

Are You Up Front on Lender Pay?

••The authors discuss compensation mechanisms that keep lenders' **attention focused on risk**. Even institutions that don't employ dual risk-rating systems and economic capital can benefit.

BY SHAHRAM ELGHANAYAN AND KAIZAD CAMA

ANGRY TAXPAYERS WANT bankers to pay a financial penalty for their industry's part in creating the global credit crisis. Accordingly, politicians in the U.S. and Europe have responded with salary cuts, bonus caps, special levies and taxes, and longer-term reforms that oblige banks to pay staff in restricted stock and deferred cash that can be clawed back.

It's far from clear, however, that measures aimed primarily at investment bankers and CEOs of too-big-to-fail banks can solve the main compensation challenge facing regional and smaller banks. In these institutions, many of the risks originate well below the CEO level—in lending units rather than trading rooms. The CEO may take more compensation in the form of restricted stock, but how can he or she then incentivize lenders to take account of the economic cost of risk and follow the bank's agreed-upon risk appetite?

Where Are We Now?

At the moment, many lenders are paid in ways that fail to take proper account of risk. For example, incentive compensation may be driven largely by performance measured in terms of raw earnings growth, return on equity, business volumes, new business, market share, and so on—usually with a fair amount of management judgment thrown in.

True, compensation for lending officers is sometimes adjusted for risk flags. For example, it may take account of the number of double-rating downgrades in a portfolio—an indication of poor attention to obligor creditworthiness—or the volume-weighted average portfolio credit rating. But this kind of mechanism fails to capture the true economic effect of lender decisions on either long-run average losses or the bank's tail risk.

Figure 1

Three Lines of Attack for Risk-Aligned Compensation

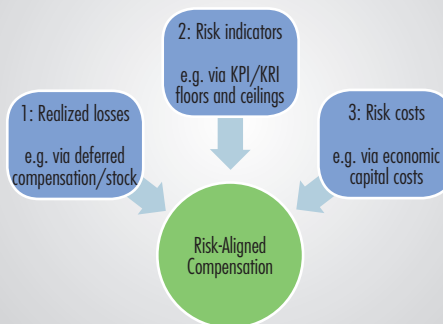


Table 1

Factoring Risk Costs into Net-income-driven Compensation — The Simple Approach

| | | Higher Profit → | | | | | | | | | |
|--------------|--------------------|-------------------|------|-------|-------|-------|-------|-------|-------|-------|------|
| | | Net Income (\$MM) | | | | | | | | | |
| | | < 0 MM | 0 MM | 10 MM | 20 MM | 30 MM | 40 MM | 50 MM | 60 MM | 70 MM | |
| Lower Risk ↑ | Risk Level (\$ EC) | < 200 MM | 0% | 0% | 17% | 34% | 51% | 69% | 86% | 103% | 120% |
| | | 200 MM | 0% | 0% | 17% | 34% | 51% | 69% | 86% | 103% | 120% |
| | | 225 MM | 0% | 0% | 15% | 30% | 46% | 61% | 76% | 91% | 107% |
| | | 250 MM | 0% | 0% | 14% | 27% | 41% | 55% | 69% | 82% | 96% |
| | | 275 MM | 0% | 0% | 12% | 25% | 37% | 50% | 62% | 75% | 87% |
| | | 300 MM | 0% | 0% | 11% | 23% | 34% | 46% | 57% | 69% | 80% |
| | | 325 MM | 0% | 0% | 11% | 21% | 32% | 42% | 53% | 63% | 74% |
| | | 350 MM | 0% | 0% | 10% | 20% | 29% | 39% | 49% | 59% | 69% |
| | | 375 MM | 0% | 0% | 9% | 18% | 27% | 37% | 46% | 55% | 64% |
| | | 400 MM | 0% | 0% | 9% | 17% | 26% | 34% | 43% | 51% | 60% |
| | | > 400 MM | 0% | 0% | 9% | 17% | 26% | 34% | 43% | 51% | 60% |

*Percents represent percent of a hypothetical target bonus.

