JUDGMENT VERSUS RISK MANAGEMENT SCIENCE – ARE WE GETTING THE BALANCE RIGHT?

This article argues that the drive toward objectivity on risk and capital is a good thing, so long as the industry accepts that the role of the new risk numbers is to supportand enhance management judgment. But if either regulators or banks are tempted to think that the new risk numbers will lead to automatic answers, they will make mistakes in their risk-based decisions.

Recent banking regulations and the search for competitive advantage are encouraging institutions to base their decisions on a new generation of risk and capital metrics. This has given rise to worry in some quarters that "objective" risk information might begin to circumscribe, or even supplant, the traditional role of management judgment across a range of important bank activities (Table 1).

Where are the new "objective" risk numbers having an impact?

Example bank activity	Risk metric
Loss reserving	Inherent loss (given point in cycle)
Deal pricing	Transaction RAROC
Capital adequacy	Enterprise economic capital
Portfolio credit limits	Economic-capital-based limits
Credit ratings	Borrower PD and facility LGD
Business line profitability	Business line RAROC

The challenge for top executives is to foster a culture in the bank (policies, attitude toward risk quantification, systems) that builds the right balance between judgment and objective numbers across a diverse range of decision making. It's a balance that often changes as businesses mature and evolve and as more risk information becomes available. Let's explore how to get the balance right in four critical areas: loss reserving, risk-based pricing, capital adequacy, and start-up businesses.

LOSS RESERVING

In the ongoing debate among securities regulators, banking regulators, and the accounting profession over how banks should calculate their allowance for loan and lease losses (ALLL), all parties agree on one thing: banks must start to calculate reserves in a more systematic, rigorous, and objective manner that reduces the role of subjective management judgment.

A big advantage of this kind of analysis is that forecasts of expected loss can be tightly integrated with risk-based capital analysis to provide executives with the most comprehensive picture possible of the condition of their bank.

Part of the momentum for this comes from the suspicion that banks use provisioning to flatten out volatile earnings over time. For external observers, the benefit of objective risk measurement is that it should lead banks to provision more as their objective expectations about credit losses increase (or less as they decrease), better representing the economics of the business at any one time.

One way to make ALLL more accurate and objective is to base it on the loss distributions created by the bank's credit portfolio model. An additional approach is to apply loss migration analytics to determine the hold-to-maturity losses inherent in a portfolio.[1]

A big advantage of this kind of analysis is that forecasts of expected loss can be tightly integrated with risk-based capital analysis to provide executives with the most comprehensive picture possible of the condition of their bank. In this sense, objective risk calculations can be seen as a platform for making sure that a wide range of different kinds of management judgments are consistent with one another.

But it would be wrong to suppose that an objective statistical analysis of expected loss in the bank's credit portfolio leads directly

to the bank's ALLL. Many other factors have to be taken into account, such as management's judgment concerning the effect of the credit cycle over time on portfolio loss expectations and an appropriately conservative view of the robustness of the analysis. Even the most carefully implemented credit portfolio modelsimply offers an analytical platform for the eventual management judgment on ALLL.

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The "bad" news, therefore, is that management will need to continue devoting time to making clearly defined judgments that transform objective credit portfolio expected loss numbers into a final ALLL number. The "good" news is that, far from becoming slaves to the new numbers, best-practice management teams will use this analytical platform to probe into why the numbers look like they do, and to examine and communicate more clearly any trends in loss expectations. Time once spent number crunching can now be used in a more productive way. In this sense, objective risk metrics help to leverage, rather than curtail, the role of bank executives' judgment.

RISK-BASED DEAL STRUCTURING AND PRICING

Risk-based pricing is another area that seems to pit traditional banking judgments against the application of "objective" risk management science. It's easy to make the economic argument for an objective, risk-based approach to pricing that allows the bank to factor in the cost of the risk capital it must set aside for each deal. But it is also easy for experienced bankers to point out that, in their judgment, a purist form of risk-based pricing could price them out of the market, leading to diminished market share. So who's right: the risk modelers or the savvy bankers?

The truth, of course, lies in the middle.To compete for themost profitable transactions, banks must be able to quantify the cost of economic capital for each deal and understand the key risk drivers of this cost (e.g., credit quality, transaction structure, or portfolio concentration).

How the risk-based numbers are applied is then a matter of judgment. For example, each deal decision also needs to take into account other factors, such as the value of the wider customer relationship, the bank's strategic direction, and the question of timing. Timing is important because most banks will want to introduce risk-based pricing gradually: The aim is to improve the bank's risk versus-return profile over time, not to disrupt business.

Often the right answer for a bank will turn out to be a subtle mix of better deal structuring, improved pricing, better targeted customer relationship management, and a more aggressive pursuit of clearly profitable customers. Building this mix of tactics requires considerable executive judgment – informed by risk metrics rather than determined by them.

