ESRB opinion to ESMA on securities financing transactions and leverage under Article 29 of the SFTR

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ESRB
European Systemic Risk Board
European System of Financial Supervision

Contents

Section 1
Introduction

Pursuant to Article 29(3) of the Securities Financing Transaction Regulation (SFTR)[1], the European Commission is required to submit a report to the European Parliament and the Council of the European Union by 13 October 2017 assessing the progress in international efforts to mitigate the risks associated with securities financing transactions (SFTs), including the Financial Stability Board (FSB) recommendations for haircuts on non-centrally cleared SFTs, and on the appropriateness of those recommendations for EU markets. Against this background, the European Securities and Markets Authority (ESMA) – in cooperation with the European Banking Authority (EBA) and the European Systemic Risk Board (ESRB), and taking account of international efforts – is required to submit a report to the Commission, to the European Parliament and to the Council by 13 October 2016 assessing:

(a) whether the use of SFTs leads to the build-up of significant leverage that is not addressed by existing regulation;

(b) where appropriate, the options available to tackle such a build-up;

(c) whether further measures to reduce the procyclicality of that leverage are required.

ESMA's SFTR report on leverage (hereafter "ESMA's report") must also consider the quantitative impact of the FSB recommendations.

This opinion forms the ESRB's contribution to ESMA's report. It focuses on issues relevant from a macroprudential perspective and considers both centrally cleared and non-centrally cleared transactions in its assessment. In preparing this opinion, the ESRB has been mindful of its task to monitor and assess potential systemic risks to the EU financial system that may result from the impairment of all or components of the EU financial system. The ESRB has also been mindful of international efforts to mitigate the risks posed by SFTs in line with Article 29(3) of the SFTR. Against this background, the ESRB has taken the FSB framework for minimum haircuts on non-centrally cleared SFTs as a starting point when assessing ways of implementing a regulatory framework in the EU. Whereas an extension of the FSB framework has been considered in certain areas, namely with respect to centrally cleared transactions, the opinion does not consider extensions to different asset classes.

The opinion reflects the views of a large majority of the ESRB members. However, a few members take a different view on some elements of the proposals and conclusions presented in Section 7, most notably with respect to an extension of the scope of the FSB framework for haircuts on non-centrally cleared SFTs and the practical implementation of some of the proposals. Moreover, some members consider that the data limitations and the ongoing implementation of post-financial crisis regulatory reforms hinder a full assessment of the extent to which SFTs contribute to the build-up of leverage and procyclicality in the financial system that are not addressed by existing regulation. The views of these members are presented in more detail in Section 6. The ESRB is aware of

[1] **Regulation (EU) 2015/2365 of the European Parliament and of the Council of 25 November 2015** on transparency of securities financing transactions and of reuse and amending Regulation (EU) No 648/2012.

these issues and is currently examining them in the context of its work on the use of margins and haircuts as macroprudential instruments.[2]

The remainder of this opinion is structured as follows. Section 2 outlines the economics of centrally and non-centrally cleared SFTs. Section 3 discusses the structure of the SFT market. Section 4 describes how the use of SFTs can lead to a build-up of significant leverage and outlines the systemic risks posed by procyclicality and financial leverage. The regulatory framework is discussed in Section 5 while Section 6 describes the views of a few members who take a different position on some elements presented in the opinion. Section 7 presents the conclusions and proposals for both non-centrally and centrally cleared transactions.

[2] The ESRB is examining the macroprudential use of margins and haircuts as part of its work programme and hosted an **international conference** on this topic on 6 June 2016, which further sharpened awareness of the main benefits from and challenges to applying margins and haircuts as macroprudential instruments. See, also, ESRB (2016a).

Section 2
The economics of SFTs

SFTs are forms of secured borrowing. SFTs are “secured” in the sense that the borrower of cash or securities provides collateral to the lender. Collateral may take the form of cash or securities. If the borrower (collateral giver) in the SFT defaults, the lender (collateral taker) keeps the collateral. If the collateral has been provided in the form of securities, the collateral taker could sell those securities in order to recover the amount lent.

SFTs comprise a variety of financial contracts such as repurchase agreements (repos), and securities lending and margin lending transactions. A repurchase agreement can be seen as an arrangement that combines a sale of securities in the first leg of a transaction (usually with a spot settlement date) with a simultaneous commitment to buy back equivalent securities in the second leg of the transaction (with a future settlement date). In “classic” repos, in which income payments are transferred back to the original owner of the securities on the same day, the difference between the two prices defines the repo rate. In sell-buy-back transactions, income payments are retained by the buyer of the securities, hence the repurchase price is adjusted accordingly to take this into account. Securities lending refers to transactions where a counterparty (the lender) lends securities against collateral, subject to the commitment that the borrower will return the same or equivalent securities on an agreed future date or when requested to do so by the lender. This contractual agreement entails the payment of a fee, usually charged to the borrower of the lent securities. Margin lending refers to transactions in which a counterparty extends credit to clients for the purchase, sale, carrying or trading of securities.

After trade execution, SFTs may be cleared through a central counterparty (CCP) or on a bilateral basis with the possibility of outsourcing post-trade services (e.g. collateral management, payment and settlement) to a third-party agent (tri-party).

In non-centrally cleared trades, the market value of posted collateral usually exceeds the overall amount that is accepted or recognised as collateral in the same transaction and such a discount is referred to as a haircut. Market participants apply haircuts to protect themselves against the potential decline in the liquidation value of the securities posted as collateral. Falls in market prices may result in actual loss for the collateral taker if he or she has to liquidate the collateral due to the counterparty’s default. To mitigate the risk that the value of collateral falls below the notional amount of the transaction, the market standard is to impose higher haircuts such that the additional collateral covers net exposures arising from repo transactions with a given counterparty.

