial guarantees and credit insurance, so they can absorb the losses that may result from these activities. It is also crucial in incentivising such entities to price their products appropriate to the risk they take, so that their facilitation of credit intermediation

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[21] This is in line with WS5's policy recommendations.

[22] Credit insurers and guarantors are, in essence, insurance companies. It can therefore be argued that they should be prudentially supervised like any other insurance company. Where this is the case, the tools may be viewed as considerations informing the prudential regime, rather than separate tools.

would not result in excessive leverage in the financial system. Thus, authorities should require these entities to hold capital that is sufficient to cover potential losses from the risks taken. Such capital should be set with sufficiently long-term time horizon in mind. These entities may have a procyclical effect on credit availability and hence on the real economy by expanding their businesses and facilitating the creation of credit in boom times where risk appetite is high and credit costs and losses are low, and scaling down their businesses in turbulent times. Therefore, the capital requirements should ideally be designed and calibrated to be countercyclical. Since these entities may facilitate credit intermediation abroad, authorities should take into account jurisdiction-specific factors in designing the minimum capital requirements while maintaining international consistency to address common risks and to avoid creating cross-border arbitrage opportunities.

Tool 2: Restrictions on scale and scope of business

Entities that may facilitate credit creation through providing financial guarantee and credit insurance products should be able to price and manage the associated risks in an appropriate manner. If they are not able to do so, authorities should impose restrictions on the scale and scope of their businesses as appropriate, or completely prohibit their involvement in the business. Authorities may also establish guidelines and procedures that entities must follow to ensure that business written is within appropriate risk profiles. Before an entity may begin insuring, guaranteeing or otherwise facilitating the creation of credit related to a new class of asset or market sector, they should also be required to file a proposal to conduct the business with the appropriate regulatory and supervisory agencies. The authorities should have the opportunity to determine appropriate exposure limits for the proposed business prior to approving entities to begin conducting that business. Implementing appropriate limits for exposure to various types of covered risks (including market sectors within those types) relative to the capital/surplus funds would help avoid cases where entities enter into new and unfamiliar markets, which could lead to significant losses and economic impact.

Tool 3: Liquidity buffers

In certain instances, these entities may be funded with short-term instruments. While they may not be directly involved in classic bank-type maturity/liquidity transformation, they may nevertheless be vulnerable to creditor runs through indirectly taking on risks. If an entity facing such runs does not have sufficient liquidity buffers, its collapse may be imminent. Where the entity is important in supporting credit intermediation chains, its collapse may trigger wider problems for the financial system. Even in normal times, entities will need to maintain sufficient liquidity to satisfy their insurance/guarantee liabilities when they become due. In this regard, authorities should impose liquidity requirements to ensure that these entities maintain sufficient liquidity buffers through both normal and stressed periods.

Tool 4: Enhanced risk management practices to capture tail events

Enhanced risk management practices such as through introducing loss modelling including appropriate stress testing are important for entities that provide financial guarantees and credit insurance, in order for them to assess the extent of losses that they may suffer in economic downturns or isolated stress events. In this regard, where appropriate, authorities should mandate periodic loss modelling with stress-testing for these entities, taking into consideration all relevant risk factors and an appropriate range of adverse circumstances and

events. Stress testing may also be used to validate the entities' models and to complement the use of models for risks that are difficult to model. If loss modelling with stress tests is properly conducted at appropriate frequencies, these entities should be able to better understand their risks and potential exposures, hence allowing management to take appropriate actions to mitigate their risks. Such actions may be beneficial from the perspective of financial stability if they result in an appropriate pace of credit creation and use of leverage in areas where risks are building up rapidly.

Tool 5: Mandatory risk-sharing between the insurer/guarantor and insured/guaranteed (i.e., deductible, co-insurance)

The amount of credit risk transfer, and thus the risk of imperfect credit risk transfer, can be reduced if the insured (or guaranteed) entities retain some of the credit risk. This can be accomplished by either a deductible, where the initial loss remains with the insured/guaranteed, or a co-payment, where losses are proportionately shared between the insured/guaranteed and the insurer/guarantor. Risk sharing has the further advantage of encouraging the insurer/guarantor to carefully scrutinise the risk profile of the underlying borrower, potentially reducing the build-up of inappropriate or excessive leverage. On the other hand, risk sharing exposes the insurer/guarantor, potentially a bank or other non-bank financial institution, to increased credit risk, increasing the riskiness of that institution. And where the cost of independently assessing the underlying credit risk is high, for example, because of a large number of small borrowers with unique characteristics, some lenders may choose not to lend rather than retain some of the risk. To give effect to the tool, appropriate information-sharing between the insurer/guarantor and the insured/guaranteed will be needed.

