



EU Transparency Register ID Number 271912611231-56

Basel Committee on Banking Supervision  
Centralbahnplatz 2  
CH-4002 Basel  
Switzerland

Deutsche Bank AG  
Winchester House  
1 Great Winchester Street  
London EC2N 2DB  
Tel +44 (0) 207 545 8380  
Fax +44 (0) 207 545 8553

24 June 2016

***Consultative document on reducing variation in credit risk-weighted assets – constraints on the use of internal model approaches***

Dear Mr Coen,

Deutsche Bank welcomes the opportunity to comment on the Basel Committee on Banking Supervision (BCBS) consultation on reducing variation in credit risk-weighted assets – constraints on the use of internal model approaches. While our comments focus on this specific proposal, we encourage the BCBS to consider them in light of the context of broader changes to standardised approaches and risk insensitive tools currently on the BCBS agenda.

We share the BCBS' objective to eliminate unjustified variance in Risk Weighted Assets resulting from internal models and support the intent to balance risk sensitivity, comparability and complexity. However, as currently calibrated, the proposal appears to prioritise simplicity at the expense of risk sensitivity and comparability. Our analysis also suggests that the suite of proposals currently on the BCBS agenda will result in a material increase in capital requirements for banks. If the BCBS is to maintain its commitment to not significantly increase capital in the system, the proposed rules require revision.

A detailed assessment of the drivers for these impacts is set out in the annex, which also provides recommendations as to how the proposals might be better aligned with the Committee's objectives. We also support the proposals set out in the responses submitted by the Institute of International Finance (IIF) and through the Global Financial Markets Association (GFMA). At a high level, our concerns on the impact of proposed constraints on the use of internal model approaches can be summarised as follows:

**Loss of risk sensitivity:**

As figure 1 (below) illustrates, standardised approaches tend to flatten out risk curves, which makes riskier assets less capital intensive and safer assets more capital intensive. This could have a number of unintended consequences:

- It could create incentives for banks to concentrate their risk exposures in higher yielding, or riskier assets. This could also result in a reduction in credit availability for lower risk, lower returning counterparties;
- The incentivising of certain assets may cause banks to gravitate towards similar business models and balance sheet compositions. This would result in correlation



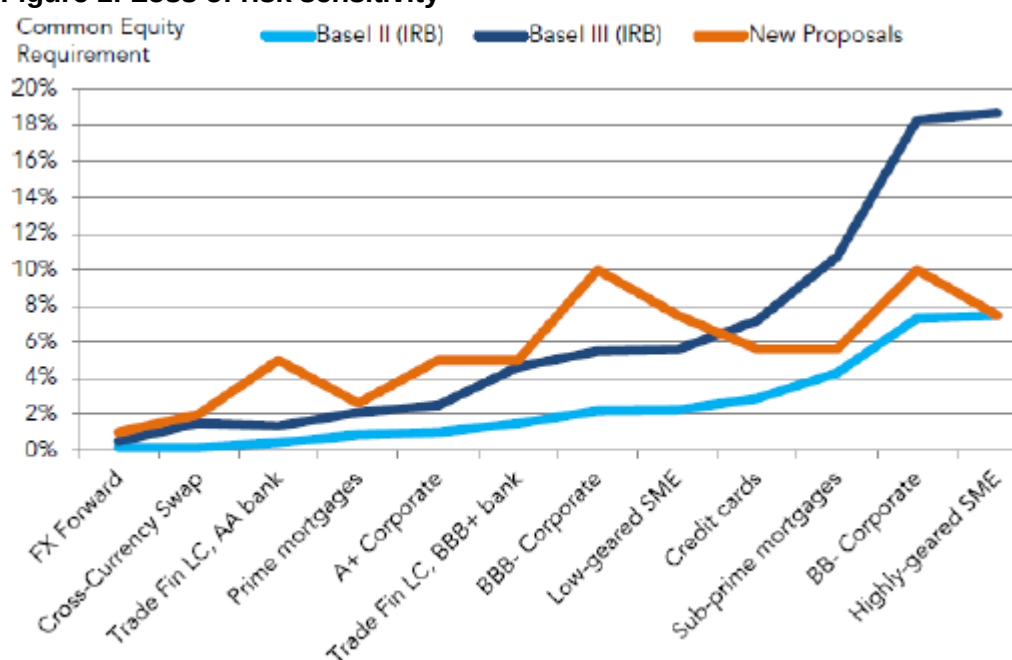
risk, could lead to banks off-loading similar assets in times of stress and so magnify procyclicality;

- Risk sensitive models and capital requirements would limit incentives for developing risk management and improving models.

Exposure level floors will further add significantly to the reduction in risk sensitivity and the increase in capital requirements. It is proposed to introduce an exposure level output floor (IMM-CCR floor) in addition to floors on input parameters and an aggregate floor. For derivatives this would be based on Standardised Approach for Counterparty Credit Risk (SA-CCR), which adds another layer of conservatism and is based on a model designed for a different purpose. Overall this approach would significantly reduce the risk sensitivity of the areas the BCBS identifies as best suited to internal models.

We provide more details on the specifics of the SA-CCR in Annexes 3 and 4. For securities financing transactions, the floor would be based on the proposed Standardised Approach for Credit Risk.

**Figure 1: Loss of risk sensitivity**



Source: Deutsche Bank, IIF

#### **Reduced comparability:**

Risk insensitive capital requirements could make headline RWA figures appear simple and comparable, but not accurately reflect the risk on individual bank balance sheets. This would make the figures less reliable and comparisons across peers less meaningful.

It is true that there is currently variation in RWA levels derived from internal models, however, analysis shows that around 75% of that variation is driven by actual differences in the risk of underlying assets<sup>1</sup>. Of the remaining 25% of variance, much is explained by supervisory interpretations.

<sup>1</sup> The BCBS Regulatory Consistency Assessment Programme, July 2013 <http://www.bis.org/publ/bcbs256.pdf>



Also, whilst bank capital calculations and disclosures are complex – including risk and capital for pillar 2 and pillar 3 requirements, IFRS 9, and stress testing – it is not clear how adding new standardised approaches with input or output floors would help create greater clarity.

Concerns about comparability and complexity should be addressed through harmonisation of definitions, pooling data and subjecting models to a more uniform validation process. Good work in this area is being done by the European Central Bank, European Banking Authority and the Single Supervisory Mechanism. This could be usefully leveraged at the international level, and considered in combination with the BCBS Regulatory Consistency Assessment Programme (RCAP). Indeed, the 2015 RCAP report states the intention to “analyse the variability of regulatory outcomes, to highlight good practices and to identify areas where additional attention from banks and supervisors is required to mitigate unwarranted RWA variability”<sup>2</sup>. We hope that the BCBS will continue this work rather than seek to deal with variability through this dramatic shift away from risk sensitivity.

### **Risk modellability:**

The BCBS has taken a broad approach to categorising exposures as non-modellable. By using such broad definitions, numerous asset classes would be deemed unmodellable simply because they are classified alongside other asset classes that are harder to model. For example, many different exposures and counterparties would be captured by categories such as ‘Other Financials’ or ‘Large Corporates.’ This designates risk insensitive approaches to more counterparties than needed to meet the BCBS objective. We provide more information on this in the annex, but in summary we would encourage the BCBS to develop an approach that makes greater distinctions between institutions and asset classes that are currently treated as one. The fact that most low-default portfolios are low-risk should not be overlooked. Removing internal models for such entities could result in increased capital requirements that would increase the cost of doing business with such corporations.

For exposures that the BCBS deems hard to model, a framework which shifts immediately to a non-risk sensitive approach is unnecessary. For example there should be a greater recognition of collateral throughout the framework. In the current proposals collateral recognition is limited by not permitting Loss-Given Default (LGDs) or Probability of Default (PD) for specialised lending. De-recognition of collateral would also mean that exposures such as repos against non-investment grade collateral would be treated as if they were totally uncollateralised. This could set unwanted incentives for risk management and result in some unsecured loans being economically more attractive than those that are collateralised.

### **Jurisdictional impacts:**

Clearly the BCBS must take a cross jurisdictional view when setting global standards, but it is important that jurisdictional impacts are understood and taken into account when refining the proposals. The commitment to ensuring no significant capital increases should apply across jurisdictions. Corporates in the EU are more reliant on bank credit than in some other jurisdictions – this must be kept in mind when considering the impacts of possible credit contractions on jobs and growth. It is also likely that where banks have business models and balance sheets created under an internal model drive regime they are likely to see different impacts from these BCBS rules than banks that have developed business models based on risk insensitive tools such as a leverage ratio or capital floors.

---

<sup>2</sup> BCBS RACP Report on risk-weighted assets for counterparty credit risk (CCR), October 2015.  
<https://www.bis.org/bcbs/publ/d337.pdf>



As always, we hope that these comments will be helpful in the finalisation of the rules on eliminating unjustified RWA variance and we would be happy to discuss any of the topics covered here in more detail.

We also note that comments are being provided under separate cover on the section of the IRB constraints consultation dealing with Credit Valuation Adjustment.

