Productive Human Endeavour Limited

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11th October 2013

Dear Sir or Madam,

The Regulatory Framework: Balancing Risk Sensitivity, Simplicity and Comparability

On behalf of Productive Human Endeavour Limited, I am pleased to submit to you my observations on your discussion paper. Through my company, I provide consultancy services to the banking industry derived from the practical experience that I have gained by having worked for over 37 years in HSBC serving in the Group Head Office as well as in its principal subsidiaries in Asia, Middle East, Europe, South and North America. My company is currently engaged by the British Bankers Association (BBA) within its Prudential Capital and Risk function to coordinate industry responses to regulatory papers.

The views expressed in this response do not in any way purport to represent the views of my former employer or the views of the BBA. They are entirely personal.

The Committee (BCBS) is to be commended for asking such important questions about the future of the regulatory framework at this juncture, so soon after the ink is dry on Basel 3, EU and US rules, and various directives. I believe that this is a golden opportunity for the BCBS to stop to consider the current framework in depth, pause to reflect on the choices of approach, and then to proceed on a journey towards 2030 taking regulators and more importantly the banking sector with it.

I would be happy to assist the Committee in these endeavours.

Yours faithfully

John C Perry

Managing Director

Productive Human Endeavour Limited.

Influencing the Future

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Basel Committee on Banking Supervision (BCBS)
Discussion paper

The Regulatory Framework:
Balancing Risk Sensitivity, Simplicity and Comparability
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Recent experience has included
August & September 2013
Coordination of responses by members of the UK British Bankers Association to the UK PRA CP 5/13 implementing CRD-CRR

Previously with HSBC

2012-13 Group HQ	Global Head of Independent Model Risk Review
2011-12 Group HQ	Senior Manager – Group Recovery & Resolution Plans
2009-10 Jersey	Executive Director - HSBC Bank Middle East Limited
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Background and summary of the BCBS ideas

The Committee (BCBS) has set out in its paper "*The regulatory framework: balancing risk sensitivity, simplicity and comparability*" that its opinion is that improvements to the comparability of capital ratios can be achieved by having less risk sensitivity – achieved by less use of "complex model" i.e. moving towards simpler approaches to measuring risk.

Their opinion is that it was the failure of models – specifically those developed by banks – (both capital and liquidity management) that was a major cause of the so-called "banking" or "financial crisis" that befell certain countries predominantly in the EU and the USA in 2007-2009.

In the paper issued by the BCBS it sets out three conceptual considerations that should be followed, "*simple", "comparable"* and *"sensitive to risk*".

It expresses its view that "*comparability*" is the most important tenet of a "Regulatory Framework". Thus, when faced with a choice between "*simplicity*" and "*sensitivity*", then the BCBS recommends "*simplicity*", because this approach leads naturally to improvements in "*comparability" of Capital ratios that the Committee believes to be the driver of investor confidence*."

The consequence of this line of reasoning is that the Committee is minded to focus on achieving that objective through "*the removal of undue complexity from the denominator i.e. the risk-weighted asset calculation methodologies*". [1]

It also says that it is Committee's opinion that the factors that drive investor confidence (or otherwise) in a bank is whether or not the *Risk-based ratios provide reliable signals for the absolute and relative resilience of banks.* This in the BCBS view requires confidence in the calculation of Risk Weighted Assets (RWA) and specifically Risk Weights (EaD / RWA) expressed as a %.

The Committee expresses its opinion that confidence may be lacking because "*if some banks look weaker or stronger than they really are, it is because the methods of calculating risk weights were not comparable", "driven by complexity in the risk-weighting process"* and this makes it *difficult for bank equity analysts to understand differences in risk-weighted assets both across firms and through time*. This in turn results in a lack of *"sensitivity in funding cost changes to risk-taking.*

With respect to complexity, the Committee's view is that "*some complexity within the regulatory framework is inevitable, as banks' business models cannot be simplified beyond a certain point*".