Lines of Attack on Compensation

In an ideal world, banks would simply tie compensation to the absolute economic cost of charge-offs associated with each lender. However, in most lending businesses, incorporating current charge-offs is impractical because of the long, unpredictable time lag between origination and loss. Compensation would end up being driven by decisions made years ago and by the general economic climate, rather than by the lender's individual performance in terms of risk selection.

This is also the reason why deferred pay, subject to clawback, and restricted stock mechanisms can't be the only line of attack on compensation or serve as the central solution to mending lender pay. Consider the long gap between the last commercial real estate crisis in the U.S., in the 1990s, and the one today. In addition, lenders are not CEOs: Their pay incentives will work best when linked to the risks the lender can control rather than to the fortunes of the firm as a whole.

The second of the three key lines of attack (Figure 1) for improving the risk alignment of banker compensation is the inclusion of risk indicators in the scorecards often used to determine compensation. For instance, score cards can be made more sensitive to leading credit risk indicators, such as floors or ceilings in the quality of the underwriting process (for example, documentation standards or unexpectedly high early impairment rates). However, credit key risk indicators (KRIs) and leading loss indicators really offer ways to penalize lenders through reducing or knocking out bonuses if lending procedures fail to meet a basic quality standard. They are not the best way to quantify an

appropriate incentive in the first place.

The third line of attack must therefore be more direct and forward-looking. The bank must build a bottom-up quantitative approach that takes the economic cost of risk into account when calculating (or allocating) bonus or incentive payments. This can then be further adjusted in line with leading risk indicators and management's judgment.¹

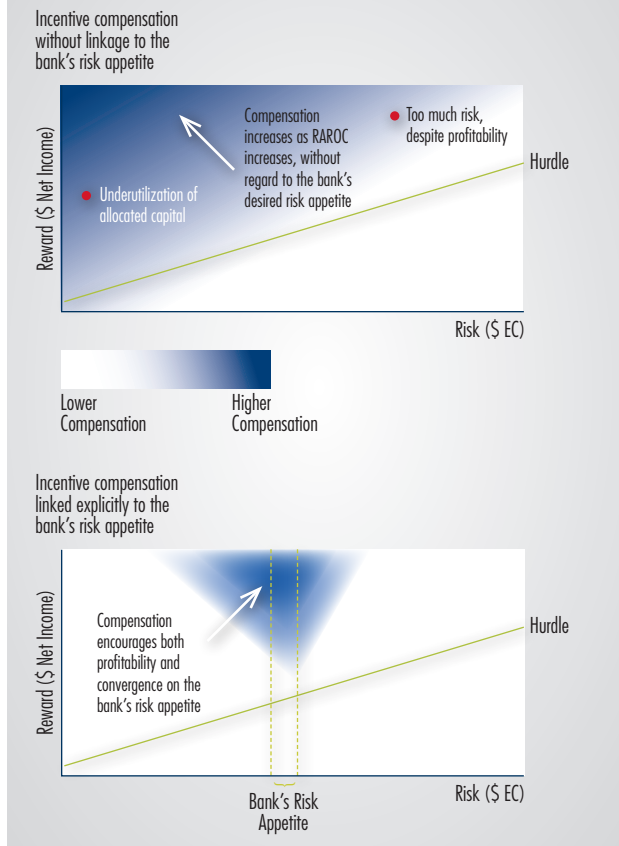
The building blocks of such a system are already in place at many banks with regard to credit risk. First, the bank needs to use its credit-rating system to estimate long-term average loss rates based on long-term loan-level risk factors such as borrower probability of default and loss given default (for example, drawn from a best-practice dual-rating system).

Second, the bank must apply a best-practice economic capital model to estimate the amount of tail risk building up in a portfolio. For example, lenders might be creating tail risk by underwriting individual loans that are inherently volatile or by allowing lenders to accumulate credit concentrations (that is, lending too much to the same names or credit segment).

It's straightforward to use economic capital model results to generate a simple matrix that will help managers adjust lender compensation as a function of risk and reward. For

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Figure 2



example, Table 1 varies the percentage of a target bonus in line with the balance between a given bank reward (such as net income or, even better, net income that has been adjusted

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for expected losses and economic capital costs) and risk (for example, expressed as economic capital). Using economic capital has the added potential for capturing bondholder (and taxpayer) concerns about bank solvency in a way that restricted stock does not.

