

ASKING THE RIGHT QUESTIONS

Can Bank Directors Help Design ERM Programs That Secure Enterprise Goals?

by David Samuels and Shahram Elghanayan

The banking industry's new emphasis on enterprise risk management—an attempt to forge a “big picture” of risk and reward across business lines and risk types—is the latest challenge for non-executive bank directors.

After all, directors must keep themselves informed about the key risks threatening a bank's goals and stakeholder interests, whether the threat is from “traditional” bank risks such as credit risks, or operational and strategic business risks.

They also need to make sure that executives are balancing the needs of various stakeholders (customers, shareholders, regulators, debt holders) as they pursue growth and next-quarter targets.

Finally, they must ensure that executive management has the risk metrics it requires to secure the bank's competitive positioning and long-term viability.

The bad news is that because enterprise risk management (ERM) programs are—by definition—comprehensive programs that try to provide an integrated picture of risk, it's easy for these complex initiatives to lose direction and dynamism.

The last thing that directors want is a costly, over-elaborate ERM program that fails to deliver clear signals at the top of the bank or substantially affect how the rest of the bank is behaving.

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The key to answering the ERM challenge is for directors to become more involved in the initial design and rollout of ERM programs to make sure they meet some fundamental criteria:

- First, programs must highlight the *key* risks to an institution's solvency and long-term profitability goals, rather than turning into laundry lists of all possible areas of concern.
- Second, to help the bank to make balanced decisions on risk and reward, ERM information should be actionable (e.g., expressed in dollar risk costs).
- Third, the ERM program must incorporate capital measurement so that board oversight and regulatory concerns on risk and capital can be addressed.
- Fourth, risk measures must be plugged into bank management tools such as performance measurement systems and risk-based decision-making processes, wherever possible.

Otherwise, decision makers will be left uncertain as to whether the returns from a proposed change in strategy will offset any additional risks, or how much it might be worth paying to mitigate an apparently major control risk.

In practice, we think this means that directors should use their oversight role to make sure that bank ERM programs are linked to capital adequacy and cost-of-capital metrics, with economic capital measurement as a core component of the ERM program.

Economic capital is vital to ERM because it acts as a common currency of risk that allows the “apples” and “oranges” of risk (e.g., rogue trader exposures versus credit concentration exposures) to be costed, compared, and prioritized at the top of the bank. For directors, in particular, economic capital offers easy-to-understand snapshots of the enterprise risk implications of different business strategies.

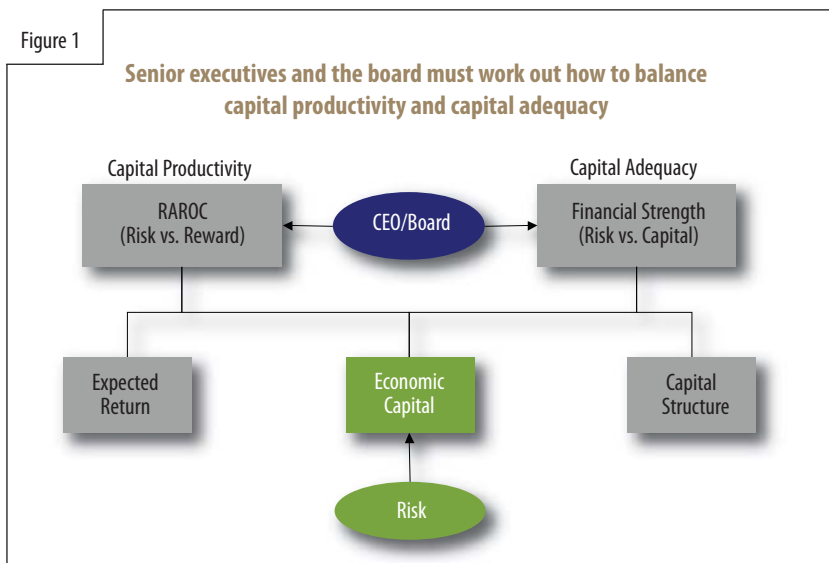
Let's take a closer look at why this is so and how directors

can steer ERM programs in the right direction.