Complexity in the rules for calculation of capital ratios is seen as function of "*the process of reaching international agreement on standards that must be applied across many jurisdictions*", reduce the opportunities for "*the potential for risk-shifting that overly simple rules can allow*". i.e. to "*hinder (capital) arbitrage"* and "*innovation within financial markets, adaptation of rules to accommodate new products,* especially the so called *'difficult cases' "*

The Committee's view is that complexity "*arises (from) mainly in the context of banks' use of internal models*", even though in the Committee's opinion "*the aim*" of permitting internal modelling was to "*bring the regulatory assessment of risk closer into line with banks' own assessments, thereby reducing the incentives for regulatory arbitrage*".

[1] Paragraph 39 – page 11

Executive Summary

Although the BCBS believes that the current Basel 3 framework has risk-based capital (i.e. modelling losses) at its core, this is not true anymore compared to the more purist approach for modelling credit risk that was set out in Basel 2. The imposition of many new blunt tools to add surcharges (such as G-SIFI and or O-SII) and countercyclical, systemic and sector capital buffers that are not in fact correlated with any risk-sensitive (modelling loss) approach has added complexity and thus model risk that has the effect of making the capital ratios less risk-sensitive, less transparent and less comparable between banks or over time.

The imposition of a one-size-fits-all Leverage ratio to all banks of all types in all countries is in my opinion flawed for a number of reasons.

1. It does not identify only the "discretionary granting of credit" in the balance sheet (that should by definition exclude at least all exposures to Sovereigns, Institutions, CCPs, SFTs and netted valuations on derivative transactions),
2. It does not identify the underlying leverage that a bank is creating in the real economy and
3. It ranks all assets as pari passu in the creation of leverage.

Those are modelling principles that could be considered to be suspect and lacking conceptual soundness.

Leverage in a balance sheet is important. I am concerned that the current approach is only really appropriate for very large well-diversified EU and North American banks on a solo basis and that for many other banks this will cause unintended actions that may not be in the best interests of the economies in which those banks operate.

Yes the whole regulatory framework has become much more and too complex. But the BCBS ideas to <u>reduce</u> i.e. to sacrifice risk sensitivity for simplicity to achieve what it thinks will be greater comparability is I believe flawed logic. I believe such an approach would result in less comparability and less risk-sensitivity.

I note that a principal attribute of simplicity is set out to be "*Simple calculations: a simple standard can be calculated <u>without</u> the need for the use of highly advanced mathematical and statistical concepts, avoids iterative calculations, and can be easily verified by external parties such as supervisors or auditors*. In summary, I disagree completely that simplicity as defined above should be an objective of any risk model development process. Simplicity does not improve comparability. On the contrary it masks risk-sensitivity, the true measures of risk specifically the volatility of outcomes and hides model risk from public scrutiny. To suggest that risk should be measured and managed without using statistics, i.e. not to define probabilities that can be ex-ante estimated and ex-post validated is a contradiction in terms.

I believe that the BCBS paper contains a number of misunderstandings with respect to how banking is conducted and these matters should be looked into. I am happy to assist.

The primary recommendation that I make to the BCBS is to request that it reviews its own models that it has developed and banks are mandated to use. I am concerned by the perpetuation of the one-size-fits-all modelling of total losses by models developed by the BCBS over 11 years ago, that have not been reviewed or calibrated for the future economic cycles of countries. I believe that this is incompatible with the tenets of prudent risk model management as set out in Supervisory Guidance on Model Risk Management" [2], published by the FRB-OCC paper 2011-12 issued on April 4, 2011. The objective should be to assess their fitness for purpose or otherwise for use by banks in their local economy.

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[2] http://www.occ.treas.gov/news-issuances/bulletins/2011/bulletin-2011-12a.pdf

My opinion is that despite the public face of support for the BCBS framework, behind the scenes there is some discord between banks, and the regulators and the BCBS. That should be a matter of concern to everyone in our society.

I believe that the answer is for the BCBS, regulators and banks to talk to each other, not at each other. There is a need to work together to put in place a robust framework that meets the needs of society and the role that banks should play in it. This will require give and take on both sides and could well result in profound changes to the role of the BCBS, the structure of the banking sector and the operating models for banking groups. No one should be frightened of this challenge.

In my answers I expand upon the points that I have made above and touch on ideas that I have to address the concerns of the BCBS, regulators and bankers.

