AUSTRALIAN BANKERS' ASSOCIATION INC.

AFMA

31 January 2014

Secretariat of the Basel Committee on Banking Supervision
Bank for International Settlements
CH-4002 Basel, Switzerland
baselcommittee@bis.org

Dear Members of the Trading Book Group of the Basel Committee,

Fundamental review of the trading book – second consultative document

The Australian Bankers' Association (ABA) and Australian Financial Markets Association (AFMA), hereafter referred to as 'Industry', welcome the opportunity to provide feedback on the Basel Committee's second consultative document on the *Fundamental Review of the Trading Book* (FRTB).

Industry is supportive of the Committee's ongoing commitment to reducing risks and increasing the resilience of the banking sector, and the Committee's move to increase the consistency in reporting across jurisdictions. However, Industry does hold some concerns regarding the current proposals.

Industry is concerned that the announced timeline for the Quantitative Impact Studies and for the Committee's Trading Book Group to complete the FRTB is too short given the work required. Industry support the views put forward on this by the International Swaps and Derivatives Association, Inc, the Global Financial Markets Association and the Institute of International Finance, on 8 January 2014, and by the Chief Risk Officers of the Bank of America, Citi Group, Goldman Sachs, J.P. Morgan Chase and Morgan Stanley, on 9 January 2014.

Industry also has concerns with:

- the impact of the new trading/banking book boundary on derivatives hedging positions in the banking book;
- the complexity of the approach for handling liquidity horizons, where Industry supports simpler alternatives; and
- the weaknesses and complexity inherent in the proposed cash flow vertex method underpinning the standardised approach, where Industry is supportive of alternative methods such as those leveraging banks' internal calculation of sensitivities.

Detailed feedback on these, and other aspects of the consultation paper, is provided in the attached submission for the Committee's consideration.

Additionally, Industry supports the IBFed's submission on the consultation document and sees the comments in the attached submission as complementary to those in the IBFed's response.

Yours sincerely,

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AUSTRALIAN BANKERS' ASSOCIATION INC.

AFMA

Submission

Joint ABA and AFMA response to Fundamental review of the trading book - second consultative document

Australian Bankers' Association

Australian Financial Markets Association

31 January 2014

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Introduction

The Australian Bankers' Association (**ABA**) and Australian Financial Markets Association (**AFMA**), hereafter referred to as 'Industry', welcome the opportunity to provide feedback on the Basel Committee's second consultative document, *Fundamental Review of the Trading Book*. Industry is supportive of the Committee's ongoing commitment to reducing risks and increasing the resilience of the banking sector. Industry also supports the Committee's move to increase the consistency in reporting across jurisdictions.

The following comments are provided for the Committee's consideration.

1. Overall revisions to the market risk framework

1.1. The trading book/banking book boundary

Industry supports the Committee's pursuit to strengthen the definition and implementation of the boundary between the trading book and the banking book, and to reduce the risks of regulatory arbitrage. However, in pursuing these ends, Industry recommends that the Committee maintain the division along the lines of how businesses operate.

Industry notes that the proposed changes could result in a large number of additional businesses being drawn into the trading book, resulting in smaller institutions requiring a trading book that previously have not. Examples here include activities related to loan underwriting and the hedging of offshore funding with cross-currency swaps.

Points for clarification

Can the Committee provide further detail on the implications for specific instruments; this is particularly so for options. For example, the treatment of embedded options, such as Bermudan features in swaps – does it include optionality in a mortgage?

The consultative document indicates that cross-currency swaps might be presumed all in the trading book. Can the Committee confirm this position, which Industry sees as a large change from the current position? Should this be the Committee's intention, funding deals that currently are in the banking book would go into the trading book leading to risk and P&L asymmetry issues. The issue extends to any derivative (e.g. interest rate swap, FRA, FX forward) in a hedge relationship with a banking book position. Can the Committee confirm if such positions need to be captured in the trading book or if they can remain in the banking book?

