Dear Ms Barger, dear Mr Ingves, dear Mr Adkins,

We understand that the above paper was submitted to, and has been discussed by, the Trading Book Group. The paper has also been published on BaFin’s website.¹ We would therefore like to send you our comments, which not only contain a critical analysis of the discussion paper, but also address what the German banks regard as some fundamental issues concerning the trading book review. We hope you will find them interesting.

A. General remarks
The proposed new standardised approach for banks which do not have an approved internal model for market risk is considerably more complex than the existing regime. Rigorous implementation would require the establishment and operation of an infrastructure comparable to an internal model with respect to methods, processes, availability of data and validation. The proposed approach represents a completely new “standardised” model for prudential purposes.

The clear benefits of the existing standardised approach in terms of design and operational simplicity are completely absent. Owing to its similarities to an internal model, the proposal admittedly addresses some of the current weaknesses of the standardised approach. By the same token, however, it also throws up serious new problems.

Since many details of the proposed approach would have to be decided by the individual bank, consistent implementation across the industry is unlikely. One of the proposal's declared objectives – namely to standardise the method of measuring market risk – would therefore not be achieved. The requirements to be met by the model are, moreover, so complex that it is doubtful whether it would be possible to apply the new approach without prior supervisory approval. This would make it necessary to introduce a supervisory approval process as part of the standardised approach.

For various reasons, implementation of the proposed new approach would probably be beyond the reach of smaller banks. Given the complexity of this so-called standardised model, we are convinced that no small bank would use it voluntarily. If mandatory introduction were considered for banks currently using the standardised approach, it would be essential to raise significantly the threshold above which banks (in Germany, at least) become subject to additional trading book requirements. Otherwise, smaller institutions would face adverse effects on their business activities, liquidity management, refinancing basis and interest rate management. But bigger banks should also have the option of using a less complex approach. We would reject as totally unreasonable and unfeasible any idea of also making use of the proposed approach mandatory for banks operating below the threshold for additional trading book requirements.

At first sight, the proposal appears only to address banks without an approved internal market risk model. It is suggested in accompanying documents, however, that banks using an internal model for market risk should be required to run regular comparative calculations based on the proposed new standardised model. This would necessitate the costly setup and operation of a second market risk model with corresponding data processes, quality controls and – judging by past experience – considerable investment of time and effort. We would reject an obligation to operate two models in parallel.

On top of this, we see a danger of the proposed new standardised model being considered in the future as a possible
• regulatory standard for banks using internal models (in place of the current freedom of design),
• benchmark model or
• floor approach.
We have serious concerns about all three scenarios.

Despite certain shortcomings in the Basel 2.5 regime, which was put together in haste and can hardly be described as a model of consistency (take, for instance, the need to add different measures together), banks are free to choose within a given framework precisely which model they wish to implement. This freedom is particularly essential for banks with extensive, complex trading portfolios because it enables them to tailor their model to the specific features of their portfolio, thus ensuring the model’s suitability for internal risk management purposes. We believe it is vital for banks to retain the future ability to develop internal models that integrate market and credit risk and to use these models for prudential purposes. This potential should not be lost in the name of regulatory standardisation. We also believe it continues to make good sense to make a distinction between a standardised and internal models approach to market risk and strongly advocate retaining this distinction.

We would also consider it problematic to use the proposed method as a benchmark or as a floor for capital requirements under the internal models approach. Assuming the floor were calibrated in such a way that it frequently had to be applied, there would be virtually no incentive to go on developing internal
models. And a benchmark approach presupposes gearing capital requirements towards some kind of "best practice". Given the complexity of the risks and risk factors that need to be taken into account, this is not possible.

We assume, and will demonstrate, that the model proposed by BaFin is not in a position to adequately capture the market risk associated with trading portfolios. Particularly for banks with complex trading portfolios, it is not suitable either as a stand-alone approach or a fall-back solution in the event of shortcomings in their internal market risk model. It is an artificial calculation for purely prudential purposes which, owing to its allocation of regulatory capital, would be at odds with internal approaches. Implementation of a new, additional market risk model would throw up virtually insoluble problems with respect to managing trading operations since two possibly very different approaches would have to be taken into account.