The basics—bank risk appetite, capital adequacy, and ERM

A good starting point for any bank's ERM program is a clear-headed discussion about what the bank's ERM program is trying to achieve in relation to its board-approved risk profile or “risk appetite.”

It helps if we begin by thinking of the board and executives as performing the balancing act illustrated in Figure 1. They need to ensure the bank has enough capital to cover its risks (financial strength) and that the bank is making enough money to fund this capital and other expenses plus a profit margin (risk-adjusted return on capital, or RAROC).



To perform this balancing act, it helps if the bank defines risk appetite with reference to a solvency standard (a quantitative measure that should be in line with any qualitative mission statements, such as remaining a solidly capitalized bank).

For example, the bank may set out its intention to maintain a target credit rating of single A, which implies a 0.07% likelihood of default—and that the bank will therefore hold enough capital to withstand 99.93% of risk scenarios (Figure 2a).

In turn, this solvency standard becomes one of the key drivers for measuring the bank’s economic capital. Specifically, the solvency standard allows the bank to read off its economic capital requirement from the bank’s total risk distribution (Figure 2b).

Importantly, this total risk distribution needs to *integrate* all of the bank’s risk and capital measurements (Figure 3), rather than focusing on a single risk type—say, credit only—or simply aggregating risks across business lines and risk types. The integration of risk measurement accounts for how—from an enterprise perspective—some risk types offset each other (i.e., if one risk happens, the other tends not to) while other risks exacerbate each other.

Using the bank’s hurdle rate of return on capital, the bank can then also allocate a “cost of risk” for each activity that requires economic capital—and can therefore put a dollar number on the benefits of any ERM risk mitigation decisions.

Some of these risk mitigation decisions are operational in

Figure 2a

How strong do you want your bank to be?		
Target solvency standard	Likelihood of going into default (%)	Percent of scenarios withstood
A	0.07	99.93
BBB	0.21	99.79
BB	0.71	99.29
B	5.9	94.10

nature—for example, what might a lack of controls in our wire room cost us in terms of extra risk capital, compared to the cost of instituting new controls? Other ERM decisions will be about business strategy and portfolio management—for example, is our big-ticket lending to a few major customers creating a major credit concentration risk (or does this risk diversify away across our enterprise portfolio)? Are we pricing and reserving appropriately for the risks we are taking?

This is why risk and capital calculations are important to ERM programs: they allow the bank to strike a quantitative bal-

ance between risk and reward from an integrated, enterprise-wide perspective.

Are we covering all our risks and enterprise risk concentrations?

Directors should probe whether the bank is considering all the major risk types within its ERM program. It’s a lot easier to make a mistake here than it might seem, and directors who ask awkward questions may find they expose some big gaps.

For example, many ERM programs pay a lot of attention to operational event risks such as rogue trading or fraud, perhaps because these sources of risk were

