

11 September 2015

Mr. Bill Coen
Secretariat of the Basel Committee
on Banking Supervision
Bank for International Settlements
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Dear Mr Coen,

INTEREST RATE RISK IN THE BANKING BOOK ("IRRBB")

Barclays welcomes the opportunity to comment on the consultative document (CD) and we are fully supportive of the Committee's objective to ensure that banks have appropriate capital to cover potential losses from exposures to changes in interest rates.

We have contributed to the work of the Joint Trade Associations (IIF, GFMA, ISDA) and the British Bankers Associations and are supportive of these industry wide efforts.

The key topics that we would like to respond on are as follows:

- Capital should be based on potential losses rather than potential variability of earnings
- The risk of standardisation of approaches for the management and capitalisation of IRRBB
- The capitalisation of banks on a gone concern basis rather than a going concern basis
- The mandatory disclosure of standardised capital requirements and benchmark for supervisors under the Pillar 2 proposals

Each of these items is set out in more details below:

Capital should be based on potential losses rather than potential variability of earnings

We are of the view that regulatory capital for IRRBB should only be held against potential losses on the banking book, regardless of which Pillar of the Basel Framework is chosen by the BCBS.

Banking books are usually structured so that they lock in positive accrual streams over a number of years, creating embedded value in the form of future earnings. Embedded value is created through lending at a margin above the bank's funding cost or by using derivatives to lock in interest income at a higher rate than the funding cost. As banks usually accrual account customer products and apply hedge accounting in respect of derivative hedges, the positive margin accrues over the term of the product and is a significant contributor to income.

By only looking at changes in the Economic Value of Equity (EVE) of the banking book, the Pillar 1 proposals will not capture the embedded value of the banking book. This will result in the regulatory capital requirements measuring the reduction in the banking book's earnings resulting from the interest rate shock, rather than the potential loss in the banking book. We do not believe that it is appropriate to capitalise IRRBB on earnings volatility, as is proposed, as this will also capture items such as opportunity

cost. Instead, we believe capital should only be held when the interest rate shock results in a loss (in excess of the embedded value) on the banking book.

An example of this is a loan book with an accrual stream of £100 million where, under an interest rate scenario, the economic value of the loan book is decreased by £30 million. Under the Pillar 1 proposals the bank would be required to hold regulatory capital against this £30 million change in economic value but in reality, this £30 million is not a loss but a reduction in future earnings from £100 million to £70 million that will be realised over the life of the loans. We believe that these types of reductions in future earnings should not be subject to capital requirements (unless they exceed the embedded value) as the business is still expecting to make a profit on the product.

If the BCBS opts for capitalising earning volatility, as is currently proposed, firms should be allowed to take into account the benefit of the net interest income locked in via hedging programmes.

The risk of standardisation of approaches for the management and capitalisation of IRRBB

It is our view that the combination of excluding equity as a source of funding, capping duration assumptions on non-maturity deposits (NMDs) and standardising parameters applicable to behavioural options, will result in capital requirements that do not reflect the economic risks that individual banks are exposed to.

An example of this issue is non interest bearing current accounts balances. These balances are generally quite sticky in nature, as customers primarily hold these accounts for transactional purposes, and their behaviour is largely unaffected by movements in interest rates. Accordingly, banks generally hedge a significant portion of these balances to provide income stability for the business and protection against falling rates (which can result in significant margin compression on these balances if left unhedged). As different markets and product segments can have a variety of characteristics and varying degrees of stability, banks generally have flexible hedging strategies that are appropriate to the respective product. These strategies are usually determined by specific product characteristics, the competitive environment and the banks own detailed empirical analysis of customer behaviour for that sector.

The likely consequence of only allowing standardised assumptions, as proposed in the CD, is that banks will have to choose between two unpalatable options. Banks can either hedge their balance sheets in line with expected behaviour, and absorb the additional capital requirements, or they can reduce their capital requirements by removing hedging, at a cost of making their business significantly more exposed to falling rates and increased earnings variability. There is also an additional risk that standardisation will discourage banks from investing time and resource into IRRBB management, as no tangible benefits will arise from any improvements.

Another consequence of the proposed standardisation of assumptions is that it is likely to result in many banks focusing hedging activity on the same point of the curve. This will increase the riskiness of the industry as a whole as these banks will all be positioned in the same way and will be vulnerable to the same risks. There is also a concern whether the market will have sufficient liquidity to clear the required volume of derivatives without causing a distortion in the swap curve, particularly in the initial implementation phase as banks rebalance their hedging into the new tenors.

Instead of a standardised Pillar 1 approach, competent authorities should have the flexibility to impose capital requirements under either Pillar 1 or Pillar 2 of the regulatory capital framework. This should be done based on an approach that takes into account specific customer behaviours and that is quantified with models based on empirical evidence. The same level of prudential scrutiny should apply to IRRBB models as is applied to models used to calculate regulatory capital requirements for traded market risk and credit risks. We are aware that there is a desire to allow comparability across the industry and we believe that this could be provided through the outlier test outlined in Principle 10. This would allow the BCBS to meet their objectives while allowing banks to manage IRRBB under the supervisory review and disclosure process.

We acknowledge that some use of internal modelling has been introduced into the standardised Pillar 1 approach through the time series approach for NMDs and a supervisory discretion to allow firms to establish baseline scenarios for other positions with behavioural options. Our concern is that the proposed fixed parameters, such as caps and floors designed to standardise expected customer

behaviour, are not reflective of the diversity of retail and commercial banking markets, business models and bank sizes. It also poses market entry barriers and discourages banks from developing and enhancing their risk management framework and models.