B. Specific comments

1. **Scope of application**

BaFin's paper envisages that, when calculating regulatory capital requirements, the proposed standardised model should only cover risk positions for which there is a suitable instrument model and for which market data from sufficiently liquid markets are available. Financial instruments would be classified as sufficiently liquid if, over the previous year, at least one transaction per week had taken place and generated a quoted price. When looking at historical data, however, it is rarely possible to determine whether a price really reflects an actual transaction or is merely an indicative, estimated price. The technical capability necessary for such analysis often does not exist, so this criterion would raise significant practical problems of application and interpretation.

This scope of application is designed in such a way that it would be necessary to have a further supervisory standardised approach in place as a fall-back solution, since every single calculation would require analysis of whether or not the instrument in question was eligible for the proposed approach. The fall-back approach would have to be used for risk positions deemed insufficiently liquid and would therefore have to be able to accommodate all conceivable risk factors. We reject the idea of maintaining two parallel standardised approaches as being unreasonably onerous, particularly for smaller banks, which are the main users.

The paper suggests using Basel II/III banking book requirements, especially those for long positions, as the second standardised approach. These requirements follow a fundamentally different logic of risk measurement and normally result in higher capital requirements. Short positions, which are not normally subject to capital requirements in the banking book, would be handled using a supplementary scenario-based standardised approach, which the paper does not describe in sufficient detail to enable proper evaluation. If a scenario-based approach is considered appropriate for short positions, its application to long positions should be considered equally appropriate. To allow banks to estimate how much economic capital they will need, it would be absolutely essential to have an integrated scenario-based approach in place for both long and short positions which were ineligible for handling with the proposed standardised model.

Furthermore, linking the scope of application solely to the availability of current market data would mean that the offsetting effects of hedging could no longer always be properly taken into account. If a hedge
component was not eligible for the approach because of insufficient market data, its risk-mitigating effect would not be recognised. This runs counter to the proposal’s declared objective of determining capital requirements in a risk-sensitive manner. It is therefore essential to establish an arrangement whereby all components of an explicit hedge could be handled using the same model. This arrangement should, in addition, compensate for the inability to recognise implicit hedges if at least one component is not eligible for modelling.

2. Availability of market data and historical data

In internal market risk models, the problem of the limited availability of liquid market data is eliminated or at least mitigated by the use of suitable proxies. Though BaFin’s paper discusses the idea of extending currently liquid time series into the past, it does not consider the possibility of extending a liquid time series from the past into the future. This approach is inconsistent and impracticable, in our view.

For many banks, especially comparatively small ones, it would not be feasible to build up historical data independently of the trading unit. With this in mind, the extremely long 40-year observation period deemed necessary by the discussion paper would represent an enormous challenge, since independent data are available for very few risk factors over such a long period. And even for these factors, it is highly doubtful whether such old data could be considered sufficiently reliable or representative for risk modelling purposes.

In the absence of provision for the use of proxy data and owing to the perceived need for 40 years of historical data, historical time series both for standardised products and for the more complex products to have emerged over recent decades (such as structured loans) could not normally be generated for use in the proposed standardised model. Product innovation would be severely hampered in the future, since it would rarely be possible to determine capital requirements for new products or new risks using the new approach. Instead, capital charges would be calculated on the basis of banking book rules. There would be similar problems with positions resulting from mergers, spin-offs or IPOs. In these cases, the proposed approach envisages that banks could construct a time series on the basis of certain criteria and extend it into the past. This investment of time and effort would normally become necessary when banks executed their first transactions with a new product. It would make banks think twice before engaging in business with new products.

If banks were forced to use different starting points for time series depending on the availability of data and/or the date of the initial trade, they would have to carry out an extremely costly and time-consuming simulation for each individual starting point. What is more, the proposed approach ignores possible diversification effects between risk factors if time series with different starting points are available.

Even putting aside these problems, it would be extremely challenging to find and validate suitable proxies. In consequence, ongoing data management and quality control would be highly onerous.

The proposed method also has the potential to create moral hazard. If a bank deleted all data except for those for the previous year, all simulations would have to begin in the same year. This would benefit the bank in two ways. In the absence of historical data, the “bad” year would not reflect a real crisis and would thus generate a lower capital charge. In addition, all hedges would be recognised because the single starting point would require only one simulation to be carried out. Deleting the data would have an adverse effect on the bank’s risk-management capability, however. And it would cause risks to be underestimated.
3. Trading book definition
The idea of distinguishing between banking and trading book positions purely on the basis of the availability of liquid market data cannot, in our view, properly reflect sophisticated investment and trading strategies in a risk-appropriate manner (criterion: at least one transaction per week). The typical features of a trading book – especially the tradability of its instruments and the intention to make a profit in the short term – are not necessarily related to the availability of independent market data. It is perfectly possible in practice for a product to be considered liquid for trading purposes (e.g. due to a large number of broker quotes) even though independent data are not available or not available on a daily basis.

