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Consultation Paper

Draft Regulatory Technical Standards on Liquidity horizons for the Internal Model Approach (IMA) under points (a) to (d) of Article 325bd(7) of Regulation (EU) No 575/2013 (Capital Requirements Regulation 2 - CRR2)



Contents

1. Responding to this consultation	3
2. Executive Summary	4
3. Background and rationale	6
4. Draft regulatory technical standards on liquidity horizons for the Internal Model A (IMA) under points (a) to (d) of Article 325bd(7) of Regulation (EU) No 575/2013 Requirements Regulation 2 - CRR2)	
5. Accompanying documents	26
5.1 Draft cost-benefit analysis / impact assessment	26
5.2 Overview of questions for consultation	32



1. Responding to this consultation

The EBA invites comments on all proposals put forward in this paper and in particular on the specific questions summarised in 5.2

Comments are most helpful if they:

- respond to the question stated;
- indicate the specific point to which a comment relates;
- contain a clear rationale;
- provide evidence to support the views expressed/ rationale proposed; and
- describe any alternative regulatory choices the EBA should consider.

Submission of responses

To submit your comments, click on the 'send your comments' button on the consultation page by 04.10.2019. Please note that comments submitted after this deadline, or submitted via other means may not be processed.

Publication of responses

Please clearly indicate in the consultation form if you wish your comments to be disclosed or to be treated as confidential. A confidential response may be requested from us in accordance with the EBA's rules on public access to documents. We may consult you if we receive such a request. Any decision we make not to disclose the response is reviewable by the EBA's Board of Appeal and the European Ombudsman.

Data protection

The protection of individuals with regard to the processing of personal data by the EBA is based on Regulation (EC) N° 45/2001 of the European Parliament and of the Council of 18 December 2000 as implemented by the EBA in its implementing rules adopted by its Management Board. Further information on data protection can be found under the Legal notice section of the EBA website.



2. Executive Summary

The amendments to Regulation (EU) No 575/2013¹ (the Capital Requirements Regulation 2 – CRR2) implement in EU legislation, *inter alia*, the revised requirements to compute own funds requirements for market risk.

As per Article 325bd of the CRR2, institutions are required to map each risk factor to one of the risk factor categories and to one of the risk factor subcategories listed in Table 2 for the purpose of identifying the relevant liquidity horizon under the Internal Model Approach (IMA). In this context, EBA is mandated to develop regulatory technical standards to specify:

- i) how institutions shall map risk factors of trading book positions to risk factors categories and subcategories,
- ii) the currencies that constitute the most liquid currencies for interest rate risk,
- iii) the currency pairs that constitute the most liquid pairs for foreign exchange (FX) risk and
- iv) the definition of a small and large capitalisation for equities.

The proposed draft RTS cover all of the four aspects of the EBA mandate in four separate sections. The first section relates to the mapping of risk factors to risk factor categories and subcategories. Ad hoc treatments for some specific risk factors are provided. Despite the expectation that the vast majority of risk factors will clearly be mapped on to a single subcategory, a general approach covering less obvious cases is also provided.

The second section of the proposed draft RTS specifies the definition of most liquid currencies for interest rate risk. In particular, most liquid currencies are defined considering also the *Triennial Central Bank OTC interest rate derivatives turnover* compiled by the Bank of International Settlements (BIS) that also reports on Over The Counter ('OTC') interest rate derivatives turnover.

In their third section, the proposed draft RTS specify the most liquid currency pairs for Foreign Exchange (FX) risk, defining them also considering the *Triennial Central Bank Survey foreign exchange turnover* compiled by BIS that also reports on OTC FX derivatives turnover by currency pair.

In their fourth section, these proposed draft RTS consult on whether the definition of large capitalisation for equity risk should only rely on an absolute threshold or should be based also on

4

¹ REGULATION (EU) 2019/876 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 20 May 2019 amending Regulation (EU) No 575/2013 as regards the leverage ratio, the net stable funding ratio, requirements for own funds and eligible liabilities, counterparty credit risk, market risk, exposures to central counterparties, exposures to collective investment undertakings, large exposures, reporting and disclosure requirements, and Regulation (EU) No 648/2012



the implementing technical standards (ITS) specifying main indices and recognised exchanges. Those draft ITS were submitted by ESMA to the European Commission pursuant to Article 197(8) of the CRR and supplemented in 2016 by the ESMA opinion on the 'main indices and recognized exchanges whose components can be used as collateral').

These draft regulatory technical standards are part of the set of regulatory technical standards referred to in Articles 325bd(7), 325be(3), 325bf(9), 325bg(4) to be delivered by 28 March 2020. The entry into force of the latest of those regulatory technical standards will trigger the 3 year-period following which IMA institutions that have been granted IMA approval for reporting purposes by their competent authority will be required to report their IMA figures under the specific reporting requirements for market risk set out in Article 430b(3).



3. Background and rationale

In January 2019, the Basel Committee on Banking Supervision (BCBS) finalised and published standards on Minimum capital requirement for market risk². The text replaces the previous minimum capital requirements for market risk in the global regulatory framework, which are implemented in the EU via Regulation (EU) No 575/2013 (CRR).

The amendments to Regulation (EU) No 575/2013³ (the Capital Requirements Regulation 2 – CRR2) implement the new market risk framework provided by the BCBS standards into EU legislation as a reporting requirement in a first step.

One of the key enhancements of the new Market Risk standards is the incorporation of the risk of market illiquidity. In particular, instead of the uniform 10-day horizon assumed for all traded instruments under the previous framework, requirements to report varying liquidity horizons are now introduced both in the Standardised approach (SA) and in the Internal Model Approach (IMA), with the aim of mitigating the risk of a sudden and severe impairment across asset markets.

As per Article 325bd of the CRR2, institutions shall map each risk factor of positions, attributed to trading desks for which they have been granted the permission to use the IMA or are in the process of getting that permission, to one of the broad risk factor categories and one of the broad risk factor subcategories listed in Table 2 of the same article.

Mapping risk factors to risk factor categories and subcategories is a key step in the assignment of a liquidity horizon to each risk factor for the purpose of scaling the calculated capital requirements based on the risk of illiquidity of the given risk factor of a position.

Article 325bd of the CRR2 mandates the EBA to develop regulatory technical standards to specify:

- How institutions shall map risk factors to risk factors categories and subcategories;
- The currencies that constitute the most liquid currencies for interest rate risk;
- The currency pairs that constitute the most liquid pairs for FX risk;
- The definition of a small and large capitalisation for equities.

