

Transforming Shadow Banking into Resilient Market-based Finance

Regulatory framework for haircuts on non-centrally cleared securities financing transactions

12 November 2015

(updated on 19 July and 25 November 2019)

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Introduction

Based on the initial recommendations to strengthen oversight and regulation of the shadow banking system as set out in its report submitted to the G20 in October 2011,¹ the Financial Stability Board (FSB) set up the Workstream on Securities Lending and Repos (WS5) to assess financial stability risks and develop policy recommendations, where necessary, to strengthen regulation of securities lending and repos.

On 29 August 2013, the FSB published the report *Policy Framework for Addressing Shadow Banking Risks in Securities Lending and Repos*² (hereafter August 2013 Report) that set out policy recommendations for addressing financial stability risks in relation to securities lending and repos (hereafter securities financing transactions). These included: standards and processes for data collection and aggregation at the global level to enhance transparency of securities financing markets, which is currently being taken forward by an FSB data expert group that proposed standards and processes on 13 November 2014;³ minimum standards on cash collateral reinvestment; requirements on re-hypothecation; minimum regulatory standards for collateral valuation and management; and policy recommendations related to structural aspects of the securities financing markets (central clearing and possible changes in the bankruptcy law treatment of securities financing transactions). The FSB also published in March 2014 implementation dates for these recommendations as set out in Recommendations 1 to 11 in Annex 1 of this document.

In addition to these policy recommendations, on 14 October 2014, the FSB published *The Regulatory Framework for Haircuts on Non-centrally Cleared Securities Financing Transactions* (hereafter October 2014 Framework Document), which included recommendations on (i) qualitative standards for methodologies used by market participants that provide securities financing to calculate haircuts on the collateral received; and (ii) a framework of numerical haircut floors for non-centrally cleared securities financing transactions in which financing against collateral other than government securities⁴ is provided to entities other than banks and broker-dealers (hereafter “non-banks”). The numerical haircut floors set upper limits on the amount that non-banks can borrow against different categories of securities.

In developing its framework for haircuts, the FSB focused on addressing the financial stability issues as described in Section 1 of the August 2013 Report and in the interim report *Securities Lending and Repos: Market Overview and Financial Stability Issues*⁵ published in April 2012.

¹ http://www.financialstabilityboard.org/publications/r_111027a.pdf

² http://www.financialstabilityboard.org/publications/r_130829b.pdf

³ <http://www.financialstabilityboard.org/wp-content/uploads/Global-SFT-Data-Standards-Consultative-Document.pdf>

⁴ Government securities are defined as claims on sovereigns under the Basel III standardised approach. This includes claims on: central governments (and their central banks); certain non-central government public sector entities (PSEs) identified as sovereigns in the standardised approach; multilateral development banks (MDBs) that meet the criteria for a 0% risk-weight under the standardised approach; the Bank for International Settlements (BIS); the International Monetary Fund (IMF); the European Central Bank (ECB); and the European Union (EU).

⁵ http://www.financialstabilityboard.org/publications/r_120427.pdf

In addition, the FSB has endeavoured to ensure that its recommendations minimise the risk of regulatory arbitrage as well as undue distortion of markets, and are consistent with other international regulatory initiatives. In particular, the FSB launched in April 2013 a two-stage quantitative impact study (QIS) to assess the potential impact and unintended consequences associated with its recommendations on minimum haircut methodology standards and numerical haircut floors. The first stage of this QIS (QIS1) took place in April-June 2013 and consisted of collecting detailed historical haircut data from a small pool of large financial intermediaries globally so as to calibrate the proposed minimum haircuts.⁶ The FSB subsequently conducted the second stage of the QIS (QIS2) in November 2013 - January 2014 to assess the scope and quantitative impact of the consultative proposals on a wider set of market participants including banks and broker-dealers, agent-lenders, and non-bank entities.⁷

The October 2014 Framework Document also included a consultative proposal on the application of the numerical haircut floors to transactions in which financing against collateral other than government securities is provided to non-banks by other non-banks (hereafter non-bank-to-non-bank transactions). This extension of the scope of the framework is intended to limit the build-up of excessive leverage outside the banking system, reduce the procyclicality of such leverage, guard against the risk of regulatory arbitrage, and maintain a level-playing field.

Ten consultative responses were received from different types of institutions, including banks, insurers, asset managers, agent lenders and a non-profit organisation.⁸ Based on the assessment of consultative responses received, the FSB members agreed to extend the scope of numerical haircut floors to non-bank-to-non-bank transactions and developed an implementation approach for applying numerical haircut floors to such transactions. The FSB recognised that the potential for non-bank-to-non-bank transactions to pose financial stability risks varies across jurisdictions. Thus, the implementation approach should depend on the national/regional authorities' assessment of the scale of securities financing activities and, within that, the materiality of non-bank-to-non-bank transactions in their jurisdictions. To ensure consistent implementation, the FSB also introduced detailed guidance for authorities and enhanced implementation monitoring through the FSB process. Since jurisdictions may adopt market regulation⁹ to implement numerical haircut floors, which can take a few years to implement, the FSB members agreed to extend the implementation date to the end of 2018. This is a one year extension compared to the date set in the October 2014 Framework Document.

The FSB also developed technical guidance (FAQs) on the implementation of the framework for haircuts on non-centrally cleared securities financing transactions, in response to the request

⁶ See Annex 3 of the August 2013 Report for the summary of QIS1 results.

⁷ See Annex 2 of the October 2014 Framework Document for the summary of QIS2 results.

⁸ All of the public responses received are published on the FSB website (<http://www.financialstabilityboard.org/2014/12/public-responses-to-the-consultative-proposal-included-in-the-october-2014-document-regulatory-framework-for-haircuts-on-non-centrally-cleared-securities-financing-transactions/>).

⁹ Numerical haircut floors may be implemented through product-based regulation or market regulation targeted at the activity of providing securities financing to non-banks against collateral other than government securities. Under such an approach, providers of securities financing would typically be required to conduct transactions above the numerical haircut floor or collect minimum margin amounts that are consistent with the numerical haircut floors.

for technical clarifications from market participants in their consultative responses. The technical guidance is set out in Annex 2.

