



Independent Audit Assurance on Banks' Capital Information

A Research Note by Financial InterGroup



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Introduction

In the aftermath of the financial crisis, the G20's Financial Stability Board (FSB) invited auditors to play a more prominent role in assisting the FSB in its mandate to stabilise the global economy. At the same time the Basel Committee on Banking Supervision (Basel Committee) published its principles for effective risk data aggregation and risk reporting¹, also known as 'BCBS 239', which set parameters for achieving closer alignment between banks' risk reporting and accounting systems. The Regulatory Oversight Committee (ROC) of the FSB also published a consultation paper² on establishing relationship data to create an authoritative record of control and ownership structures of legal entities aligned to the accounting principles applied in the preparation of consolidated financial statements.

These and other initiatives provide the foundation on which the role of auditors and accountants in global regulatory regimes are being extended to support post-crisis initiatives aimed at restoring reliability and stakeholder confidence in banks' risk reporting. Financial InterGroup's principals have authored a research working paper³ that reports on the role of auditors in regulatory oversight and offers perspectives on further involvement.

In keeping with such expressed interest by global standards setters, at the request of the UK's Prudential Regulation Authority, the Institute of Chartered Accountants in England and Wales (ICAEW) published its paper, 'Reporting on regulatory capital: choices for assurance'⁴ which set out the potential benefits of assurance and discussed the issues involved in designing an assurance engagement on banks' capital ratios and related information. The paper discussed a series of choices, including who would be the intended users of the assurance report, what the subject matter would be and what benchmark an auditor would provide assurance against. The ICAEW invited comments on their paper.

In this research note, we provide an edited summary of the comments submitted to the ICAEW in response to their discussion paper. We examine the role of independent assurance in post-crisis initiatives aimed at achieving financial stability and how this relates to current and proposed regulatory mandates. We draw comparisons with these regulatory developments and the US's Sarbanes Oxley (SOX) legislation, and similar legislation in other jurisdictions that were enacted with the aim of reducing the risk of material misstatements in financial reporting. In our responses we consider whether the role and responsibilities of auditors framed in SOX legislation should be extended more broadly to risk reporting.

As can be seen from our observations below, we support an expanding role for accountants and auditors to adapt financial metrics and reporting to achieve more comprehensive and precise disclosure of accepted risks in audited financial statements. This represents both a risk quantification and an accounting challenge as regulators seek to more fully engage accountants and auditors in achieving greater financial stability while risk-adjusting the financial system.

1 Basel Committee on Banking Supervision (2013), 'Principles for effective risk data aggregation and risk reporting', Bank for International Settlements, available at <http://www.bis.org/publ/bcbs239.pdf>

2 Risk Oversight Committee (2015), 'Consultation document on collecting data on direct and ultimate parents of legal entities in the global LEI system', available at http://www.lei.org/publications/gls/loi_20150907-1.pdf

3 Grody, Allan D. and Hughes, Peter J. (2015), 'The Global Risk Regime – New Roles for Auditors' available at SSRN: <http://ssrn.com/abstract=2508399>

4 Institute of Chartered Accountants in England & Wales (2015), 'Reporting on regulatory capital: choices for assurance', available at <http://www.icaew.com/~media/corporate/files/technical/financial%20services/financial%20planning%20and%20advice/reporting%20on%20regulatory%20capital%20choice%20for%20assurance%20report.ashx>

The Scope of Independent Assurance

A standard scope for assurance related to risk measures would aid comparisons amongst financial institutions for all stakeholders. A legend such as “This report conforms to assurance standards as agreed to by the Global Accounting Alliance and (regulator)” would be consistent with auditors’ other assurances, namely that financial statements conform to GAAP or IFRS.

However, independent accountants’ reports on financial condition are reflective of a point-in-time valuation whereas risk is a more fluid concept, built around probabilities of values at different confidence levels over time. As is the case for risk, there is more than one value that can be potentially assigned to a transaction for accounting purposes such as historic cost, fair value, and net present value. Accountants learned a long time ago that financial accounting and control systems must be constructed around a common metric embodying a single and universally accepted accounting value assigned to each transaction. This common metric, defined in accounting standards such as IFRS and US GAAP, enables the translation and aggregation of all financial transactions into a group’s consolidated financial statements. Only through the definition of a standard and universally adopted accounting metric is it possible to: effectively aggregate accounting data; achieve direct comparability of outputs from accounting systems; create single authoritative sources of accounting data; and create firm-wide operating limits and budgets (the financial equivalent of ‘risk appetite’).