The capitalisation of IRRBB on a gone concern rather than a going concern basis

The CD proposes treating IRRBB on a gone concern, or resolution, basis as it views the banking book through an EVE lens and assumes that any change in the economic value of the bank will be crystallised in the event of a rate shock. This is inconsistent with how banks manage IRRBB and with how other risk types are capitalised. It is our view that a gone concern or resolution perspective is incorporated as part of the wider regulatory framework such as comprehensive stress test (e.g. CCAR, ECB Stress Test) and resolution and recovery planning where assumptions around the stability of, for example, the equity position, would be tested under stress.

If IRRBB is to be capitalised on a resolution basis then the appropriate capital treatment should be as part of a wider regulatory framework such as comprehensive stress testing (e.g. CCAR, ECB Stress Test) and resolution and recovery planning where it makes sense to adopt a partial or total gone concern perspective. If IRRBB is subjected to CET1 capital requirements then we believe it is more appropriate to capitalise the associated risks on a going concern basis with the assumptions reflecting business activities, such as structural hedging in place to smooth income volatility, and to take into account hedging income.

The difference between going and gone concern is most apparent in the treatment of equity. In a gone concern environment any hedging of these balances will need to be unwound, with any gains or losses immediately crystallised. However, in a going concern environment these balances are often hedged to protect the bank's earnings from sharp falls in interest rates and to smooth income over the medium to long term. In the event that there is a reduction in a bank's equity then banks with structural hedges can either suspend the hedge rolls, or transact an equal and offsetting trade, so that the future fixed income stream is adjusted i.e. gains or losses are not immediately crystallised.

Setting capital requirements for equity hedging using an economic value metric will often require capital to be held against opportunity costs, rather than actual losses. Equity is a funding product that pays 0% to shareholders (as dividends are unrelated to the prevailing level of interest rates); if a hedge is put in place at a rate of 2% then the net return on the equity position is 2%. If rates were suddenly to increase to 4% the EVE metric would show a significant loss on the equity hedge (as the present value of the swap has reduced) but, in reality, the bank is still earning a positive return of 2%. All that has happened is that the bank is earning less return than it could have if the hedge was entered into today at the new rate of 4% (i.e. has an opportunity cost). Even in the event that there is a significant reduction in the equity balance there will not be a loss on the equity hedging, unless the net hedge rate falls below 0% (the rate that is being paid on the underlying).

The mandatory disclosure of standardised capital requirements and benchmark for supervisors under the Pillar 2 proposals

Mandatory disclosure and benchmarking of standardised capital requirements under Pillar 2 is likely to result in a requirement for banks to be capitalised in line with the standardised Pillar 1 framework. This is because a bank is likely to be considered undercapitalised by the investor community if they are holding less capital than the disclosed capital requirements and, over time, banks will receive market pressure to hold capital levels in line with the disclosure. In other words, a minimum or standardised floor in capital requirements would be created.

Finally, we are of the view that IRRBB is better suited to Pillar 2 as this is more accommodative to the variety of bank's risk management regimes while also giving local regulators more flexibility to prudently capitalise the idiosyncratic risks of their jurisdiction. We also expect that this regime will be the definitive and sole determinant of capital for IRRBB and will replace all existing Pillar 2 charges.

We hope that you find our comments and suggestions helpful. Please do not hesitate to contact Robbie Anderson at Robbie.Anderson@barclays.com or + 44 207 773 7159 if you have questions or comments on any of the issues raised in this response.

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'D. Hodge', with a long horizontal flourish extending to the right.

Daniel Hodge
Barclays Treasurer

i) Introduction section of the consultative paper

Lessons from the crisis and the Fundamental Review of the Trading Book

Boundary permeability and book transfers

The BCBS notes that *banks could designate instruments with observable market prices to the trading book by claiming trading intent – a subjective concept which was difficult for supervisors to invalidate. During the crisis, many positions became illiquid and some banks avoided the impact on income by re-designating such positions to the banking book and subjecting them only to the minimum capital requirements for credit default risk.*

The boundary between trading book and banking book is a supervisory concept currently under review by the BCBS as part of the Fundamental Review of the Trading Book (FRTB). In the FRTB the BCBS proposes a revised boundary that retains the link between the regulatory trading book and the set of instruments that banks are presumed to be holding for trading purposes. It also seeks to reduce the possibility of arbitrage and deliver a more consistent implementation of the boundary across banks – by introducing more tools to improve the supervision of the boundary and imposing stricter limits on the switching of instruments between the two regulatory books.

These changes should address the concerns the TFIR raise about the permeability of the trading book / banking book boundary. We disagree with the statement that the impact on income by re-designating positions from trading book to banking book can be avoided. Income recognition is dictated by accounting standards and is therefore unrelated to trading versus banking book classification. The transfer of illiquid positions that can no longer be traded from trading book to banking book is necessary for compliance with supervisory trading book regulations. Such transfers are only possible on the basis of current accounting valuations.

Internal Risk Transfers

The FRTB also considers the regulatory treatment of Internal Risk Transfers (IRT). This area has been the subject of much discussion between industry participants and the Basel Trading Book Working Group and requires further consideration with regard to the banking book before being finalised. We are of the view that following completion of the FRTB and IRRBB work, any potential for regulatory arbitrage would be eliminated; hence there is no need for supplementary requirements in this area. We suggest that the TFIR re-examine their concerns in this area in the context of work already undertaken by the TBWG, and that at a minimum, the rules for internal risk transfers include a provision for the TFIR to review the requirements at an appropriate point in the future.