3.2.5 Securitisation-based credit intermediation and funding of financial entities[23]

Tool 1: Restrictions on maturity/liquidity transformation

To the extent that securitisation vehicles are used as funding channels via the issuance of short-term liabilities (e.g. in the case of ABCP issuance), restrictions on differences in maturity between the securities issued and the underlying asset pool are a direct method to limit the risks arising from the *maturity/liquidity transformation* through securitisation. Appropriate liquidity rules on securitisation vehicles will also enhance their resilience and help mitigate the risks arising from the *liquidity transformation*. Such restrictions will reduce the roll-over risk of the asset-backed securities (ABS) issued and excessive reliance on support from sponsors (e.g. banks). However, authorities may face difficulties in assessing the appropriate maturity mismatch beyond which restrictions should be imposed. Also, such restrictions would have to be tailored to different securitisation structures, taking into account their respective strategies.

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[23] When applying the following policy tools to non-bank financial entities such as securitisation vehicles, authorities should firstly acknowledge the difference between traditional bank-based structures and those put in place by other both financial (i.e. non-bank) and non-financial entities (e.g. corporates). In both cases, authorities should apply policy tools where shadow banking risks arising from securitisation-based credit intermediation and funding of banks are not adequately covered under the scope of other FSB shadow banking workstreams such as that on securitisation (WS4), which focused on aligning the incentives associated with securitisation through retention requirements, transparency and standardisation (http://www.iosco.org/library/pubdocs/pdf/IOSCOPD394.pdf). However, in the former case, authorities should apply policy tools only where other FSB shadow banking workstreams and the Basel III framework do not adequately address the risks in question.

Tool 2: Restrictions on eligible collateral

Certain non-bank financial entities may be used by banks and/or other financial entities to fund an illiquid portfolio on their balance sheet that cannot otherwise be financed in the wholesale market (e.g. through repos). In such situations, these entities may aid in an excessive build-up of leverage in the financial system as well as liquidity transformation. In the event that the illiquid portfolio deteriorates in quality, there is also significant potential for contagion to the wider financial system. To mitigate these risks, authorities may impose restrictions on the quality of collateral that may be accepted or "swapped" (i.e. eligible collateral). Collateral that is highly liquid and trades on a regulated and transparent market can be sold rapidly to neutralise or mitigate losses from counterparty non-performance or default. However, tighter collateral requirements are likely to reduce the amount of available eligible collateral and may cause funding pressures. Furthermore, the quality of collateral can quickly deteriorate during a crisis, so "high quality" collateral in normal times may not be so during a crisis. Collateral and other specific liquidity requirements would need to be articulated in the light of other recent regulatory developments, e.g. international rules on the mandatory clearing of derivatives, their relative margining agreements, etc.

Tool 3: Restrictions on exposures to, or funding from, banks/other financial entities

Banks or other financial entities may take advantage of alternative sources of funding such as securitisation, which may inadvertently aid in the excessive creation of credit and build-up of leverage similar to the events that led to the subprime crisis, conditional on lending standards applied to the underlying assets being allowed to ease excessively. They may also create regulatory arbitrage opportunities that might undermine the effectiveness of financial regulations. To reduce over-reliance by financial entities on such funding sources and avoid the creation of ad hoc vehicles, authorities may impose restrictions on the exposures of banks or of other financial entities to such funding vehicles. For example, authorities can impose limits on non-bank entities' overall exposure to banking counterparties (including intra-group), as well as diversification limits to single counterparties, net of collateral requirements. The benefits of such restrictions may have to be balanced with potential for pressures on funding for the financial entities concerned and with possible adverse implications on market efficiency.

4. Information-sharing process

Consistency across jurisdictions in applying the policy framework to similar risks is important, to minimise regulatory "gaps" remaining as well as new regulatory arbitrage opportunities. This is achieved if authorities share appropriate information with each other and recommend further actions if inconsistencies or gaps are identified through that process. Such information sharing may also be effective in detecting new adaptations and innovations in the financial market.

Information should be shared on: (i) which non-bank financial entities (or entity types) are identified as being involved in which economic function[24] and its rationale explained by each

[24] This may include information on any material non-bank financial entities that are not identified as being involved in one of the five economic functions.

shadow banking risk factors; as well as (ii) which policy tool(s) the relevant authority adopted and how. FSB members will set up an information-sharing process to share such information and make recommendations as necessary to the relevant FSB Standing Committees. Such recommendations may include review of five economic functions or policy tools to better reflect new innovations and adaptations.

