Corporate Credit Portfolio Management: Changing Skills Requirements

by Patrick F. Reidy

This article provides an overview of the credit portfolio management function, structural alternatives, the skills necessary for its effective implementation, and a final word on training and compensation. The focus is on corporate credit portfolios, as these often present the largest concentration challenges though they can be easily modified.

Modern portfolio management of bank assets has fundamentally changed the requirements for individuals using this technique: their backgrounds, their training, and their skills in using available resources. While traditional credit training remains necessary, today's portfolio manager augments this background with knowledge of early-warning systems, alternative structures to better set risk/return parameters, and more.

Traditional training focused on the individual loan. Traditional credit training focused on the analysis of a firm's management, operations, and financial structure as the basis for determining a borrower's creditworthiness; now training programs incorporate not only these techniques, but also that elusive element called a bank's *credit culture*.

In essence, a bank's credit culture was a series of written and unwritten rules about which types of customers, industries and credit profiles were acceptable. This culture ultimately dictated the structure and composition of the bank's total portfolio.

Protection measures against portfolio losses focused on loan loss reserves based on moving-average formulas. Concentration risk was to be avoided, but there were always those special customers for whom exceptions could be made. If the formulas were correct, then overall expected losses in the portfolio would be covered by reserves. But those formulas and expectations were not always so accommodative. As a result, certain concentrations would invariably lead to extraordinary, or unexpected, losses that were charged to income in the year of their incurrence.

Portfolio management looks at the impact of loans individually, collectively, and comparatively. Modern portfolio management techniques have supplemented these unwritten rules

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with portfolio analysis and policies that establish limits on exposure by country, by obligor, by industry, and so on. These limits are derived from a specific focus on the technical aspects of this asset class—a segmentation of the credit product and an analysis of the effect of combining credits into portfolios. Credit portfolios can now be evaluated on the basis of fundamental as well as quantitative portfolio analysis. (This is now being further institutionalized in terms of required capital as defined in the updated Basel Capital Accords.)

Functionally, credit is now segmented into four parts.

1. Origination and determination of the *required* level of customer commitment. The sales/relationship function in credit portfolio management is often separate from the analysis/underwriting function. This allows for an efficient use of resources for client development as well as analytical discipline and consistency. The relationship manager determines the commitment level that will maximize relationship income.

2. Fundamental analysis of the individual credit. The underwriting function in credit portfolio management is charged with the more traditional responsibility of individual credit analysis and monitoring. But this function is being driven more and more toward a specialization based on industry, so that the full benefits of analyzing alternative borrowers within an industry can be achieved. The more specialized structure enables CPM to provide key value-added analyses to relationship and product managers in complex customer support—for example, merger and acquisition analysis. It also provides for a centralized, efficient use of analytical resources.

3. Portfolio monitoring. Many more tools and information resources exist today than were available in the past for portfolio monitoring. For example:

- Institutions now set various portfolio limits to shape the structure of the desired portfolio.
- Early-warning processes to measure portfolio deterioration have become an integral part of credit risk management.
- For large corporate portfolios, Merton-based models relate information inherent in the equity markets to a firm's debt levels.
- Bond spreads and credit derivative premiums provide a forward-looking credit view from the market that can be compared with a bank's own credit view.

4. The role of credit approval authorities. The credit approval function determines the desired exposure level for the institution's books within the context of preestablished limits by obligor and industry. As a result, credit approval manages expected loss and allocates capital to desirable transactions. CPM, as separate from credit approval, optimizes the use of capital through alterations to the portfolio's profile.

In its advanced form, CPM adds the bank's credit view to its role, with the intention of improving the portfolio's relative value performance among different asset classes.

Alternative Structures for CPM

The establishment of credit portfolio management is typically an evolutionary process for each banking institution. At start-up, CPM usually takes a defensive role—eliminating concentration risk and culling underperforming relationships from the risk/return point of view. As CPM develops, optimization of the selected portfolio is added to its role, adjusting exposures to take into account the best risk/return structure. The adjustments often use the credit derivatives markets in order not to disturb the primary relationship with the customer. In its advanced form, CPM adds the bank's credit view to its role, with the intention of improving the portfolio's relative value performance among different asset classes.