² Minimum capital requirements for market risk, January 2019 (rev. February 2019)

³ REGULATION (EU) 2019/876 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 20 May 2019 amending Regulation (EU) No 575/2013 as regards the leverage ratio, the net stable funding ratio, requirements for own funds and eligible liabilities, counterparty credit risk, market risk, exposures to central counterparties, exposures to collective investment undertakings, large exposures, reporting and disclosure requirements, and Regulation (EU) No 648/2012



These proposed draft RTS cover all four mandates included in the above article. In the following sections, the four mandates are discussed separately and focus is given to the rationale behind the relevant proposed draft RTS.

3.1 Feedback received on the Discussion Paper

In December 2017, the EBA published a Discussion Paper (DP) on EU implementation of market risk and counterparty credit risk revised standards⁴. The paper discussed some of the most important technical and operational challenges for the purposes of implementing the FRTB and SA-CCR in the EU. The DP gave also the possibility to stakeholders to provide early input. The consultation ran until 15 March 2018, and a public hearing took place on 5 February 2018. The EBA received eight public responses to the DP as well as six confidential responses⁵.

One of the implementation issues the EBA identified as potentially having a significant impact on banks is the assignment of appropriate liquidity horizons to various risk factors in the IMA. In the DP, without pre-empting any conclusion, preliminary views were provided on how the liquidity horizon implementation issues could be addressed. Feedback was sought on all four mandates included in Article 325bd of the CRR2.

Mapping of risk factors to relevant liquidity horizons

In the DP, the EBA proposed to prescribe some specific rules for mapping risk factors to already established risk factor categories or giving further guidelines for some type of risk factors. The DP specified (i) that the approach would essentially specify the mapping for certain types of risk factors where further guidance is needed, and (ii) that the content would partly rely on the existing FRTB FAQ on Liquidity Horizons.

In the feedback to the DP, respondents generally supported the outlined approach. However, concerns were expressed regarding the risk of relaxation of mapping rules at the risk factor level. Specifically, some respondents highlighted that mapping the whole instrument (i.e. all risk factors of a given instrument) to the category and subcategory, and therefore to the liquidity horizon, of the most relevant risk factor in terms of materiality could potentially lead to capital benefits and certainly to differing capital requirements among institutions for the same exposures.

Following the concerns expressed by the industry, the EBA does not include in this consultation paper (CP) the possibility to map all risk factors used for modelling an instrument to the category and subcategory of the 'most material' risk factor. Thus, the mapping is proposed to be performed at risk factor level.

 $[\]frac{4}{\text{https://www.eba.europa.eu/documents/10180/37073/Discussion+Paper+on+EU+implementation+of+MKR+and+CCR+revised+standards+\%28EBA-DP-2017-04\%29.pdf/a5f47920-54be-4b68-a25c-119c70606186}$

⁵ http://www.eba.europa.eu/regulation-and-policy/market-risk/discussion-paper-on-eu-implementation-of-mkr-and-ccr-revised-standards#responses 2065380



Most liquid currencies for Interest Rate Risk

Feedback on the DP was relatively critical with respect to the definition that was proposed for identifying the most liquid currencies. Generally, respondents claimed that it was restrictive to consider only the OTC market for the purpose of determining most liquid currencies.

In order to ensure consistency with the international regulatory standards, the RTS define the list of most liquid currencies as the one outlined in the BCBS standards on Minimum capital requirement for market risk.

Most liquid currency pairs for Foreign Exchange Risk

Respondents in general supported the approach outlined in the DP. Respondents in particular supported the proposal to allow triangulation among the currencies pairs that are particularly liquid in the market of OTC foreign-exchange derivatives.

In order to ensure consistency with international regulatory standards, the RTS proposes a list of currency pairs constituting the most liquid currency pairs subcategory in the foreign exchange broad risk factor category as the one established in the BCBS standards on Minimum capital requirement for market risk. In addition, the EU's specificity of currencies in the second stage of the economic and monetary union is captured.

Definition of Large Capitalisation

For the purpose of defining what constitutes a large market capitalisation for equities, the BCBS standards on Minimum capital requirement for market risk establishes a threshold of USD 2 billion.

In its DP, the EBA proposed to enrich the absolute threshold with other criteria to reflect the differences among EU Member States in terms of market capitalisation; in particular, it was proposed to consider the composition of national indices. Respondents, in the feedback on the DP, broadly supported the EBA proposal.

3.2 Mapping of risk factors to broad risk factor categories and subcategories

In CRR2, the risk of market illiquidity is catered for by incorporating varying liquidity horizons to mitigate the risk of sudden and severe impairment or market illiquidity across asset markets. Liquidity horizons work as scaling factors to take into account the fact that various risk factors have different underlying liquidities and should therefore attract different capital requirements. Liquidity horizons are relevant to large parts of the new market risk framework and can have a decisive impact on the composition of institutions' trading books, as well as on their modelling decisions.

These proposed draft RTS set up requirements for institutions using the IMA on how to map risk factors of positions attributed to trading desks to the broad risk factor categories and subcategories



in Table 2 of Article 325bd CRR2. Mapping risk factors to risk factor categories and subcategories is a key step in the assignment of a liquidity horizon to each risk factor for the purpose of scaling the calculated capital requirements based on the risk of illiquidity of the given risk factor of a position.

3.2.1 General Approach

In the DP, the EBA proposed to prescribe some specific rules for mapping risk factors to already established risk factor categories or giving further guidelines for some type of risk factors. The DP specified that:

- The approach would essentially specify the mapping for certain types of risk factors where further guidance is needed.
- The content of the draft RTS would partly rely on the FAQ included in the BCBS market risk framework.

Specifically, it was proposed to:

- Map each risk factor to its relevant liquidity horizon.
- Map the risk factor to the prudent risk factor subcategory 'other' of the relevant broad risk factor category, in case a subcategory for the risk factor cannot be identified.

In the feedback to the DP, the industry generally supported the outlined approach. However, concerns were expressed regarding the relaxation of mapping rules at the risk factor level; specifically some respondents highlighted that mapping the whole instrument (i.e. all risk factors of a given instrument) to liquidity horizon of the most relevant risk factor in terms of materiality possibility investigated in the DP - could potentially lead to capital benefits and certainly to differing capital requirements among institutions for the same exposures.

Following the concerns expressed by the industry, the EBA does not include in this consultation paper (CP) the possibility to map all risk factors used for modelling an instrument to the category and subcategory of the 'most material' risk factor. Thus, the mapping is proposed to be performed at risk factor level. In addition, in the eventuality of one risk factor embedding different risks, the risk factor would be mapped to the longest liquidity horizon of the embedded risks.