The FSB, through its WS3, will develop detailed procedures for information sharing by March 2014 so that the FSB would be in a position to start a peer review process of national implementation of the framework by 2015.

Annex 1: Suggested information items for assessing the extent of shadow banking risks inherent in the activities of non-bank financial institutions

In assessing the extent of shadow banking risks inherent in the activities of a non-bank financial institution that are associated with one of the five economic functions, authorities should conduct analyses based on qualitative and quantitative information obtained through regulatory/supervisory reporting, market intelligence and/or public disclosures.

The information items listed in the table below are for authorities to refer to when they conduct an assessment of shadow banking risks. A possible starting point for analysis, in keeping with the general principle of proportionality, is the size of the sector engaging in the economic functions. Authorities may refer to single or multiple information items for each risk factor and assess the riskiness based on such items. These items should not be regarded as comprehensive - authorities may refer to other information items that need to be clarified through information sharing processes with other authorities. After assessing the information, authorities should conduct more detailed analysis of risks at the entity-level. The following items are based on the consultation results in November 2012. The shaded risk factors are to be considered more important than others. They will be reviewed as necessary.

	Maturity transformation	Liquidity transformation	Imperfect credit risk transfer	Leverage
Economic function #1: Management of collective investment vehicles with features that make them susceptible to runs	• Weighted-average remaining maturity of assets/liabilities • Weighted-average original maturity of assets/liabilities • Outstanding amount of assets/liabilities by remaining maturity buckets	• Outstanding amount of "liquid" assets/liabilities (e.g. based on exchange-traded v OTC and/or bid-ask spread) • Ratio of liquid assets/liabilities to total assets/liabilities • Profile of portfolio liquidity in secondary	• Outstanding amount of off-balance sheet exposures by instruments (compared to NAV) • Outstanding amount of off-balance sheet exposures by counterparty type (compared to NAV)	• (Total borrowing + NAV)-to-NAV • Gross exposure-to-NAV

	• Outstanding amount of assets/liabilities by original maturity buckets • Ratio of "long-term" assets to total assets • Ratio of "short-term" liabilities to total assets (or liabilities) • Redemption features	markets (e.g. in how many days assets can be liquidated or % of portfolio that can be liquidated in certain period) • Liquidity profile of investor and financing liabilities (e.g. % of funds that can be locked away for certain period)		
Economic function #2: Loan provision that is dependent on short-term funding	• Weighted-average remaining maturity of assets/liabilities • Weighted-average original maturity of assets/liabilities • Outstanding amount of assets/liabilities by remaining maturity buckets • Outstanding amount of assets/liabilities by original maturity buckets • Ratio of "long-term" assets to total assets • Ratio of "short-term" liabilities to total assets (or liabilities)	• Outstanding amount of "liquid" assets/liabilities (e.g. based on exchange-traded v OTC and/or bid-ask spread) • Ratio of liquid assets/liabilities to total assets/liabilities • Outstanding amount of liabilities with support from the parent company	• Outstanding amount of off-balance sheet exposures by instruments (compared to capital) • Outstanding amount of off-balance sheet exposures by counterparty type (compared to capital) • Risk-weighted assets amount of off-balance sheet exposures by instruments (compared to capital) • Risk-weighted assets amount of off-balance sheet exposures by counterparty type (compared to capital) • Links with the parent	• Assets-to-Equity ratio • Liabilities-to-Equity ratio • Leverage associated with off-balance sheet activities (e.g. embedded or synthetic leverage in derivatives)

			company (e.g. ownership structure; amount of funding from and exposures to the parent company or its affiliates)	
Economic function #3: Intermediation of market activities that is dependent on short-term funding or on secured funding of client assets	• Weighted-average remaining maturity of assets/liabilities • Weighted-average original maturity of assets/liabilities • Outstanding amount of assets/liabilities by remaining maturity buckets • Outstanding amount of assets/liabilities by original maturity buckets • Ratio of "long-term" assets to total assets • Ratio of "short-term" liabilities to total assets (or liabilities)	• Outstanding amount of "liquid" assets/liabilities (e.g. based on exchange-traded v OTC and/or bid-ask spread) • Ratio of liquid assets/liabilities to total assets/liabilities • Profile of portfolio liquidity in secondary markets (e.g. in how many days assets can be liquidated or % of portfolio that can be liquidated in certain period) • Liquidity profile of investor and financing liabilities (e.g. the ratio of funding through repos and securities lending) • Total collateral received that is permitted to be pledged/re-hypothecated v Total collateral received that is	• Outstanding amount of off-balance sheet exposures by instruments (compared to capital) • Outstanding amount of off-balance sheet exposures by counterparty type (compared to capital) • Risk-weighted assets amount of off-balance sheet exposures by instruments (compared to capital) • Risk-weighted assets amount of off-balance sheet exposures by counterparty type (compared to capital)	• balance sheet leverage (e.g. assets-to-equity ratios, collateralised borrowing through repo markets) • leverage associated with off-balance sheet activities (e.g. embedded or synthetic leverage in derivatives)