The new standards 'presume' trade types to fall in one or the other book. If the presumptions are followed strictly then it could have a large impact, less so if followed less strictly. Industry seeks the Committee's guidance on the amount of latitude that it expects to allow with respect to these presumptions.

On page 8 of the consultative document, the Committee acknowledged Industry concerns around the classification of liquid, fair value instruments used to manage liquidity and interest rate risk in the banking book. However, it is unclear to Industry where such instruments are expected to reside under the new standards – can the Committee provide additional clarity here?

Recommendations

Industry requests the Committee provide clarity around derivatives attached to banking book positions and recommends that the division between the trading and banking books be along the lines of how business operates.

Industry is of the view that a clear non-permeable boundary is of more importance than the presumption that certain products or positions will be exclusively either in the trading book or the banking book. Accordingly, Industry recommends that banks should be able to agree with their national regulators the basis on which these allocations will be made, considering a range of factors.

1.2. Treatment of credit

Points for clarification

Previously, banks were required to hold specific risk (covering default, migration and idiosyncratic risk) for both debt and equity positions. The new standards allow migration risk to be covered within the ES model and specify the IDR to capture default risk across both debt and equity. However, the standards do not make mention of idiosyncratic risk. Could the Committee please clarify their position on (i) the capitalisation of idiosyncratic risk and (ii) how it should be accounted for within the backtesting framework?

Page 29 suggests that all positions are to be included in the IDR model except those on standard method and those dependent solely on commodity or FX risk. This implies that the default risk of (for example) single currency and cross-currency interest rate swaps would need to be captured, which does not appear logical.

Industry seeks clarification that banks will not be required to use IDR models if they do not already have IRC models, i.e. that the Standardised Approach for Default Risk may be applied alongside the Internal Models Approach for Credit Spread Risk. Establishing a requirement for an internal model for both credit spread risk and default risk places a considerable additional burden on banks with only limited and unsophisticated credit in the trading book for which the Standardised Approach for Default Risk has hitherto complemented the Internal Models Approach well.

1.3. Factoring in market liquidity

It is clear that all risk factors are not equally liquid and incorporating this into banks' calculations is appropriate. However, Industry does have concerns regarding the proposed approach to market liquidity.

The bucketing of liquidity factors is coarse and appears difficult to justify. In particular, treating Equity as having lower liquidity than major currencies' FX and IR seems inappropriate, and assigning some of the most liquid markets in the world (i.e. FX markets in liquid currencies) to 20 days seems excessive. Industry would appreciate the Committee's view on the possibility of a reduction in these liquidity horizons and/or greater granularity to allow differentiating such risk factors.

All else being equal, if the proposed liquidity factors are implemented and the multiplier 3 is retained, capital charges will be higher, as all liquidity horizons are greater than or equal to the current 10 days. This seems to contradict the stated intention of not increasing capital charges. Indeed, for a portfolio of positions with a 1 year liquidity period, institutions would be required to apply a 1-year market shock (from a stress period), compute a 97.5% ES, multiply this number by a factor of 3 (or more), and then add on default risk. In this context, the factor of 3 appears somewhat excessive and, given what the ES number already represents, a factor of m closer to 1 would appear to make more sense in the context of this revised model.

Industry acknowledges the benefits of a 'one size fits all' approach, however, it would like to highlight that there are a number of negative side effects of such a policy. For example, small and relatively easy to exit positions are penalised to the same degree as large positions when in reality they may have very different liquidity horizons, which creates a perverse incentive for large positions.