I believe that there is a way to **simplify** the regulatory framework whilst at the same time **improving** risk sensitivity and thus as a bi-product **improving** comparability.

The recommendations set out in the answer to question 5 are threefold.

1. The regulatory framework could be re-focussed from an international focus to a country (or local regional) focus that aligns modelling of the banking sector with the modelling of the economy. That can be achieved by developing a Credit Risk Standardised Approach and a recalibration of the IRB model fit for purpose for each country. [3] Yes, it would mean the end of the one-size-fits-all BCBS global models. However, it would enable the BCBS to take on a much more important role, namely to review the Country Asymptotic Risk Factor Models (CARFM) that would be developed by regulators - in conjunction with banks - to model the risks in an economy. Such models could be reviewed annually and recalibrated as the economy changed thus building in changes to the volatility of risk to adapt to the changing economic conditions. This would be significantly enhanced by the implementation of the following recommendation.

2. The legal structure of banking groups could be simplified to require only one ring-fenced locally incorporated legal entity in each country or territory. All banks in a banking group could be stand-alone and only owned by a holding company (or regional companies). All other financial service companies could be owned by the holding companies. The only business of a bank would then be banking. The consequence would a more level playing field for banking within a country, ring-fenced structures within a multiple-point-of-entry (MPE) operating model and easier recovery and resolution planning. Finally this would then lead to the following recommendation.

3. Consistent and transparent Pillar 3 disclosures in a structured format by all banks, including all members of a banking group on a solo basis allowing comparability between banks within a group and between other banks and across time.

My opinion is that those three objectives are capable of being achieved globally by the year 2030 following a transition period from year 2023.

In support of all the comments, observations and recommendations set out in this letter, I have prepared a comprehensive report. I would be delighted to be able to provide the BCBS and or an interested regulator my research to enable an assessment in detail of my ideas.

[3] The Operational Risk Basic Indicator and The Standardised Approaches, as well as the Market Risk Standardised Approach should be recalibrated also.

Summary answers

Question 1:

Does the current framework, with its reliance on the risk-based capital at its core, appropriately balance the objectives set out in paragraph 29?

Context to the question: The primary aims of the capital adequacy framework as set out in paragraph 29 is as follows:

1. *Produce a sound minimum standard of capital adequacy*
    a. *for internationally active banks,*
    b. *but also be capable of application to smaller institutions;*
2. *Deliver a well-understood measure of capital adequacy that is*
    a. *comparable across banks and*
    b. *over time;*
3. *Support a reasonable level playing field between banks*
4. *Take into account the effects of capital requirements on banks' risk-taking incentives, e.g. when faced with regulatory constraints on their capital (and therefore the size of their balance sheet), to seek higher-risk assets as a means of boosting expected returns; and*
5. *Promote improved risk measurement and management within banks.*

This is the most important question of all, because it sets the scene. If one agrees, then the answers to the other questions are primarily discussions about the edges of the framework, to refine something here and there and merely debate the boundary and scope of simplicity vs risk-sensitivity.

The framework has evolved from Basel 1 through Basel 2 into is current form. It is natural that the BCBS have wanted to react to the changing political landscape, the role that banks play in society and economic circumstances that have occurred during the past 7 years in the EU and USA.

My opinion is that there was minimum standard for internationally active banks when the Basel 2 framework was set out in 2004-05. The primary failing of that framework was not due to the BCBS. It was primarily due to the lobbying of some parties who wished to retain the very low level of Core Tier 1 Equity component (a minimum of only 31.25%) of the minimum capital requirement that was mainly driven by the desire to retain and enhance interest paying – tax-deductible – debt as loss-absorbing capital and b) the fact that when some banks did fail, the politicians and central bankers were not prepared to allow the free-market economics to play itself out. They decided to bail out some banks.

However, throughout the crisis there were many banks that did not require any bail-out or even government support, primarily because their business model contained sufficient diversification as well as eschewing that operating model favoured by others. Even in the face of activist shareholders they had focussed on ensuring that they maintained sufficient buffers of Core Tier 1 Equity, and or anticipated the full crisis by asking shareholders for additional equity as well as retaining ample prudent buffers of liquidity and a balance sheet that focussed on core customer deposits rather than reliance upon the wholesale markets.