A handwritten signature in black ink, appearing to read 'MH', with a horizontal line underneath.

Yours Sincerely,  
Matt Holmes  
Head of Group Regulatory Policy



## **Annex 1: Detailed comments**

### **Exposures to Banks**

We believe that the BCBS has taken an overly simplistic approach by only focusing on actual defaults as the key measure for classifying exposures to banks as not fit for an internal ratings based approach. There is room to design a more appropriate framework for these exposures. We cover this below, but it is more fully elaborated in the IIF and GFMA responses to this consultation.

In reality, low-default rates amongst banks are nuanced. Over the past years, numerous banks have been close to defaulting but prevented from doing so by external forces. Whilst these near defaults do not materialise as data points, they do provide valuable information which banks use in internal models. Banks' existing data sets are also complimented by external pooled data. In our view, a total discarding of internal models for exposures to banks undervalues these data inputs and the associated loss of risk sensitivity is unwarranted. We do not share the view that banks are not able to produce reliable models for this segment.

The loss of sensitivity is exacerbated by the fact that the universe of counterparties with whom large global banks operate includes many banks which are not externally rated. These include smaller banks or institutions in emerging markets. The proposed Credit Risk Standardised Approach (CRSA) would lead to one risk weight for almost all of these counterparties and may hamper our ability to accurately rank credit risk across counterparties and portfolios. This bunching of diverse counterparties means that headline numbers could hide important information and risk. This not only reduces the understanding of real risks, but also hinders meaningful comparability between peer banks' exposures and balance sheets.

The alternative proposal made by the trade associations of using BCBS designated risk buckets limits the possible RWA variance and ensures a simple system. These risk buckets can be based on an agreed upon scale of Probability of Default and Loss Given Default designations. The actual maturities would of course be the actual maturities of the exposure. Maintaining a limited role for internal models means that risk sensitivity and detailed analysis of the exposures is taken into account. The outputs being limited to buckets ensures that variance is limited and that more meaningful comparisons across banks are possible

### **Exposures to Other Financials**

The category of Other Financials captures a significant array of counterparties, many with very different business models, risk profiles and default rates. As with the section on exposures to banks, we see issues with attempting to bundle such divergent risks into a single category with a uniform measurement. Below we go into more detail about some of the different types of distinct counterparties that would be treated as a single exposure type. We again support the GFMA counterproposal here which is based upon the same ideas as those expressed for exposures to banks. The IIF counterproposals are also a significant improvement over the BCBS proposal and meet the objective of limiting unjustified variance in outcomes. We see value in using a model based on the Foundation Internal Ratings Based Approach (FIRBA) but permitting banks to use actual maturity of the exposures.

### **Exchanges & Clearing Houses**

The current BCBS proposal has the potential to make provision of liquidity to exchanges and clearing houses less economical. Policy makers and industry participants are taking forward



initiatives that increase the role of these institutions in the market and broader economy. The impact of the BCBS proposals must be considered in this context.

Treating exchanges and clearing houses as Other Financials is problematic as they are generally not externally rated. These entities, would become IRBA ineligible and would be subject to the CRSA. This would have a material impact on the treatment of banks' cash and non cleared exposures where they are currently subject to IRBA.

The credit profile of most exchanges and clearing houses is in the strong investment grade range – historical default and loss experience demonstrate this. Moody's concludes<sup>3</sup>: "The clearing member default management capabilities of clearinghouses...have proved sound through various market cycles and crisis periods. There have been only three clearinghouse failures in an over 100-year history". Increasing risk weightings for these exposures based on the methodology proposed would not be proportionate to the risk these exposures present.

Under the applicable CRSA, the lowest risk weight available for exposures to unrated exchanges and clearing houses is 50%. Under the BCBS standard for centrally cleared exposures<sup>4</sup> due to take effect from 1 January 2017, a 2% risk weight is applicable for trade exposures to qualifying central counterparties. Whilst non-cleared exposures do not have the benefit of the clearing house waterfall structure, a 50% risk weight for well regulated, largely systemically important entities seems unjustifiable.

### Pension Funds/Mutual Funds

The proposal has the potential to make the provision of liquidity and derivative hedging to mutual and pension funds less attractive, which in turn would increase the cost of this type of risk management. These institutions tend to be highly regulated entities and under the current proposal for financial institutions, would become IRBA ineligible and subject to the standardised approach.

Most mutual and pension funds are not externally rated and their general credit profile of counterparties is in the strong investment grade range. This is evidenced by their low historical default and loss experience. For this particular segment, we believe the BCBS should revise its approach for the following reasons:

- 1) Most mutual and pension funds are not externally rated and hence the BCBS reliance on the availability of external ratings does not work for this segment.
- 2) Banks rely on private information from funds to be able to develop ratings and perform overall risk management.
- 3) Given the stability of the sector, there are very few historical defaults. This testifies to the overall strong investment grade profile of the sector. Banks have historical track records and experience of these sectors allowing appropriate internal modelling based on robust methodologies and processes.

---

<sup>3</sup> Page.35 of Moody's Clearing House Rating Methodology published January 2016 summarizes 'CCP Industry Default History'.

<sup>4</sup> Paragraph. 192 of regulation in footnote.1 above: "Where a bank acts as a clearing member of a CCP for its own purposes, a risk weight of 2% must be applied to the bank's trade exposure to the CCP in respect of OTC derivatives, exchange-traded derivative transactions, SFTs and long-settlement transactions. Where the clearing member offers clearing services to clients, the 2% risk weight also applies to the clearing member's trade exposure to the CCP that arises when the clearing member is obligated to reimburse the client for any losses suffered due to changes in the value of its transactions in the event that the CCP defaults"



- 4) The SCRA would assign a 50% risk weight to almost all counterparties banks rate in this segment. This will lead to a large increase in risk weights for a sector which has demonstrated its overall resilience during the financial crisis.

### Hedge Funds

Designing a suitable standardised approach for exposures to Hedge Funds is extremely difficult due to their diverse credit profiles. This is driven by wide ranging trading strategies, governance standards, internal control standards, capital and liquidity positions. The Hedge Fund sector is not externally rated and the public release of information is uncommon due to the proprietary nature of each fund's trading strategies. Indeed funds are prohibited from making information public as it may be construed as public marketing. The current BCBS proposal would most likely apply a flat 100% risk weight irrespective of a counterparty's credit profile. This would be an overly simple treatment which hides the real risk of each banks' exposure. As mentioned before, this can create unwanted incentives in terms of bank capital allocation.

For this segment we believe the BCBS needs to revise its proposal for following reasons:

- 1) One of the principal justifications for the BCBS deeming Financial Institutions to be IRBA ineligible is the availability of external ratings and market based indicators. However, this is not the case for the Hedge Fund sector.
- 2) Banks rely on direct provision of highly confidential information from funds to be able to assign ratings and set overall risk appetite.
- 3) This segment does not suffer from a lack of historical default data as some other financial institution sectors do. The available historical information, in combination with banks' strong track records and experience of these sectors, means that internal models are informed by robust methodologies and processes.
- 4) A flat 100% risk weight de-links diverse credit standing of counterparties in this sector to bank capital requirements, thereby reducing capital driven incentive for prudent lending and risk management.

### Exposures to Corporates

The BCBS has proposed allocating banks' exposures to corporates into three buckets based on consolidated balance sheet size and on revenues. It is unclear how these bucketings have been designated, how they indicate low-default, or how they relate to a banks' ability to model. It is however likely that the BCBS methodology would penalise the largest corporate counterparties that tend to have safest credit profiles. Should this be the case, it would be a prime example of incentives for extending credit, and the benefits to banks of having safer counterparties, being eroded. With this approach, the BCBS proposal could incentivise exposures to riskier counterparties. Figure 5 in Annex 2 shows which Stoxx 600 companies would move from internal models to the standardised approach under the BCBS proposed framework. This is exacerbated by the proposal treating all corporates that are part of a consolidated group with total assets of above 50bn Euros ineligible for internal models. To better calibrate the corporates this applies to, the BCBS should designate classifications at the legal entity level.

Credit ratings have a direct impact on banks' risk appetite and decisions to lend to a company. If banks were to rely only on external ratings they may not be able to lend to clients who have recovered from stress and are stabilising. Industry experience indicates that external rating





agencies are much slower than banks in upgrading a company which has recovered from distress. Such companies would often need further bank financing to materialise their business plans and lack of bank financing or liquidity would hamper their ability to grow. The additional risk of overreliance on external ratings is that judgements made by a limited number of institutions could drive capital allocations and investment decisions for many banks. This could create broader problems were those judgements to prove inaccurate.

### Modellability

For any portfolio, sub-segments can be artificially identified which may be considered low default and hence classified as not meeting criteria on 'modellability'. By eliminating the permission to internally model parameters for all entities in a consolidated group that meets the EUR 50bn asset threshold, the BCBS is significantly increasing the number of corporates and aggregate exposures that would be deemed unmodellable. This disadvantages corporates that are part of a larger group regardless of their actual risk profile, or modellability. This could create artificial distortions and incentivise banks away from having these corporates as counterparties. Similarly, very few counterparties with an externally rated parent or holding companies are also externally rated themselves. The benefit of keeping these entities under the internal rating based approach is that banks are able to have consistent ratings and hence RWA for different parts of the corporate structure.

