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Dear Task Force Members

This letter constitutes a response to the BCBS Consultative Document on Interest Rate Risk in the Banking Book (the CD) issued in June 2015. It is written in a purely individual capacity as I am now no longer in full time employment; for the last fifteen years, however, I have been closely involved in IRRBB, so I hope my observations may be of some interest.

I should firstly like to say that I am entirely supportive of the objectives of the CD, namely:

- To reduce the scope for regulatory arbitrage between the banking book and the trading book;
- To improve the consistency and transparency of the capital regime for IRRBB; and
- To ensure banks always hold sufficient capital to absorb any potential losses in their banking books resulting from adverse movement in interest rates

Unfortunately, I do not think that the proposals contained in the CD will adequately meet these objectives and may indeed have a number of serious unintended consequences. The remainder of this letter is structured as follows:

- A summary of what I feel to be the **underlying conceptual weaknesses** in the CD;
- A list of some of the potential **unintended consequences**; and

- A suggested **alternative framework** which might possibly constitute a better way of achieving the agreed objectives.

Section 1 - Underlying Conceptual Weaknesses

I believe there are three fundamental problems with the suggested approach all of which stem from trying, albeit with some modification, to apply a trading book treatment to a banking book:

- (1) The core EVE measure assumes that all future cash flows are essentially homogenous and will re-price, in total, both *on* the re-pricing date assumed and *by* the full amount of the external interest rate change being modelled. This is a reasonable assumption for wholesale products where the re-pricing date is contractually binding on both the bank and its customer, but not for retail products where the impact of any external rate change on the product price is usually dependent on a range of behavioural factors. Consequently, any potential loss estimate based simply on discounting future cash flows using different external rates is likely to be materially inaccurate as it will stress only *one* of the many any factors involved.

The Task Force has, of course, recognised that many products do not readily fit the simple gap model and has devoted considerable effort to proposing solutions. Rather, however, than questioning if the approach is really suitable in the first place, all the solutions proposed seem to be geared to *forcing* such products into the simple value model, often by prescribing supposedly prudent constraints on re-pricing assumptions. These treatments, however, in different economic conditions, may not actually prove to be prudent at all. For instance, if banks, in line with the prescribed assumption, invested 40% of zero rate NMDs in overnight assets, the EVE measure would suggest zero risk whereas, in practice, a fall in rates would lead to margin compression. This risk, also, would not appear to be captured by the proposed complementary earnings (NII) measure.

- (2) The CD treats any decrease in net present value of future positive margin, for both fixed and variable rate products, as a “risk” for which capital should be held. This is a trading book treatment predicated on the present value of future income having *already* been taken to capital resources and hence being at risk from a subsequent rise in interest rates. For most banking book products, however, where future income is not taken to profit, and where positions may generally be presumed to be held to maturity, it is difficult to see how a potential decrease in its present value should require a regulatory capital buffer. A rise in rates would not cause a loss, or even a fall in income, and the bank could only “hedge” by then exposing itself to falling rates. Also, it will suggest that the higher its margin, the more at risk the bank is.

This problem has been partially recognised by the proposal to reduce the final capital charge by what is termed the NIP, but this seems clumsy and inconsistent as it offsets a change in the net present value of future margin with a backward looking accrual accounting measure of net profit. A high margin bank with

longer maturity products would be at a disadvantage to a low margin bank with shorter maturity products, assuming both achieved similar levels of *net* profit. A far easier solution would be to exclude future locked in profit altogether either by just using a principal only gap, or by re-computing all future fixed interest flows at the current risk free rate.

- (3) The metrics do not distinguish sufficiently between the risks to a going concern and the risks that might crystallise should the bank, probably for some other reason, fail. Clearly regulators need to consider both eventualities, but different measures should be used for what are entirely different scenarios. To try to capture both in a single number could lead to the prescription of treatments that do not adequately cover either eventuality. For example, for a going concern bank, the assumption that 40% of its NMDs will re-price (or be withdrawn) immediately on any rate increase would seem overly prudent, but, in the event of the bank failing, it could well prove to be a serious overestimate of the stability of these balances.

Again, I think this root cause of this problem is the adoption of a trading book view of the world where the “going”/“gone” concern distinction is less relevant, the assumption being that all positions will be closed in the short term.