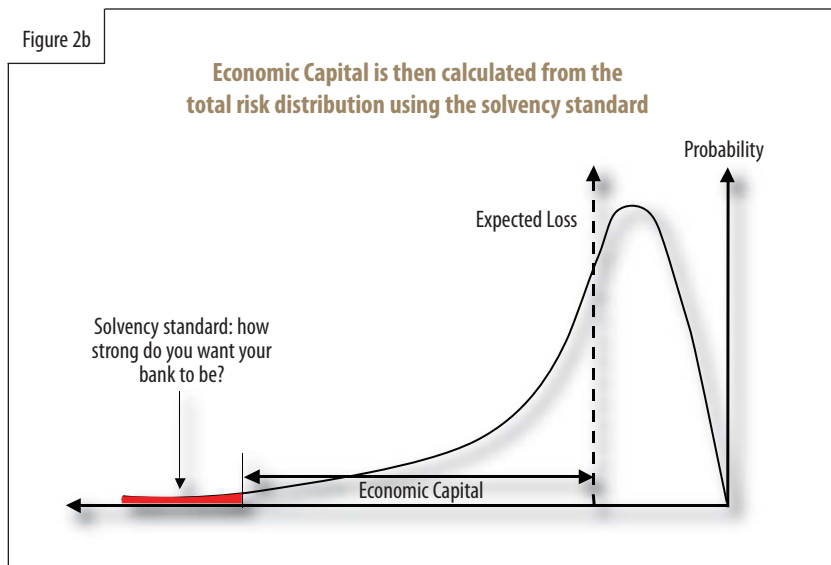
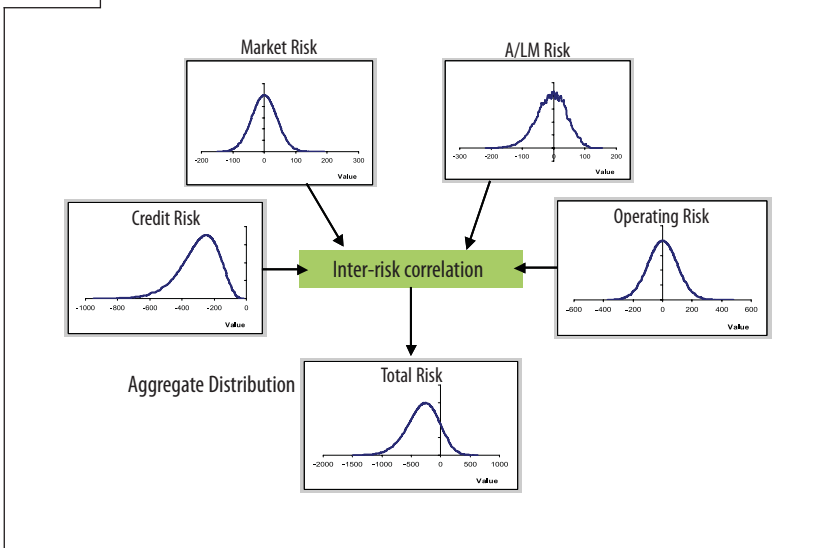


Figure 3

Risks are integrated taking account of risk correlations



often wrongly overlooked at the enterprise level until about five or 10 years ago.

Operational event risk is a worry and should be addressed, but it is important to remember the big picture: Our research shows over 90% of U.S. bank failures over the last 20 years are down to credit losses (71%) and interest rate risk (21%).¹ Many banks feel that they have credit and interest rate risk covered in their traditional risk management divisions, but the truth is that many are still blind to the way different dimensions of credit risk *interact* to cause problems *at the level of the enterprise*.

The kind of questions direc-

tors can ask here to make sure credit ERM issues are covered include:

- What borrower and single-name concentration risks are we running in our key portfolios and how much of our risk capital is devoted to these?
- What is our reliance on collateral for various products across the bank?
- How correlated might collateral values prove to be in the event of a downturn?
- Do we understand how a correlation between risk factors might drive a spike in losses across our portfolios?

This last factor is often the key to bank earnings volatility.

For example, the rate of loss that a bank suffers when a commercial or consumer real estate loan defaults often skyrockets at the same time that the default rate itself goes up. In turn, this can give rise to liquidity shocks that deepen market turmoil and subsequent losses.

Risk factor correlations are troublesome across many banking lines—for example, the way that account balances tend to rise immediately before default in the consumer credit card sector (draw-down risk), or the sharp fall in residual values in auto lending when customers hand their keys back.

As problems in the subprime sector indicate, it is not enough for banks or directors to understand risk in terms of expected outcomes, however fat the credit spread seems when only expected losses and funding costs are included. Instead, banks need to be able to quantify the chance that risk interactions and correlations will produce large “unexpected” loss levels—and precipitate a capital event at the level of the enterprise.

Bank directors should also ask how the ERM program considers the impact of macroeconomic factors on the enterprise—and here they should not limit themselves to asking about traditional market risk reporting, but also should ask about indirect financial risk drivers embedded in businesses.

For example, equity market performance drives franchise value for asset management businesses, while interest rate changes drive volumes in mortgage origination and servicing businesses up and down (Figure 4).

Figure 4

Are you capturing all the market risk elements of your mortgage businesses?