Considering the above, the CP clarifies that institutions should identify the most appropriate risk factor category and subcategory considering the type of risk factor and the data that have been used as inputs in the risk-measurement model for such risk factor.

While it is expected that the vast majority of risk factors will plainly map to a single subcategory, the methodology prescribes, where this is not the case, how the relevant liquidity horizon for a risk factor should be set. For example, there might be risk factors which could be potentially mapped to more than one category/subcategory; an example of risk factor embedding risks reflected in more than one subcategory, is the case of a single risk factor capturing market-wide movements for a given economy, region or sector and not the specific dynamic of a given issuer. If such risk



factor was built both considering large cap and small cap, then it embeds the risk reflected in both two equity subcategories.

Finally, the CP specifies that a risk factor that embeds risks that cannot be mapped to any broad risk factor category should be mapped to the broad risk factor subcategory 'Other types' of the broad risk factor category 'Commodity' with a liquidity horizon of 120 days. The outlined methodology is expected to enhance capital comparability through harmonisation of practices among different institutions.

3.2.2 Ad hoc Treatments

The general approach is complemented in the CP by various specifications. Specifications have been introduced to reflect the FRTB FAQ on liquidity horizons meant to clarify the uncertainty around the categorization of some risk factors and thus to map them to the appropriate liquidity horizon.

Such specifications were also requested by industry in the feedback received on the DP.

The CP specifies that:

- The liquidity horizon for equity large capitalisation repo and dividend risk factors is 20 days. All other equity repo and dividend risk factors are subject to a liquidity horizon of 60 days.
- For mono-currency and cross-currency basis risk, liquidity horizons of 10 days and 20 days for interest rate-most liquid currencies and other currencies, respectively, are applied.
- 3. The liquidity horizon for inflation risk factors should be consistent with the liquidity horizons for interest rate risk factors for a given currency.
- 4. The liquidity horizon of a risk factor modeling an index should be calculated by first performing a weighted average of the liquidity horizons of the index's components and then choosing the liquidity horizon (out of 10, 20, 40, 60, 120 days) that is greater or equal the computed weighted average.



3.3 Most Liquid Currencies for Interest Rate Risk

The FRTB standards specify explicitly the currencies that constitute the most liquid currencies subcategory in the interest rate broad risk factor category, namely USD, EUR, GBP, AUD, JPY, CAD and SEK as well as the domestic currency of the bank.

It is worth mentioning that Table 2 in Article 325bd specifies that the domestic currency of the institution has a LH = 10 days; accordingly, as the treatment for the domestic currency is included in the level 1 text, the draft RTS does not include such provision.

Based on the data from the 2013 report of statistics compiled by the BIS every 3 years on OTC interest rate derivatives, it appears that the currencies that underlie net OTC interest rate derivative contracts with an average daily turnover of more than USD 30 billion have been classified as 'the most liquid currencies'.

The underlying assumption could be that currencies with a higher volume of underlying OTC interest rate derivative contracts are less prone to liquidity shocks. This in turn would justify a lower liquidity horizon to be applied to interest rate instruments denominated in those selected currencies.

The CP proposes a list of the currencies that should be mapped to the most liquid currencies subcategory in the interest rate broad risk category considering the list established in the FRTB standards. Accordingly, the most liquid currencies correspond to those underlying net OTC interest rate derivative contracts with a sufficient average daily turnover. The statistics, which the CP considers for the assessment of the average daily turnover, are those contained in the BIS report of statistics on OTC interest rate derivatives. In the future, the Regulation, once adopted, could be amended, if and as appropriate, also on the basis of the issuance of a new BIS report.

3.4 Most Liquid Currency Pairs for Foreign Exchange (FX) Risk

As in the case for the interest rate broad risk factor category, the FRTB standards specify the currency pairs that constitute the most liquid currency pairs in the foreign-exchange broad risk factor category.

Based on the data from the 2013 report of statistics compiled by the BIS every 3 years on the foreign-exchange turnover of OTC products compiled by the BIS, it appears that currencies that underlie net OTC foreign exchange derivative contracts with an average daily turnover of more than USD 45 billion have been classified as 'the most liquid currency pairs'.

The BCBS specified in the FRTB that besides the currency pairs satisfying the above mentioned criteria, also currency pairs forming first-order crosses across these specified currency pairs should be considered as most liquid in the context of foreign-exchange risk.



In the feedback to the DP, industry generally supported the definition and the level of the threshold that were specified in the FRTB standards. Industry also generally agreed that the list of selected currencies should be updated on a triennial basis following the publication of the BIS OTC derivative statistics. In addition, industry supported that also currency pairs forming first-order crosses across those classified through the BIS report should be considered most liquid.

This CP proposes a list of the currency pairs that should be mapped to the most liquid currency pairs subcategory in the foreign exchange broad risk factor category considering the list established in the FRTB standards. Accordingly, the most liquid currency pairs are those underlying net OTC foreign exchange derivative contracts with a sufficient average daily turnover.

The list of currency pairs in the RTS already provides the currency pairs obtained through a first-order cross. Accordingly, most liquid currency pairs attracting a 10-day liquidity horizon would be made of:

- (i) the currency pairs in the list provided in the RTS, and
- (ii) the currency pairs that are composed by the EUR and a currency other than EUR of an EU Member State participating in the second stage of the economic and monetary union.

The statistics the CP considers for the assessment of the average daily turnover is the one contained in the BIS report of statistics on OTC foreign-exchange derivatives. In the future, the Regulation, once adopted could to be amended, if and as appropriate, also following the issuance of a new BIS report.

3.5 Definition of Large Capitalisation for Equity Risk

For defining what constitutes a large market capitalisation for equities, the FRTB establishes a threshold of USD 2 billion. Entities are then to be allocated into large/small cap according to whether their capitalisation is above/below the threshold.

As expressed in the DP, the EBA has tested this capitalisation threshold for European equity markets. These tests showed that there are many differences across Member States in terms of market capitalisation. For larger markets, the scope would include many equities from large capitalisation indices (and some from mid-capitalisation indices). However, many smaller jurisdictions would have no or a very limited number of equities above this threshold.

As a result, a threshold of 2 billion USD does not appear to be sufficient, in itself, to capture the diversity of equity markets in the EU. In particular, in the DP, it was specified that the absolute threshold could be adjusted or combined with some relative threshold. In this sense, the composition of relevant national indices had been indicated as an appropriate relative threshold mechanism. Besides, it had been pointed out that other criteria such as free-float of any given equity could also be relevant to consider.



