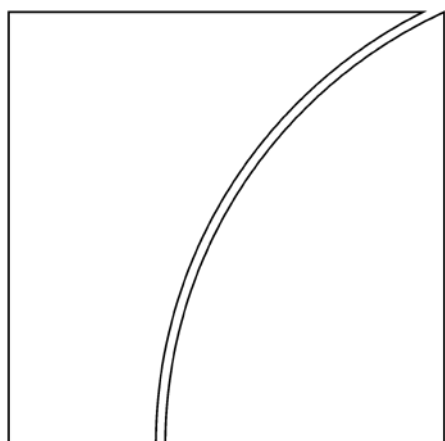


# Basel Committee on Banking Supervision

## Board of the International Organization of Securities Commissions

### Second Consultative Document

### **Margin requirements for non-centrally cleared derivatives**



*Issued for comment by 15 March 2013*

February 2013



BANK FOR INTERNATIONAL SETTLEMENTS



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## Abbreviations

|        |                                                      |
|--------|------------------------------------------------------|
| BCBS   | Basel Committee on Banking Supervision               |
| BIS    | Bank for International Settlements                   |
| CCP    | Central counterparty                                 |
| CGFS   | Committee on the Global Financial System             |
| CPSS   | Committee on Payment and Settlement Systems          |
| FSB    | Financial Stability Board                            |
| FX     | Foreign exchange                                     |
| G20    | The Group of Twenty                                  |
| G-SIFI | Global systemically-important financial institution  |
| IOSCO  | International Organization of Securities Commissions |
| LCR    | Liquidity coverage ratio                             |
| MTA    | Minimum transfer amount                              |
| NSFR   | Net stable funding ratio                             |
| OTC    | Over-the-counter                                     |
| QIS    | Quantitative impact study                            |
| WGMR   | Working Group on Margining Requirements              |



## Part A: Executive summary

This document presents the near-final policy framework that establishes minimum standards for margin requirements for non-centrally cleared derivatives as agreed to by the Basel Committee on Banking Supervision (BCBS) and the International Organization of Securities Commissions (IOSCO).<sup>1</sup> This near-final framework was developed in consultation with, and with the active participation of, the Committee on Payment and Settlement Systems (CPSS) and the Committee on the Global Financial System (CGFS).

This is the second consultative document on the margin requirements for non-centrally cleared derivatives. This consultative document reflects the near-final policy framework after careful consideration of the responses to the first consultative document issued in July 2012<sup>2</sup> as well as the results of a quantitative impact study (summarised in Appendix C). This consultative document seeks comment on four questions on certain specific aspects of the near-final margin framework.<sup>3</sup> This consultation focuses only on the remaining open issues and not on other aspects of the margin framework which have been broadly agreed by the BCBS and IOSCO.

### Background

The economic and financial crisis that began in 2007 demonstrated significant weaknesses in the resiliency of banks and other market participants to financial and economic shocks. In the context of over-the-counter (OTC) derivatives in particular, the recent financial crisis demonstrated that further transparency and regulation of OTC derivatives and participants in the OTC derivatives markets was necessary to limit excessive and opaque risk-taking through OTC derivatives and to reduce the systemic risk posed by OTC derivatives transactions, markets, and practices.

In response, the Group of Twenty (G20) initiated a reform programme in 2009 to reduce the systemic risk from OTC derivatives. As initially agreed-upon in 2009, the G20's reform programme included four elements:

- All standardised OTC derivatives should be traded on exchanges or electronic platforms, where appropriate.
- All standardised OTC derivatives should be cleared through central counterparties (CCPs).
- OTC derivative contracts should be reported to trade repositories.
- Non-centrally cleared derivative contracts should be subject to higher capital requirements.<sup>4</sup>

In 2011, the G20 agreed to add margin requirements on non-centrally cleared derivatives to the reform programme and called upon the BCBS and IOSCO to develop, for consultation,

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<sup>1</sup> Throughout this paper, the term “non-centrally cleared derivatives” is used as shorthand to refer to derivatives that are not cleared through a central counterparty.

<sup>2</sup> Available at: [www.bis.org/publ/bcbs226.pdf](http://www.bis.org/publ/bcbs226.pdf); and [www.iosco.org/library/pubdocs/pdf/IOSCOPD387.pdf](http://www.iosco.org/library/pubdocs/pdf/IOSCOPD387.pdf).

<sup>3</sup> See also footnote 16.

<sup>4</sup> G20, *Pittsburgh summit declaration* ([www.g20.utoronto.ca/2009/2009communique0925.html](http://www.g20.utoronto.ca/2009/2009communique0925.html)).

consistent global standards for these margin requirements.<sup>5</sup> Towards this end, the BCBS and IOSCO, in consultation with the CPSS and CGFS, formed the Working Group on Margining Requirements (WGMR) in October 2011 to develop a proposal on margin requirements for non-centrally cleared derivatives for consultation by mid-2012.

In July 2012, an initial proposal was released for consultation. The initial proposal was followed by an invitation to comment on the proposal by 28 September 2012. Additionally, the July proposal indicated that a quantitative impact study (QIS) would be conducted to assess the potential liquidity and other quantitative impacts associated with mandatory margining requirements.

A large number of comments were received on the proposal during the comment period and a QIS was conducted. Both sources of information have been considered in updating the initial proposal and specifying a final global framework for margining requirements on non-centrally cleared derivatives.

The following document lays out the key objectives, elements and principles of a near-final margining framework for non-centrally cleared derivatives.

## Objectives of margin requirements for non-centrally cleared derivatives

Margin requirements for non-centrally cleared derivatives have two main benefits:

**Reduction of systemic risk.** Only standardised derivatives are suitable for central clearing. A substantial fraction of derivatives are not standardised and will not be able to be cleared.<sup>6</sup> These non-centrally cleared derivatives, which total hundreds of trillions of dollars of notional amounts,<sup>7</sup> will pose the same type of systemic contagion and spillover risks that materialised in the recent financial crisis. Margin requirements for non-centrally cleared derivatives would be expected to reduce contagion and spillover effects by ensuring that collateral are available to offset losses caused by the default of derivatives counterparty. Margin requirements can also have broader macroprudential benefits, by reducing the financial system's vulnerability to potentially de-stabilising procyclicality and limiting the build-up of uncollateralised exposures within the financial system.

**Promotion of central clearing.** In many jurisdictions central clearing will be mandatory for most standardised derivatives. But clearing imposes costs, in part because CCPs require margin to be posted. Margin requirements on non-centrally cleared derivatives, by reflecting the generally higher risk associated with these derivatives, will promote central clearing, making the G20's original 2009 reform programme more effective. This could, in turn, contribute to the reduction of systemic risk.

The effectiveness of margin requirements could be undermined if the requirements were not consistent internationally. Activity could move to locations with lower margin requirements, raising two concerns:

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<sup>5</sup> G20, *Cannes summit final declaration* ([www.g20civil.com/documents/Cannes\\_Declaration\\_4\\_November\\_2011.pdf](http://www.g20civil.com/documents/Cannes_Declaration_4_November_2011.pdf)).

<sup>6</sup> IMF (Chapter 3, April 2010 Global Financial Stability Report) assumes that one-quarter of interest rate swaps, one-third of credit default swaps, and two-thirds of other OTC derivatives will not be standardised and liquid enough to be cleared.

<sup>7</sup> A recent BIS survey (Semiannual OTC derivatives statistics at end-June 2012) shows that notional amount outstanding for OTC derivatives totalled USD 639 trillion in June 2012.

- The effectiveness of the margin requirements could be undermined (ie regulatory arbitrage).
- Financial institutions that operate in the low-margin locations could gain a competitive advantage (ie unlevel playing field).

## Margin and capital

Both capital and margin perform important risk mitigation functions but are distinct in a number of ways. First, margin is “defaulter-pay”. In the event of a counterparty default, margin protects the surviving party by absorbing losses using the collateral provided by the defaulting entity. In contrast, capital adds loss absorbency to the system, because it is “survivor-pay”, using capital to meet such losses consumes the surviving entity’s own financial resources. Second, margin is more “targeted” and dynamic, with each portfolio having its own designated margin for absorbing the potential losses in relation to that particular portfolio, and with such margin being adjusted over time to reflect changes in the risk of that portfolio. In contrast, capital is shared collectively by all the entity’s activities and may thus be more easily depleted at a time of stress, and is difficult to rapidly adjust to reflect changing risk exposures. Capital requirements against each exposure are not designed to be sufficient to cover the loss on the default of the counterparty but rather the probability weighted loss given such default. For these reasons, margin can be seen as offering enhanced protection against counterparty credit risk where it is effectively implemented. In order for margin to act as an effective risk mitigant, that margin must be (i) accessible at the time of need and (ii) in a form that can be liquidated rapidly in a period of financial stress at a predictable price.

## Impact of margin requirements on liquidity

The potential benefits of margin requirements must be weighed against the liquidity impact that would result from derivative counterparties’ need to provide liquid, high-quality collateral to meet those requirements, including potential changes to market functioning as a result of an increasing demand for such collateral in the aggregate. Financial institutions may need to obtain and deploy additional liquidity resources to meet margin requirements that exceed current practices. Moreover, the liquidity impact of margin requirements cannot be considered in isolation. Rather, it is important to recognise ongoing and parallel regulatory initiatives that will also have significant liquidity impacts; examples of such initiatives include the BCBS’s Liquidity Coverage Ratio (LCR), Net Stable Funding Ratio (NSFR) and global mandates for central clearing of standardised derivatives.

As discussed in the initial proposal released in July, the BCBS and IOSCO conducted a QIS in order to gauge the impact of the margin proposals. In particular, the QIS assessed the amount of margin required on non-centrally cleared derivatives as well as the amount of available collateral that could be used to satisfy these requirements.

The results of the QIS as well as comments that were received on the initial proposal were carefully considered in arriving at the margin framework that is described in this document. The overall liquidity burden resulting from initial margin requirements, as well as the availability of eligible collateral to satisfy such requirements, in particular, have been carefully assessed in designing the margin framework. The use of permitted initial margin thresholds, which are discussed in detail in Element 2, the eligibility of a broad range of eligible collateral, which is discussed in detail in Element 4, as well as the triggers that provide for a gradual phase-in of the requirements, which are discussed in detail in Element 8, have been

included as key elements of the margin framework to directly address the liquidity demands associated with the requirements. A summary of the QIS results is presented in Appendix C.

## Key principles and requirements

As described in more detail in Part B, this paper presents the BCBS's and IOSCO's near-final policy for margin requirements for non-centrally cleared derivatives, as articulated through key principles addressing eight (8) main elements:

1. Appropriate margining practices should be in place with respect to all derivative transactions that are not cleared by CCPs.
2. All financial firms and systemically-important non-financial entities ("covered entities") that engage in non-centrally cleared derivatives must exchange initial and variation margin as appropriate to the counterparty risks posed by such transactions.
3. The methodologies for calculating initial and variation margin that must serve as the baseline for margin that is collected from a counterparty should (i) be consistent across entities covered by the requirements and reflect the potential future exposure (initial margin) and current exposure (variation margin) associated with the portfolio of non-centrally cleared derivatives at issue and (ii) ensure that all counterparty risk exposures are covered fully with a high degree of confidence.
4. To ensure that assets collected as collateral for initial and variation margin purposes can be liquidated in a reasonable amount of time to generate proceeds that could sufficiently protect collecting entities covered by the requirements from losses on non-centrally cleared derivatives in the event of a counterparty default, these assets should be highly liquid and should, after accounting for an appropriate haircut, be able to hold their value in a time of financial stress.
5. Initial margin should be exchanged by both parties, without netting of amounts collected by each party (ie on a gross basis), and held in such a way as to ensure that (i) the margin collected is immediately available to the collecting party in the event of the counterparty's default; and (ii) the collected margin must be subject to arrangements that fully protect the posting party in the event that the collecting party enters bankruptcy to the extent possible under applicable law.
6. Transactions between a firm and its affiliates should be subject to appropriate regulation in a manner consistent with each jurisdiction's legal and regulatory framework.
7. Regulatory regimes should interact so as to result in sufficiently consistent and non-duplicative regulatory margin requirements for non-centrally cleared derivatives across jurisdictions.
8. Margin requirements should be phased-in over an appropriate period of time to ensure that the transition costs associated with the new framework can be appropriately managed. Regulators should undertake a coordinated review of the margin standards once the requirements are in place and functioning to assess the overall efficacy of the standards and to ensure harmonisation across national jurisdictions as well as across related regulatory initiatives.