AFS Assets

The CD recognises that AFS assets held within a treasury investment portfolio are legitimately and practically within the banking book, with a different intent from trading assets that require a different capital treatment (section I.4.3). Nevertheless while AFS assets are more stable than trading assets, they are held at fair value on the balance sheet, and allow a greater range of management action than amortised cost assets and liabilities from core banking book business activities, such as loan portfolios or customer deposits. Being liquid instruments by definition and regulation, they may be sold and replaced with overnight duration central bank cash in a much shorter time frame and without franchise or systemic impact as compared to a bank's loan book.

The NII and EVE methodologies prescribed in the CD do not reflect the more dynamic nature of HQLA AFS assets. They also do not adequately capture asset swap risk, the most representative risk for these portfolios, which have a very different volatility and dynamic from outright exposures and re-pricing risks. The basis risk add-on for NII in the CD doesn't have a term structure component, so cannot effectively capture the volatility of spread risks, while the EVE metric only captures interest rate repricing.

We would propose that AFS assets and their associated hedges be capitalised under Pillar 2 to reflect any volatility in CET1 through the AFS reserve, using a method appropriate to the investment portfolio of the institution.

If market volatility of fair value instruments in the banking book remains a prudential concern then the BCBS could consider the following points:

- Derivatives traded in the banking book for the management of interest and foreign exchange risks that are designated as cash-flow hedges should be excluded from capital requirements since the cash flow hedge reserve is derecognised in the calculation of Common Equity Tier 1 Capital (CET1).
- High credit quality and highly liquid Available-for-sale (AFS) securities held to meet regulatory liquidity requirements should also be excluded from any market risk capital requirements. If the BCBS is concerned about non traded market risk volatility on such AFS portfolios, then gains and losses could be reversed in the calculation of CET1. We appreciate that the BCBS decided against such a treatment in the Basel 3 reforms but it may be necessary to revisit this decision in light of some of the concerns about mark-to-market in the banking book.

An alternative approach would be to impose certain accounting treatments for instruments held in the banking book that can be fair value designated under international accounting standards. For example, cash flow hedge accounting could be prudentially required for derivatives entered in to hedging interest rate risks in the banking book.

ii) Pillar 1 proposals of the consultative paper

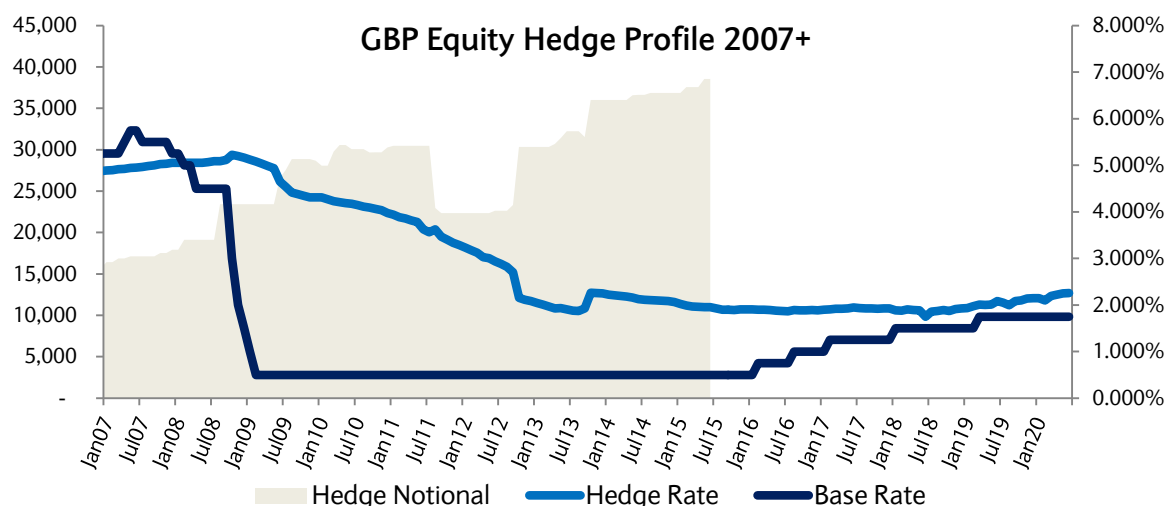
Components of an IRRBB standardised approach under Pillar 1 (CD section II. 2.)

The Income Stability Provided by Structural Hedging with Particular Focus on Equity

Banks structurally hedge their fixed rate non maturity products, for example current accounts and equity, to protect the profitability of these products against sharp falls in rates and to smooth income over the medium term.

The most significant risk to a banking book's future earnings is a sudden decrease in rates. During the sharp fall in interest rates during 2008 the structural hedge acted as a buffer and smoothed income over this period, as shown on the graph below. If Barclays did not have a structural hedge in place in 2008, it would have been immediately impacted by this fall in interest rates, which along with the margin erosion on other banking book products (primarily in the form of margin compression on the managed rate liabilities) which would have had a severe detrimental impact on the Group's earnings and profitability.

Conversely there is a risk that there could be a sharp increase in rates, in which case the structural hedge income would create a drag for the business. However, this will not create a loss for the business as the hedge rate will still remain positive and due to the rolling nature of the programme the hedge rate will gradually pick up the increase in rates. As such, banks are generally willing to give up some of the upside potential on their structural products to ensure that they are protected against falls in the level of rates and to provide a stable return for the Group.