### F-IRB Bucket

The BCBS has introduced a middle category of Foundation-IRB approach which prohibits banks from using own estimates of Loss Given Default (LGD) or Credit Conversion Factors. We believe that the BCBS is overly relying on the size of a corporate as a proxy for risk. Unlike probability of default, corporate size is not a key determinant of LGD. Factors that are important for this type of assessment include: jurisdiction (contract enforceability), seniority and form of facility, borrower's capital structure, risk mitigation and legal documentation.

We believe that portfolio segmentation should be primarily based on commonality in fundamental credit drivers. These provide for distinctions which lead to higher quality risk bucketing and calculation. This would be a significant improvement over segmentation based on size. Therefore we would support the BCBS eliminating the current proposal and continue usage of IRBA for corporate exposures.

To deal with concerns around comparability and unjustified variance, the BCBS could introduce quality-checks. For example, a minimum number of default points could be mandated to justify the use of models. Disclosure to supervisors on the details and performance of models could also be mandated. This would reduce unjustified variance without limiting bank credit to the corporates that are the engines of jobs and growth.

### Input Floors/Mortgage Exposures

In line with our response earlier this year to the BCBS consultation on SACR, we would like to re-iterate the need to provide further clarity on the Income Producing Real Estate (IPRE) definition as the current scope seems to be unnecessarily broad. While in earlier BCBS publications, IPRE was defined in the scope of specialised lending to corporate counterparties, the current consultation paper seems to exclude retail IPRE from the application of A-IRB by limiting retail mortgages to owner-occupied real estate.





We question the need to remove IRBA eligibility for IPRE retail portfolios to limit unjustified variance in RWA. For IPRE exposure to individuals, the criteria for assessing reliance of modelling (sufficient quantitative and granular data to build statistically stable scorecards) are all fulfilled and are similar to retail exposures for which A-IRB approach is still foreseen. A switch to a standardised approach for IPRE exposure could increase capital requirements drastically while risks are similar to those for owner-occupied mortgages.

### **Wealth Management Portfolios**

We recommend the introduction of additional exposure and portfolio categories for Wealth Management (WM) lending with risk weightings calibrated by their specific loss data. The consultation makes no reference to WM portfolios covering lending to High and Ultra High Net Worth Individuals. Currently WM exposures get allocated to the 'corporate', 'retail' or other categories despite their different nature and risk. The risks associated with these exposures are extremely low due to the high quality and often over-collateralised nature of the loans. We believe that the current proposals would result in RWA increases that would be multiples of the current level which would be out of proportion with observable default data. This disproportionately impacts WM lending activities and the recipients of those services.

### **Specialised Lending**

Our feedback on specialised lending must be read in conjunction with further detailed feedback provided as part of BCBS consultation on SACR<sup>5</sup>, where we provided counterproposals and analysis for Commercial Real Estate, project finance and object finance.

Specialised lending activities by their very nature are not suited to standardised approaches. They are carefully structured loans based on detailed assessment and underwriting which is specific to each transaction and to an institutions risk appetite. Collateral analysis and valuation also plays a key part in ensuring such facilities are properly risk managed. Such details can only be captured in a properly calibrated advanced approach model.

The BCBS proposal takes a blanket approach to all specialised lending activities by classifying them all IRB ineligible regardless of the specifics of each asset class or institutional characteristics. We believe that an asset class and institution specific approach is needed instead. Furthermore, the standardised risk weights remove linkages between safe and skilled underwriting, and resulting capital requirements.

There is room for improvement in both the proposed IRB supervisory slotting approach, and the standardised approach. Neither of these proposals appropriately capture risk through the available risk weights. For example, low LTV loans secured by commercial real estate collateral could lead to on average a seven times higher risk weight. As such these proposals could result in loans backed by low or ultra-prime real estate collateral becoming more costly. This would adversely impact the real economy as such borrowers may find it difficult to refinance through banks.

Should an alternative method for specialised lending be required, we propose a slotting approach based on granular risk bucketing. For the CRSA, our consultation response set out alternative proposals to enhance risk sensitivity whilst maintaining the standardised approach's simplicity. As per the trade association proposals on exposures to banks and financials, the inputs would be based on internal models so as to take into account information such as

---

<sup>5</sup> <http://www.bis.org/bcbs/publ/comments/d347/deutschebank.pdf>



collateral, location and other important information. The output buckets would be designated by regulators. Regulators could use pooled data from banks in order to correctly calibrate these ranges and buckets

### Scale & Expertise of institution

The BCBS proposal does not reflect the divergence in institutional scale and expertise in specialised lending activities. Banks can have substantial scale in all or some of the specialised lending activities. Such scale and expertise can be a prerequisite for a particular bank to develop:

- 1) Sufficiently large and diverse portfolio
- 2) Specialist knowledge across departments
- 3) Processes to support underwriting, monitoring and data collection activities
- 4) Meaningful performance data history across cycles
- 5) Robust models, scorecards and methodologies (rating as well as pricing)

The above factors are not unique to specialised lending activities and are similarly applicable to other forms of bank lending, but given the specific nature of the underlying asset class for specialised lending their importance is even greater. Institutions with sufficient scale and expertise or where external data pooling is available, are able to develop robust rating methodologies. As such we would advise BCBS to develop criteria which allows national regulators and supervisors to consistently determine the use of internal models approach.

The BCBS must take into account that the choice of modelling approaches for specialised lending activities is not restricted to classical regression approaches. Sophisticated institutions can model each transaction individually, incorporating structural and risk features. For example, for Commercial Real Estate loans, simulation of cash flows can be undertaken capturing rents, vacancy rates, interest rates amongst others.

### Project Finance

Banks' own data can be further enhanced by publicly available sources. For example Moody's<sup>6</sup> maintains a Project Finance data base with a detailed report published annually.

### Shipping Finance

A lack of modelling data is not an issue for Shipping Finance as default data is available. Any slotting approach based solely on LTV ratios will not adequately taking into account that credit risk in shipping finance heavily depends on the counterparty (type/size of operation, visibility/sustainability of operating cash flows, balance sheet ratios and so on.) and on asset quality (for example vessel age and type).

### Aircraft Finance

Again, aircraft finance does not suffer from a lack of available modelling data. Sophisticated internal models include additional metrics such as externally assessed asset values performed throughout the transaction (for example Aircraft Value Analysis Company). A slotting approach based solely on LTV ratios does not adequately take into account low risk and loss levels in

---

<sup>6</sup> [https://www.moodys.com/researchdocumentcontentpage.aspx?docid=PBC\\_1018664](https://www.moodys.com/researchdocumentcontentpage.aspx?docid=PBC_1018664)



aircraft-backed financings. These are based on reliable collateral data and strong legal rights including control over cash flows, a comprehensive security package and uniform mechanics to enforce against secured assets based on the adoption of the Cape Town Convention.

### Commercial real estate lending (CRE)

CRE particularly does not suffer from lack of available modelling data. Such data sets have been further enriched more recently during the financial crisis as well.

### Securitisation

The proposals will also have a material impact on securitisation exposures that are currently under the IRB (SEC-IRB) approach. This is due to the application of higher risk weights to the individual positions that are used to calculate the capital requirement of the underlying securitised pool (KIRB), and the ability to determine the exposure-weighted loss given default (LGD) of the securitised portfolio. These are key inputs to the SEC-IRBA risk weighted asset calculation. In addition, it is possible that as a result of the IRB constraints consultation, the scope of the SEC-IRB approach will be reduced. This is because to apply the SEC-IRBA approach, the bank must be allowed to calculate KIRB for at least 95% of the underlying securitised risk-weighted exposure amounts. If internal model approaches for exposures to banks or other financial institutions, large corporates and specialised lending exposures are no longer be available, the SEC-IRB approach will no longer be applicable to securitisations with these types underlying exposures. This would be true for many non-retail exposure pools (including trade finance and certain corporate receivables for instance). Consequently, the use of the approach which sits at the top of the hierarchy will become much less frequent, with the less sophisticated external ratings or SEC-SA approaches being used instead. We understand that this would be contradictory to the BCBS objectives for the securitisation industry as well as the push at the EU level to support securitisation markets. Lastly, the impact on KIRB of the introduction of an eventual capital floor is unclear and needs consideration.

Previous analysis and industry feedback on the BCBS securitisation proposals (finalised in 2014) identified a significant increase in RWAs for securitisations, which would likely have a negative impact on the development of the market. As the BCBS is aware, there have been subsequent proposals to reconsider and mitigate this RWA impact, most notably for Simple, Transparent and Comparable (STC) securitisations within the EU. Before its finalisation, the new securitisation framework was subject to calibration iterations based on the KIRB or KSA of the reference pool using current IRB and SA methodologies and calibration levels. The present proposals imply that the securitisation framework will need to re-calibrated again to prevent a further increase in risk weights for these exposures.