## Monitoring and evaluation

The BCBS and IOSCO will jointly evaluate the appropriateness of these margin standards in 2014. The evaluation will focus on the relation of the margin standards with related regulatory initiatives such as changes to standardised approaches for trading book and counterparty credit risk capital, potential minimum haircuts on repurchase and reverse repurchase transactions, and implementation of the LCR, that may develop alongside these requirements between now and 2014.

## Next steps

The BCBS and IOSCO welcome comments from the public on the questions set out in this second consultative document by 15 March 2013. Comments may be provided as follows:

### To the BCBS:

- By e-mail to [baselcommittee@bis.org](mailto:baselcommittee@bis.org); or
- By post to:  
*Basel Committee on Banking Supervision  
Bank for International Settlements  
Centralbahnplatz 2  
CH-4002 Basel  
Switzerland.*

### To IOSCO:

- By e-mail to [wgmr@iosco.org](mailto:wgmr@iosco.org); or
- By post to:  
*International Organization of Securities Commissions  
C/ Oquendo 12  
28006 Madrid  
Spain*

All comments will be published on the Bank for International Settlements' and International Organization of Securities Commissions' websites unless a commenter specifically requests confidential treatment.

## Part B: Key principles and requirements

### Element 1: Scope of coverage – instruments subject to the requirements

#### Background discussion

1(a) A primary threshold question that must be addressed in the design of margin requirements for non-centrally cleared derivatives is the scope of derivative instruments to which the requirements will apply. Consistent with the G20 mandate, the BCBS and IOSCO have focused their attention on all derivatives that are not cleared by a CCP, regardless of type. At the same time, some consideration has been given to whether certain types of transactions (eg foreign exchange (FX) forwards and swaps) may merit exclusion from the scope of the margin requirements because of their unique characteristics or particular market practices.

#### Key principle 1

Appropriate margining practices should be in place with respect to all derivative transactions that are not cleared by CCPs.<sup>8</sup>

#### Requirement 1

1.1 Except physically-settled FX forwards and swaps, the margin requirements apply to all non-centrally cleared derivatives. In relation to physically-settled FX forwards and swaps, the BCBS and IOSCO seek comment on the margin requirements for these instruments. The BCBS and IOSCO note that the BCBS is updating the supervisory guidance for managing settlement risk in FX transactions.<sup>9</sup> The update to the supervisory guidance covers margin requirements for physically-settled FX forwards and swaps. The BCBS and IOSCO are considering how the WGMR's work and the FX settlement risk supervisory guidance should be coordinated.

Q1. Given the particular characteristics of physically-settled FX forwards and swaps, should they be exempted from initial margin requirements with variation margin required as a result of either supervisory guidance or national regulation? Should physically-settled FX forwards and swaps with different maturities be subject to different treatments?

<sup>8</sup> These margining practices only apply to derivative transactions that are not cleared by CCP's and do not apply to other transactions, such as repurchase agreements and security lending transactions, which are not themselves derivatives but share some attributes with derivatives. In addition, indirectly cleared derivative transactions that are intermediated through a clearing member on behalf of a non-member customer are not subject to these requirements as long as the non-member customer is subject to the margin requirements of the clearing house.

<sup>9</sup> The BCBS has issued supervisory guidance for managing risks associated with the settlement of FX transactions: [www.bis.org/publ/bcbs241.htm](http://www.bis.org/publ/bcbs241.htm).

## Element 2: Scope of coverage – scope of applicability

### Background discussion

2(a) Another important element of the margin requirements is their general scope of applicability – that is, to which firms do the requirements apply, and what the requirements compel those firms to do. In particular, the scope of the margin requirements' applicability has an important effect on each of the following:

- The extent to which the requirements reduce systemic risk – here the BCBS and IOSCO have considered the extent to which potential approaches would capture all or substantially all systemic risk arising out of the non-centrally cleared derivatives, the risk of which is generally concentrated among the activities of the largest key market participants transacting in a significant amount of non-centrally cleared derivatives (eg through dealing or other activities), subject to certain exceptions in specific asset classes, such as commodities;
- The extent to which the requirements promote central clearing – here the BCBS and IOSCO have considered the extent to which potential approaches would parallel the central clearing mandate, which generally applies to all financial institutions and those non-financial institutions that pose significant systemic risk; and
- The liquidity impact of the requirements – here the BCBS and IOSCO have considered the fact that increased scope of applicability would entail a correspondingly greater liquidity impact.

2(b) In evaluating this fundamental element of the margin requirements and its implications with respect to systemic risk reduction, incentives relative to central clearing, and impact on liquidity, the BCBS and IOSCO have focused on two principal questions:

- Whether the margin requirements should apply to all parties to non-centrally cleared derivatives, only to financial firms, or only to key market participants; and
- Whether the margin requirements should require a bilateral exchange of margin between all entities covered by the requirements, or only the unilateral collection of margin by certain types of firms (eg key market participants).

2(c) The BCBS and IOSCO believe that the margin requirements need not apply to non-centrally cleared derivatives to which non-financial entities that are not systemically-important are a party, given that (i) such transactions are viewed as posing little or no systemic risk and (ii) such transactions are exempt from central clearing mandates under most national regimes. Similarly, the BCBS and IOSCO support not applying the margin requirements in a way that would require sovereigns, central banks, multilateral development banks, or the Bank for International Settlements, to either collect or post margin. Both of these views are reflected by the exclusion of such transactions from the scope of margin requirements. As a result, a transaction between a covered entity and one of the aforementioned entities is not covered by the requirements set out in this document.

2(d) With respect to other non-centrally cleared derivatives, the BCBS and IOSCO support margin requirements that, in principle, would involve the mandatory exchange of both initial and variation margins among parties to non-centrally cleared derivatives ("universal two-way margin").

2(e) In the case of variation margin, the BCBS and IOSCO recognise that regular and timely exchange of variation margin represents the settlement of the running profit/loss of a derivative and has no net liquidity costs as variation margin represents a transfer of resources from one party to another. The BCBS and IOSCO also recognise that the regular

and timely exchange of variation margin is a widely adopted best practice that promotes effective and sound risk management.

2(f) In the case of initial margin, the BCBS and IOSCO recognise that initial margin requirements will have a measurable impact on market liquidity, as assets that are provided for collateral purposes cannot be readily deployed for other uses over the life of the non-centrally cleared derivative contract. It is also recognised that such requirements will represent a significant change in market practice and will present certain operational and logistical challenges that will need to be managed as the new requirements come into effect.

2(g) These operational and logistical challenges will be dealt with as the requirements are implemented in a manner consistent with the phase-in timeline described earlier and discussed in detail under Element 8. Following the end of the phase-in period, there will be a minimum level of non-centrally cleared OTC derivative activity (€8 billion of gross notional outstanding amount) necessary for covered entities to be subject to initial margin requirements described in this paper.

2(h) One tool that has received broad support that can be used to manage the liquidity impact associated with initial margin requirements is to provide for an initial margin threshold (threshold) that would specify an amount under which a firm would have the **option** of not collecting initial margin. In cases where the initial margin requirement for the portfolio exceeded the threshold, the firm would be obligated to collect initial margin from its counterparty in an amount that is **at least** as large as the difference between the initial margin requirement and the threshold. For example, if the threshold amount were 10 and the initial margin requirement for a particular non-centrally cleared derivative portfolio was 15, then a firm would be obligated to collect at least 5 from its counterparty in initial margin (15-10=5), or more if it so chose pursuant to its risk management guidelines and principles. Such an approach, if applied in a manner consistent with sound risk management practices, can help ameliorate the costs associated with the universal two-way margin regime.

## Key principle 2

All covered entities (ie financial firms and systemically-important non-financial entities) that engage in non-centrally cleared derivatives must exchange initial and variation margin as appropriate to the counterparty risks posed by such transactions.<sup>10</sup>

## Requirement 2

2.1 All covered entities that engage in non-centrally cleared derivatives must exchange, on a bilateral basis, the full amount of variation margin (ie a zero threshold) on a regular basis (eg daily).

2.2 All covered entities must exchange, on a bilateral basis, initial margin with a threshold not to exceed €50 million. The threshold is applied at the level of the consolidated group to which the threshold is being extended and is based on all non-centrally cleared derivatives between the two consolidated groups.

2.3 All margin transfers between parties may be subject to a *de-minimis* minimum transfer amount not to exceed €100,000.

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<sup>10</sup> The BCBS and IOSCO note that different treatment is applied with respect to transactions between affiliated entities, as described under *Element 6* below.

2.4 Covered entities include all financial firms and systemically important non-financial firms. Central banks, sovereigns, multilateral development banks, the Bank for International Settlements, and non-systemic, non-financial firms are not covered entities.<sup>11</sup>

2.5 Initial margin requirements will be phased-in, but at the end of the phase-in period there will be a minimum level of non-centrally cleared derivatives activity (€8 billion of gross notional outstanding amount) necessary for covered entities to be subject to initial margin requirements described in this paper.

2.6 The precise definition of financial firms, non-financial firms and systemically important non-financial firms will be determined by appropriate national regulation. Only non-centrally cleared derivative transactions between two covered entities are governed by the requirements in this paper.

## Commentary

2(i) All covered entities engaging in non-centrally cleared derivatives must exchange initial and variation margin as appropriate to the counterparty risk posed by such transactions.

2(ii) The requirement that the threshold be applied on a consolidated group basis is intended to prevent the proliferation of affiliates and other legal entities within larger entities for the sole purpose of circumventing the margin requirements. The following example describes how the threshold would be applied by an entity that is facing three distinct legal entities with a larger consolidated group.

2(iii) Suppose that a firm engages in separate derivative transactions, executed under separate, legally enforceable netting agreements, with three counterparties, A1, A2, A3. A1, A2 and A3 all belong to the same larger consolidated group such as a bank holding company. Suppose further that the initial margin requirement (as described in Element 3) is €100 million for each of the firm's netting sets with A1, A2 and A3. Then the counterparty dealing with these three affiliates must collect at least €250 million ( $250=100+100+100-50$ ) from the consolidated group. Exactly how the firm allocates the €50 million threshold among the three netting sets is subject to agreement between the firm and its counterparties. The firm may not extend a €50 million threshold to each netting set with affiliate, A1, A2, A3, so that the total amount of initial margin collected is only €150 million ( $150=100-50+100-50+100-50$ ).