Offsetting this potential loss in income on structural products is the potential for margin widening on other banking book products as rates rise, for example

- In 2008 when rates were still high and the average Bank of England rate was 4.38%, the banks average Net Interest Margin (pre – FTP) on the Barclays savings book was 1.69%
- In 2013, post the fall in rates and the average Bank of England rate was 0.50%, the banks average Net Interest Margin (pre – FTP) on the Barclays savings book was -0.29%

This reflects that banks are usually able to widen their margins on floating rate savings products as rates rise.

The proposed treatment of equity as overnight and haircuts for hedging non-maturity deposits may appear conservative at first glance, as they result in less hedging and therefore reduce any potential income drag. As we discuss above, banking books actually make greater income when rates rise, so bank's are willing to accept a small income drag from structural hedging as a trade-off to ensure that they are protected against the sharp fall in income if these balances are unhedged and rates fall. Reducing the volume of hedging on these products significantly increases the riskiness of a bank as a greater percentage of banks liabilities will be immediately affected by a fall in rates, leading to an immediate reduction in income.

In summary, we believe that equity should continue to be treated on a going concern basis with greater importance placed on removing interest rate risk and providing stable income. This will allow banks to continue their structural hedging programs to avoid undue exposure to movements in interest rates and volatility in earnings. We believe that concerns over the cost of unwinding the hedge should be a secondary consideration when compared to the vulnerability in the balance sheet to falling rates.

Non Maturity Deposits (NMDs): Proposed Standardisation

The CD states that *“excessive interest rate risk can pose a significant threat to a bank’s current capital base and/or future earnings if not managed appropriately”* and in order to address this concern it is proposing standardising the hedging of NMDs by two methods:

- 1) Standardisation of pass-through rates and stability caps on the product balances
- 2) Duration caps to a maximum of a 3 year duration and a 6 year tenor point

Whilst, we understand the BCBS’ desire to increase the standardisation of hedging across institutions to ensure that all banks are managing the associated risks in their balances sheets appropriately, a balance needs to be struck between improving the risk management of banks with less developed processes and allowing banks with sophisticated risk management processes to continue to improve their risk management framework.

The problem with trying to find a balance between accuracy and simplicity through a standardised approach is that it comes at the cost of weakening risk management at larger institutions. Many larger banks have invested significant resources in modelling the behaviour of NMDs and determining appropriate hedging strategies that consider specific product characteristics, the competitive environment and the banks own detailed empirical analysis of customer behaviour for that sector. By implementing standardised approaches across banks, these flexible hedging strategies will be replaced by uniform hedging strategies across all banks with firm specific risks not taken into account. There is also a risk that the proposed standardised approach discourages newer participants from improving their modelling and risk management processes, or assessing their risk independently.

It is worth noting that a bank may be in a situation where they incur significant capital charges whether they decide to adopt the proposed regulatory approach or not. A bank that continues its structural hedging programme could incur capital charges for deviations from the proposed standardised approach for IRRBB. On the other hand, a bank that terminates its programme will be exposed to increased risk and income instability as the business has a greater exposure to falling rates, potentially causing it to fail regulatory stress tests.

Non Maturity Deposits: Standardisation of pass-through rates and stability caps

The CD proposes a Time Series Approach for calculating the hedgeable balance that separates NMD’s into three distinct subgroups. However, Barclays has more than 40 different NMD product types, each with distinct observed behaviours, which cannot be modelling appropriately under this narrow classification approach.

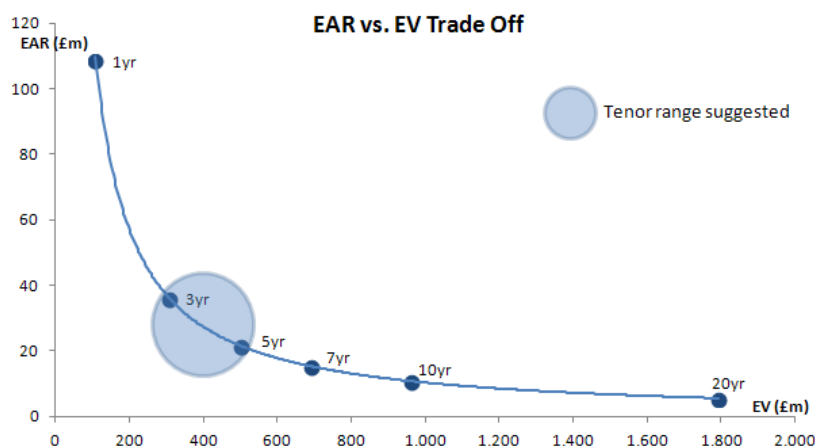
In addition, the proposed stability caps and pass-through floors are inconsistent with the customer behaviours that we have observed over many years. Barclays’ broad product offering reflects our diverse client pool; financially sophisticated clients with rate-sensitive NMD products will not behave in the same way as a regular retail customer. In recognition of this, Barclays reflects this variation by considering a lower percentage, c.40%, of the former to be stable, and a much higher percentage, c.90%, of the latter for the management of IRRBB.

We also consider the proposed pass-through rate for NMDs to have some fundamental issues. For example, the requirement to use 10 years of data to identify stable NMDs will prevent newer banks from adopting a more refined approach. It is also unlikely that past pricing and client behaviour is representative of current and future risks as it would ignore the wider market context and the prevailing competitive landscape that the bank is operating in.

Non Maturity Deposits: Hedge Duration

We disagree with the proposed duration cap of three years, with a maximum hedge tenor of six years, for hedging non maturity deposits.