ENTERPRISE-WIDE RISK AND CAPITAL ADEQUACY

At a bank, some of the most important judgments made by executives are those concerning capital adequacy (above and beyond minimum regulatory capital). Regulators are pushing banks toward supporting these decisions with more rigorous quantitative analysis and objective risk and capital numbers.

Basel's supervisory Pillar II and the Federal Reserve's SR99-18 in the U.S., for example, push institutions to explain in a sophisticated way how they assess their full range of risks and how this relates to the institution's need for risk capital. These rules generally apply to more complex institutions, but they also are driving regulator expectations for an everwidening range of banks and encouraging a more general adoption of economic capital.

Yet bank executives shouldn't be too worried that the new approaches will artificially restrict their capital adequacy decisions. Judgment will remain critical for two basic reasons.

1. Implementing and parameterizing an economic capital model are at least as much about gaining an intimate under standing of a business (and the risk factors it is exposed to) as about applying complex mathematical equations. There are many elements of judgment here, and senior executives are often the best people to help economic capital projects get these judgments right.

2. Economic capital models should not be thought of as black boxes that spit out simple answers to complicated questions such as, "What capital should we hold at an enterprise level?" As with ALLL modeling, they instead provide an objective and analytical platform on which senior executives can build the right answers. These final answers will depend on a number of additional factors, including:

- Executives' judgments about the solvency standard the bank is aiming for.
- Executives' judgments about the strength of the assumptions underlying the economic capital model and its sensitivities to key risk factors.
- Excess capital that might be required on top of economic capital for strategic reasons (such as mergers and acquisitions).

The great benefit of economic capital modeling is that it allows bank executives to identify the risk factors and the specific activities that drive up their enterprise's underlying need for capital. Executives can then better use their judgment to decide whether the bank is gaining an appropriate return for those activities and then take appropriate action.

START-UPS AND ACQUISITIONS

Objective risk metrics, such as economic capital, play an increasingly vital role in start-up financial institutions, particularly with regard to capital planning. For example, imagine a start-up bank that plans to enter its first year with $1 billion in assets and equity of $150 million – a relatively high equity-to-assets ratio of 15% – and then to expand to $2 billion assets in the second year, and so on into the third year. To support its year-on-year expansion, executives will likely have to plan on raising significant amounts of new capital.

Economic capital tools are the best way for the bank's management to budget for capital requirements on a quarterly basis, after taking into account the growth in diversification benefits for the bank as its portfolio expands and becomes less "lumpy" and concentrated. This kind of objective analysis can also help communicate to potential investors how the bank's risk profile will evolve as its portfolios mature – leading to a greater return on equity.

A sophisticated understanding of the bank's risk and capital position is also important if executives are to manage the new bank's pricing strategy in a disciplined way as the bank builds market share. For example, a start-up might legitimately need to "buy" market share for a period by offering below-market prices that do not reflect the true cost of risk. Similarly, in the early days, it may make sense to award the business a "target" risk capital diversification benefit based on future expectations (or on a competitor benchmark) so that the business is not put at a disadvantage compared to mature competitors with large, diverse portfolios of business.

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These explicit strategic judgments are fine so long as the capital subsidies are made as transparent as possible to bank executives and investors by means of objective metrics – and monitored in a disciplined way. The start-up's business plan should lay out clear expectations for when the business will earn an above-hurdle rate of return after taking the true level of incurred risk costs into account. It is always tempting in banking to allow maturing businesses to continue to grow volume while piling up hidden, uneconomic risk costs that are realized only later in the credit cycle.

Business and portfolio acquisitions require a similar mix of strategic judgment supported by objective risk metrics. Wherever possible, banks should analyze the risk-adjusted profitability of an acquisition and also calculate the degree to which an acquisition will worsen concentration risk costs (or improve diversification benefits) at the enterprise level. Leading banks are now using this kind of analysis as an important factor in their acquisition decisions.

The limiting factor here is not whether risk-based numbers should be applied (they should) but in how to gain access to the relevant information or suitable benchmarks. Bank executives must also look at the model's rationale and the quality of any data inputs and make a judgment about the weight that should be attached to any "objective" numbers in their final strategic decision.

CONCLUSION

The mix of quantitative - and experiential-based decision making at each bank will be driven by the institution's culture and the life cycle of the institution's businesses, as well as by organizational issues and the attitude of senior executives. Bank policy and culture should clearly provide bank executives with the opportunity to override quantitative models when it is appropriate. The role of the new risk numbers is to support and enhance, rather than supplant, executive judgment.

Because top executives create the context in which objective risk numbers can be used to improve business decisions, it is imperative that executives take the time to understand the concepts, interpret the results, and apply the findings in their decisions. Unless this happens, there is a danger that executives will arbitrarily accept or reject risk numbers when they make important judgments, or see the production of these numbers as a way to placate regulators rather than as an opportunity to improve their institution's risk-based decision making and overall profitability.

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Footnotes:

[1] For a more technical discussion, see "Taking Account of the Economic Cycle in ALLL", Shahram Elghanayan, The RMA Journal, February 2006.

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