The industry, in the feedback to the DP, broadly supported the principle of having a relative threshold mechanism eventually enriched by other criteria. The DP also suggested it would have been possible to leverage on the implementing technical standards (ITS) specifying main indices and recognized exchanges, submitted by ESMA to the European Commission pursuant to Article 197(8) of the CRR and complemented in 2016 by the ESMA opinion on the 'main indices and recognized exchanges' whose components can be used as collateral.

The criteria in the ESMA ITS are based on the liquidity of the components of the indices, considering two approaches: (i) one based on two common thresholds of liquidity (market capitalisation and free float) to the constituents of each index on a world-wide basis and (ii) a relative approach, applying a number of tests designed to identify the main index of more liquid instruments in each EEA economy, provided they meet an underpinning liquidity threshold. The industry supported having the ESMA ITS as input for defining the large market capitalisation for equity risk.

This CP consults on two options. The first option would just retain the absolute threshold agreed in the international standards to identify large capitalisations for the equity price and volatility subcategory in the equity broad risk factor category without adding any provision reflecting the EU equity markets. The second option also retains the absolute threshold agreed in the international standards, but in addition reflects the specificities of EU equity markets by defining the scope of large capitalisations as follows:

- 1. A market capitalisation equal to or greater than EUR 1.75 billion is considered as large market capitalisation.
- 2. Equities in indices listed in the ESMA ITS which components are all quoted in the EU are considered as large market capitalisation.

Independently of the option, all capitalisations that do not fall within the scope of large capitalisations should be considered as small capilisations for the equity price and volatility subcategory in the equity broad risk factor category.



4. Draft regulatory technical standards on liquidity horizons for the Internal Model Approach (IMA) under points (a) to (d) of Article 325bd(7) of Regulation (EU) No 575/2013 (Capital Requirements Regulation 2 - CRR2)

In between the text of the draft RTS that follows, further explanations on specific aspects of the proposed text are occasionally provided, which either offer examples or provide the rationale behind a provision, or set out specific questions for the consultation process. Where this is the case, this explanatory text appears in a framed text box.



COMMISSION DELEGATED REGULATION (EU) .../..

of XXX

supplementing Regulation (EU) No 575/2013 of the European Parliament and of the Council with regard to regulatory technical standards on liquidity horizons for the Internal Model Approach (IMA) under points (a) to (d) of Article 325bd(7)

(Text with EEA relevance)



THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Regulation (EU) No 575/2013 of 26 June 2013 of the European Parliament and of the Council on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012⁶, and in particular the third subparagraph of Article 325bd(7) thereof,

Whereas:

- (1) The methodology for fulfilling the requirement of mapping a risk factor of a position to a broad risk factor category for the purpose of paragraph 1 of Article 325bd of Regulation (EU) No 575/2013 should enable institutions to identify broad risk factor categories and broad risk factor subcategories corresponding to the risks embedded in the risk factor, considering that the requirement of mapping the risk factor of a position to a broad risk factor subcategory has the sole objective of determining the appropriate liquidity horizon to be assigned to the relevant risk factor.
- (2) Given the particularities of the risk factors of certain positions, it is necessary to provide specific rules for their mapping to ensure harmonisation of practices and avoid regulatory arbitrage. Accordingly, the general methodology should also specify the treatment for risk factors embedding risks not falling under any broad risk factor category among those included in Table 2 of Article 325bd of Regulation (EU) No 575/2013.
- Currencies that underlie net Over The Counter (OTC) interest rate derivatives with a high volume of daily average turnover tend to be less prone to liquidity shocks. As a result, it is appropriate to use the volume of the daily average turnover of OTC interest rate derivatives as a criterion for defining the most liquid currencies for the purposes of Article 325bd(7)(b) of Regulation (EU) No 575/2013. Further, the Bank for International Settlements (BIS) Triennial Central Bank Survey of OTC interest rate derivatives turnover constitutes a reliable source of statistics to evaluate the OTC interest rate derivatives turnover per instrument and currency. For that reason, and in order to ensure consistency with international practices, it is appropriate to use the results of that survey for the purpose of defining the currencies constituting the most liquid currencies subcategory.
- (4) The list of the currencies constituting the most liquid currencies subcategory for the purposes of Article 325bd(7)(b) of Regulation (EU) No 575/2013 should be updated as appropriate, where changes occur in the liquidity of the currencies. Further, given that the most liquid currencies subcategory of Table 2 of Article 325bd of Regulation (EU) No 575/2013 includes the domestic currency, the most liquid currencies for an institution should be those specified in Annex I and its domestic currency.
- (5) Currency pairs that underlie net OTC foreign exchange derivatives with a high volume of daily average turnover tend to be less prone to liquidity shocks. As a result, it is appropriate to use the volume of the daily average turnover of OTC foreign exchange derivatives as a criterion for defining the most liquid currency pairs for the purposes of Article 325bd(7)(c) of Regulation (EU) No 575/2013. Further, the BIS Triennial Central Bank Survey of OTC foreign-exchange derivatives turnover constitutes a reliable source of statistics to evaluate the OTC interest rate derivatives turnover by instrument and currency. For that reason, and in order to ensure consistency with international practices, it is appropriate to use the results of that survey for the purpose of defining the currencies constituting the most liquid currency pairs subcategory.

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⁶ OJ L 176, 27.6.2013, p. 1.



- (6) The list of the currencies constituting the most liquid currency pairs subcategory for the purposes of paragraph 7(c) of Article 325bd of Regulation (EU) No 575/2013 should be updated as appropriate, where changes occur in the liquidity of the currency pair. Further, given that the most liquid currency pairs subcategory of Table 2 of Article 325bd of Regulation (EU) No 575/2013 include those specified in paragraph 5 of Article 325bd of Regulation (EU) No 575/2013, the most liquid currency pairs subcategory is constituted both by currency pairs specified in paragraph 5 of Article 325bd of Regulation (EU) No 575/2013 and by the currency pairs specified in Annex II.
- (7) [OPTION A]: Given the need for consistency with international regulatory standards, it is necessary to define small and large capitalisation for the equity price and volatility subcategory in the equity broad risk factor category of Table 2 of Article 325bd of Regulation (EU) No 575/2013 on the basis of the absolute threshold established in the international standards by the Basel Committee for Banking Supervision⁷.
 - [OPTION B]: Given the diversity of equity markets in the EU, it is necessary to define small and large capitalisation for the equity price and volatility subcategory in the equity broad risk factor category of Table 2 of Article 325bd of Regulation (EU) No 575/2013 on the basis of a combination of an absolute threshold that is adjusted by a relative one. Given the need for consistency with international regulatory standards, the absolute threshold should be based on the threshold established by the Basel Committee for Banking Supervision. Further, given that Commission Implementing Regulation (EU) 2016/16468 provides a list of indices based on the liquidity of the components of the indices, and given that the methodology for the production of that list is based on market capitalisation and free float, on the condition of a minimum liquidity threshold, it is appropriate to establish the relative threshold consistently with that Regulation. As a result, the equities in the indices listed in that Regulation whose components are all quoted in the Union, should be considered as large market capitalisation, with all remaining ones being considered as of small market capitalisation.
- (8) This Regulation is based on the draft regulatory technical standards submitted by the European Banking Authority to the Commission.
- (9) EBA has conducted open public consultations on the draft regulatory technical standards on which this Regulation is based, analysed the potential related costs and benefits, and requested the opinion of the Banking Stakeholder Group established in accordance with Article 37 of Regulation (EU) No 1093/2010⁹,