Finally, should corporate exposures for instance be treated under several different regulatory approaches (IRBA, IRBF, Standardised depending on whether they belong to a group or not) it will become extremely challenging for originating banks to explain the historical performance of the securitised portfolios to investors and rating agencies as they will follow different origination, pricing and monitoring procedures once their regulatory treatments diverge. We think this increase in opacity and complexity contradicts the BCBS objectives of simplicity and comparability, and could result in a further increase in the cost of securitisations (and thus ultimately increased borrowing costs for end users).

### Floors

#### IMM-CCR Floor



We agree with the BCBS' aim of improving the comparability of Counterparty Credit Risk requirements across banks. This is best achieved by improving the robustness, governance and transparency of internal models.

The application of arbitrary floors reduces risk sensitivity and reliance on models. As stated previously, this could lead to reduced investment in continued improvement of models.

Also as highlighted in the cover letter, we urge the BCBS to follow up on its own recommendations published in its 2015 report: "Regulatory Consistency Assessment Programme (RCAP) - report on risk-weighted assets for counterparty credit risk (CCR)"<sup>7</sup>.

In section 1.5.2 of this BCBS report the following three key areas highlighted:

1. The frequency of recalibration for effective expected positive exposure (EEPE) based on current market data.
2. The minimum number of scenarios.
3. Modelling of margining mechanisms.

We stand ready to work with the BCBS on all three of these identified areas. We particularly believe that providing further regulatory guidance on frequency of recalibration should be a priority, and a relatively simple task.

Further we would like to highlight that the CCR measure is derived from market price and linked volatilities for which there is high quality historical data through market shocks and economic cycles. There should not be any of the data quality or availability concerns which are informing other areas of the BCBS work. More detail is provided in Annex 3.

### **Parameter estimation practices, floors & fixed supervisory parameters**

#### **1) Rating System Design (Probability of Default, PD)**

We believe that the BCBS should reconsider its proposal to use through-the-cycle rather than point-in-time ratings. In our view, point in time ratings help ensure proper measurement of risk and risk appetite (and to reflect such in product pricing). These are essential to loan origination and ongoing monitoring, both at counterparty and portfolio level. Our internal analysis has concluded that the usage of through-the-cycle ratings for loan granting is not appropriate and this is substantiated by International Monetary Fund analysis<sup>8</sup>.

The through-the-cycle approach is useful in specific circumstances such as for rating agencies. This is because they provide for a more stable rating which is useful for buy side institutional investors. They are however subject to "rating cliff effects and also suffer from inferior performance in predicting future defaults...because they are typically smooth and delay rating changes."<sup>9</sup> Banks using point in time ratings are able to better reflect the relative riskiness of exposures exactly when needed.

---

<sup>7</sup> <https://www.bis.org/bcbs/publ/d337.htm>

<sup>8</sup> IMF - 2013 Working paper; "Rating Through-the-Cycle: What does the Concept Imply for Rating Stability and Accuracy?".  
<https://www.imf.org/external/pubs/ft/wp/2013/wp1364.pdf>

<sup>9</sup> *ibid*



In its consultation, the BCBS has not provided any details on clarifying what it means by “cycle” and there is currently no harmonised definition. As such we believe in the absence of further detailed supervisory guidance the current BCBS proposal could lead to new areas in which bank internal models diverge from each other. This would run contrary to the BCBS objectives of simplicity and comparability.

Mandating through the cycle ratings would also interfere with the functioning of the IRB ‘use test’<sup>10</sup> which requires that “internal ratings and default and loss estimates must play an essential role in the credit approval, risk management, internal capital allocation and corporate governance functions of banks using the IRB approach. Rating systems and estimates designed and implemented exclusively for the purpose of qualifying for the IRB approach and used only to provide IRB inputs are not acceptable.”<sup>11</sup>

If BCBS were to mandate through the cycle ratings, banks would need to maintain two sets of rating systems, one for loan granting and one for RWA calculation. Not only would this permanently increase cost base, but the BCBS would need to explicitly allow two separately calibrated PD parameters for loan granting and RWA calculation.

#### Definition of Downturn

Chapter 4.1 of the consultative document requires banks to use “data from downturn years” with a minimum weight of one in ten. We would appreciate clarity on how “downturn years” are to be defined.

#### Seasoning Effects

We welcome the BCBS’ efforts to identify important risk drivers and improve internal risk models. However, a quantitative statistical risk model can capture only those risk factors which are statistically significant based on historic information. Enforced inclusion of non-significant risk drivers may result in insignificant estimates and lead to model instability. We therefore propose that the banks should include seasoning effects only if they deem them to be relevant and statistically significant for the portfolio in scope.

## **2) Loss given default (LGD)**

Overly conservative LGDs delinked to bank’s lending practices could have the unintended consequence of increasing risk taking versus current underwriting standards.

#### Floors

Throughout different portfolios, countries and jurisdictions, we observe LGDs on internal data that are below the floor values proposed by the BCBS, but still vary significantly. Introducing the proposed floors would lead to risk insensitivity and could incentivise banks to lend in riskier areas.

Instead of introducing the proposed floors, we recommend that the BCBS provides more specific guidelines for internal modelling of the LGD-parameter. This would improve

---

<sup>10</sup> [http://www.bis.org/publ/bcbs\\_n19.pdf](http://www.bis.org/publ/bcbs_n19.pdf)

<sup>11</sup> *ibid*



comparability in the capital requirement of credit risk and to keep the existing risk sensitivity for internally modelled portfolios in place.

With this proviso, we would nevertheless like to comment on the proposed floors themselves. In many jurisdictions it is uncommon to have a collateralisation ratio of 100% for mortgages. We assume the BCBS proposal would classify unsecured parts of mortgage exposures as “other retail.” Therefore a final LGD floor would have to be calculated as a weighted average of the LGD floor for the unsecured portion and the LGD floor for the secured portion. This would significantly increase RWA for this portfolio which is why we recommend the proposed floor for mortgage products to be a joined floor for the secured and unsecured parts.

In the current period of low interest rates, Forward Loans are a common product in many jurisdictions. Forward Loans are mortgage loans with fixed interest rates, used to release existing mortgage loans at the end of their fixed interest period which a customer can apply for up to four years in advance. The money is not paid out unless the respective land charge is transferred and hence the loan itself is secured. Nevertheless, banks have to calculate RWA for these loans during the standby time, using the LGD for unsecured mortgages as collateral is not available in this period. To avoid extreme impacts on this product, we recommend the floor be applied on a portfolio level.

For the secured part of mortgage products a LGD floor of 10% is proposed, while for commercial and residential real estate products a LGD floor of 15% is proposed. Using different LGDs for the same collateral depending on the product it secures, is counterintuitive and onerous to implement. We recommend that the BCBS rethink this proposal.

#### LGD Downturn

The treatment and calibration of downturn LGDs is mentioned several times in the paper. Section 4.2 sets the general downturn LGD floors for F-IRB and A-IRB approaches. In Section 4.2.2 the BCBS proposes an increase in haircuts “to reflect downturn conditions”. Calibration of haircuts and estimation of LGDs are performed in conjunction and should be considered as one set of parameters. We therefore believe that inclusion of downturn add-ons in LGD as well as haircuts is excessive and will lead to unjustified increase on capital.

### **Exposure at default and credit conversion factors (CCFs)**

#### CCF Floors

The BCBS proposes that Exposure At Default (EAD) to be subject to a floor, based on CCFs for off-balance sheet items under the standardised approach. These proposed CCFs do not reflect actual drawing behaviour we observe on internal historical data. Additionally, the proposed floor would disallow any CCFs lower than 37.5% (for non-retail exposures) which we deem overly conservative.

#### CCF levels

We share the view expressed in the GFMA response that modeling for CCFs should be treated similarly to LGDs. Modelling should be retained for all corporate exposures, trade finance and specialised lending. Moreover, they should not be subject to the floor being proposed. We also believe that CCF levels for unconditionally cancellable commitments should be set a 0% consistently for both the advanced and standardised approaches.





Reducing internal modelling of CCFs to revolving commitments significantly affects banks' strategic decisions regarding non-revolving commitments. Currently there is consideration given to the difference in drawing behaviour for identical non-revolving products across different jurisdictions and business areas. Using the same CCF for all of those products might lead the bank to grant loans in countries or business areas, which may not be case if decisions were based on internal CCFs. This lack of sensitivity could increase the risk that banks take on. The proposal to use the CCFs specified in the standardised approach for a larger range of exposures does not account for specific national features that result in higher or lower drawing behaviour than similar products in other jurisdictions.

We consider the proposed CCFs too high, in particular with regards to the proposed range of 50-75% for Commitments (except retail unconditionally cancellable lines). Excluding non-retail commitments that are unconditionally cancellable from the preferential treatment as applied for retail related ones does not seem justified. The introduction of the proposed CCFs will negatively impact the working capital funding of corporates. As the BCBS proposal does not reflect historical data on drawing behaviour around the use and loss levels associated with such credit lines, we have significant concerns that this proposed treatment will impede banks' abilities to provide funding and meet client demand in areas such as, trade finance, corporate working capital needs and project finance. These products would also be negatively impacted if much used credit risk insurance protection is not recognised under each modelling category. It should be noted that this runs directly counter to the intention of policy makers globally to increase funding for trade, growth and jobs. We also believe that more granular levels should be used for facilities that are extended to Multilateral Development Banks as well as other officially supported finance facilities.