2(iv) Furthermore, the requirement to apply the threshold on a fully consolidated basis applies to both the counterparty to which the threshold is being extended and the counterparty that is extending the threshold. As a specific example, suppose that in the example above the firm (as referenced above) is itself organised into, say, three subsidiaries F1, F2 and F3 and each of these subsidiaries engages in non-centrally cleared derivative transactions with A1, A2 and A3. In this case, the extension of the €50 million threshold by the firm to A1, A2 and A3 is considered across the entirety of the firm, ie F1, F2, and F3, so that all subsidiaries of the firm extend in the aggregate no more than €50 million in an initial margin threshold to all of A1, A2 and A3.

2(v) The implementation of this approach requires appropriate cooperation between home and host supervisors. As the threshold is applied on a consolidated basis, only the home supervisor of the consolidated group will necessarily be able to verify that the group

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<sup>11</sup> Multilateral development banks (MDB) exempted from this requirement are those MDBs that are eligible for a zero risk-weight under the Basel capital framework (at the time this margin framework is published, see footnote 24 of paragraph 54, part 2, Basel II: International Convergence of Capital Measurement and Capital Standards: A Revised Framework, <http://www.bis.org/publ/bcbs128b.pdf>).

does not exceed this threshold with all of its counterparties. The host supervisors of subsidiaries of a group would not be able to assess whether the local subsidiaries under their responsibility comply with the threshold allocated by the group to each of its subsidiaries. Communication between the home consolidated supervisors and host supervisors is therefore necessary to ensure that the latter have access to information on the threshold allocated to the local subsidiary under their responsibility.

### **Element 3: Baseline minimum amounts and methodologies for initial and variation margin**

#### **Background discussion**

3(a) A third key element of the margin requirements is the minimum, baseline amount of initial and variation margin that would be required to be collected for a non-centrally cleared derivative and the methodologies by which that baseline amount would be calculated. The BCBS and IOSCO have evaluated the calculation of these baseline margin amounts by reference to the two underlying benefits of the margin requirements described in Part A – systemic risk reduction and promotion of central clearing. From the perspective of systemic risk reduction, the BCBS and IOSCO have considered the extent to which baseline margin amounts would be sufficient to offset any loss caused by the default of a counterparty with a high degree of confidence; this line of analysis involves calibrating baseline margin amounts relative to the current and potential exposure posed by particular derivative transactions. From the perspective of promoting central clearing, the BCBS and IOSCO have considered the costs associated with complying with the baseline margin requirements; this line of analysis involves calibrating baseline margin amounts relative to the costs of executing the same or similar transactions on a centrally-cleared basis. This paper establishes a general framework for calculating baseline variation and initial margin that is intended to realise both benefits of margin requirements.

3(b) In terms of distinguishing baseline requirements for initial margin and variation margin, the BCBS and IOSCO have taken into account the differing form and purpose of each type of margin and their typical use in market practice.

3(c) Variation margin protects the transacting parties from the current exposure that has already arisen to one of the parties from changes in the mark-to-market value of the contract after the transaction has been executed. The amount of variation margin reflects the size of this current exposure. It depends on the mark-to-market value of the derivative at any point in time, and therefore can change over time.

3(d) Initial margin protects the transacting parties from the potential future exposure that could arise from future changes in the mark-to-market value of the contract during the time it takes to close out the position in the event that one or more counterparties default. The amount of initial margin reflects the size of the potential future exposure. It depends on a variety of factors, including how often the contract is re-valued, the volatility of the underlying instrument, and the expected duration of the contract closeout period, and can change over time, particularly where it is calculated on a portfolio basis and transactions are added to or removed from the portfolio on a continuous basis.

#### **Key principle 3**

The methodologies for calculating initial and variation margin that must serve as the baseline for margin that is collected from a counterparty should (i) be consistent across entities covered by the requirements and reflect the potential future exposure (initial margin) and current exposure (variation margin) associated with the particular portfolio of non-centrally

cleared derivatives at issue and (ii) ensure that all counterparty risk exposures are covered fully with a high degree of confidence.

### **Requirement 3 – Initial margin**

3.1 For purposes of informing the initial margin baseline, the potential future exposure of a non-centrally cleared derivative should reflect an extreme but plausible estimate of an increase in the value of the instrument that is consistent with a one-tailed 99 percent confidence interval over a 10-day horizon,<sup>12</sup> based on historical data that incorporates a period of significant financial stress.<sup>13</sup> The initial margin amount must be calibrated to a period of financial stress to ensure that sufficient margin will be available when it is most needed and to limit the extent to which margin can be procyclical. The required amount of initial margin may be calculated by reference to either (i) a quantitative portfolio margin model or (ii) a standardised margin schedule.

3.2 Non-centrally cleared derivatives will often be exposed to a number of complex and interrelated risks. Internal or third-party quantitative models that assess these risks in a granular form can be useful for ensuring that the relevant initial margin amounts are calculated in an appropriately risk-sensitive manner. Moreover, current practice among a number of large and active CCPs is to use internal quantitative models when determining initial margin amounts.

3.3 Notwithstanding the utility of quantitative models, the use of such models is predicated on a satisfaction of several prerequisite conditions. First, any quantitative model that is used for initial margin purposes must be approved by the relevant supervisory authority. Models that have not been granted explicit approval must not be used for initial margin purposes. Models may either be internally developed or may be provided by the counterparties or third party vendors but in all such cases these models must be approved by the appropriate supervisory authority. Moreover, in the event that a third party-provided model is used for initial margin purposes, the model must be approved for use within each jurisdiction and by each institution seeking to use the model. Similarly, an unregulated counterparty that wishes to use a quantitative model for initial margin purposes may use an approved initial margin model. There will be no presumption that approval by one supervisor in the case of one or more institutions will imply approval for a wider set of jurisdictions and/or institutions. Second, quantitative initial margin models must be subject to an internal governance process that continuously assesses the value of the model's risk assessments, tests the model's assessments against realised data and experience, and validates the applicability of the model to the derivatives for which it is being used. The process must take into account the complexity of the products covered (eg barrier options and other more complex structures). These additional requirements are intended to ensure that the use of models does not lead to a lowering of margin standards. The use of models is also not intended to lower margin standards that may already exist in the context of some non-centrally cleared derivatives. Rather, the use of models is intended to produce appropriately risk-sensitive assessments of potential future exposure so as to promote robust margin requirements.

3.4 Quantitative initial margin models may account for risk on a portfolio basis. More specifically, the initial margin model may consider all of the derivatives that are approved for

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<sup>12</sup> The 10-day requirement should apply in the case that variation margin is exchanged daily. If variation margin is exchanged at less than a daily frequency then the minimum horizon should be set equal to 10 days plus the number of days in between variation margin exchanges.

<sup>13</sup> Because of the discrete subset of transactions covered by the margin requirements, these assumptions differ somewhat from the assumptions used to calculate potential future exposure under the Basel regulatory capital framework for OTC derivatives.

model use that are subject to a single, legally enforceable netting agreement. Derivatives between counterparties that are not subject to the same, legally enforceable netting agreement must not be considered in the same initial margin model calculation. Derivative portfolios often are exposed to a number of offsetting risks that can and should be reliably quantified for the purposes of calculating initial margin requirements. At the same time, a distinction must be made between offsetting risks that can be reliably quantified and those that are more difficult to quantify. In particular, inter-relationships between derivatives in distinct asset classes, such as equities and commodities, are difficult to model and validate. Moreover, these sorts of relationships are prone to instability and may be more likely to break down in a period of financial stress. Accordingly, initial margin models may account for diversification, hedging and risk offsets **within** well-defined asset classes such as currency/rates, equity, credit, or commodities, but not **across** such asset classes and provided these instruments are covered by the same legally enforceable netting agreement. However, any such incorporation of diversification, hedging and risk offsets by an initial margin model will require approval by the relevant supervisory authority. Initial margin calculations for derivatives in distinct asset classes must be performed without regard to derivatives in other asset classes. As a specific example, for a derivative portfolio consisting of a single credit derivative and a single commodity derivative, an initial margin calculation that uses an internal model would proceed by first calculating the initial margin requirement on the credit derivative and then calculating the initial margin requirement on the commodity derivative. The total initial margin requirement for the portfolio would be the sum of the two individual initial margin amounts because they are in two different asset classes (commodities and credit). Finally, derivatives for which a firm faces no (ie zero) counterparty risk, require no initial margin to be collected and may be excluded from the initial margin calculation.

3.5 While quantitative, portfolio-based initial margin models can be a good risk-management tool if monitored and governed appropriately, there are some instances in which a simpler and less risk-sensitive approach to initial margin calculations may be warranted. In particular, smaller market participants may not wish or may be unable to develop and maintain a quantitative model and may be unwilling to rely on a counterparty's model. In addition, some market participants may value simplicity and transparency in initial margin calculations, without resorting to a complex quantitative model. Further, an appropriately conservative alternative for calculating initial margin is needed in the event that no approved initial margin model exists to cover a specific transaction. Accordingly, the BCBS and IOSCO have provided an initial margin schedule, included as Appendix A, which may be used to compute the amount of initial margin required on a set of derivative transactions.

3.6 The required initial margin will be computed by referencing the standardised margin rates in Appendix A and by adjusting the gross initial margin amount by an amount that relates to the net-to-gross ratio (NGR) pertaining to all derivatives in the legally enforceable netting set. The use of the net-to-gross ratio is a well-accepted practice in the context of bank capital regulation and recognises important offsets that would not be recognised by strict application of a standardised margin schedule.<sup>14</sup> The required initial margin amount would be calculated in two steps. First, the margin rate in the provided schedule would be multiplied by the gross notional size of the derivative contract, and then this calculation would be repeated for each derivative contract.<sup>15</sup> This amount may be referred to as the gross standardised

<sup>14</sup> The use of the net-to-gross ratio (NGR) in bank capital requirements can be found in Annex IV of the Basel capital framework, paragraph 969(iv), Part 5, Basel II: International Convergence of Capital Measurement and Capital Standards: A Revised Framework (available at: [www.bis.org/publ/bcbs128d.pdf](http://www.bis.org/publ/bcbs128d.pdf)).

<sup>15</sup> Subject to approval by the relevant supervisory authority, a limited degree of netting may be performed at the level of a specific derivative contract to compute the notional amount that is applied to the margin rate. As an example, one pay fixed interest rate swap with a maturity of 3 years and a notional of 100 could be netted

initial margin. Second, the gross initial margin amount is adjusted by the ratio of the net current replacement cost to gross current replacement cost (NGR). This is expressed through the following formula:

$$\text{Net standardised initial margin} = 0.4 * \text{Gross initial margin} + 0.6 * \text{NGR} * \text{Gross initial margin}$$

where NGR is defined as the level of net replacement cost over the level of gross replacement cost for transactions subject to legally enforceable netting agreements.

The total amount of initial margin required on a portfolio according to the standardised margin schedule would be the net standardised initial margin amount. However, if a regulated entity is already using a schedule-based margin to satisfy requirements under its required capital regime, the appropriate supervisory authority may permit the use of the same schedule for initial margin purposes, so long as they are at least as conservative.

3.7 As in the case where firms use quantitative models to calculate initial margin, derivatives for which a firm faces no (ie zero) counterparty risk require no initial margin to be collected and may be excluded from the standardised initial margin calculation.

3.8 Derivative market participants should not be allowed to switch between model- and schedule- based margin calculations in an effort to “cherry pick” the most favourable initial margin terms. Accordingly, the choice between model- and schedule- based initial margin calculations should be made on a consistent basis over time, for all transactions within the same well-defined asset class, and if applicable, should comply with any other requirements imposed by the entity’s supervisory authority.