In centrally cleared transactions, CCPs apply margins in order to mitigate counterparty risk. Margin is a type of collateral used by a CCP to secure its counterparties’ contractual obligations and can broadly be described as cash or securities transferred (or, in some jurisdictions, pledged)[3] to mitigate counterparty risk (Gregory, 2014). In the case of a counterparty default, the CCP may make use of the margins to cover losses.

For centrally cleared SFTs, a CCP collects initial and variation margin as well as default fund contributions from both parties to a SFT in order to cover the default risk of either party. The initial

[3] An outright transfer constitutes the title transfer, i.e. the transfer of full ownership in an asset, whereas a pledge secures an obligation by creating a security interest (lien) in the collateral that is provided. The difference often depends on the design of the national securities laws.

margin requirement for repo transactions is generally small compared with a centrally cleared derivatives transaction due to the intrinsic features of the transaction (exchange of generally highly liquid and "solid" collateral against cash), but it may still constitute a significant cost. Miglietta, Picillo and Pietrunti (2015) find that the effect on the cost of funding observed in the general collateral segment of the Italian MTS Repo market is equal to approximately 3 to 4 basis points, on average, for a 100-basis-point variation in the initial margin. Nevertheless, the aforementioned costs might in some cases be counterbalanced by benefits stemming from multilateral netting of transactions and, consequently, lower capital requirements. Initial margins can take the form of additional cash or highly liquid non-cash assets with minimal credit and market risk, to which a haircut is applied. Variation margin is usually cash and is collected on a daily basis by calculating net mark-to-market value losses or gains on the SFT positions to reflect current exposures. The CCP simply acts as a "pass-through" and transfers variation margin to the members whose mark-to-market variation is positive. Most CCP-cleared repos are negotiated on electronic repo trading venues but repos negotiated directly between parties or via a voice-broker can also be cleared by a CCP (CPSS, 2010). The CCP standardises the margins and haircuts as it becomes the counterparty to both the cash borrower and the cash lender.

Participation in SFT markets is driven by a variety of objectives. A wide range of market participants – including banks, pension funds, insurance companies, asset managers, broker dealers and investment firms – operate in SFT markets. They do so in order to obtain funding, invest cash or borrow specific securities (Keller et al., 2014). In particular, while repos are generally motivated by the need to borrow or lend cash in a secured way, securities lending markets are primarily driven by the demand for specific securities.

Cash reinvestment and non-cash collateral re-use are key elements in many SFTs. Once received as a result of a transaction, both cash or non-cash collateral may in turn be re-used in other transactions. This allows agents to recursively leverage their positions. More broadly, agents who borrow securities with a view to selling them on and buying them back at a later stage and at a lower price (short selling) may use the short sales revenue to give new cash loans in exchange for new security borrowing. Agents who lend securities against cash may use this cash to purchase securities and lend them further (Bottazzi et al., 2012).

Cash collateral reinvestment programmes pool the cash proceeds from lending securities and reinvest this cash in a broad range of assets. Agent lenders[4] can also reinvest the cash obtained as collateral in a variety of financial instruments. In margin lending transactions, collateralised loans are usually provided to clients who are seeking leverage of their trading positions by borrowing money through their agent. In turn, the securities posted as collateral are generally held in margin accounts and are often re-used by financial institutions to fund the loans provided to clients.

SFT markets play a central role in the modern financial ecosystem and their functioning is crucial for financial stability. As a source of funding for financial intermediaries, disruptions to SFT markets can have severe consequences for financial stability and the real economy (Ranaldo et al., 2016). In addition, by helping financial intermediaries to conduct market-making activities, SFTs support price discovery mechanisms and secondary market liquidity for a variety of securities issued by both public and private entities (FSB, 2013). Furthermore, SFT markets represent a key channel for

[4] In an agency lending programme, the investor appoints an agent (custody bank, asset manager or specialist firm) to lend its securities and manage the risks involved. If the agent lender acts on its own behalf and on its own book, it effectively becomes the counterparty of the SFT. A lending agent is a role only applicable in the case of securities lending.

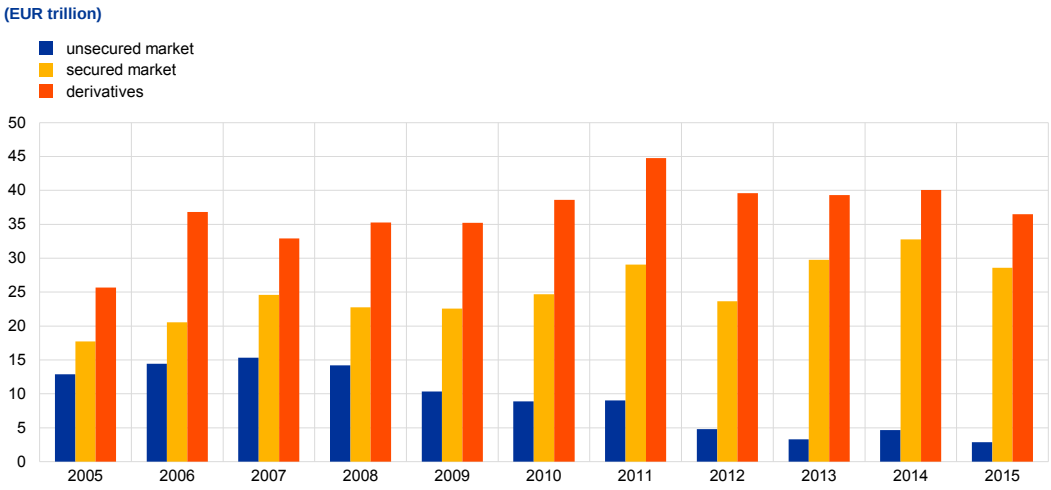
the monetary policy transmission mechanism, especially in jurisdictions where repos are the tool adopted by central banks in monetary policy operations.[5]

[5] Their role may become even more pronounced in the near future, as the reference rates calculated on the basis of repo rates are currently being considered as a potential substitute for –IBOR benchmarks. See, for instance, Contiguglia and Osborn (2016).