It should also be noted that inflated CCFs will not only result in artificially high RWA figures in this framework, but will also inflate bank balance sheets for leverage ratio purposes. To cover increasing costs, banks would have to increase customers' interest rates and collect fees for accommodated but unused commitments, which currently is not the case. Our initial internal calculations suggest that the proposed CCFs could result in up to a 15 basis point decrease in bank leverage ratios. As has been discussed at length, the leverage ratio is a non-risk sensitive tool that can result in perverse incentives from a risk-taking and balance sheet allocation perspective – further enhancing its binding nature through apparently inaccurate CCFs in the SACR framework would be a very negative, and easily avoidable, consequence.

We recommend that the BCBS reconsider these proposals taking into account the impact on lending and trade as well as data from the QIS exercise. One possible reason for this disconnect between the proposed calibration and the historical data may have been due to differing jurisdictional practice around definitions and through-the-cycle versus point-in-time calculation.

In order to improve comparability and address excessive variability in the capital requirement of credit risk, we recommend that BCBS provides more granular guidelines for internal CCF modelling instead of setting fixed parameter values.

## **Annex 2: Corporates that will move onto the standardised approach**

**Figure 5: Stoxx 600 companies that have assets over EUR 50bn and will move onto standardised**





| Ticker     | Name                         | Sector                 | Assets | ST debt | LT debt | Total debt | Revenues | S&P rating | RW STD |
|------------|------------------------------|------------------------|--------|---------|---------|------------|----------|------------|--------|
| VOW3 GY    | VOLKSWAGEN AG-PREF           | Consumer, Cyclical     | 351    | 66      | 68      | 134        | 202      | BBB+       | 100%   |
| RDSA NA    | ROYAL DUTCH SHELL PLC-A SHS  | Energy                 | 313    | 1       | 49      | 49         | 239      | A+ *       | 50%    |
| EDF FP     | EDF                          | Utilities              | 279    | 10      | 53      | 63         | 75       | A+ *       | 50%    |
| BP/ LN     | BP PLC                       | Energy                 | 241    | 6       | 43      | 49         | 201      | A-         | 50%    |
| DAI GY     | DAIMLER AG-REGISTERED SHARES | Consumer, Cyclical     | 217    | 19      | 54      | 73         | 149      | A-         | 50%    |
| FP FP      | TOTAL SA                     | Energy                 | 207    | 7       | 38      | 45         | 129      | A+         | 50%    |
| BMW GY     | BAYERISCHE MOTOREN WERKE AG  | Consumer, Cyclical     | 172    | 40      | 47      | 87         | 92       | A+         | 50%    |
| VOD LN     | VODAFONE GROUP PLC           | Communications         | 170    | 17      | 31      | 48         | 54       | BBB+       | 100%   |
| ENEL IM    | ENEL SPA                     | Utilities              | 161    | 3       | 45      | 48         | 76       | BBB        | 100%   |
| ENGI FP    | ENGIE                        | Utilities              | 161    | 8       | 28      | 36         | 70       | A *        | 50%    |
| DTE GY     | DEUTSCHE TELEKOM AG-REG      | Communications         | 144    | 14      | 47      | 61         | 69       | BBB+       | 100%   |
| ENI IM     | ENI SPA                      | Energy                 | 135    | 6       | 19      | 25         | 68       | BBB+       | 100%   |
| ABI BB     | ANHEUSER-BUSCH INBEV SA/ NV  | Consumer, Non-cyclical | 124    | 2       | 40      | 42         | 39       | A-         | 50%    |
| TEF SQ     | TELEFONICA SA                | Communications         | 123    | 13      | 44      | 57         | 47       | BBB        | 100%   |
| NOVN VX    | NOVARTIS AG-REG              | Consumer, Non-cyclical | 121    | 2       | 15      | 17         | 45       | AA-        | 20%    |
| SIE GY     | SIEMENS AG-REG               | Industrial             | 120    | 3       | 28      | 31         | 76       | A+         | 50%    |
| GLEN LN    | GLENCORE PLC                 | Basic Materials        | 118    | 6       | 30      | 36         | 154      | BBB-       | 100%   |
| NESN VX    | NESTLE SA-REG                | Consumer, Non-cyclical | 114    | 9       | 11      | 20         | 83       | AA         | 20%    |
| EOAN GY    | E.ON SE                      | Utilities              | 114    | 3       | 15      | 18         | 116      | BBB+ *     | 100%   |
| BLT LN     | BHP BILLITON PLC             | Basic Materials        | 112    | 3       | 25      | 28         | 37       | A          | 50%    |
| AIR FP     | AIRBUS GROUP SE              | Industrial             | 107    | 3       | 8       | 9          | 64       | A          | 50%    |
| FCA IM     | FIAT CHRYSLER AUTOMOBILES NV | Consumer, Cyclical     | 105    | 0       | 28      | 28         | 111      | BB         | 100%   |
| IBE SQ     | IBERDROLA SA                 | Utilities              | 105    | 5       | 25      | 30         | 31       | BBB        | 100%   |
| SAN FP     | SANOFI                       | Consumer, Non-cyclical | 102    | 0       | 13      | 13         | 35       | AA         | 20%    |
| STL NO     | STATOIL ASA                  | Energy                 | 100    | 0       | 27      | 27         | 52       | A+         | 50%    |
| ORA FP     | ORANGE                       | Communications         | 91     | 5       | 30      | 34         | 40       | BBB+       | 100%   |
| RNO FP     | RENAULT SA                   | Consumer, Cyclical     | 91     | 35      | 6       | 41         | 45       | BBB-       | 100%   |
| RIO LN     | RIO TINTO PLC                | Basic Materials        | 84     | 2       | 19      | 21         | 31       | A-         | 50%    |
| RWE GY     | RWE AG                       | Utilities              | 79     | 2       | 17      | 19         | 46       | BBB *      | 100%   |
| NG/ LN     | NATIONAL GRID PLC            | Utilities              | 76     | 4       | 32      | 36         | 19       | A-         | 50%    |
| BAYN GY    | BAYER AG-REG                 | Consumer, Non-cyclical | 74     | 3       | 16      | 19         | 46       | A-         | 50%    |
| GSK LN     | GLAXOSMITHKLINE PLC          | Consumer, Non-cyclical | 72     | 2       | 21      | 23         | 33       | A+         | 50%    |
| TIT IM     | TELECOM ITALIA SPA           | Communications         | 71     | 6       | 31      | 37         | 20       | BB+        | 100%   |
| BAS GY     | BASF SE                      | Basic Materials        | 71     | 4       | 11      | 15         | 70       | A          | 50%    |
| MT NA      | ARCELORMITTAL                | Basic Materials        | 71     | 0       | 16      | 16         | 57       | BB         | 100%   |
| ROG VX     | ROCHE HOLDING AG-GENUSSCHEIN | Consumer, Non-cyclical | 70     | 6       | 16      | 21         | 45       | AA         | 20%    |
| LHN VX     | LAFARGEHOLCIM LTD-REG        | Industrial             | 67     | 3       | 14      | 17         | 22       | BBB        | 100%   |
| REP SQ     | REPSOL SA                    | Energy                 | 63     | 7       | 10      | 17         | 40       | BBB-       | 100%   |
| DG FP      | VINCI SA                     | Industrial             | 62     | 2       | 15      | 17         | 39       | A-         | 50%    |
| TSKO LN    | TESCO PLC                    | Consumer, Non-cyclical | 61     | 3       | 15      | 17         | 78       | BB+        | 100%   |
| CDI FP     | CHRISTIAN DIOR SE            | Consumer, Cyclical     | 60     | 4       | 6       | 10         | 35       | NA         | 100%   |
| MC FP      | LVMH MOET HENNESSY LOUIS VUI | Consumer, Cyclical     | 58     | 3       | 5       | 8          | 36       | A+         | 50%    |
| MAERSKB DC | AP MOELLER-MAERSK A/S-B      | Industrial             | 57     | 1       | 10      | 12         | 36       | BBB+       | 100%   |
| AZN LN     | ASTRAZENCA PLC               | Consumer, Non-cyclical | 55     | 1       | 13      | 14         | 22       | A-         | 50%    |
| ULVR LN    | UNILEVER PLC                 | Consumer, Non-cyclical | 52     | 5       | 10      | 15         | 53       | A+         | 50%    |

Source: Deutsche Bank, Bloomberg Finance LP, based on 2015 financials

### **Annex 3: Technical considerations for the Standardised Approach to Counterparty Credit Risk (SA-CCR)**

Whilst we reiterate our view that additional capital floors based on the SA-CCR should not be incorporated in the credit risk framework, we would like to take this opportunity to suggest possible improvements to the SA-CCR for its broader improvement.