This concept now needs to be applied to ‘risk adjusting’ these same accounting transactions to embody a single and universal risk-adjusted value denominated in a common risk metric. Without a common risk metric the control features ascribed to accounting data in the foregoing paragraph cannot be replicated for risk data to conform to the new regulatory requirements contained in BCBS 239⁵. Financial InterGroup has developed a method and system ‘Risk Accounting’ that introduces a common risk metric used in risk quantification which is described in a research note available from our website.⁶

The Users of Assurance Reports and the Form of Reporting

Independent accountants’ opinions on audited financial statements are not intended to consider the likely economic consequences of accepted risks should macroeconomic and other operating conditions change. In other words, they do not give assurance that a firm’s risk profile is or is not endangering its financial position. This omission can be effectively resolved through an assurance report on capital ratios and risk-weighted assets (RWAs). However, attempts to address this should consider that banks must first develop systems that systematically account for and report accepted risks following accounting-like disciplines. That is what BCBS 239, in the main, sets out to achieve and it follows that assurance reporting should be aligned to the implementation of BCBS 239. That paper, now set as a mandate for supervisory reviews beginning in 2016, recognises that banks’ inability to properly identify and aggregate risk data across their many business silos has left the financial system vulnerable to unaccounted and unobserved risks that provide the breeding ground for unexpected losses and possible bank failures. According to the Basel Committee, one of the most significant lessons learned from the global financial crisis was that banks’ information technology and data architectures were inadequate to support the broad management of financial risks. It is, presumably, with this in mind that BCBS 239 calls for accounting-like controls to be applied to risk data along with the ability to reconcile risk data to the books and records of the firm

⁵ See footnote 1

⁶ Financial InterGroup (2016), ‘Risk Accounting: Finance and Risk Integration – A Case Study’, available at <http://sales.financialintergroup.com/>

and requires that supervisors should draw on reviews conducted by the internal or external auditors to inform their assessments of compliance with the principles.

The implementation of any degree of public assurance reporting on any aspect of risk related measures or controls prior to achieving compliance with BCBS 239 will lead to inconsistent assurance reporting. With this in mind, the identification and status of improvements necessary to achieve compliance with BCBS 239 should be a feature of early phases of assurance reporting on capital information. Accordingly, assurance reports issued during the implementation of BCBS 239 should be held as private by regulators but issued to Boards and management to enable effective monitoring and to aid in improving the scope and conduct of capital related assurance reporting. The public disclosure of assurance reports should become mandatory for all banks at a future date to be determined (this is discussed in more detail in the section [‘Assurance on Capital Information as a Permitted Non-Audit Service’](#) below).

The Focus of Assurance Reports

The most useful focus of assurance initiatives would be on Risk Weighted Assets (RWAs) as it would of necessity require assurance providers to penetrate into the deep recesses of the assumptions and mathematics that underpin capital ratios and other capital related regulatory measures. Such independent assurance reports have the potential to moderate, or even displace the voluminous narrative disclosures included in annual reports on the status of firms’ risk management that do not always provide banks’ stakeholders with the assurances they require on capital adequacy.

However, the validation of model assumptions and the underlying mathematics that banks use to calculate RWAs is not considered in the professional qualifications of accountants, so it should not be considered in an assurance service provided by accountants at this time. This is further discussed in the section [‘Model Design, Capital Rules and Regulatory Approvals’](#).

The challenges involved in providing assurances on RWAs should not be underestimated. An effective solution demands the combined endeavour of both accountants and risk professionals; for far too long they have been working independently of each other with respect to the design of integrated finance and risk control frameworks, hence the lack of progress. With risk professionals already accepting self-actualised post graduate academic professional accreditations through rigorous examination administered by risk professional groups, it would seem natural for those professionals to become the core of accountants’ risk assurance practices.