Banks structurally hedge products to provide protection against falling rates and to smooth their income streams over a specified time period. The time period that the bank decides to transact these hedges over is currently determined by the banks risk appetite between earnings and economic value volatility, as shown in the graph below. Limiting the duration of this hedging effectively caps the amount of earnings risk that a bank is able to mitigate.



If all banks applied the standardised duration assumptions then their hedges would conform and cluster around these maturities. Barclays hedges notional amounts of individual NMD products at a range of tenors up to 7 years. For larger hedges, trades are spread over multiple tenors to limit potential impacts on market prices. To transact at a single point would amplify this effect and may distort swap prices. If all banks were uniformly hedged at the same point, an extreme scenario would be that markets could move significantly when positions are rolled in periods of low liquidity and in smaller jurisdictions there is a risk that the market will have insufficient liquidity to allow all the banks to hedge.

Barclays consider the optimal approach to managing IRRBB for NMDs to be on an internal models basis, as per the CD's Pillar 2 principles. This allows banks to use their own behavioural assumptions, subject to supervisory approval, as it is appropriate for market and client behaviours. Banks would therefore be encouraged to develop strategies for managing their risk and would be able to mitigate these exposures in the way most suited to the portfolio they manage.

Automatic Interest Rate Options

While we understand the principle of including automatic interest rate options in the standardised framework, we believe that section 2.7 of the CD needs clarification and further guidance. We note that Section 7.9 of the QIS guidelines provides additional detail on how to value automated interest rate options and this detail should be part of the CD. Notwithstanding the additional guidance provided by the QIS, there are a number of outstanding issues:

- In section 1 (i) b. and section 2, why is 25% chosen as a volatility metric?
- In section 3, for each bought interest rate option, what evidence if any would banks need to provide for options to be used for hedging purposes? For example, rate floor hedging on a floating rate liability portfolio is more akin to an insurance/protection contract and is not a first order hedge.
- We do not believe the final sentence of section 3 of 2.7 CD is worded correctly. We are unclear as to why these positions should be assessed in relation to capital as opposed to their mark to market?

Supervisory scalars under the standardised approaches for positions with behavioural options

Barclays recommends that an internal model approach is adopted for positions with behavioural options (i.e. prepayment on fixed rate loans, fixed rate loan commitments and early redemptions of term deposits). This is because there are a wide variety of factors that can drive changes in customer behaviour and there is a risk that standardising will result in a misrepresentation of these risks. However if there is a desire to standardise we recommend that standardised scalars should be set by local regulators so that they reflect the rate environment and local market conditions.

We would like to make a few technical comments with regards to the definition of scalars as follows:

i. Prepayment on fixed rate loans

Regarding the standardised prepayment scalars, the scalar-based approach does not seem to differentiate between a secured and an unsecured loan portfolio. In the UK, for example, fixed rate mortgages observe lower CPRs compared to fixed rate personal loans and applying the same scalars to both these portfolios is likely to result in inappropriate stress behaviour assumptions that may misstate the underlying risk.

The scalars proposed in the CD are not consistent with empirical evidence of the sensitivity of prepayment rates to rate changes. Analysis of Barclays' historical mortgage data suggests that prepayments increase when rates fall, but by a lower multiple than proposed in the CD, for example in the GBP parallel down scenario, the scalar would be closer to 1.5 for fixed rate mortgages rather than the proposed 2. This trend is even more pronounced for portfolios with higher prepayment rates, for example the fixed rate personal loans portfolio.

ii. Fixed rate loan commitments

The proposed pull through ratio (PTR) is too severe for low PTR portfolios when compared with high PTR portfolios. For example, for a parallel down scenario, a portfolio with an 80% PTR under the base case will see a 30% stress (50% PTR under scenario) while a 55% PTR portfolio will see a 55% stress (PTR will go negative under the calculation prescribed but for a 0% floor). We believe that a scalar that directly applies to the PTR rather than the lapse ratio would be more appropriate.

iii. Term deposit redemption ratio

In the UK, the majority of term deposit products do not allow customers to withdraw balances except for certain cases which are unrelated to interest rates (i.e. death, divorce or financial hardship). In cases where customers are able to early withdraw a deposit they are charged an early redemption fee that compensates for the economic breakage cost. We appreciate that this may be different from how other markets work and therefore we believe that scalars should be set by local regulators.

Specification of supervisory shocks

The proposal on the calibration of the candidate interest rate shock scenarios could be enhanced to take into account recent market conditions and specific portfolio composition while still preserving a global and common approach across the industry. Specifically, points which could be improved are:

- Absolute shock – this approach may underestimate/overestimate stress exposures, as different currencies may have different rates of absolute volatility (e.g. 100bps EUR versus 100bps for an emergent market currency).
- Symmetry of the shocks – assuming symmetric behaviour may not be realistic, as sensitivity to up and down are dependent on the level of rates.
- Shocks evolution – shock sizes should change in line with rates levels, rather than being fixed. Also, fixed shocks implicitly set a correlation structure between currencies which may not be representative of latest market conditions.

In order to address these points, we propose that a calibration methodology which is based on a formulaic approach should be used, as this will ensure that consistency is kept across financial institutions.

For example, shock sizes could be based on historical time series, with a fixed but rolling observation period, e.g. latest 5 years of history, to ensure that latest market conditions are reflected. Proxies for the relevant buckets and risk factors could be pre-defined, to ensure consistency across the board and full transparency. Shocks could then be calibrated to specific points of the distribution (either by specifying a percentile or a number of standard deviations) and at both tails to capture asymmetry. The calibration horizon could be either fixed (e.g. 6 months) or product specific (for example 90 days for high quality and liquid securities in liquidity pools).