Overlapping intervals

The method for calculating liquidity factors requires the use of overlapping intervals, otherwise enough data is not available. Industry sees several issues with this. Firstly, it introduces a significant amount of autocorrelation into the data series. Secondly, by averaging out idiosyncratic factors, it may have the effect of greatly increasing correlation between various risk factors. This breaks the 1-day correlations that are observed, but more importantly may introduce the risk of creating false correlation between risk factors. The 60-day horizon suggested for credit for example, makes a typical single name credit that may have low correlation with an index on a daily basis have high correlation on a 60-day basis. The risk of this is that banks will use indices for capital hedges, when in reality they are poor hedges, and the hedging capability is only a function of a particular calibration period. In future periods they may perform quite differently.

Additionally, large moves are calibrated based on long time thresholds but they are assumed to occur instantaneously. This has the danger of both breaking hedges and creating false hedges. For an example of a false hedge, consider a FX liquidity horizon of 20 days applied to a (2-day) spot position hedge – this should not give 20 days' worth of FX risk but 2 days' worth. While this may seem a conservative measure, it represents 20 days of hedging when, under the assumptions implicit in the model, the market has dried up and there may be no capability to roll the 2-day FX spot hedge to continue the hedging position.

In practice, using overlapping intervals may create a negative bias for VaR (and hence also the Expected Shortfall) for most series compared against square root of time scaling. Our analysis suggests that, depending on the underlying distribution, the bias can be as large as 25% for a 100-day horizon and 40% for a 250-day horizon. This indeed was observed for pre-GFC rates series.

Such results call into question the validity of overlapping data sets for longer liquidity horizons and, by extension, call into question the validity of internal models in general for such positions. One potential policy response could be to deem positions (and their hedges) subject to longer liquidity horizons (for example, longer than 60 days) unsuitable for modelling techniques and as such capitalise them through the standard method only. Such an approach would simplify the number of liquidity horizons and open the possibility to consider other ways of treating the liquidity horizons (such as scaling a single horizon and/or setting a single horizon per desk to allow for better hedging alignment).

Points for clarification

Are the liquidity horizons indicative of the minimum horizon positions that can be applied? – i.e. can a longer horizon be applied so that sensible offsets are allowed for hedged transactions?

With respect to the broad risk factor categories to which liquidity horizons are assigned (for example on page 16), would the Committee be able to clarify their intention with respect to where specific risk factors should be mapped? For example, where does the Committee see single and cross-currency basis risk being mapped, and what rates should sit in the 'Credit spread – structured' bucket (i.e. should this include CDS indices and tranches on these indices?).

Recommendations

To reduce some of the issues highlighted above, Industry recommends the Committee consider the following three simpler approaches:

1. For implementation purposes, it would be much easier to apply liquidity scaling factors to 1-day shocks. These do not need to be restricted to normal distributions scaling (square root of time), they could use a scaling from a fat tailed distribution.
2. Alternatively, apply a reduced set of liquidity scaling factors, as in the fair-value accounting asset level approach, to the base 1-day shocks. Ideally, all risk factors within an asset class would

have the same liquidity level applied. In this way, market liquidity could be incorporated into the diversification benefit calculation.

3. Finally, regulatory specified factors per risk factor based on historical calibration could be used.

Further simplification could be obtained by employing the standard method approach for all positions with a liquidity horizon above a certain threshold, such as 60 days.

If the committee decides to proceed with the current approach, Industry recommends that institutions be given dispensation for shorter liquidity horizons if it can provide evidence to its supervisor that its position(s) can be liquidated in this shorter time frame, e.g. its holdings are only a small proportion of overall market turnover.

1.4. Choice of market risk metric and calibration to stress conditions

Scaling to a calibration on stress conditions is a reasonable way of avoiding pro-cyclicality. Combining it with the full portfolio over the most recent period also avoids using a potentially static calibration period and optimising against this.

While the measure is acceptable, ES does not provide a lot of benefits compared to VaR, as the ratio of 97.5% ES to 99% VaR is around one for a wide range of both theoretical and empirical distributions. The large, and important, downside to ES is not being able to effectively backtest it.