Section 3
Market structure

The importance of collateral for the EU financial system has grown since the global financial crisis. This reflects a broad shift away from unsecured funding after 2008 and some of the regulatory changes introduced since the global financial crisis. For example, quarterly turnover in unsecured euro money markets declined from €15.3 trillion in 2007 to €2.8 trillion in 2015 (see Chart 1), a decline which was in part compensated for by an increase in the turnover of secured transactions and derivatives. Collateral can be obtained through various means, with the largest European banks mainly employing SFTs to do so. For example, gross collateral flows (i.e. collateral posted and received) amounted to €8.5 trillion at the beginning of 2013, including €5.8 trillion through repos, compared with €340 billion for derivatives.[6]

Chart 1
Euro money markets turnover



Source: ECB Money Market Survey 2015.
Note: Derivatives include overnight indexed swaps, foreign exchange swaps, other interest rate swaps, cross currency swaps and forward rate agreements.

The absence of data on margin lending and on transactions collateralised with commodities implies that, until SFTR reporting begins, any description of SFT markets will be incomplete. Scarcity of official statistics also means that the data used in this opinion were primarily obtained from industry surveys.

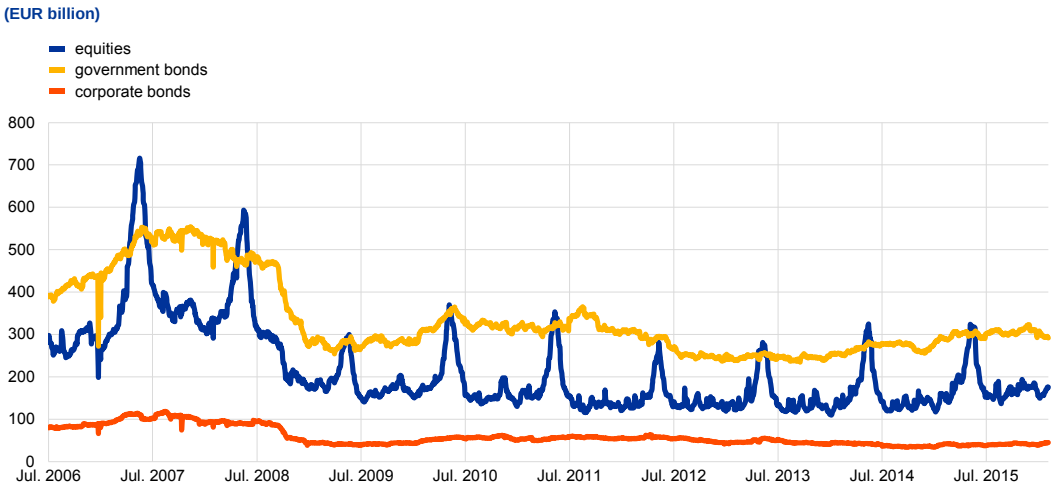
Measured either by turnover or notional amount outstanding, repos are the main type of SFTs used in the EU. According to the European Central Bank (ECB), the quarterly turnover in the secured segment (repos) of euro money markets amounted to €28.8 trillion over the last five years. However, this figure excludes the sizeable UK gilt repo market for which no turnover data are

[6] See Table 2 of Keller et al. (2014).

available.[7] At the European level, a frequently-cited industry survey estimates the gross notional amount of repos at €5.6 trillion as of December 2015, 90% of which was collateralised with fixed income securities.[8] This also includes 15% in buy-sell-backs and sell-buy-backs.[9]

In the EU, securities lending markets are smaller than repo markets, even though the range of participants is usually broader.[10] At the end of 2015, the value of EU securities on loan amounted to €500 billion[11], of which two thirds were in government bonds, and the rest were mainly equities (Chart 2). Most securities lending transactions in Europe are collateralised with non-cash, up to 90% in the case of government bond loans.

Chart 2
EU securities on loan



Source: Markit Securities Finance and ESRB (2016b).

There has been an increase in central clearing of repo transactions in the euro area (ECB, 2015b). This reflects a stronger preference of market participants for conducting secured money market transactions against general collateral, as opposed to specific collateral (also known as special repo), and with limited counterparty credit risk (ECB, 2015b). As shown in Chart 3, close to 70% of the euro area repo transactions (in terms of turnover) were centrally cleared in 2014 and 2015 while a semi-annual survey of the European repo market carried out by the International Capital Market Association (ICMA) suggests that, by notional amount, approximately 30% of all outstanding repos are centrally cleared (ICMA, 2015b). Comparable data for securities lending and margin lending transactions are not available but market commentary indicates that the share of securities lending transactions that are centrally cleared is small.