The CD also requires that a down shock is floored at zero. In the current negative rate environment (i.e. EUR) this will actually result in an up shock being applied which appears to contradict the intention of a downward shock, which is to impose a rate which is inferior to the current rate. We would like to seek clarification on the intention of this proposal: Is it to floor at zero, with negative rates included, or should rates be floored at the minimum of the current rate and a zero rate?

Excluding Embedded Value

We believe that there needs to be a clear distinction between loss risk, which is a loss that will need to be absorbed by capital, and variability risk, where the economic value of the portfolio changes due to interest rate movements but does not result in a loss. It is our view that capital should only be held against potential losses and not the variability of earnings in the banking book.

Banking book positions are accounted for in a fundamentally different way than trading books. In the banking book, customer products are typically accrual-accounted, which allows banks to recognise the product's interest income over the life of the product. Further to this, banking books are typically managed by locking in positive accrual streams over a number of years, creating embedded value which is not recognised on Day 1. This occurs in two ways:

1. ***Issuing products with a higher customer rate than funding rate:*** These products are typically tracker/variable products where the customer rate and funding rate are 100% positively correlated. A typical example of this is a 2 year tracker mortgage with a customer rate of 2.25%, comprised of the funding cost of Base Rate 0.50% and a 1.75% locked in margin for the next two years. As base rate increases/decreases, the margin on this product will not change (assuming positive interest rates). As this product is accrual accounted, the present value of this position is not realised on day 1 and is accrued over the life of the product in the form of a positive embedded value for the bank.
2. ***Using derivatives to lock in the bank's interest income at a higher interest rate than its funding cost.*** This typically happens on fixed rate products, which are hedged with derivatives to eliminate fluctuations in the business margin from interest rate movements over the life of the product. A typical example of this is a 2 year fixed rate mortgage, which has a customer rate of 2.39%. The funding rate on this product is currently base rate i.e 0.50%, with the current margin for the business at 1.89%. The customer rate is fixed and will not change as rates change, but the funding rate is variable so the margin for the business can increase/decrease depending on the movements in base rate. However, by entering into a pay fixed, receive floating derivative with a rate of 0.94%, the funding for this product is now locked in, with the business receiving a fixed margin of 1.45% over the life of the product. The exposure on both sides has now been turned into floating with no impact on the bank's margin as rates change. Similar to the treatment for tracking products described above, these derivatives can be accrual accounted as cash flow hedges with the positive margin for the business accruing over a number of years also creating a positive embedded value for the bank.

In both these cases the bank has created a positive accrual stream (embedded gain) that will be realised over a number of years. However in the regulatory EVE measure the embedded value is zero as it does not capture the rate differential between the customer rate and the hedge rate.

We also have concerns with the way that embedded value is captured on portfolios that are only partially hedged. For example, if we assume that a banking book currently has the following derivative positions, the MtM/value of which can change depending on the rate environment.

	Example A	Example B	Example C
Current embedded value	400	48	-300
MtM of position when rates increase 50bps	100	-237	-100
Change in MtM	-300	-285	200
BCBS Proposed Risk Exposure	-300	-285	0
Barclays Proposed Risk Exposure	0	-237	-100

Example A:

Barclays do not believe that capital should be held against this position. Although the position is worth £300 million less than the base case after the rate shock, the banking book still has a positive accrual stream and will not actually incur a loss. Further to this the £300 million reduction will not be a day one event but is spread over the life of the affected products.

Example B:

Barclays believe that capital should be held against the embedded loss on this position (-£237 million) and not the change in value of the position (-£285 million).

Example C:

Barclays believe that a capital charge should be held against the embedded loss on this position (the -£100 million MtM). However, under the current proposal no capital would need to be held against this position as the change in value has been positive +£200m.

Net Interest Profit Metric

The BCBS acknowledges on page 31 of the CD that measuring and offsetting embedded gains may be too hard for some positions as it *“requires knowledge of the current term structure of risk-free interest rates and the prevailing term structure when the asset (or liability) was entered into”*, which is why *“the Committee decided not to include offsets for embedded gains and losses in the EVE measure of risk”*.

We are of the opinion that due to its accrual nature it is not onerous to approximate the embedded value of a banking book if a bank has an understanding of the maturity profile and margins on its products. Irrespective of this, the CD attempts to address the embedded value issue through the Net Interest Profit (NIP) metric. However, we are of the view that the definitions of this metric on page 36 and in Annex 3 do not fully capture the true embedded value of a banking book's positions, as it only measures the NII generated from banking book positions which have a locked-in margin, for example mortgages.

Further to this

- The definition on page 36 does not take into account banking book net interest income generated on positions which do not have a locked-in margin, but are still positively income generating, for example on interest bearing current accounts. This would only provide a partial offset to any embedded losses and would not truly reflect the total banking book net interest.
- In Annex 3, the CD redefines NIP, as the “NII attributable to banking book positions minus costs”. It suggests using a standardised/internally defined parameter/scalar for estimating total NII minus costs. In this case, we assume that in fact the total BB NII is being considered and not just that products which have locked in margins. This only provides a partial offset to any embedded losses as there are cases where positions will have embedded gains which will not be fully reflected in NII (or NIP), for example positive MtM on derivative positions. This creates an inconsistency between the treatment of embedded gains and losses, as the embedded losses (if any) on the derivatives will have to be taken through capital, with embedded gains not being considered.