This document sets out a revised framework for haircuts on non-centrally cleared securities financing transactions, which integrates the new elements as explained above. As in the October 2014 Framework Document, it consists of recommendations on: (i) qualitative standards for methodologies used by market participants that provide securities financing to calculate haircuts on the collateral received (Section 2); and (ii) a framework of numerical haircut floors that will apply to non-centrally cleared securities financing transactions in which financing against collateral other than government securities is provided to non-banks (Section 3). This document also includes: (i) the implementation approach for applying the numerical haircut floors to non-bank-to-non-bank transactions (Section 3.5); (ii) details of an enhanced monitoring of implementation of the framework through the FSB process (Section 3.6); and (iii) the technical guidance on the implementation of the framework (Annex 2).

1 Key principles

The regulatory framework for haircuts on non-centrally cleared securities financing transactions is intended to limit the build-up of excessive leverage outside the banking system, and to help reduce procyclicality of that leverage.

The framework comprises two complementary elements:

- (i) Qualitative standards to be incorporated into existing or new regulatory standards for methodologies used by market participants that provide securities financing to calculate haircuts on the collateral received (including additional guidance for methodologies used by market participants to calculate margins on a portfolio basis); and
- (ii) A framework of numerical haircut floors that will apply to non-centrally cleared securities financing transactions in which financing against collateral other than government securities¹⁰ is provided to non-banks. Centrally-cleared securities financing transactions and financing provided to banks and broker-dealers subject to adequate capital and liquidity regulation on a consolidated basis are excluded.¹¹

Market participants should establish appropriate internal processes and procedures to ensure haircuts are set in accordance with the framework.

2 Qualitative standards for methodologies used by market participants to calculate haircuts

2.1 Standards for methodologies to calculate haircuts on an individual asset basis

- (i) **Haircuts should be based on the market risks of the assets used as collateral and be calibrated at a high confidence level, using a long historical time period that includes at least one stress period, in order to cover potential declines in collateral values during liquidation.**

Haircut methodologies should be designed to limit potential procyclical fluctuations in haircuts, specifically by moderating the extent to which they decline in benign market environments (for example characterised by low market volatility and rising asset prices) and thus mitigate the magnitude of the potential increase in volatile markets. Haircuts should be set to cover, at a high level of confidence, the maximum expected decline in the market price of the collateral asset, over a conservative liquidation horizon before a transaction can be closed out. Haircuts may be calculated either on a transaction level basis or at the collateral portfolio level depending on individual circumstances.

Haircut methodologies should not be based on a rolling short window, e.g. two years or less, of recent price data. Rather, the maximum price decline used to derive the applicable haircut should be calculated using a long time series of price data that covers at least one stress period.

¹⁰ See footnote 4.

¹¹ On an exceptional basis, national/regional authorities may also exclude insurance companies subject to regulatory capital and liquidity requirements and that have access to central bank facilities as appropriate.

If such historical data is either unavailable or unreliable, stress simulations or data for other similar asset types as a proxy (including at least one stress period and with prudent adjustments made as appropriate) should be used. This recommendation goes beyond the current Basel III requirements for banks permitted to calculate regulatory haircuts using “repo VAR” models or “own estimates”, which require the use of at least two years of data.

Where feasible, historical bid-ask spreads and pricing uncertainty should also be examined to consider the possibility that stressed market conditions may lead to a widening of bid-ask spreads and a reduction in the market liquidity of a given type of collateral.

The assumed liquidation horizon should be conservative, reflect the expected liquidity or illiquidity of the asset in stressed market conditions, and depend on the relevant market characteristics of the collateral, such as trading volumes and market depth.

(ii) Haircuts should capture other risk considerations where relevant

Haircuts should reflect primarily the risk of fluctuations in the collateral price (market risk) as described in (i) above, but also take into account other relevant risk considerations, such as the risk of liquidating large concentrated positions (liquidation risk), and the “wrong-way risk”¹² between collateral value and counterparty default. Specific characteristics of the collateral, which include asset type, issuer creditworthiness, residual maturity, price sensitivity (such as modified duration), optionality, complexity of structure, expected liquidity in stressed periods and the frequency of collateral valuation and margining, should also be taken into account. The creditworthiness of, and existing exposures to, counterparties may also be considered as additional factors in setting the appropriate haircut over and above the haircut derived from collateral-specific considerations (i.e. counterparty credit considerations may lead to higher haircuts).

Haircuts should also factor in the foreign exchange risk in cases where there is a currency mismatch between the currency of denomination of the collateral and the counterparty exposure (e.g. cross-currency repos). The historical volatility of the exchange rate for the relevant currency pair, including in stress periods, should be used to determine the additional haircut required in such cases.

The correlation between securities accepted as collateral and securities loaned in securities lending transactions should also be taken into account, where relevant.

2.2 Additional guidance for methodologies to calculate haircuts on a portfolio basis

Some market participants calculate margin on a portfolio basis, for example for margin lending in prime brokerage relationships, where portfolios may include long and short positions in securities and related derivatives.

Similar to haircut methodologies discussed in Section 2.1, methodologies for portfolio margin calculation should not be procyclical. In particular, methodologies should not lead to an automatic decline in margin requirements as the prices of assets in the portfolio increase or as the (actual or implied) volatility of asset prices in the portfolio decreases.

¹² “Wrong-way risk” arises when the exposure to a particular counterparty is positively correlated with the probability of default of the issuer of the collateral due to the nature of the transactions with the counterparty.

Further, when setting margin requirements for different counterparties and portfolios, market participants should consider the following:

- market risk of the portfolio (as measured by, for example, the change in the value of the portfolio if market indices rise or fall by defined percentages);
- portfolio concentration by geographies, economic sectors and individual issuers;
- illiquidity of the portfolio (for example, portfolios may be illiquid when positions are concentrated or large relative to either the outstanding amount or the average trading volume); and
- risks arising from non-correlated price and spread relationships between lent securities and collateral portfolio assets.

Methodologies should include robust stress testing of margin requirements against a range of historical and hypothetical stress scenarios. Those stress scenarios should be designed or selected with due consideration to the particular characteristics of the portfolios being stress-tested. Regular back testing of margins should also be carried out.

Market participants should ensure that appropriate internal processes and procedures are in place when they calculate margin on a portfolio basis. Such processes and procedures should be well-documented, source reliable prices and parameters, and include robust controls to identify any shortfalls in the margin methodologies.

Further, regulators should also consider testing the adequacy of margin methodologies used by market participants through regular hypothetical portfolio exercises in which relevant market participants submit their aggregate margin requirements on a number of archetypal portfolios. The objectives of such an exercise would be to identify any market-wide changes in levels of margin requirements over time as well as any outlier firms with unusually low margin requirements.