Activity	Nature of market risk
Pipeline	Option risk due to pipeline “fallout”
Servicing rights	Negative duration, and high convexity due to prepayment risk
Warehouse	Duration and convexity due to prepayment risk
Portfolio	Duration and convexity due to prepayment risk

Depending on the bank's portfolio of businesses, this kind of exposure can become an important driver of earnings volatility at the enterprise level.

Under a comprehensive ERM program, economic capital can even be used to convert the risk of fee-based businesses into the credit risk equivalent (Figure 5), so that the contributions of various businesses to the risk profile of the whole enterprise are made transparent to the board. Senior executives and the board can then analyze whether the risk contributions of various businesses exacerbate, or offset, each other at the enterprise level, allowing directors take a portfolio management view of the enterprise's business assets.

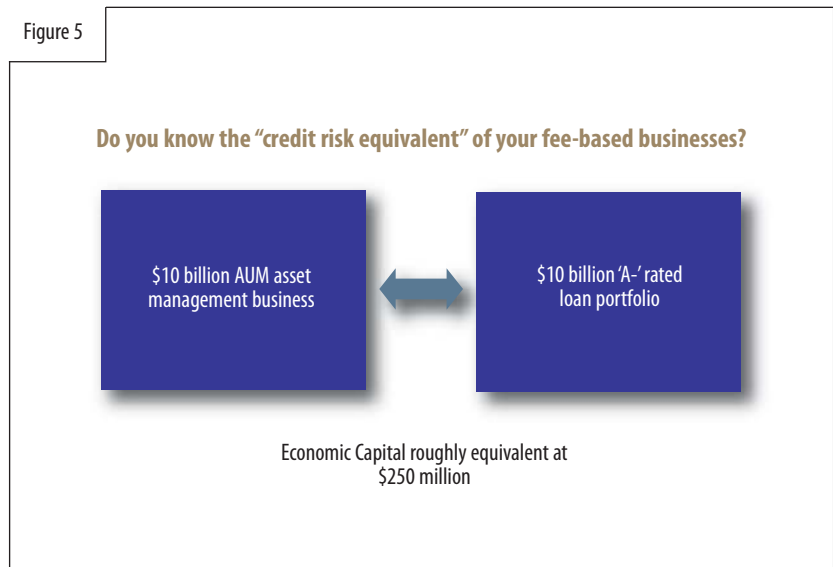
In terms of directors' oversight responsibilities, the key to ERM is really an ability to see these many dimensions and expressions of risk across the enterprise portfolio so that activities driving large unwelcome exposures can be identified—and so directors can gain an integrated risk picture for capital adequacy purposes.

Look for big risks, not small losses

It follows from this discussion that ERM programs should be most concerned with the bank's propensity for major earnings volatility and solvency-threatening capital events—not simply "losses" in some more general sense.

This has implications for the focus of ERM programs, and particularly for how they treat operational event risk (Figure 6). First, ERM programs aren't really looking for very severe, frequent operational losses—the quadrant with the large black cross in the figure.

Figure 5



These would already be obvious and, anyway, a bank would be out of business if it suffered capital events every few months. It also makes no sense to focus programs on small operational losses that happen infrequently, because these are immaterial at the enterprise level.

Small-scale losses are important if they happen frequently (green quadrant) because they drag down the bank's profits. But frequent, small-scale losses give rise to a predictable level of loss,

by definition. This means they are, essentially, a question of bank process efficiency and expense management rather than an issue for board oversight and ERM.

Instead, the real concern of an ERM program should be to identify operational risk exposures that can lead to severe losses but that happen infrequently—perhaps never yet, in the history of a particular bank—and are therefore easily overlooked or mismanaged by the bank's line management (red quadrant).