This then opens up an opportunity that accountants’ assurance services could embrace such professionals as part of their broader services. It would be expected that these professionals over time would be subject to a code of conduct and professional training, even certification, as demanded of chartered or certified accountants.

There are precedents for such broadening of services. For example, actuarial and computer audit services are part of the already broadened range of services offered by accounting firms and are already afforded credentialing of the highest standards of professional conduct and capability.

The Frequency of Assurance Reporting

To be of benefit to all stakeholders, the controls over the RWA and capital ratio calculations should be provided in a schedule consistent with regulatory reporting requirements and the financial statement auditing regiment. These may become more necessary and more frequent

in stress situations experienced by banks or the financial system as a whole. Such control assurances should be as rigorous as found in the US's Sarbanes Oxley (SOX) legislation, and similar legislation in other jurisdictions that were enacted with the aim of reducing the risk of material misstatements in financial reporting. The level of assurance and accountants' roles and responsibilities as framed in SOX legislation should be extended to risk reporting.

Model Design, Capital Rules and Regulatory Approvals

Assurance on model design is a complex issue as it requires an understanding of mathematical concepts, judgments on simplification of assumptions found in these models and awareness of best practice theories on model development. As discussed in the section '[The Focus of Assurance Reports](#)' above, this is best left to the maturing profession of certified risk managers who have been accredited by such sponsors as the Global Association of Risk Professionals (GARP) and the Professional Risk Managers International Association (PRMIA). To the extent that the accounting profession can embrace these professionals in a code of conduct appropriate to the accounting profession's standards then such services can become part of accountants' assurance services.

However, the assurance of models' performance must be focused on the shortcomings of their mathematical constructs and assumptions, not on the probability of their reliability. Like the offering prospectus of a speculative investment, caveats on shortcomings must be discussed without rendering an opinion on whether and when they will fail to perform. Well known deficiencies of best practice risk measures such as Value-at-Risk (VaR), Gaussian mathematics to model non-normally distributed outcomes, Gaussian copulas etc. found their way into risk models that, in turn, were translated into capital requirements and ratios. Known 'caveats on shortcomings' and their potential consequences were never reported in audited financial statements with catastrophic results... clean audit opinions were followed almost immediately by failures due to capital depletion.

Consequently, assurance reports on model design, adherence to capital rules and regulatory approval should be mandatory and ultimately rendered as part of the annual audit. A bank's stakeholders are entitled to expect that an independent audit opinion relates to all aspects of material risks including capital-at-risk attributable to deficient or unproven models.

End-to-End vs. Specific Aspects of Underlying Systems

In our view, assurance should be aligned to BCBS 239 mandates which seek to be more prescriptive on an end-to-end basis with respect to the internal controls and procedures that banks will be required to apply to their risk data and risk reporting. To this point, the capital calculation is the 'top of the pyramid' of effective risk data aggregation. Accordingly, BCBS 239 requires banks' controls over risk data be as robust as those applicable to accounting data. This includes the reconciliation of risk data with a bank's sources, including accounting data, to ensure that the risk data is accurate and available in a single, authoritative source per each type of risk. In summary, banks must have the capability to accurately and precisely convey aggregated risk data from sources of inputs to model outputs, and reflect risk in an exact manner.

These new requirements from the Basel Committee over risk data and controls have parallels with the Sarbanes Oxley (SOX) Act in the US and similar rules in Australia, Canada and Japan in overseeing financial statement data and controls.

As to assurance of data inputs, BCBS 239 is prescriptive and sets an assurance standard whereby regulators expect banks to measure and monitor the accuracy of data and to develop appropriate escalation channels and action plans aimed at resolving poor data quality. They expect banks to establish integrated data taxonomies and architecture across banking groups, which includes information on the characteristics of the data (metadata), as well as use of unique identifiers and/or unified naming conventions for data including legal entities, counterparties, customers and accounts.

Further, roles and responsibilities should be established as they relate to the ownership and quality of risk data and information for both the business and IT functions. The owners (business and IT functions), in partnership with risk managers, should ensure there are adequate controls throughout the lifecycle of the data and for all aspects of the technology infrastructure. The role of the business owner includes ensuring data is correctly entered. Banks do not necessarily need to have one data model; rather, there should be robust automated reconciliation procedures where multiple models are in use.

