Basel II QIS 4: It's time to invest

US banks need powerful systems for capital calculations, granular data management, analysis and real-time global credit risk management. Only then will they be able to benefit from the fourth Quantitative Impact Study (QIS4).

Basel II is a capital adequacy framework for banks. It is designed to help banks adopt a more comprehensive, sophisticated and risk-sensitive approach for calculating regulatory capital. The proposals will enable banks to align regulatory requirements more closely with their internal risk measurement and provide incentives to improve operational processes.

Basel II also provides banks with a unique opportunity to modernise and upgrade their overall risk practices and risk infrastructure, specifically for credit and operational risk. For these banks, Basel II means more than compliance; rather it denotes the opportunity to achieve distinct competitive advantage in a tough global market.

In May the Basel Committee on Banking Supervision announced that it had agreed on the remaining issues regarding the proposals for a new international capital standard and that it would publish the text of the new framework, Basel II, at the end of June 2004. But the Committee also acknowledged that additional time is needed for national regulators and banks to assess the impact of the advanced internal ratings-based approach.

Beyond the June publication, the Basel Committee aims to adjust the framework further and modify the capital rules. The Basel Committee intends to finalize the calibration to maintain broadly the aggregate level of the minimum capital requirements, while providing incentives to adopt the more advanced risk-sensitive approaches. In light of this, the US supervisory agencies (the OCC, the Federal Reserve Board, the Federal Deposit Insurance Corporation and the Office of Thrift Supervision) plan to conduct a fourth quantitative impact study (QIS 4) of the effects of Basel II on banks in the third and fourth quarters of this year. Other countries' supervisors might well follow suit.

Also, the US agencies have commenced an operational risk benchmarking review at a number of institutions. This will provide input into the development of a joint notice of proposed rulemaking (NPR), which will set out the proposed details for Basel II as it will be applied in the US. The NPR is expected to be released for public comment in late 2005 or early 2006.

Taking it to the next level

Dean Jovic, managing director of risk management/Basel II at SunGard Trading and Risk Systems, says that this proposed QIS 4 will be markedly different from earlier impact studies: "QIS 2 and QIS 3 responses could have been achieved with just spreadsheets and aggregated data but we're beyond that now. QIS 4 will require that banks use more robust technology to calculate capital in a transparent, fully auditable manner". Dr Jovic contends that all banks knew that stand-alone spreadsheets were never really a long-term solution because of issues of data integrity and granularity, aggregation and security, "but up until now that didn't matter".

From a supervisory point of view, implementing a Basel II compliant capital framework means being able to perform the capital calculations and generate reports in a flexible, transparent, auditable way to meet the requirements arising from Basel's three pillars:

Pillar 1 regulatory capital calculations to comply with the Advanced Internal-Ratings Based (IRB) Approach (banks applying the IRB Approach are required to be able to run Basel I and II calculations in parallel for comparison and consistency checking purposes).

Pillar 2 stress testing analysis, validation reports (in order to support the supervisory model approval process for banks applying the IRB Approach to credit risk or the Advanced Measurement Approach to operational risk). Pillar 2 also requires banks to build an advanced economic capital allocation process. An advanced economic capital framework will allow the bank to perform risk-adjusted performance measurement.

Pillar 3 reporting featuring a comprehensive range of information on capital and risk numbers as well as the bank's risk management practice.

Transparency, auditability and flexibility of a Basel II system environment are key. Users need to have the ability to drill down behind any number in a report to the see components of that calculation, and from these components, down to the source data behind them. Spreadsheets are simply not up to this QIS 4 job.

Months, not years

While the ultimate Basel II deadline is still three years away, it does seem – based on a Senate testimony by John Hawke, US Comptroller of the Currency - that by October this year US banks will have to be making capital calculations based on fully detailed enterprise-wide data. Beyond the internationally active banks, there is a widespread feeling that smaller US banks should also be looking to be in line with Basel II since it could mean lower capital charges for them. This was illustrated by a report issued by the Federal Reserve Board in March this year which suggested that middle-tier banks could be put at a competitive disadvantage since these banks often target the same type of borrower as the larger banks.