HAS ADOPTED THIS REGULATION:

SECTION 1 MAPPING OF RISK FACTORS

⁷ Minimum capital requirements for market risk, January 2019 (rev. February 2019).

⁸ Commission Implementing Regulation (EU) 2016/1646 of 13 September 2016 laying down implementing technical standards with regard to main indices and recognised exchanges in accordance with Regulation (EU) No 575/2013 of the European Parliament and of the Council on prudential requirements for credit institutions and investment firms (OJ, L 245, 14.9.2016, p. 5).

⁹ Regulation (EU) No 1093/2010 of the European Parliament and of the Council of 24 November 2010 establishing a European Supervisory Authority (European Banking Authority), amending Decision No 716/2009/EC and repealing Commission Decision 2009/78/EC (OJ L 331, 15.12.2020, p. 12).



Article 1

General mapping methodology

- 1. Institutions shall map risk factors of positions referred to in paragraph 1 of Article 325bd of Regulation (EU) No 575/2013 to the broad risk factor categories and broad risk factor subcategories of Table 2 of that Article in accordance with the following:
 - (a) they shall map the risk factor to the most appropriate broad risk factor category, having regard to the nature of the risk captured by the risk factor and the data used as inputs for the risk factor in the risk measurement model;
 - (b) they shall map the risk factor to the most appropriate broad risk factor subcategory under the broad risk factor category identified in accordance with point (a), having regard to the nature of the risk captured by the risk factor and the data used as inputs for the risk factor in the risk measurement model.
- 2. Where the nature of the risk factor does not correspond to any broad risk factor categories, they shall map that risk factor to the broad risk factor category 'commodity' and to the broad risk factor subcategory 'other types' under the 'commodity' broad risk factor category.
- 3. Where the nature of the risk captured by the risk factor and the data used as inputs for that risk factor correspond to risk factors that could fall under more than one broad risk factor categories or broad risk factor subcategories, institutions shall apply all of the following:
 - (a) they shall first identify the broad risk factor categories and the corresponding broad risk factor subcategories that could be identified for that risk factor on the basis of its nature and the data used as inputs;
 - (b) among the broad risk factor categories and the corresponding broad risk factor subcategories identified in point (a), they shall map the risk factor to the broad risk factor category and the corresponding broad risk factor subcategory that results in the longest liquidity horizon;
 - (c) where, based on the process referred to in point (b), more than one broad risk factor category and its corresponding broad risk factor subcategory would result in the longest liquidity horizon, institutions may map the risk factor to any of those broad risk factor categories and their corresponding broad risk factor subcategories.

Explanatory text for consultation purposes

The draft RTS clarifies that institutions should identify the most appropriate risk factor category and subcategory considering the type of risk factor and the data that have been used as inputs in the risk-measurement model for such risk factor. While it is expected that the vast majority of risk factors will plainly map to a single subcategory, the methodology prescribes, where this is not the case, how the relevant liquidity horizon for a risk factor should be set.

Finally, the EBA proposes that a risk factor that embeds risks that cannot be mapped to any broad risk factor category should be mapped to the broad risk factor subcategory 'Other types' of the broad risk factor category 'Commodity' with a liquidity horizon of 120 days.



- **Q1.** Do you agree with the general methodology? If not, please explain why.
- **Q2.** Besides systemic risk factors (i.e. risk factors capturing the market/systemic component of the modelled risk), are there other risk factors/parameters that would reflect risks embedded in more than one categories or more than one subcategories?

Article 2

Mapping methodology for index instruments

- 1. By way of derogation from Article 1, where a single risk factor models a homogeneous index instrument, institutions shall apply the following steps in sequence:
 - (a) they shall map the risk factor to the broad risk factor category corresponding to the risk embedded in the homogenous index;
 - (b) they shall apply Article 1 to each of the constituents of the index to obtain the liquidity horizons of each constituent:
 - (c) they shall compute the weighted average of the liquidity horizons obtained pursuant to point (b) by first multiplying the liquidity horizon of each individual constituent of the index by its weight in the index, and by then summing the weighted liquidity horizons for all constituents of the index;
 - (d) they shall map the risk factor to that subcategory of Table 2 of Article 325bd of Regulation (EU) No 575/2013, among those belonging to the broad risk factor category identified in point (a), that has the shortest liquidity horizon which is greater or equal to the liquidity horizon identified in point (c).
- 2. For the purpose of point (a) of paragraph 1, where the risk factor is the price of a homogenous index made of bonds and indices composed by bonds only, the institution shall map it to the credit spread broad risk factor category.
- 3. For the purposes of paragraphs 1 and 2 'homogeneous index' shall refer to an index that has one of the following compositions:
 - (a) equities and indices composed by equities only;
 - (b) bonds and indices composed by bonds only;
 - (c) credit default swaps and indices composed of credit default swaps only;
 - (d) commodities and indices composed of commodities only.



Explanatory text for consultation purposes

In line with the FAQ agreed in the international fora, the EBA proposes that the liquidity horizon of a risk factor modeling an index should be calculated by first performing a weighted average of the liquidity horizons of the index's components and then choosing the liquidity horizon that is greater or equal the computed weighted average among those 'available' in the relevant broad risk category.

Q3. Do you agree with the treatment reserved for homogenous indices?

Q4. Do you have any example of other risk factors that should be subject to the treatment specified for indices?

Article 3

Mapping of inflation, mono-currency and cross-currency basis risk factors

- 1. By way of derogation from Article 1, inflation risk factors for a given currency shall be mapped to the interest rate broad risk category, and to the broad risk factor subcategory of that currency.
- 2. By way of derogation from Article 1, mono-currency basis risk and cross-currency basis risk factors shall be mapped to the interest rate broad risk factor category, and to the broad factor subcategory of the currency denominating the basis.