However, it is clear that many banks and banking groups did not – and may still not today – comprehend the principles of banking. The BCBS is to be commended for doing its best to improve the regulatory framework. However, I believe that the current framework has become too complex and thus even with its reliance on the risk-based capital at its core does not appropriately balance the objectives set out in paragraph 29.

The reasons are as follows:

- There is an inherent conflict in the current regulatory framework because it is only an illusion that the Concordat is alive in the guise of consolidated ratios and reporting.

- The world is now full of local banks and the trend - rightly in my opinion - is continuing to focus on the financial stability of domestic banking sectors in local economies or regions.

- Modelling total losses (or unexpected losses) calibrated to the single risk factor is suspect, contains model risk and thus most likely does not represent the risks (losses) of a bank calibrated to the local economy in which it operates.[4]

- There is inconsistency of approach between Credit Risk Standardised and IRB Approaches. The BCBS seeks to have commentators believe that they are comparable, and that the Standardised approach might be more appropriate than the Internal Ratings Based approach as a benchmark or even floor. Both are models, yet very different in their approach. They are not directly comparable. Both should be reviewed, recalibrated and redeveloped fit for local or regional purpose.

- The models developed by the BCBS to model total (and or unexpected) loss for all Credit risk, Operational risk and the Standardised Approach to Market Risk have not been reviewed since they were developed over 11 years ago.

- This leads to a question about the effectiveness of the model risk governance framework within the BCBS (and lack of visible challenge by regulators) evidenced by an apparent lack of any internal independent model review function.

- The standards are different, not for internationally active banks and others, but for those who have sufficient granularity in portfolios to model and those who do not.

- The standards do not deliver a well-understood measure of capital adequacy that is comparable across banks and or over time because the measures do not show any sensitivity or resilience to volatility of operating profit or buffers of surplus equity.

- The current framework does not support a reasonable level playing field between banks. But neither should it. What it should do is to provide investors with information to assess the unevenness and make appropriate investment decisions thus forcing banks to be clearer about their reward for risk framework, purpose and strategy.

- The BCBS is right to be concerned with respect to the effects that the regulatory framework can have on a bank's risk-taking activity. It is the model risk that is inherent in the BCBS models that is the most likely cause of concern on the risk-taking activity, especially for banks that do not have effective risk measurement and or management process and thus now rely entirely upon the BCBS models.

- It is possible that the current framework may no longer promote any further improved risk measurement and management within banks. The reason being that the gulf between regulatory capital calculated by the BCBS models (that banks know may contain significant model risk) and internal measures of risk is now wide and will grow wider too. The consequence is a concern that a bank's focus is likely to be more on capital allocation of the regulatory capital requirement instead.

[4] Those intimately familiar with the IRB model will be aware of its correlation parameters for each asset class, scaling of average PD into conditional PD and choice of 99.90% level of confidence

Question 2:

Are there other objectives that should be considered in reviewing the international capital adequacy framework?

- My opinion is that the primary objective of a regulation should be country-specific capital adequacy, not international capital adequacy.
- The reason for needing to change direction is because there is discord between the modelling of the banking sector and the modelling of an economy.
- This discord should not be ignored.
- The complexity of the current framework with its many different approaches to modelling losses, as well as new models such as G-SIFI and O-SII surcharges, cyclical capital buffers, sector buffers, systemic buffers, and a non-risk sensitive leverage ratio as a back-stop creates both complexity and uncertainty for bank risk measurement and management. It has created more model risk.

Question 3:

To what extent does the current capital framework strike the right balance between simplicity, comparability and risk sensitivity, given the costs and benefits that greater risk sensitivity brings?