7 The Bank of England reports gross (repos and reverse repos) notional amounts of £479 billion as at the end of 2015.

8 See ICMA (2015a).

9 This percentage is higher than the less than 5% in UK gilt markets reported by the Bank of England.

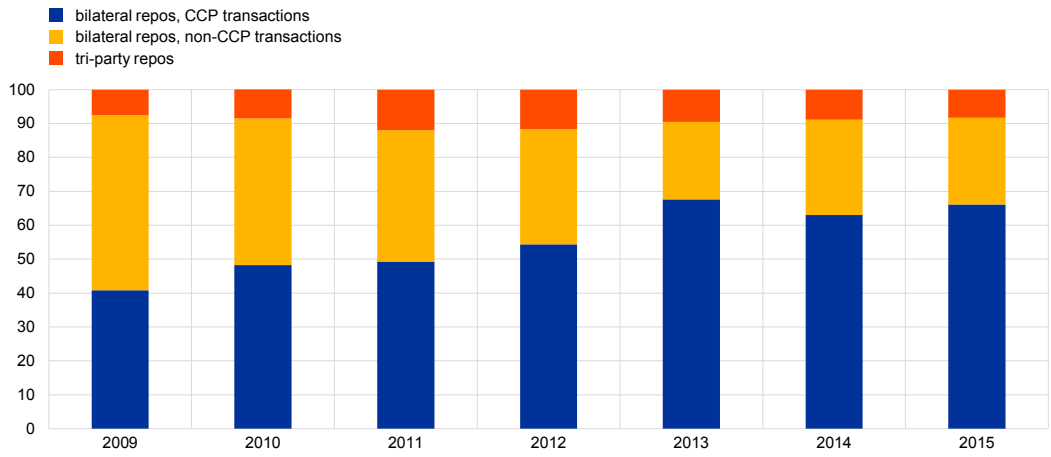
10 See ISLA (2015).

11 See ESMA (2016). There are no counterparty data available for securities lending markets, therefore activity cannot be measured for all EU market participants and the amount of securities on loan that were issued by EU issuers is used instead as a proxy.

Chart 3

Breakdown of total secured market

(percentage of total)



Source: ECB Money Market Survey 2015.
Notes: The panel comprises 98 credit institutions. Reporting of CCP-cleared transactions only started in 2009.

Section 4
Procyclicality and financial leverage

The global financial crisis showed that SFTs can be associated with different kinds of risks to financial stability, in particular through procyclicality and financial leverage. As detailed in Section 2, SFTs allow market participants to increase their leverage by borrowing against their assets as collateral, while the re-use of collateral can also be employed. Therefore, leverage in the financial system can increase significantly given that a certain pool of assets is available to be used as collateral multiple times.

SFTs can also lead to “bank-like” risks. While SFTs can enhance liquidity and are used extensively as funding instruments, they can lead to the creation of money-like liabilities with liquidity and maturity transformation. The FSB (2013) and Bouveret et al. (2013) highlight the extent to which the use of SFTs facilitates credit growth, increases interconnectedness and contributes to the build-up of leverage both inside and outside of the regular banking system. Such risk creation, which takes place at the entity level, can often form part of a chain of several transactions involving many different institutions.

SFTs can induce procyclicality and contribute to the build-up of leverage in the financial system (FSB, 2016).[12] Procyclical risk management requirements or practices take the form of low margins and haircuts in good times, characterised by low volatility and high market liquidity, followed by large and sudden increases in margins and haircuts in downturn periods.

By accelerating credit supply and asset price increases during periods of upswing and accelerating sharp declines in asset values and credit during periods of downturn, a leveraged financial system based on securities financing activities tends to be more procyclical. This reflects the direct linkage between funding levels and asset value fluctuations (FSB, 2013).

The procyclicality of SFTs is inherent in haircut-setting of market participants. In periods of upswing, market participants set low haircut levels as they expect lower collateral liquidation risk. In downturn periods, market participants increase haircuts to account for higher expected volatility in collateral liquidation values. In practice, haircuts can also rise and fall to account for counterparty default risk. Some market participants may even stop accepting certain assets as collateral (equivalent to setting a haircut of 100%). Such developments in haircut-setting were evident around the time of the global financial crisis in 2007 (CGFS, 2010). Further research on the procyclicality of haircuts has been presented in the context of the work of the FSB on their framework of minimum haircuts (FSB, 2014). The decreasing usability of certain assets as collateral can induce market participants to sell those assets, thus putting further pressure on the value and liquidity of such assets, which can in turn lead to higher haircuts. Such market dynamics can also contribute to a severe liquidity spiral related to SFTs.

[12] According to CPSS-IOSCO (2012), procyclicality refers to changes in risk management requirements or practices that are positively correlated with business or credit cycle fluctuations and that may cause or exacerbate financial instability.

Section 5
The regulatory framework

A number of policy proposals have been developed, with particular regard to the operational settings of standardised margins and haircuts, aimed at limiting the build-up of leverage and the related procyclicality of SFTs in the financial system. Globally, the FSB issued a number of recommendations establishing a regulatory framework for haircuts on non-centrally cleared SFTs. However, to date, no comprehensive EU-wide regulatory framework for margins and haircuts applicable to non-centrally cleared SFTs has been developed.[13] In fact, while centrally cleared SFTs – as in any other centrally cleared transaction – are subject to the regulatory requirements laid down for CCP margins and haircuts, the parties enjoy contractual freedom under non-centrally cleared SFTs.[14]

5.1 The FSB regulatory framework

In October 2014, the FSB issued a regulatory framework for haircuts on non-centrally cleared SFTs with the primary aim of strengthening the oversight and regulation of shadow banking activities. The FSB's framework is designed to limit the build-up of excessive leverage outside the banking system and mitigate the potential systemic risks associated with shadow banking.

The FSB framework comprises two complementary elements:

1. qualitative standards for the methodologies that firms should use to calculate collateral margins and haircuts in all non-centrally cleared SFTs; and
2. a framework of numerical haircut floors (shown in the table) for non-centrally cleared SFTs in which financing is provided to non-banks and collateral differs from government securities.[15]

[13] The SFTR, as part of transparency requirements, obligates the counterparties to SFTs to provide their consent to the re-use of the collateral they post. Refusal to give such consent, depending on market participants' discretion, has the potential of limiting, to a certain extent, the build-up of system-wide leverage. However, pursuant to the SFTR, a separate consent is not required if the collateral is provided by way of title transfer, which to a large extent is current market practice in the EU.