Section 2 - Potential Unintended Consequences

I list here what I regard as the principal unintended consequences that could arise:

- (1) The requirement to treat all Tier 1 and Tier 2 capital, plus a substantial portion of NMDs, as re-pricing overnight would lead to considerable volatility of earnings if banks elected to minimise their capital charge by investing, also, the corresponding assets overnight. It would additionally, in a high rate environment, leave banks with no capital buffer to absorb the impact of any unexpected fall in rates. While, it can be argued that the overall margin on these liabilities can never become negative, such a reduction in margin could still lead to a net loss after the deduction of costs and other items.
- (2) More widely, any capital charge based, ultimately, on simple gap mismatches could, in practice, be largely avoided by banks simply closing these gaps if capital optimisation were their only objective. It would, therefore, not necessarily achieve the objective of ensuring sufficient capital to support IRRBB. Further, given the inherent methodological weaknesses in the EVE approach – particularly the inclusion of unrealised profit – it could lead to banks acquiring positions that cosmetically reduced the gap risk but which, in practice, actually increased their exposure to adverse rate movements.
- (3) The inclusion of future margin, and charging capital in respect of changes to its present value, will clearly disadvantage those banks that offer longer duration and higher margin products. A bank providing a 20

year, variable rate, interest only mortgage at a fixed margin of 2%, would, at current rates, incur a capital charge of around 5.5%. Banks will react by either:

- increasing margins to compensate - in this example, assuming an internal cost of capital of 10%, the bank would need to add 55 bps to the price and, as this would itself incur a further capital charge, a price increase closer to 75 bps would be necessary to “break even”; or
- withdrawing such products; or
- transacting “hedges” that would effectively make their returns even more a function of the level of interest rates.

The wider social and economic effects of this element of the proposal need to be considered carefully.

- (4) The approach, while overly simplistic at the high level, is, in its detail, onerous and complicated and will require banks and regulators to employ considerable resource to implement and maintain. To cite just one example, rather than simply prescribing some standard shocks, it seems that every major bank will individually have to compute its own; these will then, presumably, have to be validated and, somehow, made consistent across banks. This will constitute a major drain on resource solely to add a measure of spurious statistical accuracy to a methodology which is, at best, imprecise for the majority of banking book items. Risk functions could, as a result, focus less on genuine risk management and more on trying to optimise the capital charge with the knock-on effect of turning IRRBB into an opaque niche specialism rather than something that ought to be both transparent and at the heart of how banks manage their balance sheets and price their products.

Section 3- Suggested Alternative Framework

An alternative suggestion is for an IRRBB capital framework comprising *three* distinct elements each addressing, separately, the principal shortcomings of the current regime.

Element 1

This element is primarily intended to discourage regulatory arbitrage by ensuring that any open, or discretionary, positions in the banking book attract the same Pillar 1 capital charge as they would in the trading book.

It would be a value based approach similar, mechanically, to that proposed in the CD, but differing in that:

- all re-pricing assumptions for non-contractual positions, including equity and NMDs, would be determined solely by the reporting bank itself with no regulatory prescription;
- future margin and other unrealised profit would be excluded; and
- the interest rate shocks would be calibrated to return broadly the same risk number as for a position in the trading book

A capital charge would only arise to the extent that the bank either had contractual mismatches or had not fully hedged according to its *own* behavioural assumptions. A value approach, in these circumstances, is appropriate because it could be presumed that any mismatches would, in the normal course of business, be closed shortly using market based instruments; in the interim the bank is, economically, exposed to the cost of these hedges rising so should hold capital as a mitigant.

Clearly supervisors would need to satisfy themselves that the bank's re-pricing and investment horizon assumptions were subject to appropriate governance and were not chosen solely to facilitate the expression of any short term interest rate views. Frequent changes to assumptions, not obviously driven by any change in either business strategy or underlying economic conditions, should, for example, prompt supervisory challenge.

Element 2

This element is intended to capture the risks to interest margin assuming the bank remains a going concern and to provide supervisors with a consistent measure of IRRBB across banks.

It would comprise a forward looking, standardised net interest income sensitivity analysis designed to determine whether, under stress of both interest rates *and* re-pricing assumptions, the bank could plausibly make a net loss and hence need to hold, under Pillar 2, a capital buffer.

The approach is predicated on the assumption that capital for IRRBB, for a going concern, is only necessary if a plausible decrease in net interest income actually led to a net loss and hence threatened solvency; variability of net interest income, *per se*, should not require a capital buffer.

Banks would submit, in a standard format, a "base line" projection of their net interest income over a chosen period (say, three years) analysed by each material product line, and showing for each:

- the anticipated average future volume; and
- the anticipated average interest rate

All external rates would be assumed to follow the paths implied by the current yield curves, but actual product rates and volumes would incorporate the bank's own assumptions under these rate paths. The final projected net interest income should agree broadly to the bank's own medium term plan.