3.9 At the same time, it is quite possible that a market participant may use a model-based initial margin calculation for one class of derivatives in which it commonly deals and a schedule-based initial margin in the case of some derivatives that are less routinely employed in its trading activities. A firm need not use only a model-based approach or only a schedule-based approach for the entirety of its derivative activities. Rather, this requirement is meant to ensure that market participants do not use model-based margin calculations in those instances in which such calculations are more favourable than schedule-based requirements and schedule-based margin calculations when those requirements are more favourable than model-based margin requirements.

3.10 Initial margin should be collected at the outset of a transaction, and collected thereafter on a routine and consistent basis upon changes in measured potential future exposure, such as when trades are added to or subtracted from the portfolio. To mitigate procyclicality impacts, large, discrete calls for (additional) initial margin due to “cliff-edge” triggers should be largely discouraged.

3.11 The build-up of additional initial margin should be gradual so that it can be managed over time. Moreover, margin levels should be sufficiently conservative to avoid procyclicality, even during periods of low market volatility. The specific requirement that initial margin be set consistent with a period of stress is meant to limit procyclical changes in the amount of initial margin required.

3.12 Parties to derivative contracts should have rigorous and robust dispute resolution procedures in place with their counterparty before the onset of a transaction. In particular, the amount of initial margin to be collected from one party by another will either be the result of

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against another pay floating interest rate swap with a maturity of three years and a notional of 50 to arrive at a single notional of 50 to which the appropriate margin rate would be applied. Derivatives with different fundamental characteristics such as underlying, maturity and so forth may not be netted against each other for the purpose of computing the notional amount against which the standardised margin rate is applied.

an approved model calculation or the standardised schedule. The specific method and parameters that will be used by each party to calculate initial margin should be agreed upon and recorded at the onset of the transaction to reduce potential disputes. Moreover, parties may agree to use a single model for the purposes of such margin model calculations subject to bilateral agreement and appropriate regulatory approval. In the event that a margin dispute arises, the collecting party should make all necessary and appropriate efforts, including timely initiation of dispute resolution protocols, to resolve the dispute and collect the required amount of initial margin in a timely fashion.

### **Requirement 3 – Variation margin**

3.13 For variation margin, the full amount necessary to fully collateralise the mark-to-market exposure of the non-centrally cleared derivative must be exchanged.

3.14 To reduce adverse liquidity shocks and in order to effectively mitigate counterparty credit risk, variation margin should be calculated and collected for non-centrally cleared derivatives subject to a single, legally enforceable netting agreement with sufficient frequency (eg daily).

3.15 The valuation of a derivative's current exposure can be complex and, at times, become subject to question or dispute by one or both parties. In the case of non-centrally cleared derivatives, these instruments are likely to be relatively illiquid, often with little or no price transparency making the process of agreeing on current exposure amounts for variation margin purposes even more challenging. Accordingly parties to derivative contracts should have rigorous and robust dispute resolution procedures in place with their counterparty before the onset of a transaction. In the event that a margin dispute arises, the collecting party should make all necessary and appropriate efforts, including timely initiation of dispute resolution protocols, to resolve the dispute and collect the required amount of variation margin in a timely fashion.

### **Commentary**

3(i) The existence of both a model-based and schedule-based initial margin standard provides derivative users with the possibility to choose between either approaches. Derivative market participants should be able to choose between a more risk-sensitive but potentially less transparent quantitative model; and a less risk-sensitive but more transparent initial margin schedule for calculating initial margin amounts. At the same time, derivative market participants should not be allowed to switch between model- and schedule- based margin calculations in an effort to cherry pick the most favourable initial margin terms. Accordingly, the choice between a model and schedule-based initial margin calculations should be made on a consistent basis over time.

3(ii) The applicable netting agreements used by market participants will need to be effective under the laws of the relevant jurisdictions and supported by periodically-updated legal opinions. Supervisory authorities and relevant market participants should consider how those requirements could best be complied with in practice.

3(iii) The BCBS and IOSCO also recognise that national supervisors may wish to alter margin requirements to achieve macroprudential outcomes, such as limiting the build-up of leverage and the expansion of balance sheets. One method for achieving this may be for the relevant authority to impose a macroprudential 'add-on' or buffer on top of baseline (or minimum) margin levels. Although no conclusions have been reached on this issue, the BCBS and IOSCO continue to give further consideration to the coordination issues that may arise in this respect.

3(iv) As discussed above, derivative transactions between covered entities with zero counterparty risk require zero initial margin and may be excluded from the initial margin calculation. As an example, consider a European call option on a single stock. Suppose that one party, the option writer, agrees to sell a fixed number of shares to another party, the option purchaser, at a predetermined price at some specific future date, the contract's expiry, if the option purchaser wishes to do so. Suppose further that the option purchaser makes a payment to the option writer at the outset of the transaction that fully compensates the option writer for the possibility that it will have to sell shares at contract expiry at the predetermined price. In this case the option writer faces zero counterparty risk while the option purchaser faces counterparty risk. The option writer has received the full value of the option at the outset of the transaction. The option purchaser, on the other hand, faces counterparty risk since the option writer may not be willing or able to sell shares to the option purchaser at the predetermined price at the expiry of the contract. In this case, the option writer would not be obligated to collect any initial margin from the option purchaser and the call option could be excluded from the initial margin calculation. Since the option purchaser faces counterparty risk, the option purchaser must collect initial margin from the option writer in a manner consistent with the requirements of this paper.

## **Element 4: Eligible collateral for margin**

### **Background discussion**

4(a) Even in cases where margin is collected in an amount sufficient to fully protect a firm from the default of a derivative counterparty, the firm may nonetheless be exposed to loss if that margin is not in a form that can be readily liquidated at full value at the time of default, particularly during a period of financial stress.

4(b) Accordingly, the BCBS and IOSCO have considered the types of collateral that should be deemed eligible for use in meeting the margin requirements, evaluating several different approaches. One approach would be to limit eligible collateral to only the most liquid, highest-quality assets, such as cash and high-quality sovereign debt, on the grounds that doing so would best ensure the value of collateral held as margin could be fully realised in a period of financial stress. Another approach would be to permit a broader set of eligible collateral, including assets like liquid equity securities and corporate bonds, and address the potential volatility of such assets through application of appropriate haircuts to their valuation for margin purposes. Potential advantages of the latter approach would include (i) a reduction of the potential liquidity impact of the margin requirements by permitting firms to use a broader array of assets to meet margin requirements and (ii) better alignment with central clearing practices, in which CCPs frequently accept a broader array of collateral, subject to collateral haircuts. After evaluating each of these alternatives, the BCBS and IOSCO have opted for the second approach (broader eligible collateral).

### **Key principle 4**

To ensure that assets collected as collateral for initial and variation margin purposes can be liquidated in a reasonable amount of time to generate proceeds that could sufficiently protect collecting entities covered by the requirements from losses on non-centrally cleared derivatives in the event of a counterparty default, these assets should be highly liquid and should, after accounting for an appropriate haircut, be able to hold their value in a time of financial stress. The set of eligible collateral should recognise that assets that are liquid in normal market conditions may rapidly become illiquid in times of financial stress. In addition to having good liquidity, eligible collateral should not be exposed to excessive credit, market and FX risk (including through differences between the currency of the collateral asset and the currency of settlement). To the extent that the value of the collateral is exposed to these

risks, appropriately risk-sensitive haircuts should be applied. More importantly, the value of the collateral should not exhibit a significant correlation with the creditworthiness of the counterparty or the value of the underlying non-centrally cleared derivatives portfolio in such a way that would undermine the effectiveness of the protection offered by the margin collected (ie the so-called “wrong way risk”). Accordingly, securities issued by the counterparty or its related entities should not be accepted as collateral. Accepted collateral should also be reasonably diversified.

#### Requirement 4

4.1 National supervisors should develop their own list of eligible collateral assets based on the key principle, taking into account the conditions of their own markets. As a guide, examples of the types of eligible collateral that satisfy the key principle would generally include:

- Cash;
- High-quality government and central bank securities;
- High-quality corporate bonds;
- High-quality covered bonds;
- Equities included in major stock indices; and
- Gold.

**The illustrative list above should not be viewed as being exhaustive.** Additional assets and instruments that satisfy the key principle may also serve as eligible collateral. Also, in different jurisdictions, some particular forms of collateral may be more abundant or generally available due to institutional market practices or norms. Eligible collateral can be denominated in any currency in which payment obligations under the non-centrally cleared derivative may be made, or in highly-liquid foreign currencies subject to appropriate haircuts to reflect the inherent FX risk involved.

4.2 Potential methods for determining appropriate haircuts could include either internal or third-party quantitative model-based haircuts or schedule-based haircuts. Each alternative is briefly discussed below.

4.3 As in the case of initial margin models, risk-sensitive quantitative models, both internal or third party, could be used to establish haircuts so long as the model is approved by supervisors and is subject to appropriate internal governance standards. As in the case of initial margin models, an unregulated derivative counterparty may use an approved quantitative model. In addition to the points regarding the use of internal models discussed in the context of initial margin, the BCBS and IOSCO also note that eligible collateral may vary across national jurisdictions owing to differences in the availability and liquidity of certain types of collateral. As a result, it may be difficult to establish a standardised set of haircuts that would apply to all types of collateral across all jurisdictions that are consistent with the key principle.

4.4 In addition to haircuts based on quantitative models, as in the case of initial margin, derivative counterparties should also have the option of using standardised haircuts that would provide transparency and limit procyclical effects. The BCBS and IOSCO have established a standardised schedule of haircuts for the list of assets appearing above. The haircut levels are derived from the standard supervisory haircuts adopted in the Basel Accord’s comprehensive approach to collateralised transactions framework, and can be found in Appendix B. In the event that the BCBS chooses to make changes to these haircuts

for regulatory capital purposes, the BCBS and IOSCO would expect to adopt these changes in the context of the margin requirements for non-centrally cleared derivatives absent a compelling policy reason not to do so. However, if a regulated entity is subject to an existing standardised, haircut-based approach under its required capital regime, the appropriate supervisory authority may permit the use of the same haircuts for initial margin purposes, so long as they are at least as conservative. While haircuts serve a critical risk management function in ensuring that pledged collateral is sufficient to cover margin needs in a time of financial stress, other risk mitigants should also be considered when accepting non-cash collateral. In particular, entities covered by the requirements should ensure that the collateral collected is not overly concentrated in terms of an individual issuer, issuer type and asset type.

4.5 In the event that a dispute arises over the value of eligible collateral, the collecting party should make all necessary and appropriate efforts, including timely initiation of dispute resolution protocols, to resolve the dispute and collect any required margin in a timely fashion.

### **Commentary**

4(i) Market conditions and asset availability differ across jurisdictions. National supervisors should develop their own list of eligible collateral assets based on the key principle, taking into account the conditions of their own markets and making reference to the list of examples of eligible collateral under the requirement section.

4(ii) Haircut requirements should be transparent and easy to calculate, so as to facilitate payments between counterparties, avoid disputes and reduce overall operational risk. Haircut levels should be risk-based and should be calibrated appropriately to reflect the underlying risks that affect the value of eligible collateral, such as market price volatility, liquidity, credit risk and FX volatility, during both normal and stressed market conditions. Haircuts should be set conservatively to avoid procyclicality. For example, haircuts should be set at a sufficiently high level during “good times” such that the need for sharp and sudden increases in times of stress can be avoided.