Further, for a model that is effectively entirely driven by market data, is it natural to surmise that the extreme data points are those in which there is the least certainty. The move from VaR to ES, and its associated increased dependence on all the data points in the tail, therefore, can be interpreted as placing even greater emphasis on those data points that are the most uncertain. Industry is concerned about the impact of this greater dependence and its implicit assumption that the shape of future tail events will match what has been seen historically (i.e. the next crisis will be the same as the last).

Point for clarification

The method for determining the risk factors explaining 75% of VaR needs to be specified. Is it to be based on a static risk factor (incremental) analysis or based on calibrating what constitutes 75% of VaR, or ES?

1.5. Treatment of hedging and diversification

It is positive that the Committee has moved away from prescribing correlations between broad risk classes as proposed in the first consultative document. However, careful consideration needs to be given to the value assigned to ρ which is the "relative weight assigned to the firm's internal model". If this is given too low a value, it removes the incentive for institutions to hold well diversified portfolios which have been shown to be effective in mitigating risk during stress periods.

1.6. Relationship between the standardised and internal model-based approaches

The requirement to calculate a new complex standardised charge for each trading desk will require substantial increases in resourcing and infrastructural developments. Industry asks the Committee to be mindful of this proposed additional burden in the context of the extensive additional requirements being imposed on the Industry from the various regulatory streams.

2. Revised models-based approach

2.1. The overall approach to internal models-based measurement

Industry notes the proposed rules break the 'use test'. Banks would no longer have a capital measure that is the same as the main risk management measure. In particular, the new rules do not require banks

to perform backtesting on their capital measure. Backtesting is done on 1-day VaR, which is a measure with limited relevance to liquidity-adjusted ES.

2.2. The identification of eligible trading desks

The proposal to determine the use of internal models on a desk-by-desk basis may result in inconsistent capital treatments for identical products and would impose a significant workload on both institutions and regulators.

Furthermore, under the proposed rules, there is a very tight requirement to align to accounting P&L. This process alone would likely require a major infrastructure upgrade at a time when institutions are implementing a vast variety of other upgrades from domestic and extraterritorial regulations and legislation. Even before upgrades to the risk engine to make it capable for the new measures; this would be a project in itself to make sure that the internal model was usable.

Industry also notes the sensitivity of the P&L attribution approach and that it may only require one or two outliers between the accounting and risk-theoretical P&L to make a desk ineligible for the internal model for a period of up to a year.

Point for clarification

The consultative document provides very little detail on the model independent assessment tool and it is difficult to see how this should be implemented.

Recommendation

Consideration be given to the additional burden placed on both institutions and regulators from determining the use of internal models on a desk-by-desk basis. It may be appropriate to review the implementation of this proposal in a future BCBS Thematic Review, especially in those jurisdictions where the depth of supervisory knowledge was shown to be lacking.

3. Revised standardised approach

Industry agrees with moves to make the standardised approach more risk sensitive. However, the proposed cash flow based model is fraught with implementation risk and will be an operational impost. Further, Industry is concerned about using the RSM as a floor to the internal model.

The proposed method of constructing the standard model from cash flows is extremely onerous, as it is not the way banks usually calculate risk. While cash flows are calculated internally in systems, there is rarely reporting on this basis. This, therefore, would require systems upgrade across the range of systems a bank uses to get all the required information output, and the volume of data flows that this will generate is very large. This is a heavy impost on banks of all scales and will require ongoing support, upgrade and maintenance distinct from that used for internal models. While the calculation in itself is possible, it would be problematic to implement in production systems. Realistically, Industry estimates the development of the required systems could take a minimum of two years from when the final domestic regulations are finalised.

Further, there appears to be a number of flaws in the current description of the model, including the absence of any floating interest rate risk, single currency basis risk and volatility smile risk. Different treatment of credit spreads for bonds and CDS also seems to be missing. Picking correlations from two different correlation matrices may lead to an illegal correlation matrix (not positive semi-definite) rendering the expression under the square root on page 32, negative.