Figure 6

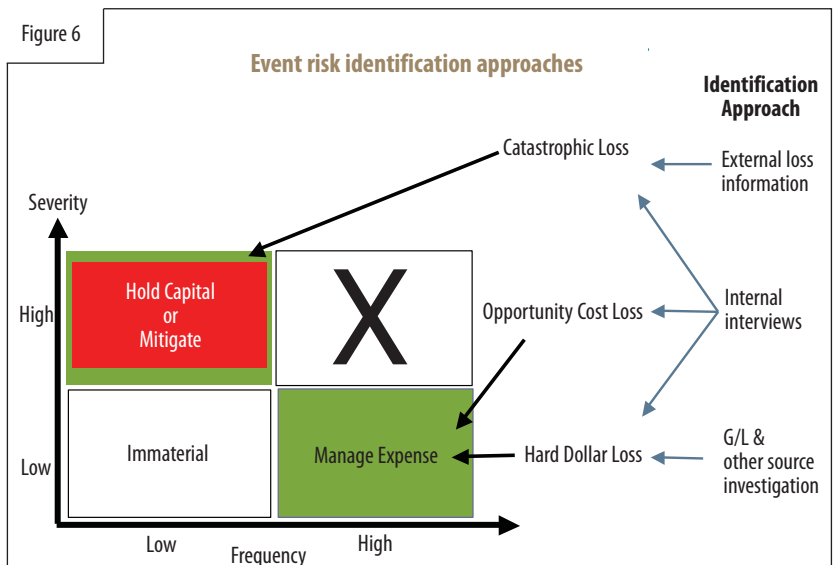


Figure 7

Is ERM information reaching the places where it will make a big difference?

- Capital adequacy decisions
- Investment decisions, e.g., selecting businesses to expand
- Acquisition model
- Controls improvement programs/cost benefit analysis
- Strategic business planning process
- Performance/Risk-adjusted profitability reports
- Risk limit and concentration reports
- Risk-adjusted loan pricing tools to drive business selection
- Commercial relationship profitability
- Customer segment profitability
- Scenario and what-if analysis tools

This may seem obvious, but it is why some banks have found that it's a mistake to overly focus ERM programs on internal operational event loss databases. This kind of internal loss data is directly relevant to the bank, unlike external data, and it can be very useful for improving process efficiency, but it does not offer an answer to red quadrant risks.

By contrast, ERM often demands the careful *blending* of external industry information (e.g., about severe but rare operational events such as wire room lapses) with carefully selected

internal information (e.g., wire room controls) to measure the bank's exposure to the big, infrequent losses that really matter.

Is ERM information reaching the places where it will make a big difference?

The best ERM analysis in the world won't help the bank if it does not affect the decisions the bank takes and how the bank is managed. Also, it is not enough for ERM to identify individual weaknesses such as a gap in controls—if ERM is to be more than a sort of "super audit" it must also

offer ways to *systematically* change and improve bank behavior.

One way to do this is for directors to make sure that the bank's most important decisions and metrics are all adjusted for the economic cost of risk. Figure 7 provides some examples.

Perhaps the most important, but underused, of these management tools is risk-adjusted loan pricing and loan selection. Figure 8 illustrates how risk-adjusted pricing can help a bank become more competitive and profitable, and it points out the ERM implications.

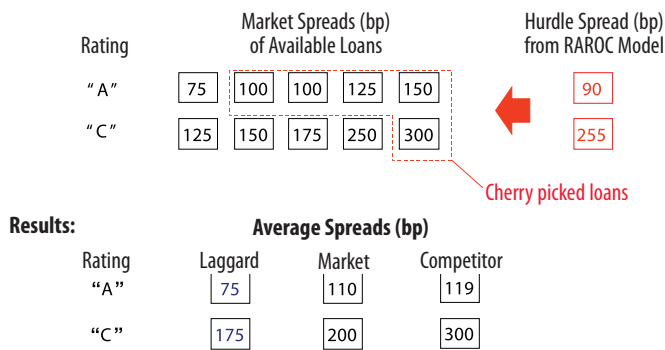
In the figure, we see the market spreads available in one illustrative market for borrowers with two different credit ratings, A and C. The competitor bank that can "see" the most attractive business from a risk-adjusted perspective (red shaded) can cherry-pick this business. But the bank that cannot see which spreads are profitable on a risk-adjusted basis is left with underpriced, low-quality loans.

Without an economic capital system in place, the directors of the disadvantaged bank will be unaware that this adverse selection is happening, until a credit downturn reveals that their bank has disproportionately won loans that the wider market has priced without proper reference to risk.