The state of CPM along this developmental curve often dictates whether it is located inside the wall (subject to the possibility of receiving nonpublic information) or outside the wall (not subject to nonpublic information and freer to adjust positions).

Functions of CPM

CPM achieves two principal goals:

1. To match *required* hold levels

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with *desired* hold levels.

2. To optimize the portfolio of assets ultimately held by the bank.

To do this effectively, CPM must perform all or some of the following key functions, depending on the state of the developmental curve discussed above:

- Serve as an analytical and advisory group to the line and to the approval authorities, plus serve as an integral part of critical deal teams.
- Prepare the credit approval package and advocate the transaction to the credit approval authorities.
- Closely monitor obligor risks, returns, and concentrations.
- Evaluate, establish, and effectively use advanced modeling techniques to help determine the potential risk inherent in the portfolio and its asset correlations.
- Manage those same risks through the judicious use of loan sales and synthetic instruments such as credit default swaps and CDOs.

CPM Skills Sets

As risk management techniques in the equity, bond, and loan markets converge, credit portfolio management demands the skills sets of generalists and specialists, and a combined knowledge of both. Generalist skills typically are needed in the analysis, underwriting, and monitoring functions. Specialist skills (such as advanced mathematics and statistical modeling backgrounds) are necessary in the functions of monitoring and optimizing the portfolio. However, to function efficiently, credit portfolio management must cross-train these staffs. And at the inception of CPM, it is important for an organization to understand that these unique skill requirements are not necessarily readily available within the traditional bank structure and must be either developed internally or sourced from other disciplines.

Examples of how organizations are reaching out to other disciplines and other nonbank firms can be found readily by speaking with individuals working in today's portfolio and credit risk management functions. Traders with equity and bond experience are being sought for positions in credit and market risk. Academics who otherwise would have stayed in the university setting are being sought for trading, modeling, and analytical functions.

Specialized academic programs to prepare students for these new opportunities are being structured. For example, New York University's Math Finance program has reported graduate placements in such positions as:

- Portfolio management and research for a quantitative hedge fund.
- Risk developers, who provide the risk and pricing analytics for the front office.
- Trader and structure in a credit derivatives group.
- Fixed-income modeling.

Another indication of the convergence of risk management skills in the finance sector is the increasing interchange of knowledge and personnel between the banking, insurance, and investment banking arenas in CPM. As an example, the RMA New York City Chapter's board of directors now includes banks, investment banks, and insurance companies. Another example is the growth in the membership of the International Association of Credit Portfolio Managers (IACPM); 48 institutions are now represented from the commercial banking, insurance, and investment banking industries.

Given this environment, what skills sets does one need to be effective in credit portfolio management?

Fundamental transaction analysis. The traditional skills of financial statement, cash flow, industry, competitive, and structural analyses continue to be of key importance. It is through fundamental *analysis* that the organization establishes a rating for the obligor and the associated transac-

tion. This rating becomes the basis for an *assigned probability of default* to the deal. Fundamental analysis also serves as a critical *first-line monitoring* of the financial status of the particular asset in the portfolio.

CPM also may need to provide value-added analysis for the front office, thereby developing structured credit solutions as part of a customer proposal. The experience and communication skills to serve as effective *advocates* for the transaction also are needed once CPM is satisfied with its analysis.

Fundamental transaction analysis is, then, a bottom-up portfolio development function. It requires detailed credit analysis training and practical experience.

Monitoring of obligor risks, returns, and concentrations. A *second-line monitoring* of portfolio risks needs to take place and be independent of fundamental transaction analysis. This monitoring function combines both bottom-up and top-down techniques. It uses models and external analyses that provide alternate credit views and a check on the bank's own fundamental analysis. It uses external analyses, where available, of the obligor, its competitors, and its industry. It uses alternative market prices to extract market expectations of default. It establishes early-warning processes that may give rise to a reevaluation of the amount committed to the underlying asset or industry.