However, this simple matrix is far from the full answer to risk-adjusted compensation. The reason is illustrated in Figure 2, which contrasts this system (based on risk costs) with one that also takes the bank's risk appetite into account. In each figure, the intensity of the blue-shaded areas reflects the size of any bonus.

In the upper figure, the lender is incentivized to optimize the relationship between net income and risk, so long as

Box 1

Caveats for Table 2

THE APPROACH IN Table 2 is surrounded by all the usual caveats for SVA-based approaches. In particular, the SVA metric is useful in that it takes account of business growth, but bad in that it can make high-growth businesses look more attractive than they really are.

- The relationship between the amount of SVA and the dollar bonus earned can be absolute (that is, the lender earns a given proportion of every SVA dollar) or, more likely, directional, depending on the calibration of the system.
- The fierceness with which the bonus is calibrated to capture the bank's risk appetite is a matter for management's judgment. The decision will depend on the importance attached to the risk appetite and on the robustness of the other mechanisms (for example, risk limits) used to enforce it. ❖

the lender's deals make a risk-adjusted return that beats the bank's hurdle rate of return (diagonal line). Unfortunately, this means that rewards can be high even when lenders do not make use of all the capital allocated to them or when lenders take on far too much risk—as the red dots indicate.

The lower figure shows the results of a more desirable system that is sensitive to the bank's risk appetite, expressed in terms of economic capital and allocated down to the level of the lending unit. In this figure, the lender gains a high bonus by making good returns while also sticking to a specific economic capital target (allocated risk appetite).

As the shading indicates, the risk appetite is enforced using "soft" economic capital limits that taper the bonus off as the lending unit exceeds its allocated economic capital. Lenders that produce a portfolio with a slightly above-hurdle RAROC will earn more for this than they would have done in the simpler scheme, so long as they stay within the narrow channel of the bank's risk appetite.

Table 2 converts this improved approach into a look-up matrix that also defines bank reward in terms of a more sophisticated "shareholder value added" metric rather than the net income used in Table 1. (The inputs for the "shareholder value added" calculation are given in the figure inset and some caveats are laid out in Box 1.²)

In this matrix, the effect of the risk appetite can be seen in the green-dashed row. After this level, lenders are penalized for exceeding their tail-risk target.

In effect, the green-dashed row acts like a bonus claw-back provision, except that it's switched on when bankers offend in real time against the bank's risk appetite, rather than when they offend in terms of realized losses at some arbitrary point in the future.

Table 2

Lender SVA Compensation Tailored to Risk Appetite

$$SVA = EC^* \frac{(RAROC - growth)}{(Hurdle - growth)} - EC$$

| | | Shareholder Value Added | | | | | | | | |
|--------------------|----------|-------------------------|------|-------|--------|--------|--------|--------|--------|----------|
| | | < 0 MM | 0 MM | 50 MM | 100 MM | 150 MM | 200 MM | 250 MM | 300 MM | > 300 MM |
| Risk Level (\$ EC) | < 200 MM | 0% | 0% | 16% | 32% | 48% | 64% | 80% | 96% | 112% |
| | 200 MM | 0% | 8% | 24% | 40% | 56% | 72% | 88% | 104% | 120% |
| | 225 MM | 0% | 15% | 31% | 47% | 63% | 79% | 95% | 111% | 127% |
| | 250 MM | 0% | 23% | 39% | 55% | 71% | 87% | 103% | 119% | 135% |
| | 275 MM | 0% | 30% | 46% | 62% | 78% | 94% | 110% | 126% | 142% |
| | 300 MM | 0% | 38% | 54% | 70% | 86% | 102% | 118% | 134% | 150% |
| | 325 MM | 0% | 21% | 37% | 53% | 69% | 85% | 101% | 117% | 133% |
| | 350 MM | 0% | 5% | 21% | 37% | 53% | 69% | 85% | 101% | 117% |
| | 375 MM | 0% | 0% | 4% | 20% | 36% | 52% | 68% | 84% | 100% |
| | 400 MM | 0% | 0% | 0% | 3% | 19% | 35% | 51% | 67% | 83% |
| | > 400 MM | 0% | 0% | 0% | 0% | 2% | 18% | 34% | 50% | 66% |

Risk level target is \$300 MM EC.
Penalty for exceeding the EC target is larger than for not reaching the target.