Recommendation 12: Regulatory authorities should set qualitative standards for the methodologies that firms use to calculate collateral margins/haircuts, whether on an individual transaction or portfolio basis, and should review those standards against the guidance set out above 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 recommendation by the end of 2015.

3 Numerical floors on haircuts

The FSB members agreed to introduce a framework of numerical haircut floors for non-centrally cleared securities financing transactions in which financing against collateral other than government securities¹³ is provided to non-banks. Through the introduction of numerical haircut floors on such transactions, the FSB aims to limit the possible build-up of leverage

¹³ See footnote 4.

outside the banking system and reduce the procyclicality of that leverage. The numerical haircut floors should thus function as a backstop in a benign market environment.

The numerical haircut floors are not intended to dictate market haircuts, and market participants should conduct their own assessment as to the appropriate level of haircuts to apply in individual circumstances, considering all relevant risk factors. Market participants are encouraged to determine their own, more granular risk-based haircut schedules, in accordance with the methodology standards as set out above, and to set higher haircuts than any regulatory numerical haircut floors where prudent. The FSB will monitor whether the numerical haircut floors are having the desired effect in terms of limiting the build-up of leverage and reducing procyclicality without becoming the de facto market standards or creating unintended consequences.

In developing the framework, the FSB considered the consultation responses to the August 2013 consultative proposals, as well as the results of a calibration exercise, undertaken as a two-stage QIS. The first stage of the QIS (QIS1) was conducted in April - June 2013, to develop and calibrate the consultative haircut proposals published in August 2013 based on detailed historical data on haircut levels in 2006, 2008 and 2012, categorised by type of collateral and counterparty, from a group of large banks and broker-dealers (17 firms in 12 FSB member jurisdictions).¹⁴ Subsequently, the second stage of the QIS (QIS2) was conducted in November 2013 - January 2014 to assess the scope and quantitative impact of the consultative proposals on a wider set of market participants (34 banks and broker-dealers, 5 agent lenders and 15 non-banks from 13 FSB member jurisdictions, representing in aggregate total assets of \$35 trillion and total combined repo and reverse repo books of \$9.8 trillion).¹⁵ In addition, the FSB has considered existing market and central bank haircuts, as well as historical price volatility of different asset classes.¹⁶

3.1 Scope of application

The framework of numerical haircut floors applies to *non-centrally-cleared securities financing transactions in which financing against collateral other than government securities*¹⁷ is provided to non-banks. Securities financing received by banks and broker-dealers subject to adequate capital and liquidity regulation on a consolidated basis¹⁸ is excluded from the scope of application of the numerical haircut floors because applying numerical haircut floors to those transactions may duplicate existing regulations. Non-centrally cleared securities financing transactions performed in any operation with central banks are also outside the scope of application.

Transactions backed by government securities are excluded from the framework because price movements in these securities generally tend not to be procyclical, although price movements

¹⁴ For the summary of QIS1 results, see Annex 3 of the August 2013 Report.

¹⁵ For the summary of QIS2 results, see Annex 2 of the October 2014 Framework Document.

¹⁶ For the summary of the FSB's analysis, see Annex 3 of the October 2014 Framework Document.

¹⁷ See footnote 4.

¹⁸ See footnote 11.

in government securities may become procyclical if credit and liquidity risks on those securities become significant.¹⁹ Also, haircuts on these transactions have been comparatively stable over time at zero or low levels (based on the results of the QIS1 calibration exercise), and thus imposing non-zero numerical haircut floors on these transactions would be binding on a large share of transactions.

3.2 Levels for numerical haircut floors

The numerical haircut floors (Table 1) have been calibrated at levels above those proposed in the August 2013 Report, taking into account the results of the two-stage QIS, data on the historical price volatility of in-scope assets, as well as existing market and central bank haircuts (see Annex 3 of the October 2014 Framework Document). Furthermore, an additional maturity bucket for debt securities with a residual maturity of more than ten years has been introduced. The haircut floors are intended to serve as “backstops” and limit the build-up of excessive leverage while maintaining incentives for market participants to conduct their own analysis of the appropriate level of haircuts, following the standards set out above.

Table 1: Numerical haircut floors for securities-against-cash transactions²⁰

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

In developing the numerical haircut floors, the FSB discussed the relative merits of setting a single numerical floor for haircuts as well as a more granular approach. Balancing simplicity with the need to avoid creating incentives to increase the use of risky or illiquid collateral, the FSB agreed that the numerical haircut floors should be risk-based, but not too granular, and that

¹⁹ Changes in bond prices can be decomposed into movements in risk-free rates and in credit and liquidity spreads.
²⁰ Where shares in mutual funds are used as collateral to securities financing transactions, they should be treated as “other assets”.

ideally they should not be based on credit ratings determined by credit rating agencies, in order to avoid mechanistic reliance on external ratings. Basing numerical haircut floors on a variant of the Basel III standard supervisory haircuts for securities financing transactions²¹ has the important benefit of consistency with capital rules and with the standardised schedules adopted by the BCBS-IOSCO (International Organization of Securities Commissions) margin requirements for non-centrally cleared derivatives.²²

The numerical haircut floors are intended to apply both where haircuts are applied at the transaction level and where margin is applied at the portfolio level. In the case of portfolio margining, the margin applied should therefore be no lower than the weighted-average of the haircut floors that would be applied individually to the financing positions in the portfolio that are within the scope of this framework. Based on discussions with market participants and the level for calibration of numerical haircut floors, the FSB believes that the consequent effective floors on portfolio margin would not be unduly restrictive, even for borrowers running diversified, market-neutral portfolios.

A further possibility is that raising the numerical haircut floors above the levels set out in Table 1 could in the future be used as a macro-prudential tool by relevant national/regional authorities. Further work would be required to refine how countercyclical changes in minimum haircuts could be implemented as a macro-prudential tool (such as the conditions/triggers for considering such changes, and the magnitude of the changes).

3.3 Cash-collateralised securities lending

The framework of numerical haircut floors is intended to apply to transactions where the primary motive is to provide financing, rather than to borrow or lend specific securities.

Therefore, cash-collateralised securities lending transactions are exempted from the framework of numerical haircut floors where:

- securities are lent at long maturities and the lender of securities reinvests or employs the cash at the same or shorter maturity, therefore not giving rise to material maturity or liquidity mismatch.
- securities are lent at call or at short maturities, giving rise to liquidity risk, only if the lender of the securities reinvests the cash collateral into a reinvestment fund or account subject to regulations or regulatory guidance meeting the minimum standards for reinvestment of cash collateral by securities lenders set out in Section 3.1 of the August 2013 Report. For this purpose, counterparties may rely on representations by securities lenders that their reinvestment of cash collateral meets the minimum standards.