4(iii) Some firms may be unable or unwilling to develop internal haircut calculation models that meet regulators’ requirements. It may also be desirable to make available a conservative and more simple and transparent approach to calculate haircut. The BCBS and IOSCO have established a set of standardised haircuts that can be used in lieu of model-based haircuts.

4(iv) Schedule-based haircuts should be sufficiently stringent so that firms have an incentive to develop internal models. To prevent firms from selectively applying the standardised tables where this would produce a lower haircut, firms would have to adopt either the standardised tables approach or internal/third party models approach consistently over time for all the collateral assets within the same well-defined asset class.

## **Element 5: Treatment of provided initial margin**

### **Background discussion**

5(a) The legal capacity in which initial margin is held or exchanged can have a significant influence on how effective that margin is in protecting a firm from loss in the event of the default of a derivative counterparty. In particular, when two parties to a derivatives transaction exchange initial margin with one another on a net or commingled basis, there can be little or no actual increase in the extent to which either firm is protected from the default of

the other. Although a firm has received initial margin as collateral, the firm also now bears the risk of additional loss on the initial margin that it has provided to the counterparty if the counterparty defaults, which may offset some or all of the benefits of initial margin received. The risk would be exacerbated if the counterparty re-hypothecates or re-uses the provided margin, which could result in third parties having legal or beneficial title over the margin, or a merging or pooling of the margin with assets belonging to the others as a result of which the firm's claim to the margin becomes entangled in legal complications, thus delaying or even denying the return of re-hypothecated / re-used assets in the event that the counterparty defaults.

5(b) Under current market practices, the exchange of two-way initial margin in bilateral trades is not universal. Accordingly, requiring the segregation or other protection of initial margin collateral may create material incremental liquidity demands and trading costs relative to current practices, as (i) firms would be required to divert significantly more liquid assets to provide initial margin to counterparties on a gross, rather than net, basis, and (ii) firms would no longer retain the unlimited ability to use initial margin collected as a source of funding, for re-hypothecation or re-use, or for other discretionary purposes.

5(c) Given the potential for the net treatment of provided margin to undermine the general benefits of the margin requirements, there was broad consensus among the BCBS and IOSCO that the requirements should address these risks by requiring the gross exchange and the segregation or other effective protection of provided initial margin, so as to preserve its capacity to fully offset the risk of loss in the event of the default of a derivatives counterparty.<sup>16</sup>

## Key principle 5

Because the exchange of initial margin on a net basis may be insufficient to protect two market participants with large, gross derivatives exposures to one another in the case of one of those firm's failure, the gross initial margin between such firms should be exchanged. Initial margin collected should be held in such a way as to ensure that (i) the margin collected is immediately available to the collecting party in the event of the counterparty's default, and (ii) the collected margin must be subject to arrangements that protect the posting party in the event that the collecting party enters bankruptcy to the extent possible under applicable law. Jurisdictions are encouraged to review the relevant local laws to ensure that collateral can be sufficiently protected in the event of bankruptcy.

## Requirement 5

5.1 Initial margin should be exchanged on a gross basis and held in a manner consistent with the key principle above. Cash and non-cash collateral collected as initial margin should not be re-hypothecated, re-pledged or re-used.

## Commentary

5(i) There are many different ways to protect provided margin, but each carries its own risk. For example, the use of third party custodians is generally considered to offer the most robust protection, but there have been cases where access to assets held by third party

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<sup>16</sup> Different ways to protect provided margin may have different implications on different market participants. The US Securities and Exchange Commission (US SEC), for example, has pointed out that, the requirement may impose a disproportionate impact on US SEC-registered broker-dealers in comparison to banks, as a result of the differences in regulatory capital treatment of the initial margin deposited with third party custodians. With respect to the exchange of initial margin, further comment is sought on the liquidity impact of the requirement on particular entities, and whether or how these factors should affect the initial margin requirement as the IOSCO continues to work on the interaction of regulatory capital framework of securities firms and margin.

custodians has been limited or practically difficult. The level of protection would also be affected by the local bankruptcy regime, and would vary across jurisdictions.

5(ii) The collateral arrangements used will need to be effective under the relevant laws and supported by periodically-updated legal opinion.

Q2. Should re-hypothecation be allowed to finance/hedge customer positions if re-hypothecated customer assets are protected in a manner consistent with the key principle? Specifically, should re-hypothecation be allowed under strict conditions such as (i) collateral can only be re-hypothecated to finance/hedge customer, non-proprietary position; (ii) the pledgee treats re-hypothecated collateral as customer assets; and (iii) the applicable insolvency regime allows customer first priority claim over the pledged collateral.

## **Element 6: Treatment of transactions with affiliates**

### **Background discussion**

6(a) Although current market practices on this point vary, the exchange of initial or variation margin by affiliated parties to a non-centrally cleared derivative is not customary. Accordingly, extending the initial margin requirements to such transactions would likely create additional liquidity demands for firms engaging in such transactions. In addition, the specific legal and regulatory environment in which such transactions are regulated varies considerably across jurisdictions. The specific legal and regulatory frameworks governing inter-affiliate derivative transactions largely owe to specific features of different jurisdictions. For example, some jurisdictions require inter-affiliate transactions be subject to centralised risk management whereas some require affiliates to enter into transactions on an arm's length basis. These transactions are not necessarily suited to harmonisation as varying legal systems may be driven by the specific and detailed nature of each jurisdiction and its legal framework.

### **Key principle 6**

Transactions between a firm and its affiliates should be subject to appropriate regulation in a manner consistent with each jurisdiction's legal and regulatory framework.

### **Requirement 6**

6.1 Local supervisors should review their own legal frameworks and market conditions and put in place initial and variation margin requirements as appropriate.

## **Element 7: Interaction of national regimes in cross-border transactions**

### **Background discussion**

7(a) The existing structure of markets for non-centrally cleared derivatives is global in scope. Key derivatives market participants are often engaged in derivatives activity through a variety of legal entities in different national jurisdictions and frequently deal with counterparties on a cross-border basis. Given the global nature of these markets, and as

noted in the Executive Summary, the effectiveness of margin requirements could be undermined if the requirements were not consistent internationally.

7(b) Accordingly, the BCBS and IOSCO have considered, as part of the framework for margin requirements, specific approaches to ensuring that implementation of the margin requirements at a national jurisdiction-level is appropriately interactive – that is, that each national jurisdiction's rule is territorially complementary such that (i) regulatory arbitrage opportunities are limited, (ii) a level playing field is maintained, (iii) there is no application of duplicative or conflicting margin requirements to the same transaction or activity, and (iv) there is substantial certainty as to which national jurisdiction's rules apply. When a transaction is subject to two sets of rules (duplicative requirements), the home and the host regulators should endeavour to apply only one set of rules, by recognising the equivalence and comparability of their respective rules.

### **Key principle 7**

Regulatory regimes should interact so as to result in sufficiently consistent and non-duplicative regulatory margin requirements for non-centrally cleared derivatives across jurisdictions.

### **Requirement 7**

7.1 The margin requirements in a jurisdiction should be applied to legal entities established in that local jurisdiction, which would include locally established subsidiaries of foreign entities, in relation to the initial and variation margins that they collect. Home-country supervisors should permit a covered entity to comply with the margin requirements of a host-country margin regime with respect to its derivative activities, so long as the home-country supervisor considers the host-country margin regime to be consistent with the margin requirements described in the paper. A branch should be treated as part of the same legal entity as the headquarter, thus subject to the margin requirements of the jurisdiction where the headquarter is established.

### **Commentary**

7(i) The following illustrative examples demonstrate how the requirement is intended to work in the enumerated hypothetical circumstances:

#### ***Circumstance 1: US bank enters into derivative with German bank.***

- US bank subject to margin rule of relevant US regulator and German bank subject to margin rule of relevant German regulator. If the US regulator considers the margin regime of Germany to be consistent with the margin requirements described in the paper and/or the German regulator considers the margin regime of the US to be consistent with the margin requirements described in the paper, then the US bank and the German bank could choose to comply with only one set of rules, either the US rule or the German rule, to the extent permitted.

#### ***Circumstance 2: German subsidiary of US bank enter into derivative with German bank.***

- Both German subsidiary of US bank and German bank subject to margin rule of relevant German regulator.

#### ***Circumstance 3: UK subsidiary of US bank enters into derivative with UK subsidiary of Swiss bank.***

- Both UK subsidiary of US bank and UK subsidiary of Swiss bank subject to margin rule of relevant UK regulator.

***Circumstance 4: UK subsidiary of Swiss bank enters into derivative with US bank.***

- UK subsidiary of Swiss bank subject to margin rule of UK regulator and US bank subject to margin rule of relevant US regulator. If the UK regulator considers the margin regime of the US to be consistent with the margin requirements described in the paper and/or the US regulator considers the margin regime of the UK to be consistent with the margin requirements described in the paper, then the UK subsidiary of the Swiss bank and the US bank could choose to comply with only one set of rules, either the US rule or the UK rule, to the extent permitted.

***Circumstance 5: Jurisdiction X subsidiary of US bank enters into derivative with German bank where the US regulator considers the margin regime of jurisdiction X to be not consistent with the margin requirements described in the paper.***

- Jurisdiction X subsidiary of US bank subject to margin rule of US regulator and German bank subject to margin rule of relevant German regulator. If the US regulator considers the margin regime of Germany to be consistent with the margin requirements described in the paper and/or the German regulator considers the margin regime of the US to be consistent with the margin requirements described in the paper, then the jurisdiction X subsidiary of the US bank and the German bank could choose to comply with only one set of rules, either the US rule or the German rule, to the extent permitted.

7(ii) In addition, branches should be treated as part of the same legal entity as the headquarters. As an example, a US branch of a French bank will be treated as a French legal entity in cross border transactions.

## **Element 8: Phase-in of requirements**

### **Background discussion**

8(a) Margin requirements on non-centrally cleared derivatives will represent a significant policy change for most market participants. Initial margin requirements, in particular, are not currently applied to a large number of transactions across many market participants. Such requirements will require significant operational enhancements and will also require significant amounts of collateral for which liquidity planning will be required. While the changes that will be required as a result of universal margin requirements are important for limiting systemic risks, these changes must be managed effectively so as to allow for an appropriate transition and not create unduly large transition costs. Moreover, the benefits gained by managing the transition to the new requirements must be weighed against systemic risks that are left un-attenuated during any transition period.

8(b) In addition, the requirements could impose some unnecessary operational costs on smaller entities that do not pose any significant systemic risk to the system and would not be expected to be bound by the initial margin requirements, in particular, in light of the provided threshold amount of €50 million.

8(c) Also, these requirements are new and interact with a large number of existing regulatory initiatives that, over time, should be reviewed and harmonised as appropriate. Accordingly, it is important that the appropriateness, efficacy and relationship of these requirements with other related requirements be monitored and evaluated on an ongoing basis.

## Key principle 8

The requirements described in this paper should be phased-in in a manner that appropriately trades off the systemic risk and incentive benefits with the liquidity, operational and transition costs associated with implementing the requirements. In addition, the requirements should be reviewed on a regular basis so as to evaluate their efficacy, soundness and relationship to other existing and related regulatory initiatives.

## Requirement 8

8.1 The requirement to exchange variation margin will become effective on 1 January 2015. The requirement to exchange variation margin between covered entities only applies to new contracts entered into after 1 January 2015. Exchange of variation margin on other contracts is subject to bilateral agreement.