SunGard Basel II Capital Manager

In response to these needs, SunGard has developed the Basel II Capital Manager. This new SunGard solution provides sophisticated modelling and analysis capabilities to help financial institutions develop comprehensive and risk-sensitive approaches for managing regulatory and economic capital and understanding credit risk.

Incorporating a powerful data consolidator, the Basel II Capital Manager facilitates modelling across a variety of assets for both retail and wholesale banking books and, for comparison, across all allowable approaches under Basel II. SunGard's Basel II Capital Manager offers complete data transparency, the ability to change complex calculations easily, flexible and distributed reporting, ad-hoc stress testing and multi-dimensional 'what if' analysis.

Predicting capital savings under IRB

UK building society Alliance & Leicester is live with the SunGard Basel II Capital Manager and is using it to predict the capital savings it can expect by using the IRB approach when Basel II goes into effect. The building society's credit risk department uses the Capital Manager's factor generation, capital credit calculator and provisioning modules to generate probability of default, loss given default, expected loss and risk weighted assets within its retail banking operations. This includes the analysis of mortgage and unsecured portfolios. Alliance & Leicester uses the results to compare capital numbers required under Basel II against current capital requirements, for a view into future capital savings.

The SunGard Basel II Capital Manager provides Alliance & Leicester with capital and economic calculation models for its retail credit exposures, stress testing and reporting for market disclosure, and the flexibility to model different rules for various asset types and to incorporate on-going changes in regulations. The SunGard Basel II Capital Manager can also be used to compare the standardized, foundation IRB, and advanced IRB approaches for credit risk, as well as to perform 'what if' analysis, stress testing across the retail and wholesale banking books, and Basel II reporting.

Simon Navin, retail Basel manager at Alliance & Leicester, said, "We considered other systems but SunGard had the most efficient, all-round solution and long-term vision for Basel II. The flexibility of Basel II Capital Manager's model has enabled us to develop advanced models across a broad risk spectrum, including risk segmentation analysis, stress testing of our retail portfolios, and loss provisioning on an expected loss basis. Using Basel II Capital Manager we are aiming to achieve accreditation for the most advanced internal ratings based approach under Basel II."