Article 4

Mapping of repo and dividend risk factors

- 1. By way of derogation from Article 1, equity reporates and dividend risk factors shall be mapped to the equity broad risk factor category.
- 2. By way of derogation from Article 1, for the purpose of determining the broad risk factor subcategory, equity repo rates and dividend risk factors for a given equity shall be treated as risk factors corresponding to the volatility of that equity.

Explanatory text for consultation purposes

In line with the FAQ agreed in the international fora, the EBA proposes some specifications with respect to the treatment of some type of risk factors. The EBA seeks feedback on whether further ad-hoc specifications would be beneficial.

Q5. Are there any other risk factors for which an ad-hoc treatment should be specified?



SECTION 2

DEFINITION OF THE MOST LIQUID CURRENCY SUBCATEGORY

Article 5

The currencies that constitute the most liquid currencies for the purposes of the relevant subcategory in the interest rate broad risk factor risk factor category of Table 2 of Article 325bd of Regulation (EU) No 575/2013 shall be, in addition to the domestic currency mentioned in that Table, those set out in Annex I to this Regulation.

SECTION 3

DEFINITION OF THE MOST LIQUID CURRENCY PAIRS SUBCATEGORY

Article 6

The currency pairs that constitute the most liquid currency pairs subcategory in the foreign exchange broad risk factor category of Table 2 of Article 325bd of Regulation (EU) No 575/2013 shall be, in addition to those established in paragraph 5 of that Article, those set out in Annex II to this Regulation.

SECTION 4

DEFINITION OF SMALL AND LARGE CAPITALISATION

Article 7

Option A:

An equity shall be considered as an equity with large capitalisation where its market capitalisation is greater than or equal to EUR 1,75 billion. All other equities shall be considered as equities with small capitalisation.

Option B:

An equity shall be considered as an equity with large capitalisation where either of the following conditions is met:

- (a) its market capitalisation is greater than EUR 1,75 billion;
- (b) it is included in one of the indices set out in Annex I of Commission Implementing Regulation (EU) 2016/164610 and its components are all quoted in the Union.

All other equities shall be considered as equities with small capitalisation.

¹⁰ Commission Implementing Regulation (EU) 2016/1646 of 13 September 2016 laying down implementing technical standards with regard to main indices and recognised exchanges in accordance with Regulation (EU) No 575/2013 of the European Parliament and of the Council on prudential requirements for credit institutions and investment firms (OJ L 245, 14.9.2016, p. 5).



Explanatory text for consultation purposes

The EBA consults on two options to identify large capitalisations for the equity price and volatility subcategory in the equity broad risk factor category. The first option would just retain the absolute threshold agreed in the international standards without adding any specific provision to better reflect the EU equity markets. The second option also retains the absolute threshold agreed in the international standards, but in addition reflects the specificities of EU equity markets by defining the scope of large capitalisations relying also on the ESMA ITS on the 'main indices and recognized exchanges' whose components can be used as collateral.

Q6. What is your preferred option? Please explain why.

Article 8 Entry into force

This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

This Regulation shall be binding in its entirety and directly applicable in all Member States. Done at Brussels,

For the Commission The President

[For the Commission On behalf of the President

[Position]



ANNEX I

List of most liquid currencies¹¹ for the purpose of article 5:

EUR, USD, GBP, AUD, JPY, SEK, CAD.

EUR = Euro, USD = US Dollar, GBP = Pound Sterling, JPY = Japanese Yen, AUD = Australian Dollar, SEK = Swedish Krona, CAD = Canadian Dollar

 $^{^{11}}$ For the purpose of this Annex:



ANNEX II

List of currency¹² pairs for the purpose of Article 6:

EUR/USD, EUR/JPY, EUR/GBP, EUR/CHF, EUR/CAD, EUR/MXN, EUR/CNY, EUR/NZD, EUR/RUB EUR/HKD, EUR/SGD, EUR/TRY, EUR/KRW, EUR/SEK, EUR/ZAR, EUR/INR, EUR/NOK, EUR/BRL, EUR/AUD.

USD/JPY, USD/GBP, USD/AUD, USD/CAD, USD/CHF, USD/MXN, USD/CNY, USD/NZD, USD/RUB, USD/HKD, USD/SGD, USD/TRY, USD/KRW, USD/SEK, USD/ZAR, USD/INR, USD/NOK, USD/BRL, USD/DKK.

JPY/GBP, JPY/CAD, JPY/CHF, JPY/MXN, JPY/CNY, JPY/NZD, JPY/RUB, JPY/HKD, JPY/SGD, JPY/TRY, JPY/KRW, JPY/SEK, JPY/ZAR, JPY/INR, JPY/NOK, JPY/BRL, JPY/DKK, JPY/AUD.

GBP/AUD, GBP/CAD, GBP/CHF, GBP/MXN, GBP/CNY, GBP/NZD, GBP/RUB, GBP/HKD, GBP/SGD, GBP/TRY, GBP/KRW, GBP/SEK, GBP/ZAR, GBP/INR, GBP/NOK, GBP/BRL, GBP/DKK.

AUD/CAD, AUD/CHF, AUD/MXN, AUD/CNY, AUD/NZD, AUD/RUB, AUD/HKD, AUD/SGD, AUD/TRY, AUD/KRW, AUD/SEK, AUD/ZAR, AUD/INR, AUD/NOK, AUD/BRL.

CAD/CHF, CAD/MXN, CAD/CNY, CAD/NZD, CAD/RUB, CAD/HKD, CAD/SGD, CAD/TRY, CAD/KRW, CAD/SEK, CAD/ZAR, CAD/INR, CAD/NOK, CAD/BRL.

CHF/MXN, CHF/CNY, CHF/NZD, CHF/RUB, CHF/HKD, CHF/SGD, CHF/TRY CHF/KRW, CHF/SEK, CHF/ZAR, CHF/INR, CHF/NOK, CHF/BRL.

MXN/CNY, MXN/NZD, MXN/RUB, MXN/HKD, MXN/SGD, MXN/TRY, MXN/KRW, MXN/SEK, MXN/ZAR, MXN/INR, MXN/NOK, MXN/BRL.

CNY/NZD, CNY/RUB, CNY/HKD, CNY/SGD, CNY/TRY, CNY/KRW, CNY/SEK, CNY/ZAR, CNY/INR, CNY/NOK, CNY/BRL.

NZD/RUB, NZD/HKD, NZD/SGD, NZD/TRY, NZD/KRW, NZD/SEK, NZD/ZAR, NZD/INR, NZD/NOK, NZD/BRL.