8.2 The requirement to exchange two-way initial margin with a threshold of up to €50 million will be staged as follows.

8.3 Each covered entity engaging in non-centrally cleared derivative activity will compute the level of the entire notional amount of non-centrally cleared derivatives in which they are engaged as of month-end of the last three months of each year beginning in 2014. The computation will encompass all non-centrally cleared derivative activities of the consolidated group.

8.4 In 2015, any covered entity belonging to a group whose aggregate month-end average notional amount of non-centrally-cleared-derivatives for the last three months of 2014 exceeds €3.0 trillion will be subject to the requirements when transacting with another covered entity (so long as it also meets that condition).

8.5 In 2016, any covered entity belonging to a group whose aggregate month-end average notional amount of non-centrally-cleared-derivatives for the last three months of 2015 exceeds €2.25 trillion will be subject to the requirements when transacting with another covered entity (so long as it also meets that condition).

8.6 In 2017, any covered entity belonging to a group whose aggregate month-end average notional amount of non-centrally-cleared-derivatives for the last three months of 2016 exceeds €1.5 trillion will be subject to the requirements when transacting with another covered entity (so long as it also meets that condition).

8.7 In 2018, any covered entity belonging to a group whose aggregate month-end average notional amount of non-centrally-cleared-derivatives for the last three months of 2017 exceeds €0.75 trillion will be subject to the requirements when transacting with another covered entity (so long as it also meets that condition).

8.8 On a permanent basis (ie in 2019 and beyond), any covered entity belonging to a group whose aggregate month-end average notional amount of non-centrally-cleared-derivatives for the last three months of the preceding year is less than €8 billion will not be subject to the initial margin requirements described in this paper.

8.9 Initial margin requirements will apply to all new contracts entered into after each of the dates described above. Applying the initial margin requirements to existing derivative contracts is not required.

8.10 Global regulators will work together to ensure that there is sufficient transparency regarding which entities are and are not subject to the initial margin requirements during the phase-in period.

Q3. Are the proposed phase-in arrangements appropriate? Do they appropriately trade off the systemic risk reduction and the incentive benefits with the liquidity, operational and transition costs associated with implementing the requirements? Are the proposed triggers and dates that provide for the phase-in of the requirements appropriately calibrated so that (i) the largest and most systemically-risky covered entities would be subject to the margining requirements at an earlier stage so as to reduce the systemic risk of non-centrally cleared derivatives and create incentive for central clearing, and (ii) the smaller and less systemically risky covered entities would be allowed more time to implement the new requirements? Should the phase-in arrangements apply to the exchange of variation margin, in addition to the exchange of initial margin as currently suggested? Or, given that variation margin is already a widely-adopted market practice, should variation margin be required as soon as the margin framework becomes effective (on 1 January 2015 as currently proposed) so as to remove existing gaps and reduce systemic risk? Do differences of market circumstances such as readiness of market participants and relatively small volumes of derivatives trading in emerging markets require flexibility with phase-in treatment, even for variation margin?

## Appendix A

### Standardised initial margin schedule

| Asset class                      | Initial margin requirement (% of notional exposure) |
|----------------------------------|-----------------------------------------------------|
| Credit: 0-2 year duration        | 2                                                   |
| Credit: 2-5 year duration        | 5                                                   |
| Credit 5+ year duration          | 10                                                  |
| Commodity                        | 15                                                  |
| Equity                           | 15                                                  |
| Foreign Exchange\Currency        | 6                                                   |
| Interest Rate: 0-2 year duration | 1                                                   |
| Interest Rate: 2-5 year duration | 2                                                   |
| Interest Rate: 5+ year duration  | 4                                                   |
| Other                            | 15                                                  |

## Appendix B

### Standardised haircut schedule

| Asset class                                                                                                                         | Haircut (% of market value) |
|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| Cash in same currency                                                                                                               | 0                           |
| High-quality government and central bank securities: residual maturity less than 1 year                                             | 0.5                         |
| High-quality government and central bank securities: residual maturity between 1 and 5 years                                        | 2                           |
| High-quality government and central bank securities: residual maturity greater than 5 years                                         | 4                           |
| High-quality corporate/covered bonds: residual maturity less than 1 year                                                            | 1                           |
| High-quality corporate/covered bonds: residual maturity greater than 1 year and less than 5 years                                   | 4                           |
| High-quality corporate/covered bonds: residual maturity greater than 5 years                                                        | 8                           |
| Equities included in major stock indices                                                                                            | 15                          |
| Gold                                                                                                                                | 15                          |
| Additional (additive) haircut on asset in which the currency of the derivative obligation differs from that of the collateral asset | 8                           |

## Appendix C

### Quantitative impact study on margin requirements for non-centrally cleared OTC derivatives

#### 1. Executive summary and key findings

The BCBS and IOSCO are releasing for consultation a near-final proposal for margin requirements on non-centrally cleared derivatives. In 2012, the WGMR conducted a QIS to assess the liquidity costs of margin requirements. This appendix summarises the results of the QIS. The results are varied but a number of key findings can be distilled from the larger analysis. These key findings are:

- (a) The QIS included data from 39 institutions including 33 banks. Among the 33 banks, 19 are “Category A” firms representing large, internationally active derivative dealers. These institutions are engaged in roughly €216 trillion of non-centrally cleared notional derivative activity and account for roughly 75% of global non-centrally cleared derivative activity.
- (b) It is estimated that the central clearing mandate will result in roughly a 46% reduction in the gross notional amount of non-centrally cleared derivative activity. Across asset classes, Interest Rate and Equity derivatives are expected to exhibit the largest decline (53%, 56%) while Foreign Exchange and Other derivatives are expected to exhibit the smallest decline (13%, 21%).
- (c) Currently, the total amount of initial margin that is being held by QIS respondents against non-centrally cleared derivative transactions (€100 billion) represents roughly 0.03% of the gross notional exposure. Initial margining requirements on bilateral trades are negotiated on a case-by-case basis and market practice varies across different counterparties, asset classes and jurisdictions.
- (d) The near-final proposal requires two-way initial margin requirements with a universal threshold of €50 million. The initial margin that would result from applying the near-final proposal to the derivative portfolios that are expected to remain uncleared at the QIS respondent firms is roughly €558 billion. Extrapolating from the QIS respondents to the entire global derivatives market would raise the estimate to roughly €0.7 trillion. Margin requirements using a zero threshold rather than a threshold of €50 million, as proposed in the July 2012 consultative paper, would result in roughly €1.3 trillion of initial margin at QIS respondents or roughly €1.7 trillion for the entire global market. Since the near-final proposal would only apply the requirements to new transactions, the margin would be posted gradually over time as new transactions replace old ones.
- (e) The results above are based on firms using models to calculate initial margin. Models may only be used to calculate initial margin with approval from the relevant supervisory authority. Some firms may not apply for model approval. Some may fail to meet the standards required by the supervisor. These firms will have to use the standardised initial margin schedule appearing in the near-final proposal when calculating initial margin. Bilateral margining requirements would increase significantly if the standardised schedule is used by a significant number of firms. The initial margin amounts required under a standardised schedule are roughly between 6 to 11 times higher than that observed under a model-based initial margin

regime. It is difficult to put a precise number on this estimate since the scope of model approvals cannot be anticipated at this time.

- (f) Bilateral margin requirements are estimated to be significantly higher than initial margin requirements that would result under central clearing. It is estimated that model-based bilateral margin requirements average roughly 0.5% of gross notional exposure while cleared requirements average roughly 0.1% of gross notional exposure. The main driver of this result is the lack of any multilateral netting between counterparties in the case of bilateral margining.
- (g) QIS respondents were also asked to identify unencumbered assets that would be eligible to satisfy the margin requirements. The model-based margin requirements comprise 8% of available margin eligible assets under the near-final proposal. Using the standardised margin schedule instead of the model-based margin requirements would raise this statistic to 86% of available liquid assets.

## 2. Study methodology

A quantitative survey, developed by the WGMR, was sent to QIS respondents in July 2012. The survey was based on the proposed margining requirements discussed in the July 2012 consultative document.<sup>17</sup> Survey results were collected and reviewed by national supervisors in early September. A small analysis team met in Basel at the end of September to compile and summarise the results. The analysis team reviewed the received surveys for errors or inconsistencies. A number of submissions were revised as a result of national supervisor and analysis team consistency checks.

The resulting submissions were used to produce the analysis that follows. The QIS survey asked respondents to consider the impact of initial margin requirements in a number of ways. Importantly, QIS respondents were asked to calculate initial margin requirements that would result if the requirements were applied to the following two **situations**:

- A. The entire portfolio of non-centrally cleared derivatives as of 30 June 2012.<sup>18</sup>
- B. The portfolio of non-centrally cleared derivatives that would result after a number of products that are considered likely for mandatory central clearing were removed from the portfolio. The list of products that are considered likely to be centrally cleared in the near future was provided by the WGMR as part of the survey. The list identified a number of derivative products that would likely be cleared in the near future including, for example, standard interest rate swaps, actively traded and liquid CDS contracts, and equity, foreign exchange and commodity contracts that are already being cleared. This exercise is forward looking. The actual set of derivative contracts that move to clearing in the near future may differ from the derivative types that were identified by the WGMR for this exercise.

In addition, QIS respondents were asked to report the initial margin amounts that would be required under the following two **calculation methods**:

---

<sup>17</sup> There are some differences between the requirements that were proposed in the July 2012 consultative document and this near-final framework. In particular, the near-final framework allows for application of the net-to-gross ratio in the calculation of standardised margin amounts. Also, the near-final framework requires that thresholds be applied on a fully consolidated basis which may have implications for counterparties that are part of larger parent. Tables in this appendix do not take into account those two differences.

<sup>18</sup> Some respondents were unable to provide 30 June 2012 figures. They have instead provided the latest figures available.

- C. A model-based initial margin regime with model standards consistent with those articulated in the BCBS and IOSCO consultative document.
- D. A standardised initial margin regime with standardised initial margins prescribed by the BCBS and IOSCO consultative document.

In what follows, this appendix focuses on results related to considering situation B and calculation method C. Application of model-based initial margin requirements to the portfolio of non-centrally cleared derivatives that will remain following the central clearing mandate represents an estimate of the long run impact of initial margin requirements on non-centrally cleared derivatives. Of course, the long run impact will be realised gradually over time as the requirements will only necessarily apply to new trades.<sup>19</sup>

While we focus on the scenario described by situation B and calculation method C, we also provide a brief discussion of the scenario that obtains when standardised initial margins are applied to the portfolio that will remain after central clearing takes effect (Scenario (B,D)), as these two scenarios are considered more relevant than others.

All results in all tables reflect aggregates based only on QIS sample respondents. In certain places, the QIS results are extrapolated to the global level in the discussion that appears in the text. Finally, all results are presented in terms of millions of Euros.

### 3. QIS respondents

The WGMR QIS used data from 39 different respondents across 10 jurisdictions. All QIS responses were reviewed by national supervisors and Analysis Team members before inclusion. Responses that were deemed unsuitable for the analysis were not included. Table 1 reports information concerning the respondents whose data was used in the impact assessment.

**Table 1: QIS respondent information**

|       | Number of respondents |                |                |                |       |
|-------|-----------------------|----------------|----------------|----------------|-------|
|       | Banking               |                | Insurance      | Others         | Total |
|       | Category A            | Non-category A | Non-category A | Non-category A |       |
| Total | 19                    | 14             | 3              | 3              | 39    |

Note: The table above reports the number of QIS respondents within each respondent category and broad industry group.