General earnings based (NII) measure methodology (CD section II. 4.)

Barclays is fully supportive of an NII approach as we are of the opinion that certain balance sheet risks can only be captured by looking at the impact of a rate scenario on the firm's earnings, for example, a rolling structural hedge programme. However, we are concerned with the construction of the proposed NII measure.

Standard NII methodology measures the change in NII after a rate shock, with maturing balances being replenished, either with a constant balance sheet i.e. a like for like replacement of maturing balances, or

using a dynamic balance sheet, potentially linked to business volume forecasts. When a product matures it is reinvested at the relevant term and forecast margin. As a result, the forecasted NII closely approximates real changes in the NII the business expects to make over the NII horizon for that rate shock, pre any management actions.

Barclays EaR metric calculates the change in NII over a one year period, using a constant balance sheet, after a +/- 200bps rate shock. It does not discount the cash flows, as we are estimating the earnings over the year, not the present value of those earnings.

Comparing the NII metric proposed by the BCBS with common market practice, we note the following points:

- NII as defined by the BCBS does not capture the appropriate product margin and as a result does not truly represent the bank's NII. For example, a 2-year fixed rate mortgage, which has 3 months left to maturity, will require replenishment in a 1-year NII window. If the margin on the existing mortgage is 2.5% and the current margin for a 2-year fixed rate mortgage has fallen to 2%, common market practice is that the mortgage earns a margin for 3 months of 2.5% and for 9 months of 2% respectively while the CD proposes that this product will earn 2.5% for the entire 12 months.
- EVE and EaR are distinctly separate metrics. Discounting earnings does not result in consistency and comparability with EV, instead it understates the forecast NII and as such does not truly reflect a bank's earnings sensitivity to changes in interest rates.
- The proposed methodology is static and does not consider the intricacies of monthly rate movements on earnings and the impact of rolling hedges. In a structural hedge programme the hedge balance is topped up each month and the new hedges are subject to rate movements and therefore create earnings (NII) volatility. The proposed calculation for NII appears to ignore the persistence of non-maturity products, which is especially prevalent in rate reduction scenarios.

Basis Risk

It is our opinion that the proposed standardised approach to basis risk does not fully capture basis risk. We recommend that the BCBS issues guidance to capitalising basis risk but leave the specific implementation to local supervisors. Our issues with the proposed approach are:

- The basis risk and curve risk add-ons are overly prescriptive and complicated. For many institutions the methods used are likely to be too complicated compared to their ability to manage these risks while for other banks the method might be too restrictive.
- The reference rate basis risk section only considers the first repricing date for the floating cashflow, and only within the first year, therefore the term structure of basis risk is lost. For example a 10-year asset referencing 3M LIBOR that is funded by a 10-year liability referencing 6M LIBOR will have the same basis risk as a 1-year asset referencing 3M LIBOR funded by a 1-year liability referencing 6M LIBOR. These are not the same ultimate risk exposures and a short term non-parallel gap risk add-on does not capture the difference.
- The short term non-parallel gap risk add-on captures curve risk in the first year by a complicated method of pairing cash flows of different frequencies. Footnote 47 notes that the interest rate shocks in subsection II.2.2. include slope but not curvature and do not capture stresses to short dated cash flows. It would be simpler to add curvature and more pronounced short dated stresses to the scenarios or add additional scenarios than to create a separate add on term.
- The segmentation of reference rates is complicated by:
 - Government bond yields in the banking book: these rates are typically received from high quality liquid assets, which will in most cases have a maturity >1 year. NII type measures are not particularly suitable for managing the risk on a bond portfolio, which will typically be managed using PV based metric (such as EVE or VaR type metrics or stresses).

- Government bond yield is considered the ‘default’ choice for rates which do not otherwise fall into the other categories, but it is not clear why this is the appropriate rate. A bank will not normally be funded at a government bond yield rate. (Footnote 46)
- Both administered rates and bond yields capture credit spread or funding spread risk in the banking book, and may overlap with other risk management metrics used to capture these risks.

We would recommend:

- A less prescriptive guidance that directs that basis risks need to be addressed, but leaving the detail of the implementation to the institution and supervisor.
- Guidance that allows for managing basis risks within the EVE and NII metrics without reference to an add-on. In this case, a wider set of scenarios that capture reference rate basis and non-parallel gap risk directly in the scenario description.
- Segmentation of reference rates according to the institution’s own determination of relevant rates with which to capture basis.

Minimum capital requirements (CD section II. 5.) - Currency aggregation

Within section 5 of the CD, three of the four proposals to calculate the minimum capital requirement include a parameter ‘w’, which the BCBS has determined should be at 0.25 and only applies to currency gains.

Specifically, *“The parameter w $[0;0.5]$ needs to be calibrated in a prudentially sound way. The view of the BCBS is that w should not take values higher than 0.5 and has decided that the preliminary value of w to be 0.25.”*

However, despite the BCBS stating that ‘w’ should be determined in a prudentially sound way, the determination of this factor appears to be ad hoc. The BCBS provides no rationale why a maximum of 0.5, or a minimum of 0 is deemed correct. There is also no logic disclosed as to why the midpoint of these two points is recognised as the relevant value. Equally, the wording of the statement that the value of 0.25 is ‘preliminary’ should be clarified.