- Simplicity is not the answer to achieve comparability.
- The current framework does not strike the right balance because it is not risk-sensitive enough.
- To allow simplicity to trump sensitivity might be seen by some banks as being beneficial to them, but they would be wrong to give up influencing their own future.
- The question should be, do we want improved risk measurement and management achieved through improvements to risk sensitivity? Answer YES.
- Yes, risk-based capital ratios should be centre-stage, but Basel 3 has reduced their value because of the inclusion of additional buffers that are not based upon risk-sensitivity to the modelled losses.
- The BCBS suggest that complexity has been created by the banking sector. I do not share this opinion. I believe that there are misunderstandings all sides (the BCBS, regulator and banks) with respect to complexity. [5]

[5] I have on many occasions provided in-house (during my career with HSBC) and external presentations that explain how Basel 2 works and the pinciples of banking. I would be happy to work with the BCBS, and or regulators and banks to improve everyone's comprehension.

Question 4:

Which of the potential ideas outlined in Section 5 offer the greatest potential benefit in terms of improving the balance between the simplicity, comparability and risk sensitivity of the capital adequacy framework?

The BCBS set out a number of ideas. I have turned the questions into summarised answers:

- Explicitly recognising simplicity should not be an objective of any capital adequacy framework let alone an additional objective, because it does not enhance comparability. It only enhances the mask of mist that should be cleared by transparency and improvements to risk-sensitivity.

- Enhancing disclosure is not the answer. Improving transparency is the answer.

- Fresh ideas in Pillar 3 disclosures would also help comparability. I have a number of ideas with respect to capital adequacy, risk ratios, income statement & profit attributable to shareholders that I would be happy to share with the BCBS.

- Using additional metrics is not the answer. More clearly defining and refining the current metrics to agree on what should be modelled and thus measured is the answer.

- We need to differentiate modelling "risk" i.e. probabilities from "uncertainty" i.e. possibilities.

- The effectiveness of the leverage ratio cannot be achieved because it is such a blunt tool. It may or may not on a random basis serve its purpose.

- Utilising added floors do not mitigate the consequences of complexity. They are merely quite blunt tools to compensate for the fact that the BCBS and or regulators do not like the outcomes of the models that they have developed. Regulators should resist the use of judgmental overrides.

- Using benchmarks can be useful. But this must be based upon alternative modelling approaches of the same data, not by comparing models that use different inputs.

- It is not that there is a need to reconsider the linkage between internal and regulatory models. My point is that there should be link and yet Basel 3 has severed the link.

- Limiting national discretion is not the answer, because there are good reasons for and local regulators to do so within the current framework. Limiting national discretion to improve supervisory consistency in fact would result in further inconsistency at this time.

- There is a need to redesign the BCBS website and create a database and front-end search engine that would improve the accessibility of Basel Committee documents.

- The ideas to address factors driving complexity in a more fundamental manner are premature because the complexity as set out by the BCBS is not in my opinion the cause for concern. Instead it is the complexity caused by too many competing BCBS models. I believe that the focus should be to improve and fix the current framework.

Question 5

Are there other ideas and approaches that the Committee should consider?

A recap. In my opinion, it is the BCBS models that are the cause of the model risk that need to be reviewed, not the internal modelling of PD, LGD and EAD. Thus the BCBS models - primarily Credit Risk (Standardised and IRB), and Operational Risk - might not provide appropriate measurement of the risk in each country. The world of banking 2013 > 2019 and beyond is now a world full of local banks. Year 2020 hindsight is likely to be another illusion. The current framework to calculate the capital ratio and leverage ratio will still not tell us anything about the capacity of banks to withstand volatility in their operating profits and or in equity under their own control. The consequences of misunderstood model risk in banks – primarily the market risk models and the BCBS Securitisation framework - have been significantly addressed and models have been improved. However the fact is that similar fundamental review of the fitness for purpose of the credit and operational risk models for use locally has not yet been undertaken. This is in my opinion a matter for concern. I remain concerned that many regulators have and continue to adopt Basel 2 and Basel 3 without stopping to pause for thought on the appropriateness and or the accuracy of the modelling of the losses for the banking sector in their economy.

Now is the time to pause before jumping into the sea of simplicity. We need a vision for banking regulation of a banking sector in 2030. The inherent conflicts in the regulatory framework exist and need a long-term solution. The world is now full of local banks, ring-fenced branches, and yet the EU that believes that it should allow cross-border banking free from ring-fenced capital or liquidity. The Concordat has past its fit-for-purpose date.