In determining the scope of assurance reports, particular attention should be given to the following areas given the elevated sensitivity of these inputs and their potentially material impact on RWA and capital calculations:

External data sources

External data sources may be used as input to models used to calculate RWAs and capital requirements. They include: pricing and yield curve information for portfolio valuations; default rates; credit ratings; pre-payment speeds; etc. Such data are typically obtained from multiple data providers and may be subject to validation by, for example, cross-checking multiple data sources resulting in rankings of data quality to inform decisions on the validity of those data points relative to each source.

Mapping tables

Mapping tables ensure that data held in disparate sources relating to counterparty, contract or instrument, internal business unit, client, account, etc., are properly organised to support the correct categorisation and aggregation of data that are input to models used for RWA and capital calculations and, consequently, require ongoing validation.

We believe it would be advantageous to develop a scope of assurance services that allows supervisors overseeing the BCBS 239 mandate to evolve to a point where it becomes feasible to mandate these external assurance services to alleviate regulatory oversight and cost burdens. Such services should be priced as part of the financial audit services of the accounting profession. This is precisely how SOX assurances are conducted in the US. A further example is the financial regulator in Germany 'BaFin' that oversees the newly mandated European Market Infrastructure Regulation (EMIR) on derivatives by assigning the responsibility to the bank's independent auditors to perform assurance services and report on compliance, with the cost of these services borne by the respective bank.

The Type of Assurance Provided

The possible types of assurance that could be offered may include an approach that leads to reasonable assurance, limited assurance or the completion of agreed-upon-procedures. The type of assurance could also differ between interim and year-end information. Our preference would be for reasonable assurance comporting with auditors' standard of evidence to support a reasonable opinion on both the year end and interim capital calculations.

Comparability of Information

There are obvious difficulties in ensuring the comparability of risk data; in general and, more specifically, how it flows into measures of RWAs and capital ratios. Notwithstanding the different methods allowed either by regulatory design or regulatory accommodation, the base metric of risk, as well as financial information in general, is the base currency of the enterprise, itself a variable subject to market and sovereign risk.

To make risk metrics more comparable new methods are being introduced. Various accounting standards bodies are attempting to adapt historical costs, amortised costs and fair value accounting to become more sensitive to current and future risks. At the same time the regulatory bodies, principally the Basel Committee⁷, are adjusting their risk regimes to reflect better measures of tail risk, such as substituting the Value-at-Risk method with the Expected Shortfall method for market risk and providing an accounting based leverage ratio to back-stop the known shortcomings of stochastic risk calculations.

One method 'Risk Accounting'⁸ which is the object of ongoing research and development by Financial InterGroup, introduces a new metric, the Risk Unit (RU) as a common metric to value risks inherent in financial transactions. The RU is applied in a bottom-up transaction based approach allowing the risk system to be both aggregatable and tied directly to the accounting records of the firm. The RUs can also be used to risk adjust the Capital Asset Pricing Model (CAPM) and the Risk Adjusted Return on Capital (RAROC) measures, thus bridging accounting with economic theory and risk management concepts.

The Determination of Materiality

The question of materiality determination is complex as there are no benchmarks that can be used to gauge it with respect to capital adequacy and capital ratios. This is evident from the financial crisis. Banks that were considered well capitalised with capital ratios well in excess of minimum regulatory requirements suffered massive capital depletion during the crisis leading, in many cases, to failure.

The evolving risk landscape has resulted in banks 'flying' above extant financial accounting and control systems that were designed for a bygone era when risk concentrations within and between financial firms were innocuous. Today's accounting and auditing standards are not designed to consider the potential financial consequences of the often massive concentrations of risk that have become a feature of today's banks and the global financial system. In these circumstances, if accounting and auditing reports are not 'risk-adjusted' to provide the reporting framework by which materiality can be gauged, then the mission to give assurances both on the audited financial statements and on risk related measures cannot be achieved.