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¹² For the purpose of this Annex:

EUR = Euro, USD = US Dollar, JPY = Japanese Yen, GBP = Pound Sterling, CHF = Swiss Franc, CAD = Canadian Dollar, MXN = Mexican Peso, CNY = Chinese Yuan, NZD = New Zealand Dollar, RUB = Russian Ruble, HKD = Hong Kong Dollar, SGD = Singapore Dollar, TRY = Turkish Lira, KRW = South Korean Won, SEK = Swedish Krona, ZAR = South African Rand, INR = Indian Rupee, NOK = Norwegian Krone, BRL = Brazilian Real, AUD = Australian Dollar, DKK = Danish Krone



RUB/HKD, RUB/SGD, RUB/TRY, RUB/KRW, RUB/SEK, RUB/ZAR, RUB/INR, RUB/NOK, RUB/BRL.

HKD/SGD, HKD/TRY, HKD/KRW, HKD/SEK, HKD/ZAR, HKD/INR, HKD/NOK HKD/BRL.

SGD/TRY, SGD/KRW, SGD/SEK, SGD/ZAR, SGD/INR, SGD/NOK, SGD/BRL.

TRY/KRW, TRY/SEK, TRY/ZAR, TRY/INR, TRY/NOK, TRY/BRL.

KRW/SEK, KRW/ZAR, KRW/INR, KRW/NOK, KRW/BRL.

SEK/ZAR, SEK/INR, SEK/NOK, SEK/BRL.

ZAR/INR, ZAR/NOK, ZAR/BRL.

INR/NOK, INR/BRL.

NOK/BRL.



5. Accompanying documents

5.1 Draft cost-benefit analysis / impact assessment

Article 325bd of the CRR2 requires the EBA to develop draft RTS to specify in greater detail:

- how institutions shall map risk factors to risk factors categories and subcategories;
- the currencies that constitute the most liquid currencies for interest rate risk;
- the currency pairs that constitute the most liquid pairs for FX risk;
- the definition of a small and large capitalisation for equities.

As per Article 10(1) of Regulation (EU) No 1093/2010 (EBA Regulation), any regulatory technical standards developed by the EBA shall be accompanied by an Impact Assessment (IA), which analyses 'the potential related costs and benefits'.

This section presents the cost-benefit analysis of the provisions included in the RTS described in this CP. The analysis provides an overview of identified problems, the proposed options to address those problems and the costs and benefits of those options.

A. Problem identification

In January 2019, the Basel Committee on Banking Supervision (BCBS) finalised the standards on Minimum capital requirement for market risk¹³. One of the key enhancements is the incorporation of the risk of market illiquidity. In particular, the new Expected Shortfall (ES) metric prescribes different liquidity horizons for different risk factors instead of the uniform 10-day horizon under the previous framework. The liquidity horizon is the time assumed to be required to exit or hedge a risk position without materially affecting market prices in stressed market condition. The longer the liquidity horizon, the less liquid the risk factor is and thus the higher the capital requirements tend to be.

The Basel standards set out a pre-described list of liquidity horizon for each broad category and subcategory of risk factor. Mapping risk factors to risk factor categories and subcategories is a key step in the assignment of a liquidity horizon to each risk factor. However, the Basel standards does not provide any specific guidance on how this mapping should be performed. Consequently, the CRR2 which implements the FRTB standards into the EU, requests the EBA to specify such mapping methodology. The lack of a common specification, would result in an inconsistent implementation of the internal model approach for the calculation of the own funds requirements for market risk across banks.

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¹³ https://www.bis.org/bcbs/publ/d457.htm



Regarding the currencies (resp. currency pairs) that constitute the most liquid currencies (resp. currency pairs) for interest rate risk (resp. FX risk), the Basel text already specifies a list of currencies (resp. currency pairs) that would benefit from a lower liquidity horizon. The CRR2 instead leaves this specification to the EBA. Similarly, the Basel text defines the meaning of small and large market capitalisation in the context of the equity risk, while under the CRR2, the EBA is mandated to specify such definition.

B. Policy objectives

The specific objective of the RTS are to establish a harmonised methodology for mapping risk factors to risk factor categories and subcategories. Moreover, the RTS aim at establishing a common list of currencies constituting the most liquid currencies for interest rate risk and currency pairs constituting the most liquid pairs for FX risk, as well as a definition of a small and large capitalisation for the purpose of mapping a risk factor falling within the equity broad risk factor category.

Generally, the RTS aim to create a level playing field, promote convergence of institutions practises and enhance comparability of own funds requirements across EU. Overall, the RTS are expected to promote the eeffective and efficient functioning of the EU banking sector.

C. Baseline scenario

The baseline scenario aims to describe the regulatory environment and regulatory developments, as well the institutions' practises.

In terms of regulatory environment, the baseline assumes the entry into force of the CRR2, which does not provide any methodology for mapping risk factors to risk categories or subcategories. The FRTB FAQ provides some guidance on the liquidity horizon to apply to specific risk factors, such as risk factors representing equity dividends, equity repo risk factors, risk factors capturing monocurrency and cross-currency basis risk, inflation risk factors and risk factors modelling multi-sector credit and equity indices. Regarding, the most liquid currencies for interest rate risk and currency pairs that constitute the most liquid pairs for FX risk, one source of information for institutions could be the prescribed list in the Basel standards or alternatively, institutions could rely on other statistics or liquidity indicators. For the definition of large and small capitalisation for equities, institutions could rely on the definition provided in the Basel standards.

In terms of institutions' practises, the baseline scenario assumes that no common approach exists regarding the mapping of risk factors to risk categories or subcategories for the certain types of risk factors for which mapping is non-trivial, given that such a specification is not present in the current CRR or CRR2.

D. Options considered, Cost-Benefit Analysis and Preferred Options

In the DP, the EBA put forward two possibilities on how the mapping of risk factors could be performed.



Option 1a: Mapping applied at risk factor level

Option 1b: Mapping applied at instrument level

Under Option 1a institutions would need to map each risk factor to its relevant board risk category and subcategory. Under Option 1b, institutions would need to map all the risk factors of a given instrument to the liquidity horizon of the most relevant risk factor or to the longest liquidity horizon among those corresponding to the risk factors.

In the feedback to the DP, the industry expressed concerns regarding Option 1b. Specifically some respondents highlighted that mapping the whole instrument (i.e. all risk factors of a given instrument) to the category and subcategory (and therefore to the liquidity horizon) of the most relevant risk factor in terms of materiality could potentially lead to capital benefits and certainly to different capital requirements among institutions for the same exposures.