#### **Supervisory factor calibration for Interest Rates (IR)**

The Potential Future Exposures (PFE) for IR derivatives is calculated using a Supervisory Factor of 0.5%, regardless of currency. This approach does not take into consideration the differences in volatilities of the various currencies. Therefore, we recommend a more granular calibration of the supervisory factor for the IR asset class. This could be achieved by grouping currencies with similar volatilities into bands, and assigning a different supervisory factor to each band. This approach is also in line with the calibration of supervisory factors for Credit and



Commodities asset classes as defined under SA-CCR, where multiple bands, based on ratings and commodity types respectively, are proposed. Employing a similar approach for the IR asset class, which is a meaningful contributor to counterparty credit risk, will allow for better risk assessment.

As an example, we have shown a proposed bucketing for the most widely traded currencies into bands based on analysis of historical data going back to 2008).

**Table 1: Volatilities based on data from 2008 to 2016**

| Ccy     | Vol (bp) |
|---------|----------|
| JPY 10Y | 2        |
| EUR 10Y | 15       |
| GBP 10Y | 35       |
| USD 10Y | 53       |
| AUD 10Y | 44       |
| NZD 10Y | 44       |
| CAD 10Y | 40       |
| SGD 10Y | 61       |
| RUB 10Y | 307      |
| TRY 10Y | 271      |
| BRL 10Y | 366      |
| MXN 10Y | 116      |
| ZAR 10Y | 145      |

The average volatility as per the table above is ~115 bp which translates to an approximate standard deviation of 0.5% (same as the Supervisory Factor for IR). This is derived as follows:

$$115bp \times \frac{1}{\sqrt{2 \cdot \pi}} = \sim 0.5\%$$

The above formulation is based on the standard normal distribution assumption as per BCBS working paper No. 26<sup>12</sup>. The currencies clearly fall into two bands based on their volatilities – first band (shaded green) has an average vol of ~40bp and the second band (yellow) has an average vol of ~240bp. Using the same formula as stated above, these volatilities imply a Supervisory Factor of 0.2% for the green band, and 1% for the yellow band.

#### Recognition of diversification within IR and FX hedging sets

Within IR and FX asset classes, add-ons for different hedging sets are aggregated via simple summation.

$$AddOn = \sum_j AddOn_j^{(IR/FX)}$$

This formulation does not allow any diversification to be recognised across different hedging sets, and assumes worst correlation between every two currencies and every two currency pairs. A simple summation implies that all the interest rates and FX rates always move in a manner that leads to increase in exposure for all the hedging sets. As an example, if you consider exposures to EUR/USD and BRL/USD, the above formula for AddOn calculation

<sup>12</sup> [http://www.bis.org/publ/bcbs\\_wp26.pdf](http://www.bis.org/publ/bcbs_wp26.pdf)



assumes that two FX rates will always move in a way that leads to increase in both the exposures. This is not consistent with observed price movements in the market, where movement in exchange rates are not always adverse for all exposures of a bank.

We find this approach to be overly conservative. It is important to recognise the correlation among currencies and currency pairs within IR and FX asset classes respectively. This issue has been acknowledged in the context of the Fundamental Review of the Trading Book, which was revised to permit diversification benefits. We would recommend revising SA-CCR to ensure consistency and a more risk-sensitive approach.

#### Recognising triangulation among currency pairs

The FX asset class does not allow netting among triangular FX trades in which the net exposure is zero. For example, a bank enters into three FX forwards with the same counterparty:

|         | BUY      | SELL     |
|---------|----------|----------|
| TRADE 1 | EUR 7    | USD 10   |
| TRADE 2 | USD 10   | JPY 1000 |
| TRADE 3 | JPY 1000 | EUR 7    |
| Net     | 0        | 0        |

The cash flows net down to 0, so there is no risk. When a bank calculates the PFE for these trades, the SA-CCR formulation leads to a non-zero exposure for the trades. This is an overestimation of the actual risk, and needs to be addressed.

The same is also true where the cash flows do not net down to zero, the trades can still be collapsed to net cash flows in each currency:

|         | BUY     | SELL    |
|---------|---------|---------|
| TRADE 1 | EUR 8   | USD 10  |
| TRADE 2 | USD 9   | JPY 900 |
| TRADE 3 | JPY 900 | EUR 7   |
| Net     | EUR 1   | USD 1   |

It would be more appropriate to allow netting of cash flows in each currency to a single amount and then use the net buy amount converted to the domestic currency as the effective notional. For the above case the three trades would net to a single trade in the EUR/USD hedging set with an effective notional of EUR 1 converted to the domestic currency. This method is in line with the general FX risk management practices and allows capturing of outstanding risk for any currency, while recognising the offsetting nature of FX swaps.

#### Recalibration of alpha factor

Both the PFE and RC components of EAD under SA-CCR are multiplied with an alpha factor equal to 1.4 which was set by the BCBS based on ISDA documents written in 2003. The derivatives market has evolved significantly since 2003 and derivatives transactions are now much better collateralised, therefore the conclusions from the 2003 paper are no longer relevant. As a result, alpha needs to be recalibrated to reflect the new market conditions.

#### Better modelling of PFE for trades with positive MtM



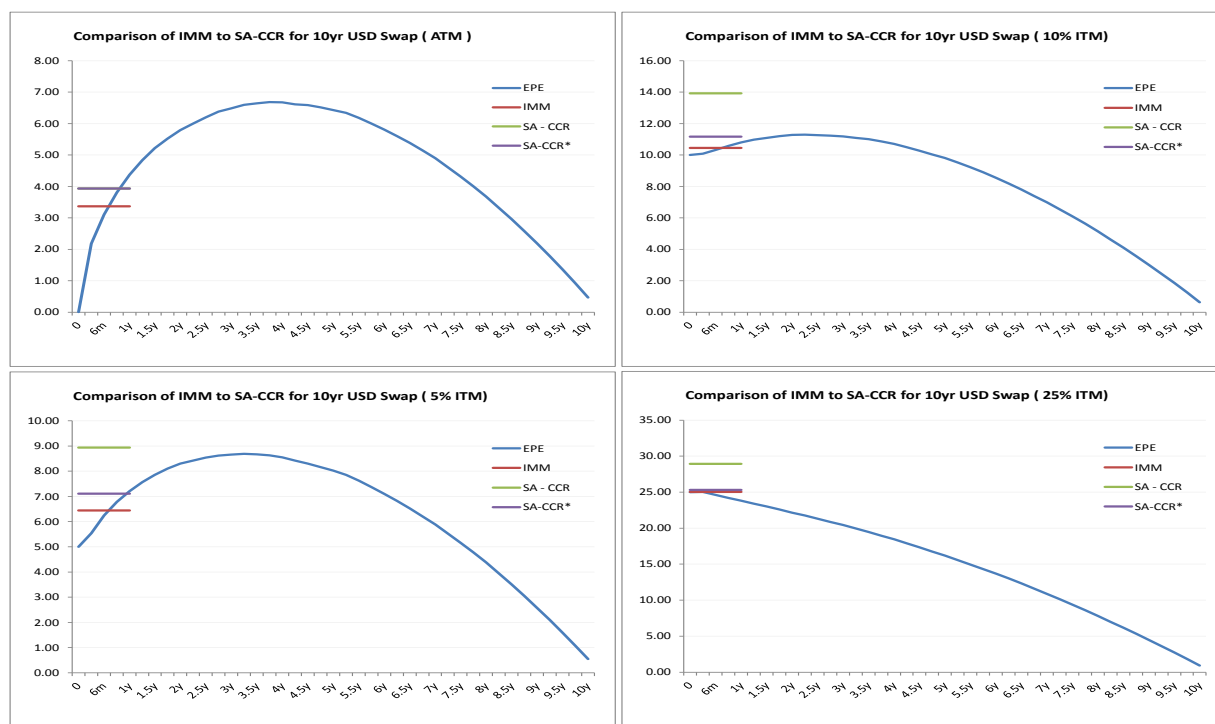
The AddOn calculation for each of the five asset classes is based on calculating a stylised Effective EPE (EEPE) calculation under the assumption that the net mark-to-market (MtM) of the portfolio within a netting set is zero. This assumption is generally appropriate for margined transactions, but in the absence of a margin agreement, the formulae provided under SA-CCR PFE calculation result in an overestimate of EEPE where bank is owed money by the counterparty, i.e. the net MtM of the portfolio is positive for the bank. An AddOn calculated based on a stylised ATM option will significantly overstate the volatility value for a net positive MTM trade, as shown in the example in Annex 4. We understand the BCBS' rationale for simplification, but believe that this should be balanced with sufficient risk sensitivity. This can be achieved through the introduction of an exponential function similar to the one used in the multiplier which allows for the recognition of excess collateral. This does not add a great deal of complexity, but will ensure that the PFE estimates are in line with the EEPE they are designed to estimate.

#### Additional clarity on how non-vanilla option structures are treated

Supervisory delta for options, across all asset classes, is calculated using a Black-Scholes formula. It is quite straightforward for what to do in case of simple Put and Call options. However, there is no clarity on how the combination of options is treated – Caps, Floors, Saddles, Collars, etc. Such combinations typically have both Puts and Calls in various arrangements, and some of these, like Caps and Floors, cannot be represented as linear combinations of Puts and Calls. The regulatory text is silent on how such structures would be treated under SA-CCR and some guidance on this would be welcome. As previously suggested by ISDA, we would recommend permitting the use of internal model deltas as is permitted under FRTB.