		pledged/re-hypothecated		
Economic function #4: Facilitation of credit creation	• Weighted-average remaining maturity of assets/liabilities • Weighted-average original maturity of assets/liabilities • Outstanding amount of assets/liabilities by remaining maturity buckets • Outstanding amount of assets/liabilities by original maturity buckets • Ratio of "long-term" assets to total assets • Ratio of "short-term" liabilities to total assets (or liabilities)	• Outstanding amount of "liquid" assets/liabilities (e.g. based on exchange-traded v OTC and/or bid-ask spread) • Ratio of liquid assets/liabilities to total assets/liabilities	• Outstanding amount of insurance/guarantees written by underlying asset types (compared to capital) • Outstanding amount of insurance/guarantees written by underlying risks (compared to capital) • Risk-weighted assets amount of insurance/guarantees written by underlying asset types (compared to capital) • Risk-weighted assets amount of insurance/guarantees written by underlying risks (compared to capital)	• balance sheet leverage (e.g. assets-to-equity ratios, collateralised borrowing through repo markets) • leverage associated with off-balance sheet activities (e.g. embedded or synthetic leverage in derivatives)
Economic function #5: Securitisation-based credit intermediation and funding of financial entities	• Weighted-average remaining maturity of assets/liabilities • Weighted-average original maturity of assets/liabilities • Outstanding amount of underlying	• Outstanding amount of "liquid" assets/liabilities (e.g. based on exchange-traded v OTC and/or bid-ask spread) • Ratio of liquid assets/liabilities to total assets/liabilities	• Outstanding amount of securitisation exposures retained or purchased by the originator (or sponsor) v total amounts of securitisation • Risk-weighted assets amount of securitisation	• Weighted-average attachment point for the most junior tranche

	assets/securities issued by remaining maturity buckets • Outstanding amount of underlying assets/securities issued by original maturity buckets		exposures retained or purchased by the originator (or sponsor) v total amounts of securitisation (compared to capital) • Outstanding amount of securitisation exposures by originator type • Outstanding amount of securitisation exposures by exposure type • Outstanding amount of liquidity facilities provided by the sponsor	

Annex 2: Policy Tools – Shadow Banking Risks Mapping Table[25]

Economic Function 1: Management of collective investment vehicles with features that make them susceptible to runs

	Maturity transformation	Liquidity transformation	Leverage	Imperfect credit risk transfer	Note (Explanations)
Tool 1: Tools for managing redemption pressures in stressed market conditions					
Tool 1a: Redemption gates	**	**			The tool helps funds manage redemption requests and maturity mismatches (or transformation) by prolonging the term of a fund liability.
Tool 1b: Suspension of redemptions	**	**			The tool helps funds manage redemption pressures, in a stronger way than gates, and to allow sufficient time for the manager to assess the situation.
Tool 1c: Imposition of redemption fees or other redemption restrictions	**	*			The tool makes redemption more costly to investors, hence restraining redemptions but choice.
Tool 1d: Side pockets	**	**			The tool reduces the maturity/liquidity risks by separating the impaired or illiquid portions of an investment portfolio.
Tool 2: Tools to manage liquidity risks					
Tool 2a: Limits on					Illiquid assets (i.e. no observable market price,

[25] This table sets out high-level indications/guidance for authorities on the focus and effectiveness of policy tools in addressing each shadow banking risk in developing and designing their policy tools. The FSB will update the table as necessary.

investments in illiquid assets	**	***			no secondary market) make unwinding positions harder, and thus need to be limited.
Tool 2b: Liquidity buffers	**	***			The tool helps withstand a certain level of redemption pressures. It will weigh on the performance of funds and restrict capacity to invest in the advertised strategy.
Tool 2c: Limits on asset concentration	*	*			Concentration increases redemption pressures, aggravating maturity/liquidity transformation risks and making assets potentially riskier.
Tool 3: Limits on leverage			***		Risks increase with the size of the fund (hedge funds in particular) and its interconnectedness to banks.
Tool 4: Restrictions on maturity of portfolio assets	***	**			Liquidity: Although restrictions on maturity do not directly address risks from liquidity transformation, they may indirectly help reduce the scope for these risks by reducing maturity mismatches.