This approach: (a) recognises the key principle that haircut floors should only apply to securities financing transactions; (b) allows regulatory and supervisory authorities to enforce this

²¹ The BCBS is currently reviewing the standardised supervisory haircuts for securities financing transactions under its Basel III framework.

²² <http://www.bis.org/bcbs/publ/d317.pdf>

principle in a relatively objective manner, without having to make subjective intent determinations; and (c) limits opportunities for regulatory arbitrage that could otherwise exist.

“Special repos (or specials)”²³ on collateral other than government securities are not exempted from the scope of numerical haircut floors. Although special repos are also used for borrowing and lending specific securities, the cash borrower typically uses the cash for financing purposes. Furthermore, haircuts on special repos (if any), unlike cash collateralised securities lending, are typically paid by the cash borrower and thus the transactions are economically similar in this respect to securities borrowing that may be captured by numerical haircut floors.

3.4 “Collateral upgrade” transactions

“Collateral upgrade” transactions can be defined as borrowing securities in Table 1 against other securities in Table 1 that attract higher haircuts as collateral. Such transactions, if left out of the scope of application of the numerical haircuts framework, could potentially be used to circumvent numerical haircut floors regulation. This could be achieved by structuring a financing repo as a combination of a “collateral upgrade” transaction and a repo of the lower-haircut securities against cash. For example, main index equities could be swapped for under-one-year corporate debt securities that could then be repo-ed with a lower numerical haircut floor. In order to prevent such circumvention, numerical haircut floors would also need to apply to “collateral upgrade” transactions. These floors would be equal to the difference between the floors that would be applied to repos of the collateral types on the two legs of the transaction done separately.²⁴ For example, the haircut floor on the collateral swap transaction described in the above example would be 5.5%, i.e. the floor for main index equities (6%) less the floor for under-one-year corporate debt securities (0.5%). This extension of the framework adds an element of complexity but is necessary to reduce the risk of regulatory arbitrage.

Similar to the exemptions for cash collateralised securities lending (as explained in Section 3.3), securities lenders could be exempted from the numerical haircut floors on “collateral upgrade” transactions – or securities borrowing/lending transactions against the pledging of other securities as collateral, rather than cash – if they are unable to re-use, or provide representations that they do not and will not reuse, the securities received as collateral against the securities lent.

3.5 Implementation approaches

The framework of numerical haircut floors could be implemented through the following three approaches:

- (i) *Entity-based regulation*: Under this approach, numerical haircut floors would be implemented through regulations targeted at each type of entity that engage in securities financing transactions. As a result of such regulatory actions, banks and other entities that engage in securities financing transactions could either be required to comply with numerical haircut floors or could be given strong incentives to do so.

²³ Special repos are repos that are conducted to finance assets that are in high market demand.

²⁴ For the purpose of calculating haircut floors for collateral swaps involving government securities, market participants should assume the floor for government securities to be 0%.

As an example of an incentive to comply with the numerical floors, the Basel regulatory capital framework (i.e. Basel III framework) could be modified so that bank capital requirements are set significantly higher for transactions that do not comply with the numerical haircut floors.

- (ii) *Product-based regulation (market regulation)*: Numerical haircut floors would be implemented through product-based regulation or market regulation targeted at the activity of providing securities financing to non-banks against collateral other than government securities. Under such an approach, providers of securities financing would typically be required to conduct transactions above the numerical haircut floor or collect minimum margin amounts that are consistent with the numerical haircut floors.
- (iii) *Hybrid approach*: Numerical haircut floors would be implemented through a combination of the above, for example, regulatory incentives to encourage banks in bank-to-non-bank transactions to comply with the numerical haircut floors and regulatory requirements for non-bank lenders in non-bank-to-non-bank transactions to comply with the numerical haircut floors.

For bank-to-non-bank transactions, the FSB recommends that the BCBS incorporates the numerical haircut floors into the capital requirements for securities financing transactions within the Basel III framework by the end of 2015. The BCBS should set significantly higher capital requirements for transactions with haircuts below the numerical haircut floors, with the goal of creating incentives for banks to set their collateral haircuts higher than the floors rather than to hold more capital.

Following the BCBS's incorporation of the numerical haircut floors into the Basel III framework, authorities should choose to implement numerical haircut floors for bank-to-non-bank transactions either by implementing the relevant changes in the Basel III framework or by requiring banks 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 (i.e. entity-based regulation) or could be encompassed within a requirement that applies on a market-wide basis (i.e. product-based or market regulation). For broker-dealers, authorities should also consider whether to implement the numerical haircut floors through capital requirements or through minimum margin requirements.

Although data is currently unavailable or incomplete in many jurisdictions, the anecdotal evidence and available data suggest that the value of outstanding non-bank-to-non-bank transactions is currently small. However, that could change in the future as market practices and activities evolve. To ensure shadow banking activities are fully covered, to reduce the risk of regulatory arbitrage, and to maintain a level playing field, the FSB believes that it is essential to extend the scope of application of the numerical haircut floors to also cover non-bank-to-non-bank transactions. At the same time, it recognises that the potential for non-bank-to-non-bank transactions to pose financial stability risks varies across jurisdictions, as the incentives for activity to migrate beyond the regulatory perimeter, and the resulting risks to global financial stability, may be greater in jurisdictions with large securities financing activities. Therefore, the implementation approach should vary based on the national/regional authorities'

assessment of the scale of securities financing activities and non-bank-to-non-bank transactions in their jurisdictions (see Annexes 3 and 4 for visualised timelines and assessment flows):

- Jurisdictions with large securities financing activities (i.e. the total outstanding amount of borrowings through securities financing transactions by all entities in the jurisdiction exceeds the indicative threshold of €500 billion²⁵) should apply numerical haircut floors to all non-bank-to-non-bank transactions using market regulation or an entity-based approach by the end of 2018, and the jurisdictions with the very largest securities financing activities (i.e. the total outstanding amount of borrowings through securities financing transactions by all entities in the jurisdiction exceeds the indicative threshold of €1.5 trillion²⁶) should do so using market regulation also by the end of 2018.
- In jurisdictions that do not have large securities financing activities, authorities should assess whether the volume of non-bank-to-non-bank transactions in their jurisdiction is material. If the volume of these transactions is material, authorities should ensure they are covered using either market regulation or an entity-based approach by the end of 2018.
- Finally, in jurisdictions that do not have large securities financing activities, and where the volume of non-bank-to-non-bank transactions is not material, it may be sufficient to limit the application of the numerical haircut floors to bank-to-non-bank transactions.
- Regardless of the implementation approach employed in a jurisdiction, the consequences of trading below the numerical haircut floors should be at least as rigorous as the treatment in the Basel III framework.