This base line projection would then be subject to a number of standard regulatory stresses; each would comprise both potentially adverse paths of the relevant market rates and some adverse (but economically consistent) stresses to the banks' re-pricing and balance retention assumptions under these paths. For example, in a rising rate scenario, a bank itself might assume that it would still retain 90% of current accounts – the regulatory stress might restrict this to 75%.

The net interest income under the worst case scenario would then be summed with other *unstressed* elements of net profit (e.g. fees, operating costs and expected credit losses as projected in the bank's management plan), to determine whether, *prima facie*, there was any cause for supervisory concern. It would, in other words, be somewhat similar to the existing Standard Outlier Test but would be on an income rather than a value basis.

Banks "failing" this test – either because one of the scenarios suggested an absolute loss or because the supervisor felt there was an insufficient cushion – would then be subject to more detailed examination as part of the ICAAP. In this, the bank might then wish to present the results of its own income sensitivity model as, clearly, the simplified and standardised model described above would only be *indicative* of a potential problem; equally the supervisor might wish to suggest additional scenarios to stresses any bank specific vulnerabilities.

The final outcome might be a Pillar 2 capital charge to cushion against actual loss under stress, or, alternatively, other mitigating actions might be agreed. It would, also, of course be necessary to ensure that there was no overlap with the existing stress testing regime.

Element 3

This final element is designed to capture those interest rate risks that would *only* arise in the event of a bank failing.

The principal concern here is those fixed rate asset positions that banks typically hold on the presumption that a certain core of their zero or low cost liabilities – principally capital and NMDs - will be retained in perpetuity. For a going concern, these hedges are perfectly prudent as they reduce margin volatility and protect against falling rates. Should, however, the bank fail, the underlying liabilities would most probably evaporate entirely meaning that the hedging portfolio would then become an open risk position which, if rates had risen, would have a negative market value and this, on liquidation, could considerably reduce the total value of assets available to unsecured creditors.

The CD's prescribed assignment of most of the relevant liabilities to the overnight bucket in the EVE calculation seems designed to capture precisely this risk, but I think it could be strengthened in a number of respects:

- It should be computed separately as a risk arising under an entirely different scenario; otherwise, it could be potentially masked either by offsetting short term discretionary positions or by the contrary impact of more "going concern" stresses.
- The positions have no obvious "holding period" – they will probably be maintained for as long as the bank continues to think it is a going concern. What is important, therefore, is not the size of the negative mark to market of the *current* position under an instantaneous shock, but rather the *maximum potential negative mark to market* of the portfolio over the medium term, assuming a rising rate path scenario but also taking into account the portfolio's likely evolution – i.e. positions will run off and be replaced by new hedges struck at higher rates. (This approach is consciously borrowed from the Potential Future Exposure computation for counterparty risk).
- While a value approach captures correctly the potential loss given the failure of the bank, for this to translate into a risk based capital charge, some account needs to be taken of the fact that different banks have *different* probabilities of default. The calculation, therefore, needs to weight the amount of the possible loss by the probability of its occurring; otherwise stronger banks with more capital (and hence less likely to fail) will be regarded as *more* risky than those with less capital (and hence more likely to fail).

One option would be to require additional Pillar 2 capital to be held to cover this risk and for its quantum, as outlined above, to be a function of the size of the portfolio, its duration and the bank's own probability of default. Clearly, as with the CD proposal, banks would still have to balance capital optimisation against the benefits of margin stability, but an approach that took better account of the true probability of the bank failing in a rising rate environment would, it is hoped, return a more proportionate capital charge which banks would then be more likely to accept as a "reasonable" cost of doing business.

There might, however, exist also a non-capital based solution to this particular regulatory concern. What, essentially, is required is some sort of insurance policy that would pay out in the event of *both* a significant rise in rates *and* the default of a particular bank. It would seem, at least theoretically, possible that some option product could be designed with these features, and while it would probably be inappropriate for banks themselves to take out contracts based on their own probability of default, possibly regulators, or some independent agency acting on their behalf, could do so with the necessary premiums being met by a levy on the banks. In other words, a solution akin to the depositor protection scheme might constitute a more transparent and direct mitigant for this very particular risk.

I should like to thank you very much for the opportunity to respond to this CD. I appreciate my comments in sections 1 and 2 of the above will largely duplicate feedback you will have received in other responses, but, I hope that Section 3 might possibly contain some more constructive and useful ideas, if, following this consultation, you do decide to re-consider the overall approach.

Yours sincerely

Paul Newson