The survey sample is comprised mainly of banks with a small number of insurance firms and pension funds (other) as well. Among the 33 banks in the QIS sample, 19 of these banks are “Category A” firms that were identified in the QIS as being large, internationally active derivative dealers or globally systemically-important banks. The total universe of “Category A” firms identified in the QIS survey is 30. Accordingly, the received survey responses represent 19 of these 30 institutions.

<sup>19</sup> Some participants may choose to apply the requirements to both new and old trades to achieve certain netting efficiencies.

#### 4. Non-centrally cleared derivative activity

The 39 QIS respondents are engaged in a significant amount of non-centrally cleared derivative activity. Table 2 shows a comparison of current non-centrally cleared derivatives activity among QIS respondents to the global level of non-centrally cleared derivatives activity as reported by the BIS in the December 2011 OTC derivative statistics release. The first row of Table 2 shows the total gross notional outstanding amount of non-centrally cleared derivatives as reported by QIS respondents. The second row shows an adjusted amount that uses a methodology similar to the one employed by the BIS to control for double counting of derivative contracts between dealers. The third row of Table 2 shows an estimate of the total notional amount of global non-centrally cleared derivative activity. The BIS OTC derivative statistics relate to both cleared and non-cleared derivative activity. Accordingly, in row 3, the BIS statistics are scaled by the fraction of each asset class which is currently not being cleared as reported in the FSB's June 2012 Progress Report on OTC Derivative Market Reform Implementation.<sup>20</sup> The fourth row of Table 2 reports the ratio of the adjusted non-centrally cleared derivative activity among QIS respondents, row 2, and the global level of non-centrally cleared derivative activity implied by the BIS and FSB statistics, row 3. Finally, the fifth row of Table 2 reports an estimate of the total amount of centrally-cleared derivatives in each asset class.

**Table 2: Comparison of QIS respondent and global non-centrally cleared derivative activity (EUR Million)**

|                                            | Foreign Exchange | Interest Rate | Credit     | Equity    | Commodity | Other   | Total       |
|--------------------------------------------|------------------|---------------|------------|-----------|-----------|---------|-------------|
| Total QIS-unadjusted: (1)                  | 54,958,056       | 230,135,986   | 24,264,950 | 6,596,400 | 2,026,853 | 514,734 | 318,496,980 |
| Total QIS-adjusted: (2)                    | 40,386,477       | 154,248,042   | 14,414,399 | 4,978,987 | 1,812,676 | 408,334 | 216,248,915 |
| Total BIS/FSB - non-centrally-cleared: (3) | 53,892,541       | 208,157,384   | 19,105,708 | 4,939,023 | 2,019,813 | N/A     | 288,114,470 |
| QIS coverage (2)/(3): (4)                  | 75%              | 74%           | 75%        | 101%      | 90%       | N/A     | 75%         |
| Memo: Total centrally-cleared: (5)         | 25,136           | 220,890,121   | 5,264,220  | 152,670   | 611,000   | N/A     | 226,943,146 |

Note: The data in rows (1) and (2) reflect current non-centrally cleared derivative positions of QIS respondents as of June, 2012. The data in row (3) reflect BIS and FSB data. The final row of the table presents an estimate of the total amount of centrally cleared derivatives. In the case of the Interest Rate and Credit categories, this estimate is calculated by applying the percentage of derivatives that are centrally-cleared taken from the FSB report to the BIS OTC derivative statistics. In the case of all other asset classes, this estimate is calculated by applying the percentage of derivatives that are centrally-cleared computed using data provided by QIS respondents to the BIS OTC derivative statistics.<sup>21</sup>

<sup>20</sup> Adjustments have been made to the BIS and FSB statistics to account for the different treatments of centrally-cleared derivatives. The BIS statistics include an "unallocated" derivative category, which comprises foreign exchange, interest rate, equity, commodity and credit derivatives of non-reporting institutions. To maintain comparability with QIS statistics, the notional outstanding amount of "unallocated" derivatives has been allocated to individual asset classes on a pro rata basis.

<sup>21</sup> For the purposes of calculating the amount of non-centrally cleared derivatives (Table 2, row 3) and centrally-cleared derivatives (Table 2, row 5), we have used the clearing percentage figures from the FSB report where such figures are available. The FSB report only provides a breakdown of centrally-cleared derivatives and

As shown in Table 2 it is estimated that the QIS respondents account for about 75% of global activity in non-centrally cleared derivatives. The coverage of the QIS sample ranges somewhat across asset classes with the highest coverage in Equity and Commodity (101%, 90%) and the lowest coverage in Interest Rate (74%).<sup>22</sup>

In what follows all of the results appearing in the Tables relate to the QIS sample. In some cases we discuss how the sample results would extend to the entire global derivatives market. In such cases we simply scale the results found in the table by 1.3 ( $1/0.75=1.3$ ).

Table 3 reports the gross notional derivative exposures that would result before and after central clearing requirements take effect. The notional amounts in the first row of Table 3 reflect current portfolios and are identical to those reported in the first row of Table 2. The notional amounts in the second row of Table 3 reflect the portion of current portfolios that are expected to remain non-centrally cleared after central clearing mandates take effect. The third row of the table reports the percentage reduction in non-centrally cleared derivative activity that will result after central clearing mandates take effect.

**Table 3: Non-centrally cleared derivative activity before and after central clearing takes effect**

|             | Total gross notional outstanding amount (EUR million) |               |            |           |           |         |             |
|-------------|-------------------------------------------------------|---------------|------------|-----------|-----------|---------|-------------|
|             | Foreign exchange                                      | Interest rate | Credit     | Equity    | Commodity | Other   | Total       |
| Before      | 54,958,056                                            | 230,135,986   | 24,264,950 | 6,596,400 | 2,026,853 | 514,734 | 318,496,980 |
| After       | 47,863,156                                            | 107,208,907   | 12,132,371 | 2,908,279 | 1,211,562 | 408,843 | 171,733,118 |
| % Reduction | 13%                                                   | 53%           | 50%        | 56%       | 40%       | 21%     | 46%         |

Note: The data above reflect the notional amount of non-centrally cleared derivative activity that will remain after central clearing mandates take effect (future portfolio). Each cell represents the simple sum of non-centrally cleared derivative notional amounts for each QIS respondent within each asset class and jurisdiction.

For each asset class, the quantity in the table reflects the sum of all gross notional amounts in the asset class across all QIS respondents. As expected, the largest notional amounts are observed for Interest Rate and Foreign Exchange derivatives (€107 trillion, €48 trillion) while the smallest amounts are observed for Equity and Commodity derivatives (€3 trillion, €1 trillion). There is roughly a fifty percent decline in non-centrally cleared derivative activity as a result of central clearing with the notable exception of Foreign Exchange derivatives for which central clearing is only expected to reduce non-centrally cleared activity by 13 percent.

non-centrally cleared derivatives for interest rate and credit derivatives. For the other asset classes, we have calculated the clearing percentage figures using the QIS data. Based on the FSB report, the clearing percentages for interest rate derivatives and credit derivatives are 51.48% and 21.60% respectively. Based on the QIS data, the clearing percentages of interest rate derivatives and credit derivatives are 62.88% and 22.01% respectively.

<sup>22</sup> We note that the data samples that are used to construct both the QIS sample and the BIS sample differ for a number of reasons and though the BIS sample is generally expected to encompass the QIS sample this need not always be the case. In particular, the BIS data are taken from a December 2011 survey while the QIS data are taken from June of 2012. Also the set of respondents encompassing the BIS and QIS samples are only partially overlapping. Finally, the methodology used to construct notional outstanding estimates consistent with those reported for the BIS sample only approximates the methodology used by the BIS.

## 5. Initial margining requirements for non-centrally cleared derivatives

### (a) Current practice

Before considering the effects of requiring initial margin on all non-centrally cleared derivative transactions, it is instructive to review current margining practices. Currently, initial margining requirements on bilateral trades are negotiated on a case by case basis and market practice varies across different counterparties, asset classes and jurisdictions. Table 4a reports the total amount of initial margin that is collected by and posted from QIS respondents on non-centrally cleared derivatives. Table 4b summarises the current margin practices of QIS respondents. It should be noted that only some of the QIS respondents have provided the information in Table 4b. Accordingly, the results are not representative of the entire sample.

**Table 4a: Current initial margin amount (EUR million)**

|       | <b>Total Notional Outstanding</b> | <b>Initial margin posted</b> | <b>Initial margin collected</b> |
|-------|-----------------------------------|------------------------------|---------------------------------|
| Total | 318,496,980                       | 5,801                        | 94,640                          |

Note: The table above reflects initial margin amounts that are both posted and collected by all QIS respondents.

**Table 4b: Current margin practices**

|                                                                        | <b>Average</b> | <b>Median</b> | <b>Number of respondents</b> |
|------------------------------------------------------------------------|----------------|---------------|------------------------------|
| Margin period of risk (or risk horizon) in days                        | 8.1            | 10.0          | 15                           |
| Confidence level (%) used                                              | 96.2%          | 96.3%         | 14                           |
| Length of the look-back period (in years) used in calibration of model | 2.9            | 2.0           | 13                           |
| Level of initial margin as a percentage of potential future exposure   | 97.5%          | 100.0%        | 10                           |
| Margin frequency (in days)                                             |                |               |                              |
| Variation margin                                                       | 2.3            | 1.0           | 31                           |
| Initial margin                                                         | 1.0            | 1.0           | 21                           |

Note: 21 respondents have provided information on initial margin frequency. 8 of these respondents collect initial margin at deal inception. 1 of them collects initial margin on an event-driven basis. The remaining 12 respondents collect initial margin daily.

In total, all QIS respondents are currently engaged in roughly €319 trillion in notional derivative activity. QIS respondents are collecting a total of roughly €95 billion in initial margin and are posting roughly €6 billion in initial margin. The bias towards margin collected rather than margin posted reflects the fact that the sample is dominated by 19 large derivative dealers that tend to collect but not post initial margin. The total amount of margin that is being held against non-centrally cleared derivative transactions, roughly €100 billion, represents roughly 0.03% of the gross notional exposure.

**(b) Impact of proposed initial margin requirements**

The BCBS and IOSCO near-final proposal envisions a two-way margining regime with universal thresholds of €50 million. Table 5 reports the total amount of initial margin that would be required under such threshold. For comparison, the total amount of margin that would be required under a two-way margining regime with zero thresholds –which was also discussed in the consultative document published in July of 2012- is also presented. As discussed above, the results presented here assume that model-based initial margins are applied to the portfolio of non-centrally cleared derivatives that obtains once central clearing mandates take effect. The initial margin amounts are presented in two ways. The results in the second column of Table 5 show the total amount of initial margin that would be required if netting, hedging and diversification across asset classes is not recognised. This is consistent with the approach proposed in the near-final proposal. The third column in Table 5 reports the total amount of initial margin that would be required if netting, hedging and diversification are recognised across different asset classes.

In addition to the total amount of initial margin required under the proposed margin regime, we also report the total number of distinct counterparty pairings with a positive margin requirement in column 4 of Table 5. Under a zero threshold regime all counterparty pairings are subject to positive margin requirements. In the case of a €50 million threshold some counterparty pairings have a zero initial margin requirement if the exposure amount is below the threshold of €50 million. It should also be noted that the results in Table 5 relate to counterparty pairings, eg Bank X and Customer Y, and cannot be interpreted as the number of distinct counterparties, eg Bank X, that would be affected by the margin requirements. In particular, many counterparties are counted multiple times in column 4 as they transact with multiple QIS respondents.