#### **Annex 4: PFE modelling example**

We have modelled EAD for four 10 year USD receiver swaps, with PV ranging from 0-25, under IMM and SA-CCR. As shown in the graphs below, SA-CCR always results in a more conservative EAD estimate. However, for swaps with a higher positive MTM (counterparty owes the bank money under the swap), the difference between SA-CCR-EAD and IMM-EAD increases (i.e. SA-CCR EAD estimate is overly conservative). We have also shown the impact of the inclusion of an exponential function to address this (SA-CCR\*).





EU Transparency Register ID Number 271912611231-56

Basel Committee on Banking Supervision  
Centralbahnplatz 2  
CH-4002 Basel  
Switzerland

Deutsche Bank AG  
Winchester House  
1 Great Winchester Street  
London EC2N 2DB  
Tel +44 (0) 207 545 8380  
Fax +44 (0) 207 545 8553

24 June 2016

***Consultative document on “Reducing variation in credit risk-weighted assets – constraints on the use of internal model approaches” – Removal of Internal Measurement Approach (IMA) for Credit Valuation Adjustments (CVA)***

Dear Miss Barger, Mr Durand, Mr Pykhtin,

Deutsche Bank (DB) welcomes the opportunity to comment on the Basel Committee for Banking Supervision (BCBS) proposals on reducing variation in credit risk-weighted assets – constraints on the use of internal model approaches. Given that the removal of the internal model approach for CVA was made public via this credit risk consultation, but revisions to the CVA framework are being discussed within the Trading Book Group, DB deemed a separate response on CVA appropriate.

We have noted the importance of retaining both standardised and internal model approaches to encourage more effective risk management and measurement of CVA risk in our response to the BCBS consultation on revising the CVA framework in 2015<sup>1</sup>. Against this background we would like to request the BCBS reconsider their decision to remove the IMA from the CVA framework, while at the same time taking some suggestions for improving the risk sensitivity of the standardised approach into account. These will also contribute to the BCBS objective of aligning the CVA framework more closely with the FRTB.

**Review removal of IMA approach**

The BCBS decision to remove IMA from the CVA framework appears to be driven by a desire for less complexity as well as the view that CVA risk will be significantly reduced due to increased central clearing and margining for uncleared derivatives. Whilst we support the BCBS' objective of increasing simplicity, in our view some of the concerns around use of market risk models for CVA and complexity of the IMA-CVA approach are unfounded, as outlined in more detail in Annex 1. We furthermore note that central clearing and uncleared margining do not cover the full universe of trades / counterparties. Therefore, a reduction in CVA will be limited in the short to medium term, given the existence of legacy trades. In light of this and the fact that internal models encourage better risk management and measurement, we recommend that the BCBS reviews the removal of IMA and properly assess its potential impact.

---

<sup>1</sup> <http://www.bis.org/bcbs/publ/comments/d325/deutschebank.pdf>





### **Increase risk-sensitivity of SA-CVA framework**

When reviewing the SA-CVA proposals, also against the background of the removal of IMA-CVA, we have identified several areas for improvements to increase the risk sensitivity of this approach and make it more fit-for-purpose:

- **Recognise proxy hedging benefits:** The current drafting of SA-CVA disincentivises prudent risk management, as proxy hedging of CVA P&L of counterparties without CDS results in higher SA-CVA capital charges than if the exposure was unhedged. We do not believe this was the intention of the BCBS. This issue can be addressed by permitting mapping of illiquid counterparty sensitivities to proxy entities and using the R factor to account for the degree of proxy hedging.
- **Remove R factor for risks other than counterparty credit spread risk:** The BCBS has indicated that the hedging disallowance parameter R is intended to prevent the recognition of perfect hedging of CVA risk. While we understand the rationale for the inclusion of this R factor for counterparty credit spread, where proxy hedging is frequently used, we note that it is not appropriate to apply the R factor in the context of other risk types (e.g. interest rate, FX, equity risk), which can be perfectly hedged. We would therefore propose to only use the R factor for counterparty credit spread risk.
- **Recalibrate SA risk weights and correlations:** Our empirical analysis shows that counterparty credit risk, FX and IR risk weights within the SA-CVA proposal are overstated approximately 3 times. It also shows that the correlations within the SA-CVA are insufficiently granular (for example: single IR/FX cross-bucket correlation; single credit intra-bucket correlation) and overall too low when compared to historical correlations of these asset classes. More granularity is needed to obtain a risk-sensitive CVA capital charge. In order to obtain this, the granularity of IR and FX RW buckets and correlations should be increased and IR, FX and CS risk weights (RW) and correlations based on historical data should be re-calibrated.
- **Align CVA aggregation methodology with FRTB:** Given the overall BCBS objective to align the CVA framework more closely with the FRTB, we propose to align the CVA aggregation methodology with the FRTB methodology and correctly capture netting of correlated exposure risk. As currently drafted, the SA-CVA framework is not aligned and more conservative compared to the FRTB-SA framework. This is the result of the aggregation formula for calculation of the capital charge, where the FRTB formula recognises negative net sensitivities, while CVA only allows positive components.
- **Reduce CVA multiplier floor:** As with FRTB-TB, conservatism in SA-CVA is enforced by highly conservative risk weights (RW) and correlations, as well as the non-recognition of cross-asset class diversification. Further conservatism is built into the SA-CVA framework via the R factor which ensures that perfect hedging is not recognised. Adding yet another layer of conservatism via a multiplier floor of 1.5 would not be appropriate. We propose to set the level of the floor of the CVA multiplier at 1. It can then be left up to the supervisory discretion to apply a different level when and where necessary.

### **Review input to first CVA consultation**

This response should be read in conjunction with our previous response to the BCBS' 2015 consultation. In that response we expressed full support for revising the CVA framework, bringing it closer to the FRTB, widening the scope of eligible hedges and aligning accounting and regulatory CVA.



In particular, we would like to highlight two aspects of our original response:

- 1) Importance of aligning accounting and regulatory CVA exposure calculations: This approach will result in an exposure calculation that is generally consistent with P&L movements and regulatory capital that more accurately reflects economic impacts. Also, this would align the CVA framework more closely with the FRTB market risk framework, which is P&L based.
- 2) Netting qualification: In our view, the BCBS proposal to require legal netting enforceability would require a burden of proof that is too high for a non-default risk measure. Where firms are able to conduct robust legal assessments (governed by internal policies and controls) to determine that netting is highly probable, we propose that netting enforceability should be recognised for purposes of the CVA framework.

In the Annex 1 we provide more detailed views and examples on our proposals to increase the risk sensitivity of the SA-CVA framework. Please do not hesitate to contact us if you have questions or wish to discuss these issues further.

Yours sincerely,

Matt Holmes  
Head of Group Regulatory Policy



## **Annex I Detailed comments on the proposed CVA framework**

In this Annex we provide additional views on removing the IMA as well as detailed suggestions for revisions to the SA-CVA framework the BCBS should take into account when reviewing the overall CVA framework.

### **Maintaining IMA**

The CVA risk internal modeling approach allows banks to prioritise model improvements, therefore making the model increasingly sensitive to changing risk drivers. This results in more effective risk management and measurement of CVA risks. Relying solely on SA modeling, i.e. a “one size fits all” approach, with parameters and model assumptions that will not accurately reflect the banks specific risk profile, will unnecessarily reduce the accuracy of risk management and result in less effective pricing of derivatives. We therefore strongly believe that the CVA framework should contain both a standardised and an internal model based approaches.

The BCBS has nonetheless decided to remove the IMA from the CVA framework, stating that the IMA 1) fails to effectively capture CVA, 2) it is too complex and 3) that CVA will be reduced by the greater use of central clearing and margining<sup>2</sup>. After reviewing the concerns of the BCBS, DB proposes that the BCBS reviews its decision on removing the IMA based on the following arguments:

1. Reservations to whether CVA can be effectively captured within an internal model designed to capture market risks in the trading book.
  - DB: The BCBS has explicitly stated that it wishes to align the CVA framework with the FRTB framework. The July 2015 Consultative Paper notes that CVA risk is sensitive to the same risks as market risk, including credit spread risk, interest rate risk, FX risk and that the capital charge that relates to CVA should be closely aligned to the capital charge for market risk. The proposed SA methodology for calculation of the CVA capital charge is generally consistent with the FRTB-TB SA. It is therefore appropriate to also permit the use of market risk internal models to calculate CVA, especially if banks have FRTB-TB IMA approval as stated below. This would furthermore align the two frameworks more closely as objected by the BCBS.
2. IMA-CVA is too complex.
  - DB: The most complex part of the IMA-CVA calculation is the calculation of sensitivities, which is also required for SA-CVA. Once sensitivities are calculated, modelling CVA risk does not require meaningful incremental effort. And as mentioned above, CVA sensitivities can appropriately be stressed using the banks' market risk model. Therefore, provided the bank has FRTB-TB IMA approval, IMA-CVA is not meaningfully more complex than SA-CVA and its use should continue to be permitted, as is currently the case. From a supervisory perspective, this will not generate incremental burden, as model approval will only be required once.
3. CVA risk will be significantly reduced by a greater use of central clearing and margining for non-centrally cleared transactions.
  - DB: Central clearing and uncleared margining do not cover the full universe of trades / counterparties, therefore reduction in CVA will be limited in the short to medium term.
    - a) Uncleared Margining (UM) and Clearing apply only to new transactions that are executed post entry into force of the rules. Legacy trades, which are still part of banks' balance sheet, still carry meaningful CVA risk.