Jurisdictions should begin to assess the need to cover non-bank-to-non-bank transactions, and whether to use an entity-based approach or market regulation, within one year following publication of this document. Jurisdictions that do not, as the result of this initial assessment, implement the numerical haircut floors using market regulation by the end of 2018 should thereafter annually assess the need to extend the coverage to non-bank-to-non-bank transactions or non-bank-to-non-bank transactions that are not covered by existing entity-based regulations. If a jurisdiction determines that it should cover non-bank-to-non-bank transactions or additional transactions outside existing entity-based regulations after the end of 2018, it should do so as appropriate as soon as possible and within three years from that assessment.

When assessing the scale of securities financing activities and the materiality of non-bank-to-non-bank transactions within the jurisdiction so as to determine the need to cover non-bank-to-non-bank transactions and the relevant implementation approach, authorities should rely on data collected for the purpose of FSB global securities financing data collection and aggregation, once this data collection process begins.²⁷ However, it will take some time for the

²⁵ Approximately 5% of the global total at the time of publication - this indicative threshold may be further refined in light of the data collected for the purpose of the FSB standards for global securities financing data collection so as to ensure consistency and comprehensiveness (<http://www.financialstabilityboard.org/wp-content/uploads/Global-SFT-Data-Standards-Consultative-Documents.pdf>).

²⁶ Approximately 15% of the global total at the time of publication - this indicative threshold may also be further refined (see previous footnote).

²⁷ <http://www.financialstabilityboard.org/wp-content/uploads/Global-SFT-Data-Standards-Consultative-Documents.pdf>

FSB global securities financing data collection to operate,²⁸ and data is currently unavailable or incomplete in many jurisdictions, especially granular data relevant to a jurisdiction's assessment of the need to cover non-bank-to-non-bank transactions and the relevant implementation approach. Therefore, authorities should rely on other national/regional data (e.g. sector balance sheet statistics (flow of funds) and industry surveys) and qualitative information from market intelligence especially at the beginning of the implementation.²⁹ In assessing the materiality of non-bank-to-non-bank transactions within the jurisdiction, authorities should take account of the growth rate of the above factors and whether activities appear to be motivated by regulatory arbitrage (i.e. avoiding regulatory requirements on banks).

Recommendation 13: For non-centrally cleared securities financing transactions 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 securities financing transactions and incorporate the framework of numerical haircut floors into the Basel regulatory capital framework (i.e. Basel III framework) by the end of 2015.³⁰

Recommendation 14: Following the BCBS's incorporation of the framework of numerical haircut 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).

Recommendation 15: 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.

Recommendation 16: 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

²⁸ The FSB plans to start the collection and aggregation of global securities financing data by the end of 2018.

²⁹ In this regard, authorities may initially focus on the total amount of outstanding repos as a proxy for the total outstanding amount of borrowings through securities financing transactions by all entities or non-banks in the jurisdiction, as such data are more easily available on a consistent basis. Other segments of the securities financing market could be considered when data are readily available.

³⁰ The BCBS recently issued a consultative document to incorporate numerical haircut floors into the Basel capital framework. See <http://www.bis.org/bcbs/publ/d340.pdf>.

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.

3.6 Monitoring process

Since the framework of numerical haircut floors would be implemented through different regulatory approaches and the coverage may differ across jurisdictions, the FSB highlights the potential for market participants to seek to avoid the numerical haircut floors by booking transactions in different jurisdictions. It is therefore highly desirable that the framework is implemented globally in ways that achieve consistent outcomes and that it is regularly monitored to ensure consistency in implementation.

The FSB, in coordination with the relevant international standard setting bodies, will therefore establish a monitoring framework that involves relevant authorities and captures the trends and risks in securities financing transactions. Such monitoring results may be included in the FSB annual global shadow banking monitoring exercise³¹ and will leverage on the FSB initiative on global securities financing data collection and aggregation. Also, such monitoring should be able to identify potential conflicts and inconsistencies between approaches with respect to cross-border application of numerical haircut floors ensuring close cooperation among the relevant authorities. Based on the monitoring results, the FSB could in the future consider reviewing, for example, the counterparty and collateral scope as well as the level of numerical haircut floors. The FSB work on developing standards and processes for global securities financing data collection and aggregation based on Recommendations 2 and 3 of the August 2013 Report should also put the authorities in a better position to monitor whether these steps remain sufficient to address potential risks to financial stability arising from securities financing transactions.

Derivatives (e.g. total return swaps) can be used to achieve similar economic objectives as repo and securities lending transactions (and possibly vice-versa). The FSB will therefore also coordinate closely with the BCBS-IOSCO monitoring group on margin requirements for non-centrally cleared derivatives so as to minimise incentives to arbitrage any differences between the two regimes.

Finally, to ensure consistency in authorities' implementation of the framework of numerical haircut floors across jurisdictions, in particular their assessments of the need to cover non-bank-to-non-bank transactions, a monitoring process will be established that will include experts from the FSB member agencies. These experts will review national implementation approaches – (i) the Basel III framework only, (ii) market regulation or (iii) the Basel III framework and an entity-based approach for certain types of non-bank entities – and the rationale for the adoption of such approaches (including any proxies or thresholds used in the assessment that are different from the guidance above). A detailed survey questionnaire will be developed by the experts in 2017 and included in the existing shadow banking monitoring and information-sharing exercise templates for 2018.

³¹ For example, please see http://www.financialstabilityboard.org/publications/r_121118c.pdf.

Recommendation 17: The FSB, in coordination with the relevant international standard setting bodies, will monitor the implementation of the framework of numerical haircut floors and will consider reviewing the framework including its scope and levels as necessary.

Recommendation 18: The FSB will establish a monitoring process in 2017 to review the national implementation of the framework of numerical haircut floors, in particular their approaches for covering non-bank-to-non-bank transactions and the rationale for these approaches. The initial monitoring exercise will take place in 2018.