Additionally, assigning the discounted cash flows to vertex points using a linear function in time will not preserve the interest rate risk profile (delta ladder) of the cash flows. Hence, the capital calculated will not properly reflect the interest rate risk, resulting in a further loss of transparency and potential

exploitation. A simple correction term (originally proposed by RiskMetrics) could be employed to correct this issue.

Regarding the modelling of floating rate cash flows in the standard method, please refer to the discussion in Section 6 below.

Finally, it appears that there are a number of errors in the examples provided – please refer to Appendix A where more detail is provided.

Recommendation

To Industry, aspects of the proposed models and examples appear to be incorrect. Further explanation and corrected worked examples would help Industry to understand the Committee's thinking in this area.

Industry would recommend, however, a move away from a cash flow based approach and would suggest increasing the risk sensitivity of the standardised approach via levering off banks existing validated risk metrics (i.e. 'Greeks'/sensitivities) that are extensively used on a daily basis, even in relatively small institutions.

4. Disclosure requirements

While publishing the capital charge at a higher level is understandable, Industry questions the usefulness to investors of capital charge data at the desk level.

Further, Industry is concerned about the impact of the requirement to publish standard method outcomes in addition to the modelling-based outcomes. Industry expects the market would quickly move to focus on the standard method metric and employ it to compare between different banks. This would then incentivise banks to optimise/minimise standard method outcomes, which may lead to sub-optimal risk-management in many cases.

Recommendation

Disclosure of capital charges be limited to a higher level and not at the individual desk level.

5. Impact assessment

Industry is concerned with the timeframes outlined for the QIS and subsequent finalisation of the standards. The proposed standards (especially with respect to liquidity horizons, the standard method and the new IDR model) represent substantial changes to the current approach. Industry would like to flag upfront concerns around the feasibility of building robust prototypes for impact assessment purposes within the prescribed timeframes. Industry considers that a staged approach, spread over a longer timeframe, would be more amenable to robust and reliable QIS outcomes. Industry holds similar concerns with respect to productionising the changes into our systems in the event the proposed changes are accepted in their current form.

6. Annex 1: Revised market risk framework

Standard method

The standard method is specified to be calculated on a monthly basis (paragraph 47, page 56). This appears to leave open the possibility of some form of 'gaming' behaviour where an institution could reduce its positions at the end of each month in order to attract a lower capital charge. Averaging the number could be a more prudent approach. Specifically, Industry suggests specifying a minimum calculation period of one month (to cater for less sophisticated banks) with a greater frequency (and averaging) required for banks employing IMA, such that any comparisons between IMA and standard method remain on a like-for-like basis.

Model complexity

In an environment where the disproportionate reliance on complex models was seen to be a factor contributing to the 2008 crisis, the response in the context of trading book capital is a model that is significantly more complex. For example, in the proposed standards, 18 separate ES calculations are required to determine a single day's observation of one aspect of capital (i.e. IMCC, paragraph 189, page 95). Industry would appreciate an insight into Committee thinking regarding when the additional complexity of the model is outweighed by the additional operational risk and loss of transparency associated with such a complex model. Can the Committee indicate if there is scope for the model to be simplified?

Backtesting

It does not appear to be clearly specified what historical window should be employed to calculate the 97.5% and 99% VaR numbers used to backtest the model. While the most recent year of history is one alternative, due to the nature of the stress period and the liquidity horizons, it may have little to do with the actual windows driving the capital calculation. It could, therefore, be argued that it would be inappropriate to link the model performance over an unrelated window to the performance of the capital model as a whole. In this sense, backtesting employing the stress period would be more appropriate. However, the data set across all rates may not be available for this period. Can the Committee provide clarity here as to what period it is expecting to be used for backtesting purposes?