I recommend that the primary objectives of the regulatory framework should be re-defined: **Risk sensitivity to achieve comparability: Aligning bank risk with the risks in an economy.**

- Simplifying regulation can only be achieved by firstly simplifying the structure of financial institutional groups by adopting a Multiple Point of Entry (MPE) operating model that requires only one locally incorporated ring-fenced bank in each country owned by a holding company.

- Modelling a banks' portfolio of risk should be calibrated to where the risk exists.

- An answer is to develop "Country Asymptotic Risk Factor Models" (CARFM). It might that in some parts of the world a regional model would be useful as a benchmark also. There are in fact only four fundamental drivers of the current model that need to be determined and updated by each regulator to make it country specific.

- The implication would be the end of the BCBS one-size-fits-all global models.

- However, the benefit of this approach is that country-specific banking models simplify the development, calibration, validation and independent review process.

- Local models fitness for purpose would need to be independently reviewed. There would be a new and much more important role of the BCBS to review the fitness for purpose of models developed by regulators and ensure the highest standards.

- A benefit from this work would be to reverse-engineer from these models, local fit for purpose Standardised Risk Weights.

Principles of banking

I do not believe that banking is per se complicated or overly complex! On January 23rd 2010 The Economist published an article entitled '*Base camp Basel – Regulators are trying to make banks better equipped against catastrophe*'. [6] In response to that article, I wrote a letter to The Economist, which was published on February 4th 2010, setting out the following opinion. [7]

Quote

Principles of banking

The latest attempts (as written in The Economist) to '*make banks better equipped against catastrophe'* are no doubt well-intentioned ('**Base camp Basel'**, January 23rd).

When I joined HSBC in 1975, I was given a copy of The Country Banker, written by George Rae in 1885, as mandatory reading to my introduction to banking. Rae wrote about the '*rights and duties of shareholders*' as well as commenting that '*every now and again I still come upon something new – some fresh "wrinkle" some side-light, which goes to enlarge or qualify, sometimes to upset, old and cherished impressions, and to divest experience of finality*'. Looking to the future, he warns '*be especially on your guard in sluggish times of business and low rates of interest for money'*.

No amount of regulation will ever replace common-sense principles for banking. These are namely: customer deposits first, prudent diversified lending second, allied with strong buffers of equity and ample tangible liquidity. All those principles and many more too, Rae explains clearly in his book as well as urging that, '*in banking being cautious is one of the cardinal values*'.

I commend bankers, regulators, politicians and shareholders to read Rae before setting off from base camp Basel, otherwise they will find that by the time they reach the summit, their view of banking although appearing to have changed, has in reality been much as it always was.

Unquote

The future of modelling in the banking sector

The world of banking is very little different to what it has always been. What differentiates each generation of new bankers and regulators is their inability to comprehend the basics – the principles of banking - and or their desire to reinvent the wheel in yet more inappropriate ways. Both bankers and regulators (including the BCBS) are somewhat culpable for the complexity of the current regulatory framework that has resulted in the inability for any comparability of any capital ratio. This is because fundamentally it does not provide any indication of the resilience for a bank to withstand unusual volatility that cannot be covered through operating profit. It does not provide any information on the buffer that a bank is maintaining. The addition of new models, leverage ratio, countercyclical and systemic buffers, and surcharges for G-SIFi and O-SII have added to the complexity, lack of transparency and comparability.

There is the illusion that that the Concordat is alive visible through the reporting of consolidated ratios that in fact mean almost nothing now that local regulators are rightly focussed on the risks posed by local subsidiaries and branches in their jurisdiction.

