the data requirements of Basel II will have a serious impact on banks. Matt Warner reports

Basel II

The Financial Services Authority (FSA) warned in January that the UK's financial services industry must brace itself for a new wave of regulation. As many as 20 new initiatives will be introduced by the EU over the next three years, while from the US come the wide ranging Sarbanes-Oxley requirements. However, for the banking industry, no regulation is more pressing than the Basel II Accord, which becomes mandatory in 2007.

The new accord, named after the Swiss city where international bank supervisors meet, will be implemented through the EU's Capital Requirements Directive. The legislation focuses on how much capital adequacy a bank requires given its risk profile, but recognises the great advances in computing and risk management that have been made since the first Basel Accord of 1988. The role of IT is central to complying with Basel II, as effective data-warehousing and the generation of accurate credit and operational risk models are vital.

The potential benefits to the banking sector are great. Risks can now be assessed more accurately, so capital can be assigned more appropriately. PricewaterhouseCoopers estimates that the new rules could release about 5% of bank capital across the EU – about €100bn. However, the technical challenges involved are considerable.

The regulations offer the banks a choice of how much of the risk management they do for themselves. These are called the standardised, foundation and advanced options. The first approach lets the bank use the banking regulator's estimate of risk capital; the latter two rely on internal data collected by the bank itself. Most tier-one banks are choosing the advanced internal ratings-based (IRB) approach to Basel II, as it brings the greatest capital benefits, but also the highest costs.

the costs involved

"IT systems will be affected in a significant way, involving much expense," says Simon Hills, director of the British Banking Association's prudential capital team. "Banks will have to go back into their records, homogenising and re-casting data for the Basel II definitions (e.g. of loss), so they can demonstrate to the regulators that they are using accurate risk models correctly. This can be a tremendously expensive process." Research by analysts Forrester shows that tier-one banks will have spent on average €115m over the past five years to comply with Basel II, with 60% of these budgets being assigned to IT projects.

Much of this spend will go on data-warehousing, as good data collected in compliance with Basel II rules drives the risk models. Finding data of sufficient quality can prove difficult, as Kevin Hughes, senior manager in information risk management at KPMG, explains. "Most banks have data that goes back ten years, but a major problem has been the stability of the last decade. There hasn't been any boom or bust. This means you have a problem predicting the next ten years, as the regulators aren't going to let you assume it will stay so static."

consistent data is needed

Data problems are further exacerbated by the different systems and approaches to risk that the various business units within a bank adopt. The credit card unit will have different risk criteria to mortgages or corporate loans. Banks often have poor records of loss and varying definitions of probability of default, loss-given default and exposure at default. "The trouble for banks is that Basel II introduces a rigid definition of defaults," explains Hills. "Each unit must express these in the same way. You need a single firm-wide view."

For smaller banks and building societies, the lack of rich data is an even greater problem when pursuing the advanced IRB option. These institutions have worked together to solve the problem by entering into data-pooling partnerships. By doing this they can achieve

the required critical mass of historical data to enable risk modelling.

Baseline Capital has found plenty of business by offering a pool solution for residential mortgage data, usually the biggest retail asset on smaller institutions' books. "By pooling data, these banks are able to build more predictive models," explains Richard Coates, Baseline Capital's managing director. "But there is more to it than just building models; you need the technology to run it on, so we also provide the solution for the banks to produce the Basel II outputs needed."

A data warehouse is still required by each participating bank. This sends a monthly feed into the Baseline solution. Here the data can be pooled and put through models and analysed, then the information required is returned to the various banks. Coates likens the process to a pipeline. "The hardest part of the pipeline is all the technology you must add along the way, from the data warehouse to the 'number-crunching' software. You're dealing with massive amounts of information."

The pool is receiving details of tens of thousands of mortgages every month, each with up to 150 pieces of information. Hence millions of new pieces of data must be stored, accessed, processed and retained on a monthly basis. Coates estimates that even the smallest institution must spend £2m on Basel II compliance.

in-house data warehousing

While smaller banks have chosen co-operation, tier-one banks have been busy developing data warehouses and using integrated software to knit together disparate databases. This work has been ongoing since the Basel II accord was first outlined in 2001. Hughes estimates that 70% of banks have built their own data warehouse, while the remaining 30% have bought packages. Companies such as SAP, IBM and Sungard have been doing some of the IT 'heavy-lifting' for this minority, while companies such as Mercer Oliver Wyman are becoming Basel II consulting specialists, and Peoplesoft are gaining a reputation in data management aspects of the legislation.

the software vendors

For software vendors, new regulations mean sales. Software vendor Chordiant has a new product based around Basel II called the Decision Management Suite, which is an analytical tool. "Many people are still getting their data together, though they haven't got long," says Andy Cutler, vice president of marketing. "But now banks are coming to us ready for serious conversations, as once you've got the data you must use it."

The investment in IT will see a return, even though the cost and complexity of new data systems and analytical software will be very significant. However, Hughes warns that there is more to Basel II than just IT. "We're seeing lots of work on data, but what needs to be done is the integration of Basel II into business processes. That is key to it all." Senior managers also face the challenge of getting their finance, risk and IT people to work together.

An example of executives seeing the systems as more than just boxes ticked for the regulators is the day-to-day use of the data to align decisions about lending to SMEs more closely with the actual risk. The IT work behind Basel II is enabling banks to actually deploy data that they have had for years but that was in too poor a condition to use. ■

Matt Warner is a freelance journalist