Again, we look to BCBS 239 to provide the informational foundation on which risk-adjusted financial statements may be constructed. However, this must be complemented by new techniques that are designed to account for accepted risks inherent in transactions in addition to their fair value. Our proposed technique is Risk Accounting as discussed in the section '[Comparability of Information](#)' above.

⁷ Basel Committee on Banking Supervision (2013), 'Fundamental review of the trading book', Bank for International Settlements, available at <https://www.bis.org/publ/bcbs265.pdf>

⁸ See footnote 6

Regular vs. Ad Hoc Reporting

We are advocates of aligning external audits and periodic accounting reviews with risk assurance, in fact integrating the two. For without a sense of the scale of accumulating risks, the point-in-time assessment of the financial condition of a bank is meaningless. This was clearly demonstrated by the near catastrophic build-up of risk in the financial system that went unrecognised in financial statement audits in the period leading up to the financial crisis.

Factors Affecting the Costs and Benefits of Assurance Reporting

The scope of a capital information assurance service is already embedded in the BCBS 239 mandates, with some modifications as suggested in the section '[End-to-End vs. Specific Aspects of Underlying Systems](#)' above. The costs of using internal audit vs. external resources, or balancing the two for optimising costs to the bank, is what remains to be resolved. Again, we caution that the scale of the challenges associated with the implementation of BCBS 239 and, consequently, the provision of risk related assurance services are substantial; industry-wide estimates by various consulting firms place the cost of implementing BCBS 239 between \$8 billion to \$50 billion.

Assurance on Capital Information as a Permitted Non-Audit Service

Assurance reporting on capital information should ultimately be included as an audit service, as part of the annual audit at a minimum. The evidence of the financial crisis is that accumulating exposures to risk in financial institutions were not adequately disclosed in published financial statements; banks that were reported as well capitalised were, in fact, under-capitalised. We see an expanding role for accountants and auditors to adapt financial metrics and reporting to achieve more comprehensive and precise disclosures of accepted risks in audited financial statements while enhancing the reliability of risk reporting and the effectiveness of regulatory oversight. This represents both a risk quantification and an accounting challenge as regulators seek to more fully engage accountants and auditors in initiatives aimed at achieving greater financial stability.

Transitional Arrangements

We strongly recommend a transitional period of private reporting to allow adjustments in the scope of the assurance services while adapting to the BCBS 239 mandates. This is more fully responded to in the section '[The Users of Assurance Reports and the Form of Reporting](#)' above.

Financial InterGroup's Principals



Allan D. Grody

Allan is the founder of the Financial InterGroup companies. He has been active in the financial industry for nearly five decades and has had hands-on experience in multiple sectors of the financial industry. He advises on domestic (USA) and international issues related to financial institutions' global strategies, restructuring and acquisition needs, information systems, communications infrastructures and risk management systems.

In an earlier career, he was the founder and Partner-in-Charge of Coopers & Lybrand's Financial Services Consulting Practice, which was subsequently merged with Price Waterhouse and eventually sold to IBM. Professor Grody founded and taught the only graduate level Risk Management Systems course at NYU's Stern Graduate School of Business. He is a former founding Board member of the Technology Committee of the Futures Industry Association. He is currently an editorial board member of the Journal of Risk Management in Financial Institutions and a board member of the Blue Ribbon Panel of the Professional Risk Managers International Association. He writes, speaks and advises on issues where data management, risk management and technology converge. He has participated in expert panels sponsored by local and global regulators on these subjects.



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Peter is a Principal of Financial InterGroup and Managing Director of its UK based company. He is a former country/regional executive with JPMorgan Chase, Fellow of the Institute of Chartered Accountants in England & Wales, an advisory board member of Durham University Business School's Banking, Risk & Intermediation (BRI) research group and a Visiting Research Fellow at the Leeds University Business School (UK).

At Financial InterGroup he leads consulting projects and provides advisory and training services to some of the globe's leading banks, global IT and consulting firms, trade associations and banking institutes with particular emphasis on cross-enterprise risks, operational risk, Basel II & III, capital management (including the Internal Capital Adequacy Assessment Process - ICAAP), finance transformation, accounting (including IFRS), data management, risk measurement and management systems and risk based auditing.

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