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[6] http://www.economist.com/node/15328883

[7] http://www.economist.com/node/15450342

The one-size-fits-all modelling of total losses embodied in models that were developed by the BCBS and must used by banks as the basis to calculate capital requirements and these buffers calibrated to the (global) single risk factor may no longer be fit for purpose for local economies. [8]

The BCBS (and most supervisors, many boards, bank executives and commentators) have the following perception as articulated by the BCBS in its paper;

1) "*the use of highly complex internal models can jeopardise sound internal risk management to the extent that bank management places undue reliance on them. Risk management decisions based entirely on the output of complex quantitative analysis ("black boxes") may not result in effective and prudent decision-making"*

2) *Complexity has rendered aspects of the supervision of large and complex financial institutions more difficult. As capital adequacy calculations have become more complex and employ ever more sophisticated mathematical models, increasingly high demands are placed on a relatively small pool of supervisors with expert knowledge of advanced modelling methodologies. This is particularly acute in the case of large and complex financial institutions, where the use of models is extensive.*

3) *To summarise, the negative consequences of undue complexity and reduced comparability in the capital framework could potentially include making it more difficult for bank management to understand the regulatory regime.*

There might be a tendency of a layperson [9] not versed in the principles of banking, risk management theory, and mathematics, to view the BCBS reasoning set out as above as eminently sensible. This is general trait of humans in that if something seems difficult to comprehend - especially when expressed in mathematical concepts – the tendency is express concern with regard to the concepts. The English language has an abused phrase oft-quoted "*there are lies, damned lies and statistics*" as if the use of statistics is a cardinal sin and that these models are as the BCBS states "*complex quantitative analysis ("black boxes")*" For many experienced practitioners schooled in the principles of banking, the "black boxes" that the BCBS developed that banks use are nothing of the kind. They are in fact transparent see-through boxes that reveal the essence or otherwise of risk sensitivity. They are more akin to the black-box in an aeroplane that when it is examined reveals what happened, both what went right and what went wrong. It should be remembered that it is these BCBS that account for c. 85% - 95% of the modelled loss calculations and thus determine how much capital a bank must maintain. Banks do not determine the losses.

The Asymptotic Single-Risk Factor (ASRF) IRB model is very straight-forward and easy to explain on a sheet of paper even to a laymen.

It is not complex and those seeking to portray it as such are in my opinion being disingenuous to those to proposed the model, those who explained it very well in the many papers, (M Gordy as well as the BCBS in its own excellent explanatory notes). The foundations of the model principles date back to Robert Merton in 1973 (On the Pricing of Corporate Debt), the oft-cited work of Vasicek 1987, and concepts such as Moody's EDF.

[8] The comments applies equally to Credit Risk (Standardised and IRB), Operational Risk modeling and Market Risk modelling.
[9] A Layperson. "Someone without professional or specialized knowledge in a particular subject"

To be 100% clear I am not questioning the ASRF model. On the contrary, I recommend that it should be used (unless anyone has a better idea). I am merely suggesting that it needs a model parameter update after 11 years, and that consideration needs to be given to developing country specific and or regional specific models that would align more closely with each bank's portfolio. As well there is the need to consider a granularity adjustment to address concentration risk (As set out recently by Michael B. Gordy and Eva Lutkebohmert), but only in line with a comprehensive review, not instead of.

To allow on the one hand increasing risk-sensitivity of modelling credit risk in the trading book, incremental default risk and migration risk with internal VaR models that use industry, country etc correlations, and on the other hand to disallow modelling of c. 70% to 80% of the risk of a bank held in traditional credit risk in the banking book is I believe conceptually unsound.

Back to Basics

There is a need to get "back to basics" i.e. the "principles of banking". If that needs to be articulated with the adjective "simplicity", then so be, but it does not and should not mean any reduction on improvements to risk-sensitive measurement. What is needed is to differentiate risk (modelling probabilities that have a reasonable capability to be ex-ante predicted and ex-post validated), from uncertainty (a mere possibility). [10] Banks and regulators have inappropriately blurred the distinction. Above all there is a need for improvement in management of the reward for risk framework that needs to comprehend more clearly model risk and thus use more common sense in assessing the conceptual soundness of strategic decisions. In this regard regulators play an important behind-the-scenes role in challenging banks through their oversight and stress testing scenarios.