Further, with respect to backtesting and P/L attribution, there are a number of issues that will make this difficult to implement in practice:

1. Issues arise due to the global nature of markets and the different cut-off times used to compute P/L. For example, if the risk system employs rates as of Close of Business London time, yet the Sydney desk's P/L is based on Close of Business Sydney rates, then perfect alignment between the risk system, backtesting and actual P/L is not a realistic expectation. Given these constraints are typically not negotiable (arising from local accounting/regulation requirements in each jurisdiction); is the Committee able to introduce allowances for this issue in the standards?
2. It is not clear how the backtesting and P/L attribution would work for portfolios which contain risks that are not able to be modelled, idiosyncratic risk and/or positions subject to the IDR, where the ES model is effectively only capturing general IR risk. Is the Committee able to provide further details as to how they envisage this should work?

Points for clarification

It is implied (on page 115, part (f)) that the stress period should be different per desk, yet this is not specified in paragraph 181, nor does it appear consistent with the aggregation approach. Can the Committee provide clarity on this point?

Page 115 refers to each 'portfolio' covered by IMA. Should this instead refer to each 'desk'?

Can the Committee clarity what the 1-year liquidity horizon means for correlations in the IDR, given that the correlation is to be calibrated to 10 years of data? Does it mean that model needs to factor in correlation and a year's worth of movement in correlation?

In footnote 36 on page 86, it states that P&L(t-x+1,t-x+11) is be aggregated with P&L(t-x+2,t-x+252). Should this instead aggregate with P&L(t-x+1,t-x+251)? (That is, the beginning of the observation period (t-x+1) should align for P&Ls that are being aggregated.)

There appears to be an inconsistency in the definition of ACC and capital in the capital aggregation equations in paragraph 181 (j) and paragraph 194. Paragraph 194 suggests that there is no averaging of the standard method charge, while with a consistent definition of ACC, paragraph 181 would imply that

the standard method is included in the averaging. If the intention is for there to be no averaging of the standard method number, employing different notation for the variables involved would possibly provide greater clarity.

In two places (pages 94 and 113) the standards still make reference to the IRC in the context of going forward. Should these refer to IDR instead?

Observations regarding floating payments in the standard method

With respect to floating rate flows, Industry notes that there appears to be some contradiction as to whether they should be included into the FX framework – for example:

- Page 57, paragraph 52, Floating rate notes. Floating cash flows should be placed in the appropriate bucket of the FX framework. (This appears inconsistent with the work examples from the Committee.)
- Page 60, paragraph 74, IR forwards/futures/FRAs. It is not clear if floating flows feed into the FX framework or not (the wording is: 'Any other position generates a notional in the FX risk framework' – does this refer to floating rates?).
- Page 60, paragraph 76, IR swaps. Only fixed flows are specified to feed into the FX framework. (This does appear consistent with the worked examples from the Committee.)

Floating rate modelling and general interest rate risk

Simply excluding floating rate payments would likely lead to inaccurate risk measurement, as it effectively means the PV01 of the trade will be modelled as being significantly different to what it is in reality.

This is best illustrated by comparing a floating rate note (FRN) and a zero coupon bond (ZCB) of the same maturity. If the floating flows are stripped from the FRN then the ZCB is left, and so it would be expected that the capital charge for these products would be the same using the standard method as prescribed.

However, the impact of the floating rate payments on the FRN is to reduce the duration of the FRN to the next payment date. (This is especially evident in the case where the curve used to project the floating rates is the same as that used to discount the resulting cash flows – where it can be shown that the value and risk of an FRN can be modelled as a principal payment at the next payment date.)

This reduction in duration would then lead to a significant reduction in interest rate risk – meaning that modelling an FRN as a ZCB with the same maturity will overstate its risk (with the overstatement increasing with increasing maturity of the position).

One way to factor floating payments into the standard method would therefore be to use the argument above to collapse floating payments into equivalent fixed notional payments. The challenges to such an approach, however, would be (a) the collapsing approach is only theoretically valid for when projection and discount curves are the same – so it does not capture issues such as single currency and cross-currency basis risk, and (b) the approach may not be easy to generalise across all types of floating rate instruments.