Annex 1: Implementation dates for the policy recommendations for shadow banking risks in securities lending and repos³²

Recommendation 1: Authorities should collect more granular data on securities lending and repo exposures amongst large international financial institutions with high urgency. Such efforts should to the maximum possible extent leverage existing international initiatives such as the FSB Data Gaps Initiative, taking into account the enhancements suggested in this document.

Implementation date: Ongoing

Recommendation 2: Trade-level (flow) data and regular snapshots of outstanding balances (position/stock data) for repo markets should be collected. Regular snapshots of outstanding balances should also be collected for securities lending markets and further work should be carried out on the practicality and meaningfulness of collecting trade-level data. Such data should be collected frequently and with a high level of granularity, and should also capitalise on opportunities to leverage existing data collection infrastructure that resides in clearing agents, central securities depositories (CSDs) and/or central counterparties (CCPs). National/regional authorities should decide the most appropriate way to collect such data, depending on their market structure, and building on existing data collection processes and market infrastructure where appropriate. Trade repositories are likely to be an effective way to collect comprehensive repo and securities lending market data. Regulatory reporting may also be a viable alternative approach.

Recommendation 3: The total national/regional data for both repos and securities lending on a monthly basis should be aggregated by the FSB which will provide global trends of securities financing markets (e.g. market size, collateral composition, haircuts, tenors). The FSB should set standards and processes for data collection and aggregation at the global level to ensure consistent data collection by national/regional authorities and to minimise double-counting at the global level.

Implementation date: End of 2018

Recommendation 4: The Enhanced Disclosure Task Force (EDTF) should work to improve public disclosure for financial institutions' securities lending, repo and wider collateral management activities, taking into consideration the items noted above.

Implementation date: EDTF to consider by January 2015 and implementation by firms thereafter.

³² Recommendations 1-11 have already been finalised and published in the August 2013 Report (http://www.financialstabilityboard.org/publications/r_130829b.pdf). Recommendations 12-18 are those finalised in the November 2015 Report (<https://www.fsb.org/wp-content/uploads/P190719-1.pdf>). The implementation dates for Recommendations 14-18 have been updated as of July 2019. See (<https://www.fsb.org/2015/11/regulatory-framework-for-haircuts-on-non-centrally-cleared-securities-financing-transactions-2>).

Recommendation 5: Authorities should review reporting requirements for fund managers to end-investors against the FSB's proposal, and consider whether any gaps need to be addressed.

Implementation date: January 2017

Recommendation 6: Regulatory authorities for non-bank entities that engage in securities lending (including securities lenders and their agents) should implement regulatory regimes meeting the minimum standards for cash collateral reinvestment in their jurisdictions to limit liquidity risks arising from such activities.

Implementation date: January 2017

Recommendation 7: Authorities should ensure that regulations governing re-hypothecation of client assets address the following principles:

- Financial intermediaries should provide sufficient disclosure to clients in relation to re-hypothecation of assets so that clients can understand their exposures in the event of a failure of the intermediary;
- In jurisdictions where client assets may be re-hypothecated for the purpose of financing client long positions and covering short positions, they should not be re-hypothecated for the purpose of financing the own-account activities of the intermediary; and
- Only entities subject to adequate regulation of liquidity risk should be allowed to engage in the re-hypothecation of client assets.

Implementation date: January 2017

Recommendation 8: An appropriate expert group on client asset protection should examine possible harmonisation of client asset rules with respect to re-hypothecation, taking account of the systemic risk implications of the legal, operational, and economic character of re-hypothecation.

Implementation date: Ongoing (the expert group has been established in August 2014)

Recommendation 9: Authorities should adopt minimum regulatory standards for collateral valuation and management for all securities lending and repo market participants.

Implementation date: January 2017

Recommendation 10: Authorities should evaluate, with a view to mitigating systemic risks, the costs and benefits of proposals to introduce CCPs in their inter-dealer repo markets where CCPs do not exist. Where CCPs exist, authorities should consider the pros and cons of broadening participation, in particular of important funding providers in the repo market.

Implementation date: January 2016

Recommendation 11: Changes to bankruptcy law treatment and development of Repo Resolution Authorities (RRAs) may be viable theoretical options but should not be prioritised for further work at this stage due to significant difficulties in implementation.

Implementation date: Not applicable

Recommendation 12: Regulatory authorities should set qualitative standards for the methodologies that firms use to calculate collateral margins/haircuts, whether on an individual transaction or portfolio basis, and should review those standards against the guidance set out above 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 recommendation by the end of 2015.

Implementation dates: End of 2017 (for the relevant regulatory authorities) and end of 2015 (for the relevant standard setters including the BCBS)

Recommendation 13: For non-centrally cleared securities financing transactions 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 securities financing transactions and incorporate the framework of numerical haircut floors into the Basel regulatory capital framework (i.e. Basel III framework) by the end of 2015.

Implementation date: End of 2015

Recommendation 14: Following the BCBS's incorporation of the framework of numerical haircut floors into the Basel III framework, authorities should then implement the framework of numerical haircut floors by January 2022. 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).

Implementation date: January 2022

Recommendation 15: 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 January 2024. 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.

Implementation date: January 2024

Recommendation 16: 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 by January 2021. If authorities do not implement the framework of numerical haircut floors through market regulation in their jurisdictions by January 2024, they

should annually assess the need to extend the coverage of the framework, and implement any required changes within three years of their assessment.

Implementation date: January 2021

Recommendation 17: The FSB, in coordination with the relevant international standard setting bodies, will monitor the implementation of the framework of numerical haircut floors and will consider reviewing the framework including its scope and levels as necessary.

Implementation date: By January 2023 and onwards

Recommendation 18: The FSB will establish a monitoring process by January 2022 to review the national implementation of the framework of numerical haircut floors, in particular their approaches for covering non-bank-to-non-bank transactions and the rationales for these approaches. The initial monitoring exercise will take place in 2022.

Implementation date: By January 2022 with initial assessment in 2022

Annex 2: Technical Guidance on the Implementation of the FSB Framework for Haircuts on Non-centrally Cleared Securities Financing Transactions³³

Questions and Answers

- Q1. Are intra-group transactions of “banks and broker/dealers that are subject to adequate capital and liquidity regulation on a consolidated basis (hereafter banking groups)” outside the scope of the FSB framework for haircuts on non-centrally cleared securities financing transaction? What about cross-border intra-group transactions?**

Answer: Since the objective of the FSB framework for haircuts on non-centrally cleared securities financing transactions is to limit the possible build-up of leverage outside the banking system and reduce the procyclicality of that leverage, intra-group transactions of banking groups should be excluded only if the group entities involved in the transactions are subject to capital and liquidity regulations on a consolidated basis. For example, if a bank and a non-bank are both under the same holding company, but only the bank is subject to capital and liquidity regulation, intra-group transactions between the bank and non-bank should be subject to the framework for haircuts.