The challenge of credit risk

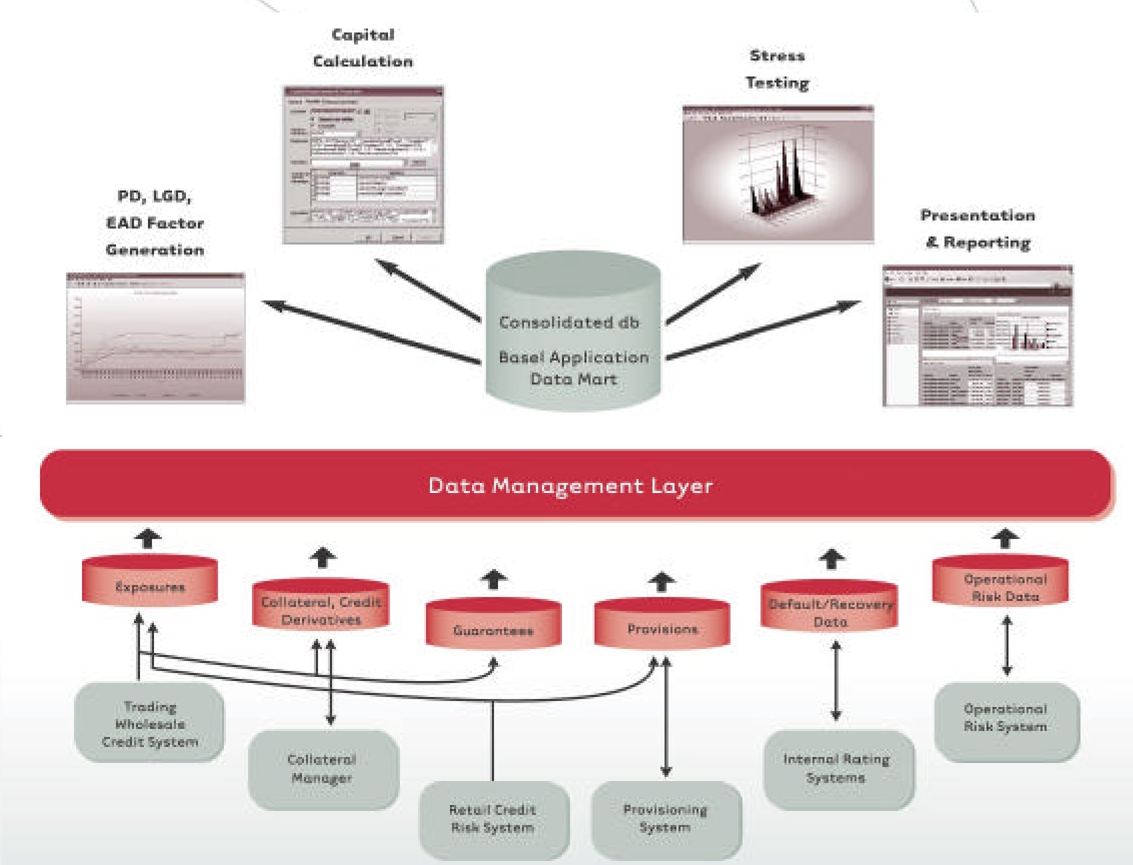
Alongside the challenge of sophisticated capital calculation, Basel II requires banks to develop a disciplined, rigorous, fully documented and auditable approach to assessing the core parameters of credit risk. This challenge has many dimensions and technology will address only some of them. In addition, the right technology will differ from bank to bank, depending on existing systems and organizational priorities.

While no single system will address all dimensions of the Basel II credit risk challenge, some common elements will be:

•Consistent obligor identifiers across products and internal business units or a correspondence table to index across multiple obligor naming systems.

•Data consolidation from multiple products and units into consistent aggregate exposure amounts by obligor (for wholesale exposures) or by consistent credit relevant characteristics such as current payment status, past payment history and amount and type of collateral.

SunGard Basel II Capital Manager



•Workflow tools to facilitate the credit rating process, to enforce consistent procedures and ground rules and to maintain an auditable history of ratings decisions and their rationale.

•A loss database for back-testing the predictive accuracy of ratings on actual credit performance and to support refinement of estimates for probability of default, exposure at default and loss given default.

All these are addressed by SunGard's new Adaptiv Risk solution. Including elements of Credient, a SunGard solution already live at major international banks, Adaptiv Risk is a real-time, integrated market and credit risk solution supporting global exposure aggregation and limits management in real-time. Complementing the Basel II Capital Manager, Adaptiv Risk enables banks to bring together their credit risks onto a single platform for enterprise-wide analysis.

The ticking clock

Last year it was 'the summer of discontent' as banks and regulatory authorities worldwide expressed their reservations about Basel II. Indeed, some observers doubted whether it would even go ahead. The Basel Committee listened, took stock and after some adjustments, including the treatment of expected losses in the calculations, fully intends to proceed toward implementation of the revised Accord.

This summer might be termed 'the cull of the spreadsheets'. Excel just will not cut it for QIS 4 and banks need to get Basel II data consolidators and capital calculators in place sooner rather than later. If they do not, they risk being left behind by more nimble competitors who move into a more favourable minimum capital framework by employing sophisticated Basel II solutions.

The next step

SunGard will be running Basel II events in New York and Toronto looking particularly at the implications of QIS 4 for US banks: For details of these go to www.risk.sungard.com/qis4.

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