Skills sets needed in this area may include an understanding of fundamental transaction analysis, but more importantly, an understanding of data management, programming, statistical analysis, and modeling.

Managing the portfolio of credit assets. Managing the portfolio of credit assets requires that the credit approval authorities determine the amount of the credit the bank wishes to hold on its books and the allocated amount of capital. Therefore, whether in the credit approval or CPM function, detailed knowledge of regulatory and economic capital calculations is required. Often, capital allocations are aggregated to the industry level and evaluated relative to the obligor and industry concentration levels mandated by the bank's policies and the business cycle.

Managing the portfolio of credit assets also requires the ability to optimize the portfolio. Rebalancing the portfolio requires a strong knowledge of optimization models and models that price combinations of portfolios. Therefore, specialized mathematical skills are needed to evaluate, understand, and run these models; such skills also allow CPM to make recommendations for changing portfolio structure either by buying or selling assets in the secondary market or by using the synthetic markets to add or subtract exposure. Leveraging credit assets through collateralized debt obligations should require a basic knowledge of all the skills noted above, but especially a strong understanding of the mathematics underlying market pricing models that are derived using assumptions on probability of default, expected losses on default, and asset correlation.

FUNDAMENTAL TRANSACTION ANALYSIS IS A BOTTOM-UP PORTFOLIO DEVELOPMENT FUNCTION. IT REQUIRES DETAILED CREDIT ANALYSIS TRAINING AND PRACTICAL EXPERIENCE. MONITORING OF OBLIGOR RISKS, RETURNS, AND CONCENTRATIONS COMBINES BOTH BOTTOM-UP AND TOP-DOWN TECHNIQUES.

Key Issues in Training and Compensation

Management must recognize that training and compensation for CPM require a very different approach than that used for more traditional credit groups. Training and compensation must be carefully coordinated to ensure that performance and behavior are aligned with the timeline and goals established for the development of CPM. As for staffing, it is important to identify the specific positions and requirements needed to do the job.

Blending of fundamental and quantitative skills, as well as balancing trading and hold portfolios, makes ongoing training a unique challenge. Meanwhile, the products are changing so rapidly that training must be continuous, both for those executing the transactions and for members of senior

management who evaluate and approve the transactions.

Key training areas continue to include fundamental analysis skills embedded in traditional bank credit-training programs or those offered by outside organizations, such as RMA. In addition, CPM staff must understand the link between internal rating systems and default probabilities—data sources for assessing both an internal credit outlook and implied default probabilities taken from market pricing. The degree of familiarity or expertise required will depend on the particular assignment in question. As for pricing, CPM staff must be trained in both cash market and derivatives pricing for loans, and they must understand models for pricing, portfolio evaluation, and CDO (collateralized debt obligation) tranche evaluation.

For fundamental analysis, the Bank of Tokyo-Mitsubishi Trust Company has developed an internal training program using external licensed materials. All of our analysts have also attended a CPM training program to provide them with an overview of these techniques and how they apply to individual company analysis as well as portfolio construction. Finally, each analyst also is updated as necessary on new product development related to his or her assigned portfolios. Quantitative portfolio analysis functions are handled on a joint basis between the bank's Credit Division for the Americas, its Credit Risk Management Group, and the Portfolio Management Group.

The variety of necessary backgrounds and experiences means that compensation programs for CPM functions are significantly different from those of a more traditional credit evaluation and approval function. Much of this is related to the initial shortage of individuals with the needed skills combinations. Traditional job descriptions used in compensation surveys have not always meshed well with these new positions. As time passes, however, these initial challenges are being overcome through more cross-training and a greater understanding of the multiple skill levels necessary to run CPM activities efficiently.

Summary

Credit portfolio management differs from traditional credit functions in that it allows for adjustment and optimization of portfolios using a variety of loan trading and derivatives techniques. Credit management has now been segmented into complementary, but unique functions, requiring advanced skills specific to certain positions within credit portfolio management, as well as deep cross-disciplinary skills for managing these functions. Training and compensation must be carefully coordinated to ensure that performance and behavior are aligned with the timeline and goals established for the development of CPM. ❐

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