Moreover, we see no obstacles to allocating an instrument to the trading book even if one of the risk factors must be considered illiquid, particularly if the desired profit has already been realised (purchase of a hedge). Thirdly, even liquid instruments are not always held for the purpose of realising a profit in the short term.

The proposed definition would result in positions being allocated to the trading book in a volatile manner. Aside from the difficulties this volatility would raise in terms of risk management, we believe allocation of this kind would be incompatible with existing accounting standards. Making liquidity a condition for inclusion in the proposed standardised model is, in itself, enough to make the proposed standardised model unsuitable for internal risk management purposes.

4. Methodology
a) Pricing algorithms
Pricing algorithms are always geared to specially selected market data. The same is true of implementation. Algorithms for interest-rate products, for instance, are often calibrated on the basis of swaption or cap data. These pricing methods cannot be expected to function properly if other types of market data are substituted. It would consequently be very difficult to price an interest-rate option today on the basis of interest-rate curves in the 1970s. And even if these fundamental difficulties could be resolved, it would be a highly complex and time-consuming undertaking to tailor a bank’s entire portfolio-based valuation system to a new, additional database. What is more, each past quarter would pose its own problems. In the case of the above interest-rate option, for example, a different solution might have to be found for the 1970s than that for the 1980s owing to the availability of different market data in the latter decade. This would make the banks’ pricing processes hugely more complex. The idea of reviving all market price models used since 1970 is impracticable, not least due to the low record-keeping capacity of earlier IT systems. Nor is it economically viable to set up a new data processing system because the qualitative requirements exceed those of existing risk management systems and the required quantity of data cannot be covered by the IT infrastructure designed for valuation purposes.

Additional technical investment would be needed since most banks cannot conduct a day-specific simulation of market values which takes into account shortening residual maturities.

b) Constant level of risk
The proposed new standardised model rejects the concept of a "constant level of risk" (and thus the use of dynamic hedging strategies), which was introduced in connection with the incremental risk charge and comprehensive risk measure under Basel 2.5. Yet the ability to recognise dynamic hedging strategies in a conservative manner is an essential precondition for appropriate risk measurement when applying a capital horizon of one year. It is not clear, moreover, how banks are supposed to handle transactions that mature within the forecast period.
c) Composition of the synthetic bad year
The synthetic bad year is to be created by means of a sensitivity-based portfolio revaluation on the basis of quarterly changes in risk factors and the subsequent selection of four “bad” quarters which match the required 99.9% confidence level of portfolio loss distribution. This algorithm is not stable, i.e. a minor change in portfolio exposures could lead to an entirely different selection of four bad quarters out of the total of around 30 million possible combinations. The divergence between the approximated estimates of quarterly results based on sensitivities and the precise revaluation of the synthetic bad year can result in considerable differences in a bank’s need for regulatory capital. This inherent instability in the proposed approach will add to, and exacerbate the acknowledged instability intrinsic to historical simulation. The question also arises as to how the desired 99.9% confidence level is to be achieved once the four bad quarters have been excluded. For the exposures that mature within the forecast period, the order in which the relevant quarters are put together is particularly important in this context.

A further problem is that basing the selection of bad quarters on a sensitivity-based portfolio revaluation opens the door to considerable opportunities for arbitrage, and thus for manipulation. Let us assume, for instance, a certain quarter is selected because of a high delta exposure to a risk factor. If the bank had hedged this risk, another quarter would have been selected. But if the bank used a hedging instrument with a delta close to zero (e.g. a far-out-of-the-money option), this would not affect the selection of the quarter. And in a stress scenario, the hedging instrument would demonstrate the desired hedging effect thanks to full valuation. It is therefore possible to construct a portfolio in such a way that quarters selected to make up the “bad year” generate only minor risks in the full valuation phase.

Furthermore, since sensitivities can vary depending on a bank’s individual selection of market data, supervisors would need to invest not inconsiderable time and effort in monitoring these valuations. This time and effort is out of all proportion to the associated benefit, in our view. We would also consider regular reporting requirements to be an excessive burden on banks.