*Percents represent percent of a hypothetical target bonus.

The rate of increase in the bonus percentages allows the bank to somewhat penalize lenders for *undershooting*—in other words, for not making full use of the risk capital allocated to them in the bank’s annual capital plans. However, a much steeper decline in the bonus acts as a more severe penalty for lenders who exceed the target risk capital.

Banks can factor the costs of various risks into such a matrix, including contingent liquidity risk. Rather than adjusting the economic capital amount, the cost of managing contingent liquidity risks is best transfer priced and included as an expense in the profitability calculation.

Stability and Transparency of Economic Capital Costs

An important implementation issue is the degree to which the bank should filter the economic capital number used to calculate risk-adjusted compensation.

A common solution is to sidestep the need for filtering by using a bottom-up calculation of stand-alone economic capital for the business unit. However, this ignores potentially large diversification benefits and concentration costs at the enterprise level.

On the other hand, allocating back a portion of diversified enterprise economic capital is also problematic.

For example, take the case of a lending unit that performs so well that it begins to build up major concentration costs for the enterprise as a whole—and prompts a major acquisition in another area of banking to create diversification benefits.

Should the unit be penalized fully for the capital costs of concentration and then, a year later, gain the full benefits of the diversification strategy (over which it had no control)?

Probably not, at least for compensation purposes. Enterprise-level economic capital numbers are often opaque

Box 2

The Fed’s Six-Step Approach to Balanced Compensation in Larger Banks

1. Identify employees who ... receive incentive compensation and whose activities may expose the organization to material risks.
2. Identify the types and time horizons of risks [from] these employees.
3. Assess the potential for [existing] performance measures [to] encourage the employees to take excessive risks
4. Include measures, such as risk adjustments or deferral periods, within the incentive compensation arrangements.
5. Communicate [the risk adjustment scheme] to the employees.
6. Monitor incentive compensation awards, payments, risks taken, and risk outcomes for these employees. ❖

Abridged from the Federal Reserve System’s Proposed Guidance on Sound Compensation Policies, October 2009, p. 12.

to business units and jump around for reasons they can’t control. It’s often better to filter the economic capital numbers

What About Banks That Lack Economic Capital Systems?

CAN BANKS THAT lack dual-rating systems and (especially) economic capital systems pursue the approach outlined in this article? Yes, but with caveats.

The advantage of using dual-rating systems is that they send a clear signal to lenders about the benefits of reducing facility risk versus reducing borrower risk. Other systems lose this granularity, even if they capture risk more or less accurately. But if the risk capital calculation is accurate, it can be applied in the way described in the article to adjust compensation for risk appetite alignment, as well as to adjust for risk capital costs.

Banks that don't have economic capital systems can use that old stand-in, capital factor tables. But there are some real problems here. The biggest is that the benchmark capital factors are likely to be drawn from benchmark analyses that are not specific to the

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bank in question. Also, static capital factors won't really capture the growth of risk over the economic cycle.

While capital factors might help adjust for risk and risk appetite observance at bonus

pool level, they are unlikely to offer the risk factor granularity necessary to reflect (and shape) the behavior of individual lenders.

Still, they may be better than not taking risk into account at all in compensation. Alternatively, smaller banks might consider a compromise: using capital factors to play devil's advocate during the compensation-setting process. That is, banks can periodically run reviews to see what would happen if they adjusted compensation using capital factor analysis along the lines of the economic-capital-based analysis described in this article. Would it make a big difference to the ranking of high-earners? What does the answer tell the bank about the directional signals it's sending through compensation?

A better solution is for smaller banks to apply a sophisticated economic capital model using the services of a third-party provider. The goal will be to generate bank-specific economic capital factors, such as a look-up table.