[14] As shown in Chart 3, non-centrally cleared repo transactions have declined since 2009.

[15] Pursuant to the **FSB framework**, non-centrally cleared securities financing transactions performed in any operation with central banks are outside the scope of application of the minimum haircuts. Cash-collateralised securities lending transactions where the primary motive is not to provide financing also fall outside the scope.

Table

Numerical haircut floors for securities-against-cash transactions

	Haircut level	
Residual maturity of collateral	**Corporate and other issuers**	**Securitised products**
≤ 1 year debt securities, and Floating Rate Notes (FRNs)	0.5%	1%
> 1 year, ≤ 5 year debt securities	1.5%	4%
> 5 years, ≤ 10 year debt securities	3%	6%
> 10 year debt securities	4%	7%
Main index equities	6%	
Other assets within the scope of the framework	10%	

Source: FSB (2015).

The aim of the qualitative standards developed by the FSB is to mitigate potential procyclical fluctuations in haircuts. It is important to note that the FSB's regulatory framework is not intended to set mandatory standards for market participants. Numerical haircut floors are instead intended to serve as backstops against the build-up of excessive leverage. Market participants are incentivised to use the qualitative standards developed by the FSB as guidance for their own analysis as to the appropriate level of collateral haircuts and margins.

Regarding the implementation of the regulatory framework, the FSB considers three alternative approaches, namely: 1) an entity-based regulation approach; 2) a product-based (market) regulation approach; and 3) a hybrid approach combining these two. In addition, the FSB proposes specific recommendations that encourage the Basel Committee on Banking Supervision (BCBS) and national competent authorities to take certain actions so as to enhance the regulatory framework on non-centrally cleared SFTs. For this reason, it is recommended that the BCBS review the capital treatment of SFTs in the Basel III framework, which incorporates the numerical haircut-floor provisions. National authorities should: 1) set and review the quality standards for the methodologies used to calculate collateral haircuts and margins so as to reduce their procyclicality; 2) implement the framework of numerical haircut floors, as reviewed by the BCBS, based on their assessment of scale and materiality of SFTs; and 3) assess the suitability of the adopted approach for implementing the haircut-floor framework.

5.2 Existing EU regulation

The FSB recommendations are yet to be fully implemented into EU law. The SFTR does not provide for mandatory margin requirements or haircut levels applicable to SFTs, since its primary aim is to foster the transparency of SFTs by increasing the reporting requirements for counterparties. Similarly, no requirements for margin or haircut levels are contained in Directive 2002/47/EC on Financial Collateral Arrangements.

It is important to note that there is no harmonised definition of procyclicality or leverage in current EU legislation. Nonetheless, for non-centrally cleared SFTs, a number of relevant provisions laid down in existing EU legislation can be used to address excessive leverage and procyclical trends.

In regulating credit institutions and investment firms, the CRR/CRD IV framework[16] contains detailed provisions regarding the so-called volatility adjustments under the Financial Collateral Comprehensive Model[17], which actually represent mandatory haircuts to collateral (in relation to both centrally cleared and non-centrally cleared transactions). However, the purpose of the European framework on banking regulation is not to introduce collateral-specific margin requirements. Instead, its primary aim is to define the correct non-collateralised exposures, which are instrumental in the calculation of the capital charges. In addition, it is worth noting that credit institutions and investment firms can be authorised by supervisory authorities to use own-estimates for the calculation of the volatility adjustments.

A number of other provisions in the CRR/CRD IV refer to the concept of haircuts. Some examples include Article 323 of the CRR, which allows institutions to recognise insurance, subject to appropriate discounts and haircuts, as a mitigant for operational risks. In addition, Articles 10 to 13 of the Commission Delegated Regulation (EU) 2015/61[18] set out haircuts for specific types of assets (e.g. Level 1, 2A, 2B etc.) for the purposes of calculating the liquidity coverage requirement.

For insurance and reinsurance undertakings, the Solvency II[19] regime does not currently include dedicated macroprudential tools. As in the case of the CRR/CRD IV framework, the primary focus of Solvency II is not to mandate minimum margin levels, but to appropriately compute the resulting exposure after the collateral has been offset against it in order to calculate capital requirements of relevant undertakings. In this context, specific rules are laid down for the appropriate valuation of collateral.

The legal frameworks for Undertakings for Collective Investment in Transferable Securities (UCITS)[20] and Alternative Investment Funds (AIFs)[21] have some macroprudential features that can mitigate procyclical dynamics, such as excessive credit growth and leverage. Although neither framework provides regulatory requirements in terms of the appropriate value of collateral, the UCITS contains leverage limits while the Alternative Investment Fund Managers Directive (AIFMD) contains the provision for the imposition of a leverage limit.[22] These provisions can have similar effects as margin requirements and haircuts though they should be considered as complementary

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16 Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012 and Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, amending Directive 2002/87/EC and repealing Directives 2006/48/EC and 2006/49/EC.

17 Tables 1 to 4 in Article 224 of Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012.

18 Commission Delegated Regulation (EU) 2015/61 of 10 October 2014 to supplement Regulation (EU) No 575/2013 of the European Parliament and the Council with regard to liquidity coverage requirement for Credit Institutions.

19 Directive 2009/138/EC of the European Parliament and of the Council of 25 November 2009 on the taking-up and pursuit of the business of Insurance and Reinsurance (Solvency II).

20 Directive 2009/65/EC of the European Parliament and of the Council of 13 July 2009 on the coordination of laws, regulations and administrative provisions relating to undertakings for collective investment in transferable securities (UCITS).