An alternative method could be to employ some form of PV01 measure.

7. Annex 2: Actions to reduce variation in risk-weighted assets for market risk

Industry does not have any specific comments on Annex 2.

Appendix A - Worked Examples on the RSA and FAQ process

Discrepancies found in the Foreign Exchange Risk (FXR) portfolio

1. Credit spread on Product #2 is not needed as it is a market value position.
2. Credit spread on Product #3 should be 1.65% to reproduce the remaining calculations.
3. Page 45: Row EUR, column Bucket 1 should be -938,385.
4. Page 45: Row JPY, column Bucket 2 should be -85,877,800.
5. Page 45: Row GBP, column Bucket 3 should be -988,367.
6. Page 45: Row JPY (0.01 USD/JPY), column Bucket 2 should be -858,778.
7. Page 45: Rounded exchange rate, should be KRW (0.094 USD/100KRW).
8. Page 46: Formula on top of page is inconsistent with SUM(MVi MVj) calculations. There is a factor of 2 missing in the calculations.
9. SQRT(TOTAL) should be:
    - EUR 1,063,941.29
    - GBP 1,455,553.96
    - JPY 1,835,532.04
    - BRL 34,993.15
    - KRW 1,142,341.96

Additional questions

1. Note trades in reporting currency are not included in the FXR calculation. Is this AUD even for desks in London? In the worked example this is USD which appears in Product #8.
2. How is the market value computed? See, for example, Products #2, 7 and 9. Is this the number we would get from Calypso?

Discrepancies found in the Commodity Risk (CR) portfolio

1. Bucket 2 (Crude Oil) the last formula on page 34 is missing a minus sign. This error results in the sum being incorrect as well as the overall risk exposure for this bucket.
2. Bucket 2 (Crude Oil) the final correlation coefficient is incorrect; it should be 30% not 20% as quoted.
3. Bucket 5 (Metals) the tenor difference for products 15 & 16 is incorrect. The tenor for product 16 is 2.22 years so the tenor difference should be 2.22 years which results in an incorrect correlation of 80%. This should be 60%. This effects all remaining calculations resulting in an incorrect risk exposure K5.
4. Annex 1 is missing Bucket 11 information.
5. Annex 2 does not treat the bucket 8 (other) correlation parameters. For bucket 8 if notional positions are of same sign then correlation is 100% otherwise correlation is 0%.

Additional questions

1. A Wheat_CBOT deal and an offsetting Wheat_KCBOT deal with the same tenor are deemed to have a correlation of 40%; the correlation is surely much higher.

2. "Long and short positions in identical instruments only are allowed to fully offset. Offsetting is not permitted between different instruments relating to the same commodity" (para 132, p74). Does this mean that a future and a forward cannot offset?

Discrepancies found in the Credit Spread Risk (Non-Securitisation) portfolio

1. The computation of K_1 on page 16 does not include the $j > i$ correlation terms. Our calculations lead to $K_1 = 245{,}723.88$.
2. The computation of K_2 on page 16 does not include the $j > i$ correlation terms. Our calculations lead to $K_2 = 177{,}866.63$.
3. The computation of CSR capital also does not include the $c > b$ correlation terms.
4. These all affect the final capital calculation. We obtain CSR Capital = 1,369,890.11.

Additional questions

1. The calculation approach for Credit Spread Risk is different to the General Interest Rate Risk. The difference is that the trades in the Credit Spread Risk are bucketed as described in Annex 1 pg. 17, there is no correlation between cash flows of the same trade even when the cash flows have different maturity groupings. For the General Interest Rate Risk these correlations are present. This difference in calculation methodology is not explained or justified.
2. The missing upper triangular correlation terms appear more than the included upper triangular correlation terms, which one is intended?