*: Effective as risk mitigant **: Very effective ***: Significantly effective

Economic Function 2: Loan provision that is dependent on short-term funding

	Maturity transformation	Liquidity transformation	Leverage	Imperfect credit risk transfer	Note (Explanations)
Tool 1: Impose bank prudential regulatory regimes on deposit-taking non-bank loan providers	**	***	***	**	A prudential regulatory regime equivalent to banks captures all the policy recommendations below. So the effectiveness of this tool in addressing each shadow banking risk should be higher than the policy recommendations below.
Tool 2: Capital requirements			**	**	Leverage: The introduction of a capital requirement will also act as a cap on leverage. Credit risk transfer: The higher the amount of capital that an institution holds, the more likely they are to be able to deal with any costs associated with imperfect credit risk transfer.
Tool 3: Liquidity buffers	**	***			
Tool 4: Leverage limits			***		
Tool 5: Limits on asset concentration	*	*			
Tool 6: Restrictions on types of liabilities	**	**	*		Restrictions on liabilities may be a constraint to balance sheet growth, hence leverage.

*: Effective as risk mitigant **: Very effective ***: Significantly effective

Economic Function 3: Intermediation of market activities that is dependent on short-term funding or on secured funding of assets

	Maturity transformation	Liquidity transformation	Leverage	Imperfect credit risk transfer	Note (Explanations)
Tool 1: Impose prudential regulatory regimes equivalent to banks	**	***	***	**	A prudential regulatory regime equivalent to banks captures all the policy recommendations below (and possibly others). So the effectiveness of this tool in addressing each shadow banking risk should be higher than all the policy recommendations below.
Tool 2: Liquidity requirements	**	**			Maturity and liquidity: For example, holding a buffer of liquid assets would help institutions meet liquidity withdrawals, which may arise due to liquidity or maturity mismatches.
Tool 3: Capital requirements			**	**	Leverage: The introduction of a capital requirement will also act as a cap on leverage. Credit risk transfer: The higher the amount of capital that an institution holds, the more likely they are to be able to deal with any costs associated with imperfect credit risk transfer.
Tool 4: Restrictions on use of client assets	**	**	**		Maturity and liquidity: Institutions' that use clients' assets to raise funding are vulnerable if clients suddenly decide to withdraw their assets. Reducing the re-hypothecation of client assets should limit the negative impact of a client run. Leverage: A limit on re-hypothecation should also reduce institutions' ability to leverage up.

*: Effective as risk mitigant **: Very effective ***: Significantly effective

Economic Function 4: Facilitation of credit creation

	Maturity transformation	Liquidity transformation	Leverage	Imperfect credit risk transfer	Note (Explanations)
Tool 1: Capital requirements			**	**	Leverage: The introduction of a capital requirement will also act as a cap on leverage. Credit risk transfer: The higher the amount of capital that an institution holds, the more likely they are to be able to deal with any costs associated with imperfect credit risk transfer.
Tool 2: Restrictions on scale and scope of business	**	**	**	**	
Tool 3: Liquidity buffers	**	***			
Tool 4: Enhanced risk management practices to capture tail events	*	*	*	*	Generic risk management practices are indicated * as they are mostly effective to identify build-up of risks but require specification of concrete further actions.
Tool 5: Mandatory risk-sharing between the insurer/guarantor & insured/guaranteed			*	**	

*: Effective as risk mitigant **: Very effective ***: Significantly effective

Economic Function 5: Securitisation-based credit intermediation and funding of financial entities

	Maturity transformation	Liquidity transformation	Leverage	Imperfect credit risk transfer	Note (Explanations)
Tool 1: Restrictions on maturity/liquidity transformation	***	***			Restrictions on differences in maturity/liquidity between the securities issued and the underlying asset pool will enhance their resilience, mitigate risks and reduce roll-over risks of ABS.
Tool 2: Restrictions on eligible collateral		***	**	*	This will help reduce the funding of an illiquid portfolio, fuelling excessive build-up of liquidity transformation and leverage. Restrictions can be set based on the quality of collateral.
Tool 3: Restrictions on exposures to, or funding from, banks/other financial entities	*	*	***	*	Lending standards on the underlying assets will help limit the excessive creation of credit and build-up in leverage. Restrictions/diversification rules on the exposures of banks or other financial entities to such funding vehicles

*: Effective as risk mitigant **: Very effective ***: Significantly effective