---

<sup>2</sup> Reducing variation in credit risk-weighted assets – constraints on the use of internal model approaches, page 4



- b) Certain counterparties are not subject to uncleared margining (NFC- / sovereigns) or clearing (NFC - / sovereigns and pension funds).
- c) Clearing is only possible for standardised derivatives – end-users may require bespoke derivatives to hedge their risks more effectively, which will generate CVA risk for banks.

## Improving the SA-CVA proposal

### A. Recognise proxy hedging benefits

The current drafting of SA-CVA disincentivises prudent risk management, as proxy hedging of CVA P&L of counterparties without CDS results in higher SA-CVA capital charges than if the exposure was unhedged. We do not believe this was the intention of the BCBS, based on the following:

- Accounting CVA P&L for illiquid names is driven by proxy spreads. Changes in proxy spreads drove the high CVA losses in the credit crisis. However, the SA-CVA omits the linkage between illiquid counterparties and their proxy spreads in the capital calculation, as the counterparty credit risk factors refer to the counterparty only.
- As a consequence banks are penalised for hedging their exposure to illiquid names within accounting CVA by higher capital requirements. If counterparty and proxy are not in the same bucket, then the capital charge “Kb” aggregation makes the hedge additive to risk, instead of reducing it. The bank incurs higher capital requirements than if the name was not hedged. Furthermore, even if counterparty and proxy are in the same bucket, the low correlations would imply little to no hedging benefit whilst accounting CVA and thus P&L is first-order hedged.
- This mismatch is substantial as proxies are often scaled index CDS as shown in the EBA report on CVA and the Deloitte survey on Counterparty Risk and CVA<sup>3</sup> that span multiple industries and thus buckets.
- Below a stylized example for a high-yield basic materials corporate (bucket 11) with 125 €/bp CVA counterparty sensitivity. Whenever the bank hedges CVA P&L of counterparties without CDS, the bank incurs higher SA-CVA capital charges than if it were not hedging.

| Hedge / Proxy spread mapping                                | Hedge CS01 (€/bp) | CVA P&L          | SA-CVA K(option 1) | SA-CVA K(option 2) |
|-------------------------------------------------------------|-------------------|------------------|--------------------|--------------------|
| No hedge                                                    | 0                 | open / risky     | 131,250,000        | 131,250,000        |
| CDS referencing counterparty ("liquid name")                | 125,000           | first-order flat | 13,125,000         | 13,125,000         |
| Proxy CDS referencing different entity in same bucket (#11) | 125,000           | first-order flat | 150,223,000        | 150,223,000        |
| Proxy CDS referencing different entity in IG bucket (#4)    | 125,000           | first-order flat | 166,859,000        | 176,744,000        |

*Proposal:* This issue can be addressed by permitting mapping of illiquid counterparty sensitivities to proxy entities and using the R factor to account for the degree of proxy hedging, as outlined below.

- 1) The rules should permit the mapping of illiquid counterparty sensitivities to proxy spread entities.

<sup>3</sup> EBA report p.69: <https://www.eba.europa.eu/documents/10180/950548/EBA+Report+on+CVA.pdf>. Deloitte survey p.33: [http://www2.deloitte.com/content/dam/Deloitte/lu/Documents/risk/dtt\\_en\\_counterpartyriskcvasurvey\\_06032013.pdf](http://www2.deloitte.com/content/dam/Deloitte/lu/Documents/risk/dtt_en_counterpartyriskcvasurvey_06032013.pdf)



For example: The CVA sensitivity of HY basic materials corporate can be mapped to IG corporate in same industry, retaining the (higher) risk weight from the original bucket. This would ensure alignment with actual CVA P&L, which is based on proxies where the counterparty does not have traded CDS.

We believe that mapping cs01 to proxy entities is appropriate for CVA for the following reasons:

- CVA does not aim to address the risk of default - proxy hedging is appropriate as the movement in credit spreads are highly likely to be reflected in the proxy
- Default risk is appropriately captured under counterparty credit risk by not allowing proxy hedges as these would not pay out in default

2) Rank the R factor depending on the degree of proxy hedging in order to reflect hedging “quality”.

For example,

R= 0.01 if counterparty and reference entity match,

R= 0.02 if counterparty and reference entity do not match.

Applying these solutions would lead to results below:

| Hedge / Proxy spread mapping                                | Hedge CS01 (€/bp) | CVA P&L          | SA-CVA K(option 1) | SA-CVA K(option 2) |
|-------------------------------------------------------------|-------------------|------------------|--------------------|--------------------|
| No hedge                                                    | 0                 | open / risky     | 131,250,000        | 131,250,000        |
| CDS referencing counterparty ("liquid name")                | 125,000           | first-order flat | 13,125,000         | 13,125,000         |
| Proxy CDS referencing different entity in same bucket (#11) | 125,000           | first-order flat | 18,562,000         | 18,562,000         |
| Proxy CDS referencing different entity in IG bucket (#4)    | 125,000           | first-order flat | 75,421,000         | 62,648,000         |

## B. Recalibrate SA risk weights and correlations

We note that the correlations within the SA-CVA are insufficiently granular (single IR/FX cross-bucket correlation; single credit intra-bucket correlation) and overall too low when compared to historical correlations of these asset classes. More granularity is needed to obtain a risk-sensitive CVA capital charge. Our analysis indicates that counterparty credit risk, FX and IR risk weights within the SA-CVA proposal are overstated approximately 3x on average

To analyse the appropriateness of the risk weights we used the formula below. The Risk Weight is based on a stressed calibration/definition, captures the liquidity horizon and reflects a 97.5% ES. I.e. based on historical (stressed) data, the RW can be estimated by

$$RW_{estimate} = (\Phi^{-1}(99\%) \cdot \sqrt{LH}) \cdot vol_{stressed}$$

where  $\sqrt{LH}$  ensures a liquidity horizon of LH and  $\Phi^{-1}(99\%)$  (i.e. 2.33) reflects a 99% quantile as the SA RW are equivalent to a 97.5% ES measure which is equal to 2.34 assuming a Normal distribution. Note that it is better to use a factor of 2.34, however, this is close enough to the 2.33 assumption that we used.

Therefore, we have compared the scaled RW, i.e.

$$scaled\ RW = RW / (\Phi^{-1}(99\%) \cdot \sqrt{LH}) = RW / (2.33 \cdot \sqrt{LH}),$$



against the 1Y stressed volatilities  $vol_{stressed}^{1Y}$ , i.e. 1Y historical vols based on the stressed window June 2008 – June 2009.

*Proposal:* The granularity of IR and FX RW buckets and correlations should be increased and IR, FX and CS RWs and correlations should be re-calibrated based on historical data. This will lead to more appropriate reflection of actual risk

### C. Align FRTB-CVA-SA aggregation formula with FRTB-TB-SA formula

The SA-CVA framework is more conservative compared to the SA-FRTB framework due to the aggregation formula for calculation of the capital charge. The FRTB formula recognises negative net sensitivities, while CVA only allows positive components to be included in the calculations. This not only contradicts the BCBS objective for alignment of the FRTB and CVA frameworks, but it also adds to the overconservatism of the current SA-CVA framework.

#### SA-CVA formula

Capital charge within bucket:

$$K_b = \sqrt{\left[ \sum_{k \in b} WS_k^2 + \sum_{k \in b} \sum_{l \in b, l \neq k} \rho_{kl} \cdot WS_k \cdot WS_l \right]} + R \cdot \sum_{k \in b} \left[ (WS_k^{Hdg})^2 \right]$$

$$K = m_{CVA} \cdot \sqrt{\sum_b K_b^2 + \sum_b \sum_{c \neq b} \gamma_{bc} \cdot K_b \cdot K_c}$$

$K_b$  will always be positive → no netting of correlated exposure risk

#### SA- FRTB formula

$$\text{Delta (respectively Vega)} = \sqrt{\sum_b K_b^2 + \sum_b \sum_{c \neq b} \gamma_{bc} S_b S_c}$$

Since  $S_b$  and  $S_c$  can be negative, this allows for netting of correlated exposure risk.

*Proposal:* The CVA aggregation methodology should be changed in order to achieve BCBS' objective of greater alignment with the FRTB framework and to correctly capture netting of correlated exposure risk. This can be amended by replacing the second term in the SA-CVA aggregation formula with the corresponding term in the SA-FRTB formula.