



In a December 2016 [speech](#), the chairman of the Basel Committee on Banking Supervision, Stefan Ingves, commented on the issue of complexity in the capital adequacy framework. He associated the existence of complex capital rules with **the decision to adopt banks' internal models for capital calculations with a view to greater risk sensitivity**. But he cautioned that complex rules can also have adverse consequences, as they inhibit the effective oversight of risk-taking both from a supervisory and a management perspective.

Complexity also limits the ability of a wider set of stakeholders to contribute to the development of policy, Mr. Ingves added. He acknowledged the axiom that the implementation of complex rules is itself complex, creating challenges for banks in the design of the necessary systems and controls.

Giving an indication of the Basel Committee's intended future direction, the chairman reaffirmed the need to strike a "careful balance between risk sensitivity, simplicity and comparability." He went on to assess the relative merits of simple rules versus complex rules, commenting that simple rules "can often produce more prudent and robust outcomes" and "be more risk-sensitive and robust than complex ones, and can better meet supervisory objectives."

This implies that the Basel Committee may be anticipating more far-reaching reforms.

In an earlier call for a rethink, in a 2012 [speech](#), Bank of England chief economist Andy Haldane (he was then executive **director, financial stability**) remarked: "The quest for risk-sensitivity in the Basel framework . . . has spawned startling degrees of complexity and an over-reliance on probably unreliable models. The Tower of Basel is at risk of over-fitting, and over-balancing. It may be time to rethink its architecture."

A system that is exposed to escalating operating complexity over time will require safeguards to limit its adverse side-effects. If complexity remains untreated and continues to escalate, such safeguards can eventually achieve a scale that they become inherently value-destroying. This is arguably the point where the global financial system now finds itself. The practice of treating complexity and its unpredictable and unintended consequences with incrementally applied regulatory safeguards such as the leverage ratio, capital surcharges and recovery and resolution plans is indicative of a system whose capacity to create value has inverted, making it unsustainable over time. It is typically the tipping point **where a system's complete overhaul, or even replacement, should be contemplated.**

A New Metric for Risk

If simple rules are to eventually displace complex rules, it follows that the quantification of exposure to risk must be the output of a common and inherently simple measurement method and system. This is an area of ongoing research that is testing whether the multifaceted risks of a financial institution can be effectively quantified and aggregated at the enterprise level via a common risk metric. If such a metric can be successfully defined, its use in risk measurement and **management systems could ultimately satisfy the stated aspiration of striking a "careful balance between risk sensitivity, simplicity and comparability."**

Such a metric and its method of calculation have been codified and presented in two research papers on risk accounting, [Part 1](#) and [Part 2](#), by Allan D. Grody and Peter J. Hughes, published in the Journal of Risk Management in Financial Institutions.

The method proposes a new, common metric, termed a Risk Unit, or RU, to express all forms of risk.

Following the significant interest shown during the paper's peer review process, the journal's publishers took the unusual

step of inviting leading academics and practitioners to review and comment on the proposed new technique. Six reviewers submitted [comments](#) that were subsequently published in the journal and disseminated via a [press release](#) titled “A Revolutionary Way to Measure Risk.”

The reviewers generally concluded positively, as evident from the following extracts:

“...represents a sizable step forward in the search for a practical global solution to enterprise risk management (ERM)”

“...the London Whale trading loss... Here, the Risk Unit would bloom”

“...a very useful conceptual framework that could serve as a baseline for fulfilling the needs of BCBS 239, with a relatively simple to implement approach”

“The Risk Unit is the first mechanism proposed to integrate the major components of risk in a large institution”

“...(the) proposed framework is both novel in addressing the limitations of existing ERM risk measurement frameworks and practical in adapting the control and reporting frameworks that already exist in accounting and general ledger systems”

“The framework presented... harmonizes all quantifiable risks and valuation uncertainties into one consistent framework without getting bogged down with specific risk models, methodologies and calibrations”

“...(the) approach could be a meaningful way of establishing a common metric for operational risk, an area in risk management which, after many years, is still lacking analytical rigour”

The Proposed Method

In brief terms, the proposed method involves tagging transactions with risk information that is used in a calculation of **each transaction's exposure to risk**. **The resulting risk values expressed in RUs complement the accounting values** already assigned in accordance with accounting standards such as IFRS or GAAP. Both risk and accounting values can then be aggregated and reported using the aggregation paths already predefined for management reporting, e.g. business line, legal entity, organization, product, customer, location and risk type.

The method produces three core metrics that are permanently attached to each transaction and for each risk type triggered:

Inherent Risk is expressed in RUs and is the risk-weighted size of a transaction that represents its maximum possible loss.

Risk Mitigation Index (RMI) is a dynamic measure on a scale of 1 to 100, where 100 is consensus-agreed best practice that represents, in percentage terms, the portion of inherent risk that is mitigated **through the effective management and control of the firm's operating environment**.

Residual Risk is expressed in RUs and is the portion of a transaction's inherent risk not covered by effective risk mitigation - represented by the RMI – that represents its probability of loss.

At the group level, the RMI becomes a de facto measure of risk culture, as it blends quantitative and qualitative risk attributes from across the enterprise.

Potential Benefits and Proof of Concept

The concept of a common additive metric that can be applied to all forms of risk and assigned upon transaction registration in official accounting systems enables the production of real-time or near-real-time measurements of risk across the vertical and horizontal dimensions of the enterprise. This same metric can also be used to set risk operating limits (risk appetite). The result is a true enterprise risk management system that identifies risk mitigation initiatives and quantifies their risk reduction impact in RUs and RMI.

The method's standardized risk metric is the output of an inherently simple and common measurement system that can be readily aggregated to provide a foundation for capital calibration and meet a wide range of enterprise risk reporting requirements that are directly comparable within and between firms.

The method's creators, in collaboration with academics, are in the process of structuring proofs-of-concept (POCs) aimed at further validating the method which will include the design and development of an RU calculation and reporting model and its validation through testing and simulation in live operating environments.

Contact from all interested parties is most welcome.

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