Directors play an especially important role here because there is often resistance from powerful heads of business to the idea that risk costs should be included in performance and pricing metrics—board-level support for senior executives can be critical in making sure the bank behaves in ways that increase long-term shareholder value, rather than simply building revenue and market share

Figure 8

Risk-based pricing can be used to undercut market pricing on high-quality loans, abandoning under-priced, low-quality loans to the competition



(even where this destroys value).

From their vantage point at the top of an institution, directors can also push for consistency in how the bank's key metrics are calculated. For example, banks are being pushed by regulators and the accounting profession to make their Allowance for Loan and Lease Losses (ALLL) more accurate, systematic, and objective. One way to do this is to leverage the risk distributions generated by the bank's economic capital model. The bank can use the same loss distributions to draw off accurate expected credit loss estimates, which can then be adjusted to fulfil through the cycle or point-in-time ALLL requirements based on the bank's reserving philosophy. That way, the bank can be sure that both its risk-and-capital analysis and its ALLL numbers represent an objective, joined-up analysis of the bank's credit risk profile—in line with ERM goals.

Conclusion

While enterprise risk management programs are not cheap to run in terms of either resources or management time, they represent some of the best money and time a bank director can authorize executive management to spend. As discussed in this article, a comprehensive ERM program can help the bank align its risk management and business strategies (see box opposite), as well as avoid expensive control lapses.

We've argued that, to do this, ERM programs must focus on the bank's largest risks in terms of capital events, consider and integrate a full range of risk types, and be linked via risk and capital

Figure 9

Questions for Directors to Ask Senior Executives

1. Are we using risk-and-capital concepts to quantify risk/return trade-offs, in dollars where possible?
2. Does our ERM program quantify the destructive power of correlated credit risk factors across our enterprise?
3. Are our operational risk ERM resources directed toward our big risks (or smaller, more visible losses)?
4. Are we thinking out of the box on ERM to see all our business risks and their interactions (e.g., risks of fee-income businesses)?
5. Do we embed ERM information in business metrics, e.g., risk-adjusted pricing/performance?

metrics to a consistent set of management tools (especially risk-based decision making).

Figure 9 summarizes some questions directors might ask their executives to check to see if their bank's ERM strategist has taken these issues on board.

In terms of understanding ERM program results, directors do not have to be masters of the minutiae of economic capital calculations—this is the job of executive risk officers. Instead, they should ensure the quality of the program and then use program results to make sure they can answer inquiries that are important to their oversight role—for example, about the bank's risk appetite and capital adequacy, rankings of the bank's top five or 10 risks, how the bank selects the best risk-adjusted business, and assessments of the ERM impact of upcoming strategic decisions.

Importantly, incorporating risk and capital metrics will help directors answer a question increasingly asked of the architects of ERM strategies: "Is your bank's ERM program really creating information that is 'actionable' and delivering tangible shareholder value?" The time is now for bank directors to take a lead role

in driving executive management to implement an ERM program grounded in capital measurement and risk-based decision making. □

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Notes

¹ See *ERisk Report*, March 2004, Vol.III, No. 3.

How Widely Do Industry Bodies and Regulators Define ERM?

In the February 2007 edition of the *Journal*, the RMA's Enterprise Risk Council defined ERM succinctly as "creation of shareholder value through the integrated management of risk."¹ Likewise, regulators are defining ERM as much more than enterprise risk avoidance. For example, Governor Susan Schmidt Bies of the Federal Reserve, who has regularly stressed the importance of setting up bank ERM programs, says she thinks the key six points for bank ERM are:²

1. Aligning the entity's risk appetite and strategies.
2. Enhancing the rigor of the entity's risk-response decisions.
3. Reducing the frequency and severity of operational surprises and losses.
4. Identifying and managing multiple and cross-enterprise risks.
5. Proactively seizing on the opportunities presented to the entity.
6. Improving the effectiveness of the entity's capital deployment.

Notes

¹ *The RMA Journal*, February 2007, p. 10.

² *Speech to National Credit Union Administration 2007 Risk Mitigation Summit*, 11 January 2007, www.bis.org/review/r070112e.pdf.