Keep it simple. George Rae's book is only 312 pages (including the index). It is a very interesting and engaging read. It contains all the principles of banking. A few chapters might benefit from some revision, and there might indeed be a need to add a few chapters to cover market risk. Yet the final one "The Future Outlook" written in 1885, can probably can remain as is with only minor changes – highlighted below - if somewhat tongue in cheek:

"*In pursuance of your inquiry then*

- *Have we seen the last of our money panics? - it has to be confessed that we have not, thus far, found much encouragement for the future, in either the past or the present condition of things ; and we have yet to add to the adverse features of the situation, the humiliating fact that, even in this ~~nineteenth~~, ~~twentieth~~,* ***twenty-first*** *century of civilization and culture, we are not yet exempt from the folly and mischief of ' runs'.*
- *Have we seen the last of overtrading and speculation? We might almost as well ask, have we seen the last of human nature? We have not seen the last of these things. On the contrary, when they next take place, they will be probably be on a larger scale than heretofore, a scale proportional to the enormous increase in our commercial and monetary transactions since the time of our last panic. It is possible to indeed imagine such as conjunction of disturbing events and adverse influence at some critical point in the future, as may result in more intense pressure upon our monetary system than it has ever suffered in the past; unless when the evil time comes, the ~~Act of 1844,~~ ~~Basel 1 Accord,~~ ~~Basel 2~~,* ***Basel 3 Accord*** *is promptly suspended, or judiciously amended meanwhile*.'

[10] I recommend that the BCBS and local regulators should look specifically at the disparate approaches to "modelling" the probability of default of Sovereigns and Institutions

A need for a new universal acronym to set out the principles of banking

The Bank of England many years ago coined the acronym CAMEL to highlight the 5 key tenets of banking supervision to identify the primary reasons on why banks fail: Insufficient equity (**C**apital), imprudent risk taking manifested by inferior **A**sset quality, weak governance and **M**anagement evidence by inappropriate strategies, weak **E**arnings and absence of operational efficiency, and inadequate **L**iquidity to meet customer demand.

It is my recommendation that CAMEL could be replaced by the acronym **LEVEL** that can be used by all those who have an interest in assessing the stability of a bank.

- **L**everage
- **E**quity
- **V**olatility
- **E**arnings
- **L**iquidity

The choice of the word LEVEL is purposeful. It implies that each of these tenets, principles of banking must be level, balanced, not only each in isolation, but in relation to each other. Of course these measures of risk are different. Each impacts upon the other. Each can be measured in its own right and can have different absolute and relative values and ranges within which each would be considered to be prudent. Consequently there can be different combinations of these risk measures that can still indicate that the bank is in equilibrium. In reality, all the values will be in perpetual motion. That is why a management body [11] working together with the senior management should set out a clear Reward for Risk Framework that includes target ranges for each of the five principles of banking.

"*Let a man be sure to drive his business rather than let it drive him. When a man is but once brought to be driven, he becomes a vassal to his affairs: they master him, which should by him be commanded*". (Quote by Owen Feltham. [12])

The risk for a bank can be summarised simply in the following statement that I have coined:

"Inappropriate **L**everage of a balance sheet, in consort with insufficient **E**quity to act as a buffer against higher than expected **V**olatility of losses, (and in extremis total losses), and changes in the composition of the balance sheet, coupled with a mispriced and inefficient business model that causes strain on **E**arnings, and an imprudent approach to **L**iquidity management. [13] That I believe should be a creed that everyone can recite.

If any, or all these failings exist, it is because of: 1) a poor enterprise-wide governance framework starting with the management body, extending through senior management to all employees, 2) an inappropriate Reward for Risk Framework within which the bank should be operating and 3) a lack of comprehension of the Principles of Banking. It is possible by revising and simplifying the framework as I have set out to address these matters.

In conclusion, if I can be of service to the BCBS, I would be happy to assist.

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[11] management body and senior management as defined in the EU CRR and CRD

[12] Owen Feltham (1602 – February 23, 1668) was an English writer, author of a book entitled Resolves, Divine, Moral, and Political (c. 1620) . The quote is the opening quote in George Rae's book: "The Country Banker"

[13] It should not be assumed that the definitions of these labels are those as set out by the BCBS. In the opinon of this author, there is need to start with some blank sheets of paper, to align accounting concepts with respect to definitions of losses, with risk concepts, to identify the true drivers of failures of a bank and establish country-specific ranges for the measures.