- Q2. What type of entities, transactions and collateral are subject to the qualitative standards for methodologies used by market participants to calculate haircuts on non-centrally cleared securities financing transactions?**

Answer: All non-centrally cleared securities financing transactions should be within the scope of the qualitative methodological standards, as long as the primary objective of the transaction is to obtain financing. For example, securities financing received by banks and broker-dealers subject to adequate capital and liquidity regulation on a consolidated basis are included in the scope for the qualitative standards, as are transactions backed by government securities. Certain securities lending/borrowing transactions may be outside the scope (see answer to Q3).

- Q3. What kind of SFTs are outside the scope of the qualitative standards for methodologies used by market participants to calculate haircuts on non-centrally cleared SFTs? Are SFTs with the primary objective to borrow/lend specific securities outside the scope? If so, please clarify the definition of such SFTs outside the scope.**

Answer: Securities borrowing should be outside the scope of the qualitative standards for methodologies used by market participants to calculate haircuts if the lender of securities receives cash collateral and that cash collateral is reinvested in accordance with the minimum standards set out in Section 3.1 of the August 2013 FSB Report,³⁴ or if the lender of securities does not re-use non-cash collateral received. In addition, securities borrowing can be excluded from the scope of the qualitative standards for

³³ Updated in November 2019.

³⁴ http://www.financialstabilityboard.org/wp-content/uploads/r_130829b.pdf

methodologies used by market participants to calculate haircuts if the borrower of the securities intends to use the received securities to meet a current or anticipated demand (e.g. delivery obligations, customer demand, segregation requirements).

Q4. For the numerical haircut floors, what is the treatment of covered bonds?

Answer: Covered bonds are debt securities issued by financial institutions or corporates that are backed by a pool of assets. Covered bonds usually remain corporate obligations (they are on the issuer's balance sheet) and thus, investors have recourse against the issuer as well as the collateral. As such, they should be treated as corporate bonds when applying the numerical haircut floors.

Q5. When a bank or broker-dealer transacts with a non-bank located in a jurisdiction that has not adopted the numerical haircut floors, should the numerical haircut floors be applied to such transactions?

Answer: If a bank or broker-dealer transacts with a non-bank located in a jurisdiction that does not impose these numerical haircut floors, such transactions should still be included in the scope of numerical haircut floors. This would prevent an incentive for non-banks to move transactions "offshore" and thereby evade the numerical haircut floors.

Q6. What type of entities should be regarded as "securities lenders" for the treatment of cash-collateralised securities lending and "collateral upgrade" transactions under the FSB framework of numerical haircut floors?

Answer: In cash-collateralised securities lending subject to the FSB framework of numerical haircut floors for non-centrally cleared securities financing transactions (see Section 3.3), "securities lenders" are assumed to be non-banks. In "collateral upgrade" transactions (see Section 3.4), "securities lenders" are also assumed to be non-banks although banks could also lend non-cash securities under the framework. As stated in Section 3.4, "collateral upgrade" transactions are subject to the FSB framework of numerical haircut floors unless the non-banks are unable to re-use, or provide representations to the bank that they do not and will not re-use, the securities received as collateral against the securities lent.

Q7. Is margin lending excluded from the scope of the FSB framework of numerical haircut floors for non-centrally cleared securities financing transactions?

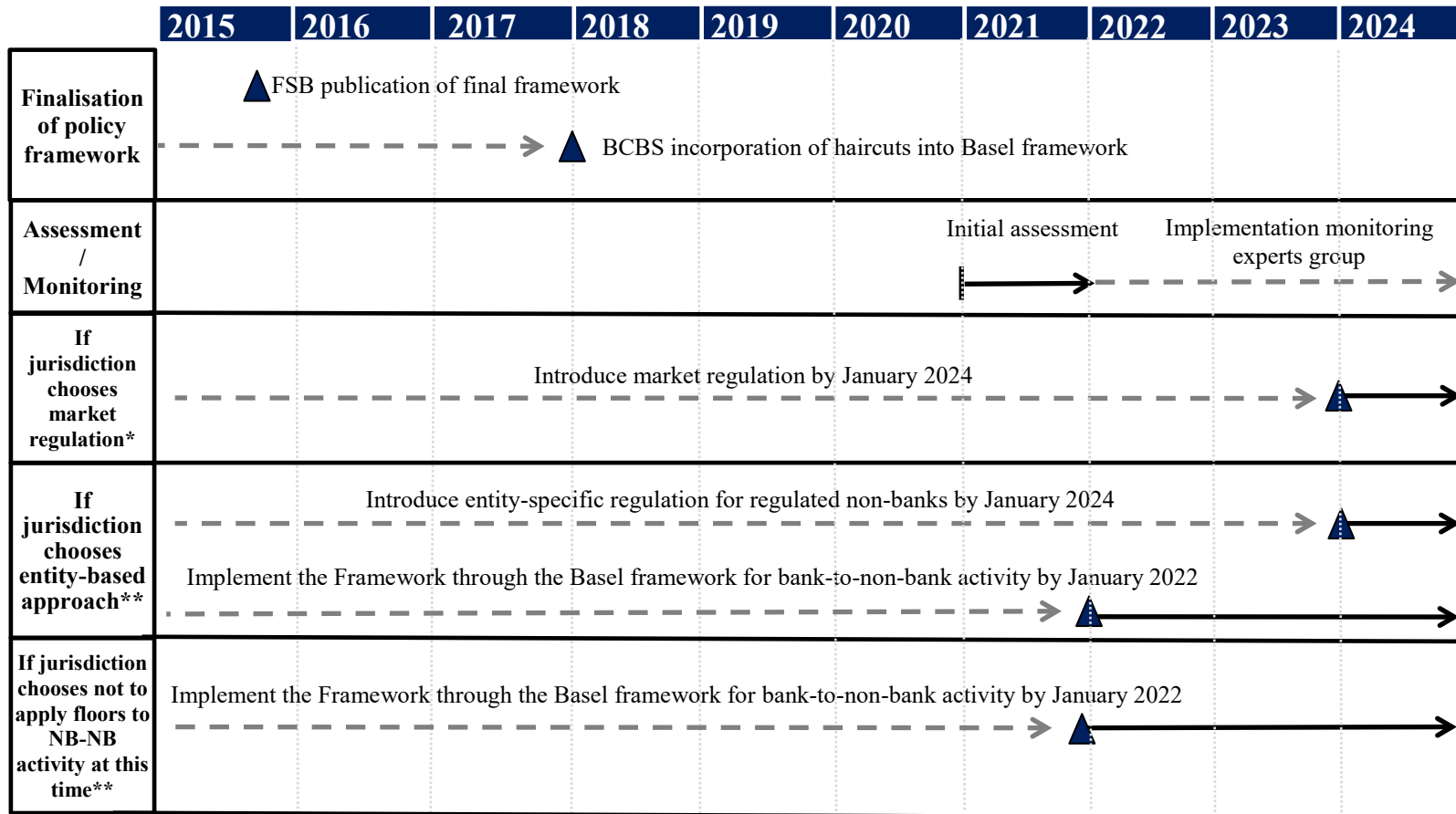
Answer: As stated in Section 3, the FSB framework of numerical haircut floors for non-centrally cleared securities financing transactions apply to transactions in which financing against collateral other than government securities is provided to non-banks. Through the introduction of numerical haircut floors on such transactions, the FSB aims to limit the possible build-up of leverage outside the banking system and reduce the procyclicality of that leverage.