Given the impact of ‘w’ on the formula, due consideration is needed to ensuring that the most appropriate number possible is chosen. In calculating our capital requirements, based on Option 1, the value of ‘w’ being at 0 or 0.5 has a potential impact of +/- 3% of the capital charge compared with the base case of $w=0.25$.

Barclays supports the usage of correlations among interest rates to aggregate risks in various currencies and we propose the use of a coherent correlation-based aggregation method irrespective of the NII or EVE sensitivity in each currency.

iii) Review of the IRR Principles and proposal for an enhanced Pillar 2 capital treatment for IRRBB

In general terms Barclays are supportive of an enhanced Pillar 2 approach and the principles laid out in this consultation paper are coherent and broadly encouraging. However, we have identified a number of items in these principles which we do not support, which we have detailed below:

Credit Spread Risk in the Banking Book (Principle 1, 4 and 9)

We believe that the definition of CSRBB requires significant clarification before it can be unambiguously interpreted or implemented. CSRBB is not mentioned as part of the Pillar 1 standardised approach and it is apparent that the standardisation of CSRBB is very difficult to achieve. While CSRBB on a liquid asset buffer is reasonably straightforward to measure it is questionable if there is a direct link between changes in a bank's credit spread and banking book customer asset (i.e. mortgage) pricing. Changes in a bank's credit spread will not necessarily be immediately passed on to the customer, if at all, given the competitive environment and the bank's desired market position.

Information to supervisors and public disclosure (Principle 8)

Advance notification of supervisors of any significant changes to behavioural assumptions relating to the treatment of optionalities

While we are supportive of reporting the results of our internal IRRBB models, including material assumptions, to the supervisor when requested, we are concerned about the requirement to notify the supervisor in advance of making significant changes to behavioural assumptions relating to the treatment of optionalities.

We would like to note that under the current Pillar 2 framework (SREP), supervisors already have the ability to request information and insight into banks' internal models. The framework provides for a deeper discussion between the bank and the supervisor to ensure common understanding of practices, processes and controls while assessing the robustness of the bank's governance process and any significant changes that have occurred. We therefore suggest that national supervisors refer to their respective SREP and regular supervisory assessments in determining the appropriate additional information they need.

The bank's behavioural assumptions that relate to embedded customer optionality are a key input of the bank's daily / monthly hedging process and accordingly, these assumptions and their appropriateness are frequently back tested and discussed in governance and review meetings between Treasury, Risk and the relevant business units.

Depending on the materiality of the portfolio, a behavioural assumption may be adjusted when observed customer usage of the option deviates as little as 1% from hedging assumptions. Once a change is agreed the interest rate hedge for that product is immediately adjusted to remove the business' interest rate risk. This review and hedge adjustment process occurs over a very short period of time, usually a number of hours, and is an integral part of reducing the interest rate risk the business is exposed to.

Our concern stems from the ambiguity over the notification requirement. Barclays has over 1000 behavioural assumptions across its product set and in an environment where interest rates are changing, it is likely that the majority of these assumptions will need to be adjusted frequently.

We are concerned that either an advance supervisory notification or approval requirement before adjusting hedges could result in significant delays in hedge adjustment processes, materially increasing the interest rate risk on the banking book.

While the number of assumptions subject to supervisory notification depends on the definition of "material", even if limited to only the mortgage book, it could cause a significantly increased burden on the supervisor for changes that are possibly of minor relevance (i.e. only a very small percentage of behavioural assumptions over the last year have had a P&L impact over £1 million), in the context of the wider banking book.

Rather than banks notifying the supervisor about behavioural assumption changes on an ad hoc basis, we recommend that emphasis is given to the existence of a strong risk function and control framework to be included in the supervisory review process. Supervisors should define the materiality of assumptions in terms of IRRBB metrics that would then need to be documented as a part of the recurring supervisory IRRBB reporting and dialogue.

The mandatory disclosure of the standardised framework under the Pillar 2 alternative

Quantitative disclosure

We disagree with an obligation to disclose the results of the standardised fallback calculation as we strongly believe that such disclosure would confuse readers of financial statements. Banks who primarily use an EVE approach tailored to their business model would obtain different results to banks using an EaR approach. Therefore, mandatory disclosure of standardised results on the basis of an EVE methodology will force banks to favour an EVE approach over EaR even though EaR could be the more suitable metric to measure and manage IRRBB for that institution.

Standardisation and comparability can be achieved through standardised shock scenarios applied across the industry whereby the focus should be on relative versus absolute changes.

Qualitative disclosure

We are supportive of standardised qualitative disclosures to allow an increase of comparability across the industry. However, we are concerned about the level of the proposed disclosure anticipating that banks would have too many assumptions to publish, some of which could be associated with confidential pricing assumptions and client behaviour. We prefer a narrowly defined and standardised list of disclosures of assumptions and greater focus on principles and methodologies of management.

The standardised framework as a fall back option (Principle 10 and 12)

Principles 10 and 12 both state that the standardised framework should be used as a fall back for assessing the capital requirements for IRRBB. Principle 10 specifically states that the standardised framework would be used at a minimum as a common metric for supervisors to compare and assess banks internal measures. Given the issues we have highlighted with the Pillar 1 approach we also reject the idea of a Pillar 1 approach as a fall back option.

If a Pillar 1 approach is incorporated as a back up to an approved Pillar 2 approach then this will create a dangerous precedent where the Pillar 1 approach is considered a capital floor. A bank may be considered under-capitalised if the Pillar 1 approach recommends a capital charge which is higher than the Pillar 2 approach, despite approval of the banks internal methodology as per Principle 11.