**Table 5: Initial margin requirements under two-way universal threshold regime**

| Threshold | No netting across asset classes (EUR million) | With netting across asset classes (EUR million) | Number of 'counterparty pairings' with positive initial margin requirements |
|-----------|-----------------------------------------------|-------------------------------------------------|-----------------------------------------------------------------------------|
| 0.0       | 1,271,393                                     | 1,094,594                                       | 100,672                                                                     |
| 50.0      | 558,232                                       | 513,261                                         | 3,730                                                                       |

As shown in the second column the total amount of initial margin that would be required under the two-way margining regime with universal thresholds of €50 million is roughly €0.6 trillion. A two-way regime with zero thresholds would require roughly €1.3 trillion in initial margin. A large part of the reduction in total initial margin is attributable to transactions that do not involve two Category A counterparties. The reduction in total initial margin for these types of transactions ranges from 46% (for transactions between prudentially-regulated financial firms that are not Category A firms) to 87% (for transactions between prudentially-regulated financial firms that are not Category A firms and non-prudentially-regulated financial firms that are not Category A firms). In comparison, the reduction in total initial margin for transactions between Category A firms was about 21%.<sup>23</sup>

The application of diversification and netting benefits across different asset classes, reported in the third column, results in roughly an 8-14% reduction in total required margin.

<sup>23</sup> The calculations in this paragraph depend on data that are not contained in this summary.

The number of counterparty pairings that would be subject to a positive initial margin requirement, reported in the fourth column, under the two-way, €50 million threshold regime is 3,730. A zero threshold regime would increase the number of counterparty pairings subject to a positive margin requirement to 100,672. It should be noted that these results only reflect margin amounts that would be collected by counterparties reflected in the QIS sample. As discussed in the context of Table 2, the QIS sample represents roughly 75% of total global derivative activity. Using this table to “gross up” the results in Table 7 would suggest total initial margin requirements of €0.7 trillion under the €50 million threshold and €1.7 trillion under a zero threshold regime.

## 6. Foreign exchange swaps and forwards

The near-final proposal discusses the issue of exempting certain foreign exchange swaps and forwards from margin requirements. In order to assess the relative importance of different classes of foreign exchange derivatives the QIS requested a detailed breakdown of foreign exchange derivative exposures. Table 6 below reports the detailed breakdown.

**Table 6: Foreign exchange gross notional outstanding amounts**

|       | Foreign exchange swaps and forwards (maturity <1 month) (EUR million) | Foreign exchange swaps and forwards (1 month ≤ maturity < 6 months) (EUR million) | Foreign exchange swaps and forwards (6 months ≤ maturity < 1 year) (EUR million) | Foreign exchange (after removing swaps and forwards included under previous columns) (EUR million) | Total foreign exchange (EUR million) |
|-------|-----------------------------------------------------------------------|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|--------------------------------------|
| Total | 8,224,686                                                             | 12,509,723                                                                        | 4,211,856                                                                        | 22,916,891                                                                                         | 47,863,156                           |

Note: The data above reflects non-centrally cleared derivative notionals that will remain once central clearing mandates take effect.

As can be seen from the table, foreign exchange swaps and forwards tend to be clustered in the maturity range between one and six months though there are also significant amounts outside this maturity range and these derivative categories. Also “Foreign exchange (after removing swaps and forwards included in the previous columns)” is the largest single category of foreign exchange derivatives. This amount includes longer dated swaps and forwards, longer dated derivatives that are not swaps or forwards, and shorter dated derivatives that are not swaps or forwards such as options.

The initial margin impact of each foreign exchange category listed above is difficult to gauge when initial margin is assessed using the model-based approach. Respondents with model-based initial margin estimates typically jointly model all foreign exchange and interest rate exposures, consistent with the requirements of the near-final proposal, and in many cases, no margin breakout according to the above categories is available. A breakout of initial margin according to the above categories can be produced using the proposed standardised approach. Since the standardised initial margin for foreign exchange does not vary by maturity the results of this breakout would be proportional to the results reported above.

## 7. Bilateral initial margin and centrally cleared margin requirements

The initial margin amounts reported in the above tables represent initial margin that would be required on non-centrally cleared transactions. One driver of the magnitude of bilateral initial margin requirements is the lack of any multilateral netting between counterparties. Netting across different counterparties is a benefit of central clearing as all exposures are netted against the clearing house. Another driver of the magnitude of the margining requirements is the required closeout period of 10 days which exceeds the closeout period applied by many CCP's. A specific question was included in the QIS to assess the potential importance of multilateral netting and the closeout period in determining the quantitative magnitude of margin requirements.

Specifically, QIS respondents were asked to calculate, for each broad asset class, the amount of initial margin that would be required if their entire bilateral portfolio was centrally cleared so that multilateral netting between counterparties was allowed. The margin calculation assumed a 10 day closeout period and a zero threshold. This amount is then compared against the initial margin that would be required if the transactions remained bilateral assuming both a 10 day closeout period and a zero threshold.

Table 7 presents the results of this analysis. The first column presents the total gross notional exposure upon which the calculations are based. Roughly 50% of QIS sample respondents completed the requested analysis and this is reflected in the total notional amount. The second column presents the total bilateral initial margin that QIS respondents would be required to post on these derivative transactions. The total is roughly €846 billion. The third column presents the total amount of initial margin that QIS respondents would have to post to a clearing house as initial margin if each broad asset class of swaps was centrally cleared and the clearing house maintained a required closeout period of 10 days. The total amount of initial margin required in this case would be roughly €224 billion which is roughly 27% of the amount that would be required under a bilateral margin framework. The significant reduction observed here suggests that multilateral netting benefits are large and that bilateral margins should be expected to be many times larger than those required on centrally cleared transactions. Finally, the last column of Table 7 reports the amount of initial margin that would be required if central clearing initial margin was applied with a 5 day closeout period which is often applied in practice on cleared transactions. The use of a 5 day closeout period further reduces the required margin to roughly €159 billion which represents roughly an 81% reduction in initial margin requirements relative to the bilateral requirements.

**Table 7: Comparison of bilateral and cleared initial margin requirements**

| Asset classes                    | Current non- centrally-cleared derivatives (EUR million) |                                                                |                                                             |                |
|----------------------------------|----------------------------------------------------------|----------------------------------------------------------------|-------------------------------------------------------------|----------------|
|                                  | Total gross notional outstanding amount                  | Total initial margin without netting across all counterparties | Total initial margin with netting across all counterparties |                |
|                                  | (1)                                                      | (2)                                                            | (3)                                                         | (4)            |
|                                  |                                                          | 10-day closeout                                                | 10-day closeout                                             | 5-day closeout |
| Foreign exchange & interest rate | 141,463,868                                              | 548,771                                                        | 106,849                                                     | 75,554         |
| Credit                           | 12,038,081                                               | 87,308                                                         | 24,571                                                      | 17,374         |
| Equity                           | 3,705,099                                                | 108,824                                                        | 36,529                                                      | 25,830         |
| Commodity                        | 1,081,925                                                | 44,377                                                         | 11,815                                                      | 8,354          |
| Other                            | 392,237                                                  | 56,383                                                         | 44,652                                                      | 31,574         |
| <b>Total</b>                     | <b>158,681,211</b>                                       | <b>845,662</b>                                                 | <b>224,415</b>                                              | <b>158,686</b> |

Note: The data above reflect non-centrally cleared derivatives as of June 2012. The initial margin amounts reflect a model-based calculation. Number of respondents: 19.

## 8. Application of standardised initial margin

The above discussion has focused on application of model-based initial margins. The consultative document also considers the application of standardised margins. In this section, we briefly discuss the implications of applying the proposed standardised margin percentages.

The impact of the standardised schedule may be relevant since under the proposals in the consultative document, models may only be used with approval from the relevant supervisory authority. Assuming that some firms either do not apply for model approval, or fail to meet the standards required by the supervisor, the impact of the proposals will be between that of the modelled and standardised approaches. It is difficult to put a precise number on this estimate since at this stage it is not possible to anticipate the scope of model approvals.

Table 8 shows the results of applying standardised initial margin requirements in a two-way, universal threshold margin regime. These results are compared against the model-based requirements that were reported in Table 5 and are reproduced in the first two columns below. The result of applying the standardised method is reported in the third column of Table 8. Finally, the ratio of the standardised margin amount to the baseline model margin amount is reported in the fourth and final column of the table.

**Table 8: Initial margin requirements under two-way universal threshold regimes**

| Threshold amounts (EUR million) | Calculated based on model – Total initial margin (EUR million) |                                            | Calculated based on standardised schedule – Total initial margin (EUR million) | Standardised initial margin as a multiple of model-based initial margin |
|---------------------------------|----------------------------------------------------------------|--------------------------------------------|--------------------------------------------------------------------------------|-------------------------------------------------------------------------|
|                                 | (1)                                                            | (2)                                        | (3)                                                                            | (4) = (3) / (1)                                                         |
|                                 | No netting across multiple asset classes                       | With netting across multiple asset classes | No netting across multiple asset classes                                       |                                                                         |
| 0.0                             | 1,271,393                                                      | 1,094,594                                  | 7,456,163                                                                      | 5.9x                                                                    |
| 50.0                            | 558,232                                                        | 513,261                                    | 6,191,528                                                                      | 11.1x                                                                   |

Notes: the data above reflect non-centrally cleared derivatives that will remain once central clearing mandates take effect. Columns (1) and (2) reflect model-based initial margin calculations. Column (3) reflects standardised margin calculations.

As the results in Table 8 show, application of the standardised margin schedule to the portfolio of non-centrally cleared derivatives that will result after central clearing mandates are in place would result in between roughly €6.2 and €7.5 trillion. The amounts are not very sensitive to the application of the thresholds as the required initial margin amounts are so much larger than the thresholds.

## 9. Initial margin requirements and unencumbered assets

Initial margin requirements will have to be funded with available assets. Moreover, not all assets will be eligible to satisfy initial margin requirements. Table 9 reports the ratio of estimated initial margin requirements to the total amount of unencumbered assets that were identified as being eligible to satisfy initial margin requirements in the consultative document. In some cases firms either did not report the total amount of available unencumbered assets or they mis-interpreted the question to ask for only the assets available to the firm that had been posted by their counterparties. These submissions were excluded from the analysis that appears in Table 9 below.

**Table 9: Initial margin and unencumbered assets**

|       | Initial margin under zero universal threshold as % of total unencumbered assets |                    | Initial margin under EUR50 million universal threshold as % of total unencumbered assets |                    |
|-------|---------------------------------------------------------------------------------|--------------------|------------------------------------------------------------------------------------------|--------------------|
|       | Model-based (%)                                                                 | Schedule-based (%) | Model-based (%)                                                                          | Schedule-based (%) |
| Total | 18                                                                              | 103                | 8                                                                                        | 86                 |

Note: The data above reflect margin amounts that will obtain on non-centrally cleared derivatives once central clearing mandates take effect and unencumbered assets as of June 2012.

As can be seen in Table 9, the model-based initial margin requirements comprise between 18 and 8% of unencumbered eligible assets depending on whether a universal threshold of

€0 or €50 is assumed. The initial margin requirements are substantially larger when measured against the standardised initial margin amounts.

Q4. The BCBS and IOSCO seek comment on the accuracy and applicability of the QIS results discussed above.