Option 1a is retained.

The vast majority of risk factors are expected to plainly map to a single category and single subcategory, however a general methodology is needed to reflect also non-trivial cases. In particular, 2 options can be identified for mapping a risk factor that could be mapped to multiple categories (resp. sub-categories).

An example of risk factor embedding risks reflected in more than one subcategory, is the case of a single risk factor capturing market-wide movements for a given economy, region or sector and not the specific dynamic of a given issuer. If such risk factor was built both considering large cap and small cap, then it embeds the risk reflected in both two equity subcategories.

Option 2a: Map the risk factor to the broad risk factor category (resp. subcategory) with the longest liquidity horizon among the identified broad risk factor categories (resp. subcategories)

Option 2b: Map the risk factor to the broad risk factor category (resp. subcategory) based on a materiality threshold among the identified broad risk factor categories (resp. subcategories)

Option 2a provides for a simple and straighforward approach to deal with situations where a risk factor may be mapped to several broad risk factor categories (resp. subcategories). It can be more conservative than Option 2b, which for a given risk factor would require banks to identify the most relevant broad risk factor category (resp. subcategory) and perform the mapping accordingly. However, there is no straightforward way to assess the material of a risk factor and different approaches could be considered. Given that this treatment would apply only for a limited number of cases, the additional operational burden of implementing Option 2b does not overcome the benefits of having a more accurate mapping.

Option 2a is retained.



Liquid currencies for interest rate risk

Option 3a: List of currencies for interest rate risk prescribed in the FRTB standards

Option 3b: Extending the list above to more currencies

Option 3a aligns with FRTB standards and provide for a level playing field for internationally active banks. Under Option 3b, alternative currencies were explored based, among other sources, on the Triennial Central Bank Survey OTC interest rate derivatives turnover statistics published by the BIS every three years.

To align with international standards, Option 3a is retained. In the future, the Regulation, once adopted, could be amended, if and as appropriate, also on the basis of the issuance of a new BIS report.

Liquid currency pairs for FX risk

The FRTB defines a list of specified currency pairs that are subject to a lower liquidity horizon. Currency pairs forming first-order crosses across these specified currency pairs (triangulation) are also subject to the same liquidity horizon. Article 325bd of the CRR2 requires the EBA to develop draft RTS to specify in greater detail the currency pairs that constitute the most liquid currency pairs subcategory in the foreign exchange broad risk factor category. Notwithstanding this, the Level 1 text already prescribes that currency pairs that are composed by the EUR and a currency other than EUR of a Member State participating in the second stage of the economic and monetary union should be included in the most liquid currency pairs for FX risk.

Option 4a: Retain the list of specified currency pairs prescribed in the FRTB standards and perform the triangulation on such list

Option 4b: Retain the list of specified currency pairs prescribed in the FRTB and perform triangulation on an extended list, which includes both the specified currency pairs prescribed in the FRTB and the currency pairs prescribed in the Level 1 text

Option 4a aligns with FRTB standards and provide for a level playing field for internationally active banks. Option 4b takes into account the provision in CRR2 proposal under Article 325bd (5), which includes all the currency pairs that are composed by the EUR and a currency other than EUR of a Member State participating in the second stage of the economic and monetary union in the most liquid currency pairs. The only currency pair of this type not already included in the FRTB standards list is the DKK/EUR. Option 4b thus considers all the currency pairs forming first-order crosses across the specified currency pairs to be subject to the same liquidity horizon. This means that USD/DKK, JPU/DKK and GBP/DKK are included in the list of liquid pairs. Option 4b thus remains consistent with the philosophy of the FRTB standards, which considers that the combination of two liquid currency pairs to create a new, triangulated pair that, by virtue of being the result of combining two liquid instruments, is also liquid.



Option 4b is retained.

Definition of small and large capitalisation for equities

Option 5a: Definition of small and large capitalisation prescribed in the FRTB standards (Option A in the CP)

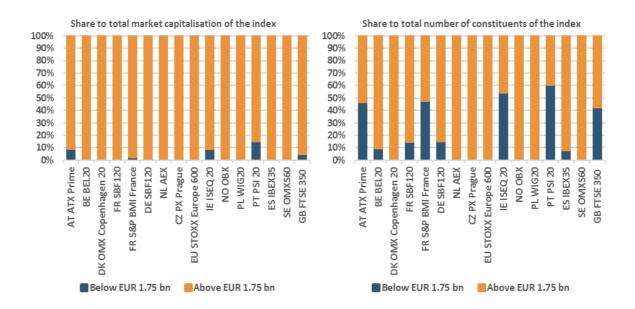
Option 5b: Definition of small and large capitalisation pre-scribed in the Basel standards supplemented by the constituents of one of the indices set out in Annex I of Commission Implementing Regulation (EU) 2016/1646 and whose components are all quoted in the Union standards (Option B in the CP)

Option 5a aligns with FRTB standards and provide for a level playing field for internationally active banks. Option 5b takes into account the heterogeneity of financial markets across the EU in terms of size and allows for a more proportionate treatment for smaller economies. Figure 1 shows the share of constituents which will fall below the EUR 1.75bn threshold to the total market capitalisation of the respective index (left panel) and the total number of constituents in the index (right panel). This can give an indication of how many additional equities will be assigned to the large capitalisation category even if they fall below the EUR 1.75bn threshold. When looking at the share in terms of total market capitalisation of the index, it appears that not many equities will benefit. On the other hand, when looking at the results by the number of constituents that will be classified as large cap, the results show that a significant share of the ATX Prime Index (47%), S&P BM France (48%), ISEQ20 (55%), PSI20 (61%) and FTSE 350 (43%) will qualify for large cap.

Both option 5a and 5b are retained for consultation.



Figure 1: Market capitalisation of constituents of selected European indices set out in Annex I of Commission Implementing Regulation (EU) 2016/1646



Source: Bloomberg

Note: Data as of end December 2018



5.2 Overview of questions for consultation

- **Q1.** Do you agree with the general methodology? If not, please explain why.
- **Q2.** Besides systemic risk factors (i.e. risk factors capturing the market/systemic component of the modelled risk), are there other risk factors/parameters that would reflect risks embedded in more than one subcategories or more than one categories?
- Q3. Do you agree with the treatment reserved for homogenous indices?
- **Q4.** Do you have any example of other risk factors that should be subject to the treatment specified for indices?
- Q5. Are there any other risk factors for which an ad-hoc treatment should be specified?
- **Q6.** What is your preferred option? Please explain why.