5. Communication of modelling results, effects on risk profile, and use test
Even if the proposed approach would not necessarily lead to a significant change in the level of a bank’s need for regulatory capital, the serious methodological weaknesses explained above would severely impair the potential for analysis, the identification of relevant risk factors and the ability to communicate convincingly the results of the model to the market. The “double instability” of the algorithm referred to above is, in itself, sufficient to virtually rule out its use for internal risk management purposes. Regulatory capital would also be almost impossible to manage: it would be enormously difficult, when concluding new business, to anticipate how much additional capital would need to be set aside. It would be disproportionately onerous, and in practice unfeasible, to carry out a simulation before entering into every single transaction. These problems have extremely negative implications for the reliability of a bank’s capital management since it would no longer be possible to predict how new business would affect its regulatory capital needs.

The proposed artificial algorithm offers little or no insight into a bank’s actual trading strategies. It is therefore unlikely to prove an effective internal tool for managing the bank’s risk profile. It would not be possible to retain the – in our view – desirable use test requirement. This is another argument against replacing existing approved internal market risk models with the proposed new standardised model. And for banks using the current standardised approach, a regulatory standardised model which is unsuitable for internal use would merely represent a significant cost factor without any associated benefits.
6. **Calibration of the standardised model**

Despite the 99.9% target confidence level, the use of an extremely long data time series will not ensure that the calibration of the model will be able to meet the CRD III requirements with respect to covering the relevant risk components (VaR, IRC, stressed VaR). The proposed new approach might therefore create undesirable incentives for the financial industry. As the recent financial crisis shows, a failure to measure risks even with the help of an extremely long observation period does not mean that these risks do not exist. This is especially true of migration and default risk: historical data contain no default scenario for any counterparty which is still in existence today (general problem with historical simulation).

7. **Pillar 1 capital requirements for interest-rate risk in the banking book**

We have fundamental objections to handling interest-rate risk in the banking book (IRRBB) under Pillar 1. The idea of introducing Pillar 1 capital requirements for IRRBB was discussed and rejected when drafting the Basel II Accord. The main reason for this decision was the lack of a single modelling standard that would be recognised by all market participants and could serve as a model for measuring IRRBB. This situation has not changed. Considerable differences continue to exist in the way banks handle the drivers of IRRBB, e.g. when modelling divergence between contractual and actual maturities and between fixed-interest periods of savings and loan products.

For banks that measure and manage IRRBB on the basis of a VaR methodology and interest rate risk across trading and banking book boundaries, there is an additional danger of stand-alone Pillar 1 capital requirements negating hedging and diversification effects and significantly overestimating the resulting total of capital requirements for interest-rate risk in the banking and trading books.

Should the introduction of such capital requirements be given serious consideration, banks with their own VaR models should be permitted to use these internal models, subject to passing a suitability test, to measure this risk category as well. This is already standard practice in many banks.

The idea of using the proposed new model to determine Pillar 1 capital requirements for IRRBB also raises the question of how to deal with positions for which no liquid market data are available.

8. **Suitability as a fall-back model**

One of the proposal’s declared objectives is to make the withdrawal of supervisory approval for an internal model a viable option since the new standardised model represents an enforceable fall-back solution in terms of the effects on a bank’s capital requirements. This is unrealistic, in our view, both in view of the operational complexity of the model and from an economic perspective. We believe that, compared to internal market risk models, the proposed standardised model would be far more prone to the typical weaknesses that impair the quality of a model’s prognoses. It cannot therefore be considered an alternative which could function – generating higher capital charges – as a qualitatively flawless substitute for an internal market risk model.
C. Conclusion
The German banking industry takes the view that the proposal is not a suitable substitute for the existing standardised approach. Nor is it suitable to act as a benchmark or floor for the internal models currently in use.

Furthermore, the discussion paper fails to flesh out a number of details which are nevertheless key to the proposal’s practical implementation. An industry-wide standard cannot be achieved on this basis. Nor is this a suitable basis for conducting a quantitative impact study.

Instead, the fundamental review of trading activities should seek solutions capable of eliminating the shortcomings of the current framework and simplifying existing requirements.

We would appreciate it if our views were taken into account during future deliberations. We would be happy to provide further information about any of the issues raised and would welcome the chance to discuss our concerns with you in person.

Yours sincerely,
on behalf of the German Banking Industry Committee, Association of German Banks

Dirk Jäger
Managing Director

Uwe Gaument
Director

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