21 Directive 2011/61/EU of the European Parliament and of the Council of 8 June 2011 on Alternative Investment Fund Managers and amending Directives 2003/41/EC and 2009/65/EC and Regulations (EC) No 1060/2009 and (EU) No 1095/2010.

22 Article 25(3) of Directive 2011/61/EU of the European Parliament and of the Council of 8 June 2011 on Alternative Investment Fund Managers and amending Directives 2003/41/EC and 2009/65/EC and Regulations (EC) No 1060/2009 and (EU) No 1095/2010.

rather than direct substitutes. For example, these provisions have a different scope, are based on a different type of regulation while the tools are also of a different nature.

For centrally cleared transactions, the regulation of CCPs and their risk management practices has been significantly strengthened since the global financial crisis with the global Principles for Financial Market Infrastructures (CPSS-IOSCO, 2012) and Regulation (EU) No 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories (also known as the European Market Infrastructure Regulation – EMIR). EMIR and the relevant delegated legislation contain several provisions on collateral margins and haircuts.

CCPs and market participants, respectively for centrally cleared transactions and bilaterally cleared derivative trades, must duly consider the potential procyclical implications of their decisions in terms of risk management. For this purpose, the EMIR Regulatory Technical Standards (RTS) No 153/2013 specify in Article 28(1) three options for how a CCP can take account of the potential procyclicality of margin requirements. The first option (a) is a margin buffer, which can be temporarily exhausted in periods when calculated margin requirements are rising significantly. The second option (b) assigns at least a 25% weight to stressed observations in the look-back period, while the third option (c) applies a margin floor calculated on a ten-year historical look-back period. A CCP must employ at least one of the three options.

Finally, in terms of a voluntary contractual framework, current industry standards such as the Global Master Repurchase Agreement (GMRA) or the Global Master Securities Lending Agreement (GMSLA) do not contain any reference to mandatory or minimum margin/haircut levels, and therefore leave counterparties free to negotiate bilaterally. These contractual standards are focused on strengthening the current market practice of private investors, and have no consideration for the macroprudential impact of the contractual provisions, other than the resilience and solvability of the contracting parties.

5.3 Ongoing regulatory work

At the international level, there is a lack of consensus on how to design a system-wide framework to tackle the build-up of leverage specifically applicable to SFTs.[23] As highlighted in Section 5.1, the FSB has developed internationally agreed proposals that can inform a system-wide framework, namely the introduction of numerical haircut floors to act as a backstop, in conjunction with the adoption of generalised qualitative standards for the calculation of haircuts.

[23] In some jurisdictions, however, regulations apply regarding the re-use of clients' assets. For example, in the United States, the Federal Reserve's Regulation T and the Securities and Exchange Commission's Rule 15c3-3 limit the amount of a client's assets that a prime broker may rehypothecate to the equivalent of 140% of the client's liability to the prime broker. Although these provisions do not specifically target the repo market directly, they do apply to all collateral pledged to broker-dealers and prime brokers who execute deals on behalf of their clients. By imposing a limit on rehypothecation, the aforementioned provisions reduce the amount of assets which broker-dealers and prime brokers can use to conduct SFTs on their own behalf. In this way the provisions contribute to lowering collateral velocity, which, to some extent, has the effect of indirectly addressing the problem of excessive leverage in the financial system.

At the European level, there is ongoing work within the ESRB on the macroprudential use of margins and haircuts.[24] The ESRB[25] and ECB[26] have previously argued that in order to effectively limit the build-up of excessive leverage and reduce the procyclicality of haircut-setting practices, authorities need tailored macroprudential tools to intervene when systemic risks arise. These tools are in addition to the FSB framework and could potentially extend beyond the shadow banking sector to cover the entire financial system. Policy instruments that are being considered in order to reduce or limit leverage through SFTs and the procyclicality of haircuts include (a) permanent minimum requirements and (b) time-varying countercyclical minimum requirements/buffers. These instruments have both been supported by recent research suggesting that only a comprehensive macroprudential regulation of haircuts on SFTs can reduce the build-up of leverage and asset market volatility in an effective way.[27]

In order to address regulatory arbitrage, any macroprudential haircut framework should have a broad scope and should ideally capture both cleared SFTs and non-centrally cleared SFTs. For haircut floors, a European framework could build upon the FSB minimum haircut framework.

Any policy framework should also consider allowing regulators to set countercyclical haircuts. Moreover, there is evidence that a countercyclical minimum requirement can improve upon constant minimum requirements, such as constant floors.[28] However, there is no internationally agreed framework on how to design a countercyclical tool. Other potential tools may also be considered, albeit that each would require further analysis, including macroprudential margin add-ons, macroprudential collateral add-ons, haircut and margin ceilings, incremental step-up approaches, minimum amounts for specific collateral, macroprudential restrictions on variation margin and admissible (variable) corridors.

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24 As noted in ESRB (2016a), work is ongoing within the ESRB on analysing the need for new macroprudential instruments that could address the procyclicality of initial margins or haircuts and the build-up of excessive leverage.

25 See ESRB (2015).

26 See ECB (2015a).

27 See Brumm et al. (2015).

28 See Brumm et al. (2015).

Section 6
Issues concerning indicators, triggers and practical implementation

While in principle there is agreement amongst most ESRB members on the conclusions presented in Section 7 (a) below, a few members take a different view on the practical implementation of some elements of the proposals contained in Section 7 (b) and (c). In particular, a couple of members believe that implementation of the FSB numerical haircut floors requires further analysis of the scope and calibration of the floors. In addition, one member suggested that further work should be undertaken to assess the impact of any possible extension of the FSB minimum haircut regime; this member was concerned that proposals aimed at encouraging incentives to promote the central clearing of SFTs could lead to regulatory arbitrage.