If the analysis is revised periodically through the economic cycle, the look-up tables should give smaller banks a reasonable approximation of the economic capital costs and risk appetite implications of lender strategies (for example, in terms of portfolio concentrations and systemic risks). These can then be used to adjust compensation directly or be translated, using an analysis of the drivers of economic capital, into look up tables of more readily understood underwriting criteria (such as product types, collateral, and FICO bands). ❖

used for business performance appraisal and incentive compensation so that they reflect a targeted, static diversification benefit for a strategic planning period. In the case of an immature business, the diversification benefit may even be based on a target benchmark rather than a bank-specific number.

The economic capital number used to calibrate the lending unit's incentive payments will then be driven (quarter by quarter) by factors within the control of the employee, such as borrower credit quality, collateral, and loan structure (for example, loan-to-value), intra-business-line portfolio concentration, and so on.

One challenge in crafting such systems is to strike the right balance between keeping the risk adjustment "real," in terms of capturing enterprise risks, and keeping it transparent and acceptable at the local level.

Making Economic Capital Relevant to Lenders

A practical issue here is how to overcome the fact that many lenders are not experts in economic capital and may not have access to the economic capital models run by central risk units.

The bank intends lenders to adjust their behavior in line with economic capital signals, but how can it make sure that lenders understand these signals and adjust their behavior, rather than view the changes in their compensation as arbitrary?

One ambitious approach would be to extend economic capital reporting to the desk of each lender in real time, allowing lenders to see their economic capital, which they can link to a likely change in their compensation.

For many banks, the more practical approach will be to translate the economic capital cost and risk appetite limit into more traditional underwriting criteria such as ratings, FICO bands, collateral types, and so on. This can be achieved through applying a series of economic capital analyses that examine how economic capital is driven up and down when traditional underwriting criteria are altered. Lenders can then be given compensation look up tables (and monthly utilization rates) based on an underwriting language they immediately understand.

However, the actual size of the bonus pool—and the compensation for the business unit leader—should be linked directly to the economic capital analysis.

Conclusion

Toward the end of a boom, banks tend to be paid less and less for the growing credit and contingent liquidity risks they assume. In most industries, being paid less for doing more would not be a recipe for wage inflation, in the absence of major efficiency gains.

Banking is different because the industry faces many challenges in factoring credible estimates of risk costs into its assessment of business and lender performance. Competition for volume and short-term returns still drives perceptions of profitability and, accordingly, compensation as well.

While some authorities in Europe are turning to rules and formulas on pay, leading U.S. regulators seem to want to lay out key compensation principles (see Box 2) and then to examine whether banks have taken into account the possible effects of compensation structures on their risk taking.

This means U.S. banks will have more latitude to craft compensation mechanisms to each different kind of business line (for example, in terms of risk time horizon and degree of tail risk) and to the seniority of employees (such as the proportion of restricted stock versus risk-adjusted cash incentives).

It's a window of opportunity that U.S. banks must now grasp and turn to their advantage. ❖



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Notes

1. Factoring risk costs into the calculation of bonuses is a work in progress across the industry. A recent IIF survey of compensation practices at 37 large banks with major wholesale banking operations found that half the firms did not yet use risk-adjusted bonus pool calculations. Less than a third of firms risk-adjust the size of the bonus pool and risk-adjust how the bonus pool is allocated. In addition, the use of unadjusted financial metrics was highest for origination and advisory businesses (as opposed to proprietary trading, etc.). However, around 67% of firms in the survey planned to increase the use of risk-adjusted metrics for determining bonuses. See Institute of International Finance (IIF), *Compensation in Financial Services: Industry Progress and the Agenda for Change*, March 2009.

2. It's important to base bonuses on some dollar-based economic profit measure (such as SVA) rather than base an incentive on whether the deals in a portfolio meet some percentage RAROC target. Otherwise, lenders might boost their portfolio RAROC by turning down business that reduces portfolio RAROC but that would still make sense for the bank (because it offers risk-adjusted returns higher than the bank's hurdle rate of return).

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