Securities financing transactions that would be included in the scope of the framework of numerical haircut floors include reverse repos, securities borrowing as well as margin lending.

Margin lending transactions entail the provision of collateralised loans by a financial institution (usually a bank or a broker) to clients who are seeking leverage of their

trading positions by borrowing money (see FSB (2015) [*Standards and Process for Securities Financing Data Collection and Aggregation*](#)). The securities serving as collateral are held in margin accounts and are often re-hypothecated by financial institutions to fund the loans provided and eventually may reduce the cost of funding to the clients. In most jurisdictions, margin lending is included in the “prime brokerage” services provided to the client, based on a margin agreement between the financial institution and the client.

Annex 3: Timeline of initial implementation of the FSB framework for numerical haircut floors*



* : Updated in November 2019.

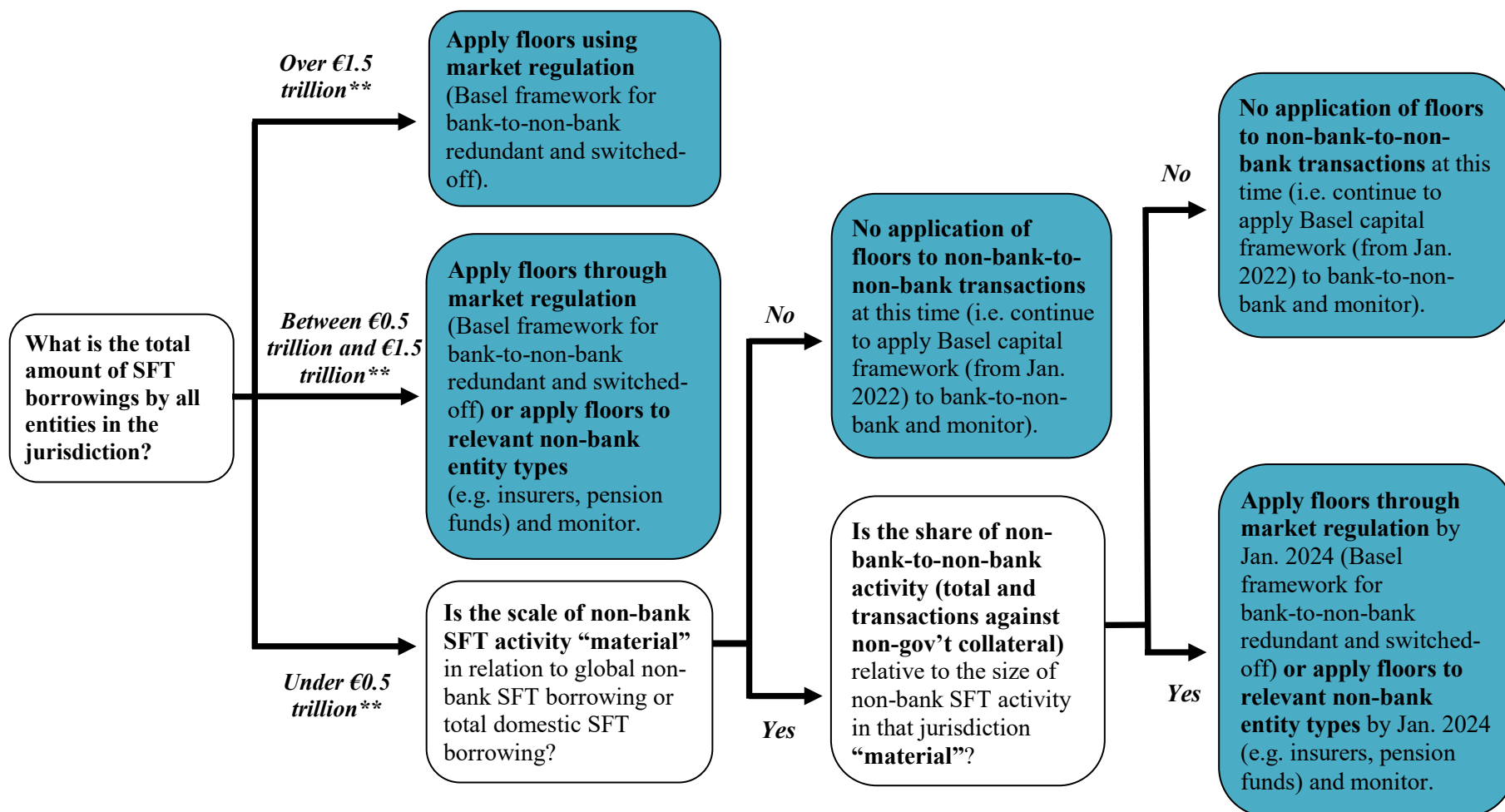
** : For details, See Annex 4, shown in the next page.

▲ = Due date/publication date

→ = Implementation

- → = Work in progress

Annex 4: Steps for assessing the need to cover non-bank-to-non-bank transactions*



* : Updated in November 2019.

** : These thresholds are meant to approximately represent 15% of global SFT activity, 5-15% of global SFT activity, and 5% of global SFT activity, respectively.