Furthermore, one member disagrees with the ESRB proposals on the use of countercyclical instruments, citing a lack of empirical evidence and analysis on their calibrations. One member believes that the practical implementation of countercyclical instruments requires further consideration, in particular with respect to the coordination of tasks amongst national competent authorities, the EMIR college members and any macroprudential authority. A couple of members also point to post-crisis regulatory reforms recently introduced, including the EMIR provisions, which may address some of the risks associated with procyclicality and leverage. For example, EMIR RTS No 153/2013 sets out three options a CCP should consider when taking account of potential procyclicality of margin requirements. The lack of granular data and evidence were also referred to by a few members in their responses. For example, one member considers that a lack of granular SFT data at the EU level prevents a full assessment of procyclicality. Moreover, one member raised concerns regarding the potential unintended consequences of the proposals on market liquidity and market-making services. That member saw a need to consider the costs and benefits of any new proposals in this area in order to assess any potential unintended consequences.

Section 7
Conclusions and proposals

(a) Assessment whether the use of SFTs leads to the build-up of significant leverage that is not addressed by existing regulation.

From a macroprudential perspective, the ESRB is of the view that SFTs can give rise to the build-up of significant leverage inside and outside the banking system (Bouveret et al., 2013; FSB, 2013). Such risks played a role in the run-up to the 2008-09 global financial crisis (CGFS, 2010; Gorton and Metrick, 2012). Moreover, a large and growing literature[29] – a subset of which focuses on SFTs[30] – supports the conclusion that the financial system is prone to episodes of excessive build-up of leverage and subsequent rapid deleveraging, which needs to be addressed. Importantly, a number of studies also show that applying margin and haircut requirements as macroprudential instruments can increase financial stability and improve welfare more generally.[31]

To date, there has been no comprehensive framework for addressing these issues at a systemic level in the EU regulatory regime. The existing EU regulation leaves the level of haircuts in SFTs – which determines the exposure and leverage that can be created with a given amount of collateral – to the discretion of trading parties.[32] This holds true for bilateral transactions and, to some extent, for centrally cleared transactions, where EMIR provides CCPs with a degree of flexibility in the setting of margins and haircuts that could potentially result in levels set during periods of low volatility and high market liquidity that do not fully take account of macroprudential concerns.[33] As described in Section 5.2, a CCP must employ at least one of three options when taking account of potential procyclicality of margin requirements in line with EMIR RTS No 153/2013. The three options include (a) a margin buffer, which can be temporarily exhausted in periods when calculated margin requirements are rising significantly; (b) assigning at least a 25% weight to stressed observations in the look-back period; and (c) a margin floor calculated on a ten-year historical look-back period. As noted in Section 6 above, a couple of ESRB members point to these post-crisis regulatory reforms that were recently introduced, including the EMIR provisions, which may serve to address some of the risks associated with procyclicality and leverage.

(b) Assessment of, where appropriate, the options available to tackle such a build-up.

A prudent framework for minimum haircuts should limit the build-up of significant leverage. Implementation in the EU of the FSB regulatory framework for haircuts on non-centrally cleared SFTs (FSB, 2015) is therefore a starting point for limiting the build-up of leverage. In this respect, a large majority of ESRB members support the implementation of the FSB framework into the European regulatory framework. In line with the FSB framework, the numerical haircut floors should

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29 See, for example, Brunnermeier and Pedersen (2008), Brunnermeier (2009), Geanakoplos (2010), Adrian and Shin (2010; 2014), Gorton and Metrick (2012), Schularick and Taylor (2012), Baglioni et al. (2013), Gorton and Ordoñez (2014), Beccalli et al. (2015), Brumm et al. (2015), Jordà et al. (2015), and Nuño and Thomas (2016).

30 See, for example, Brunnermeier (2009), Adrian and Shin (2010; 2014), Geanakoplos (2010), Gorton and Metrick (2012), Gorton and Ordoñez (2014) and Brumm et al. (2015).

31 See, for example, Gai, Haldane and Kapadia (2011), Goodhart et al. (2013), Brumm et al. (2015) and Valderrama (2015).

32 Furthermore, the requirement under the SFTR to provide consent to the re-use of collateral, mentioned in Section 5, is left to the discretion of market participants.

33 The EMIR also provides for a detailed framework giving authority to a "College of Supervisors" to approve the CCP margining model.

be implemented using market regulation. However, as outlined in Section 5.1, the FSB framework on non-centrally cleared SFTs was designed to address risks within the shadow banking system. Therefore, a large majority of ESRB members are of the opinion that the implementation of the FSB regime of minimum haircuts and quantitative margin standards should be kept under review, in particular to assess whether it might be extended to cover a wider set of SFTs in order to address any identified regulatory arbitrage or other risks.

Furthermore, it is again worth highlighting that numerical floors are not intended to dictate haircut levels to market participants. Instead they are designed to act as backstops that encourage market participants to determine their own haircuts above the minimum floors in accordance with the qualitative standards proposed by the framework. In practice, however, the ESRB expects that counterparties in non-centrally cleared SFTs would conduct transactions above the numerical haircut floor or collect minimum margin amounts that are consistent with the system-wide margin and haircut minimum levels and practices. These minimum limits should be implemented at an absolute level, representing a mandatory floor for internal counterparty models as well.

Consistency is also important with respect to global regulatory initiatives related to derivatives, which, for example, give incentives for central clearing of derivatives transactions. Therefore, when implementing minimum haircut floors for SFTs, a large majority of ESRB members also believe that it is important to consider incentives to promote the central clearing of transactions. For example, stricter regulation of non-centrally cleared SFTs that would be eligible for central clearing, including haircut floors that are higher compared with equivalent transactions that are centrally cleared, may foster central clearing of SFTs in the EU. A large majority of ESRB members believe that this could be beneficial for financial stability in the EU.

(c) Assessment whether further measures to reduce the procyclicality of that leverage are required.

Imposing minimum system-wide margin and haircut levels would help to reduce the build-up of excessive leverage in periods of upswing, but it may not be fully effective in preventing all instances of procyclical behaviour.

Market participants have a tendency to collectively underprice risk in good times. Minimum haircut floors may not fully internalise systemic costs arising from excessive reliance on the supply of secured funding markets, which could be subject to sudden reversals (CGFS, 2010; Gorton and Metrick, 2012).

In order to prevent the build-up of systemic risk resulting from excessive leverage, and to further limit the procyclicality of margins and haircuts, a macroprudential approach towards their setting should be developed. This might, for example, include giving macroprudential authorities the power to set countercyclical minimum haircuts on both centrally and non-centrally cleared transactions (ESRB, 2015; ECB, 2015a; CGFS, 2010). However, as described in Section 6, a few members take a different view on the practical implementation of a macroprudential framework in this area.

It has been shown that applying countercyclical haircuts in addition to minimum haircut floors could more effectively contain market participants in their build-up of leverage compared with a situation with minimum haircut floors only (Brumm et al., 2015). However, there is no consensus that the withdrawal of such a countercyclical add-on in the event of a negative shock decreases the subsequent deleveraging pressure induced by binding collateral constraints, and so could soften any systemic impact. Work is ongoing to evaluate and determine the optimal solutions, including the identification and consideration of specific tools to address procyclicality and the deleveraging phase, which could be deployed in conjunction with those specifically addressing the build-up of leverage. The implementation of any macroprudential countercyclical tool would also ideally take

account of developments at the global level in order to prevent potential regulatory arbitrage between jurisdictions due to potential inconsistencies in the international regulatory framework.

Furthermore, as specified in ESRB (2015), the ESRB believes that the overall anticyclical contribution of the EMIR legal framework could be significantly enhanced. In particular, it is worth repeating in the context of this opinion that the ESRB would prefer a less flexible regulatory framework for CCPs' calibration of collateral haircuts. Such a framework should seek to address the procyclicality of haircuts and the potential positive correlation with margin requirements during a stress scenario. It is worth noting that the definition of the most appropriate measure for preventing procyclicality of haircuts in the EU is still under discussion. In this respect, the ESRB proposed that the EMIR provision could contain a minimum length for the look-back periods to be taken into account when estimating stress or predefined minimum haircuts.

The ESRB believes that the proposals put forward in ESRB (2015) are also valid for SFTs. The ESRB notes that in the international principles underpinning the design and regulation of CCPs, there are no specific measures targeted at SFTs. From this point of view, the ESRB would like to emphasise the need for close international cooperation should the EU decide to consider prudential measures targeted at the central clearing of SFTs.

Annex
Overview of FSB Recommendations

FSB Recommendation 12 (date of implementation: end of 2017)

Regulatory authorities should set qualitative standards for the methodologies that firms use to calculate collateral haircuts/margins, whether on an individual transaction or portfolio basis, and should review these standards against the guidance set out by the end of 2017. In particular, regulatory authorities should seek to minimise the extent to which these haircut methodologies are procyclical. Standard setters (e.g. Basel Committee on Banking Supervision (BCBS)) should review existing regulatory requirements for the calculation of collateral haircuts in line with this FSB recommendation by the end of 2015.

FSB Recommendation 13 (date of implementation: end of 2015)

For non-centrally cleared SFTs in which banks and broker-dealers provide financing to non-banks against collateral other than government securities (i.e. bank-to-non-bank transactions), the Basel Committee on Banking Supervision (BCBS) should review its capital treatment of SFTs and incorporate the framework of numerical haircut floors into the Basel regulatory capital framework (i.e. Basel III framework) by the end of 2015.

FSB Recommendation 14 (date of implementation: end of 2018)

Following the BCBS's incorporation of the framework of numerical haircuts floors into the Basel III framework, authorities should then implement the framework of numerical haircut floors by the end of 2018. That may be either through the Basel III framework or requiring banks and broker-dealers in bank-to-non-bank transactions to conduct transactions above the numerical haircut floor or collect minimum excess margin amounts consistent with the numerical haircut floors. Such a requirement could be directed solely at banks and broker-dealers (i.e. entity-based regulation) or could be encompassed within a requirement that applies on a market-wide basis (i.e. market regulation).

FSB Recommendation 15 (date of implementation: end of 2018)

Authorities should introduce the framework of numerical haircut floors on non-bank-to-non-bank transactions based on their assessment of the scale of securities financing activities and the materiality of non-bank-to-non-bank transactions in their jurisdictions by the end of 2018. Jurisdictions with large securities financing activities should apply numerical haircut floors to all non-bank-to-non-bank transactions using market regulation or an entity-based approach, and the jurisdictions with the very largest securities financing activities should do so using market regulation. In other jurisdictions (i.e. jurisdictions that do not have large securities financing activities), if the volume of non-bank to-non-bank transactions in the jurisdiction is material, authorities should ensure that such transactions are covered using either market regulation or an entity-based approach. Otherwise, it may be sufficient to limit the application of numerical haircut floors to bank-to non-bank transactions.

FSB Recommendation 16 (date of implementation: end of 2017 onwards)

An initial assessment of the need and the implementation approach for introducing the framework of numerical haircut floors on non-bank-to-non-bank transactions should be conducted within a year of this document's publication. If authorities do not implement the framework of numerical haircut floors through market regulation in their jurisdictions by the end of 2018, they should annually assess the need to extend the coverage of the framework, and implement any required changes within three years of their assessment.

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