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CREDIT PORTFOLIO MANAGEMENT

CHARLES W. SMITHSON

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To Nathan and Matthew

Preface

Like its sister book, *Managing Financial Risk* (which deals with market risk), this book evolved from a set of lecture notes. (My colleagues at Rutter Associates and I have been teaching classes on credit portfolio management to bankers and regulators for almost four years now.) When lecture notes get mature enough that they start curling up on the edges, the instructor is faced with a choice—either throw them out or turn them into a book. I chose the latter.

The good news about writing a book on credit portfolio management is that it is topical—credit risk is the area that has attracted the most attention recently. The bad news is that the book will get out of date quickly. In the credit market, tools, techniques, and practices are changing rapidly and will continue to change for several years to come. We will try our best to keep the book current by providing updates on our website. Go to www.rutterassociates.com and click on the *Credit Portfolio Management* book icon.

A number of people have contributed to this book. In particular, I want to acknowledge my colleagues at Rutter Associates—Paul Song and Mattia Filiaci. Without them, this book would never have been completed.

This book benefited greatly from my involvement with the newly formed International Association of Credit Portfolio Managers (IACPM). I learned a lot from conversations with the founding board members of that organization: Stuart Brannan (Bank of Montreal); John Coffey (JP Morgan Chase); Gene Guill (Deutsche Bank); Hetty Harlan (Bank of America); Loretta Hennessey (CIBC); Charles Hyle (Barclays Capital); Paige Kurtz (Bank One); Ed Kyritz (UBS); Robin Lenna (at Citibank at the time, now at FleetBoston Financial); and Allan Yarish (at Royal Bank of Canada at the time, now at Société Genérale).

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A special thank-you is due to Beverly Foster, the editor of the *RMA Journal*, who convinced me to write a series of articles for her journal. That series formed the first draft of many of the chapters in this book and was the nudge that overcame my inertia about putting pen to paper.

Finally, as always, my biggest debt is to my wife, Cindy.

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Contents

CHAPTER 1

The Revolution in Credit—Capital Is the Key

THE CREDIT FUNCTION IS CHANGING

The credit function is undergoing critical review at all financial institutions, and many institutions are in the process of changing the way in which the portfolio of credit assets is managed. Visible evidence of the change is found in the rapid growth in secondary loan trading, credit derivatives, and loan securitization (and we discuss these in Chapters 5, 6, and 7). Less obvious—but far more important—is the fact that banks are abandoning the traditional transaction-by-transaction "originate-and-hold" approach, in favor of the "portfolio approach" of an investor.

Banks Are Facing Higher Risks

The portfolios of loans and other credit assets held by banks have become increasingly more concentrated in less creditworthy obligors. Two forces have combined to lead to this concentration. First, the disintermediation of the banks that began in the 1970s and continues today has meant that investment grade firms are much less likely to borrow from banks. Second, as we see in an upcoming section of this chapter, the regulatory rules incent banks to extend credit to lower-credit-quality obligors.

The first years of the twenty-first century highlighted the risk—2001 and 2002 saw defaults reaching levels not experienced since the early 1990s. Standard & Poor's reported that, in the first quarter of 2002, a record 95 companies defaulted on \$38.4 billion of rated debt; and this record-setting pace continued in the second quarter of 2002 with 60 companies defaulting on \$52.6 billion of rated debt. Indeed, in the one-year period between the start of the third quarter of 2001 and the end of the second quarter of 2002, 10.7% of speculative-grade issuers defaulted, the highest percentage of defaults since the second quarter of 1992, when the default rate reached 12.5%.

2000 SURVEY
OF CREDIT PORTFOLIO MANAGEMENT ATTITUDES AND PRACTICES

At the end of 2000, Rutter Associates, in cooperation with *Credit* magazine surveyed loan originators and credit portfolio managers at financial institutions. (Also surveyed were the providers of data, software, and services.) We distributed a questionnaire to 35 firms that originate loans and a different questionnaire to 39 firms that invest in loans. Note that some of the originator and investor firms were the same (i.e., we sent some banks both types of questionnaires). However, in such cases, the questionnaires were directed to different parts of the bank. That is, we sent an originator questionnaire to a specific individual in the origination area and the investor/portfolio manager questionnaire to a specific individual in the loan portfolio area. The following table summarizes the responses.

	Firms Receiving at Least One Questionnaire	Firms from Which at Least One Questionnaire Was Received
Originators		
U.S.	13	4
Europe	22	10
Total	35	14
Investors/Loan Portfolio Managers		
U.S.	24	9
Europe	15	8
Banks	11	11
Hedge Funds & Prime Rate Funds	18	4
Insurance Companies	8	1
Total	39	17

Banks Are Earning Lower Returns

Banks have found it to be increasingly difficult to earn an economic return on credit extensions, particularly those to investment grade obligors. In the 2000 Survey of Credit Portfolio Management Attitudes and Practices, we asked the originators of loans: "What is the bank's perception regarding large corporate and middle market loans?"

- Thirty-three percent responded that "Loans do not add shareholder value by themselves; they are used as a way of establishing or maintaining a relationship with the client; but the loan product must be priced to produce a positive NPV."
- Twenty-nine percent responded that "Loans do not add shareholder value by themselves; they are used as a way of establishing or maintaining a relationship with the client; and the loan product can be priced as a 'loss leader.' "
- Only twenty-four percent responded that "Loans generate sufficient profit that they add shareholder value."

Digging a little deeper, in the 2000 Survey, we also asked the originators of loans about the average ROE for term loans to middle market growth companies and for revolving and backup facilities.

- For originators headquartered in North America, the ROE for term loans to middle market growth companies averaged to 12% and that for revolving and backup facilities averaged to 7.5%.
- For originators headquartered in Europe or Asia, the ROE for term loans to middle market growth companies averaged to 16.5% and that for revolving and backup facilities averaged to 9.4%.

Banks Are Adopting a Portfolio Approach

At the beginning of this section, we asserted that banks are abandoning the traditional, transaction-by-transaction originate-and-hold approach in favor of the portfolio approach of an investor.

Exhibit 1.1 provides some of the implications of a change from a traditional credit function to a portfolio-based approach.

EXHIBIT 1.1 Changes in the Approach to Credit

	Traditional Credit Function	Portfolio-Based Approach
Investment strategy	*Originate and Hold*	*Underwrite and Distribute*
Ownership of the credit asset (decision rights)	Business Unit	Portfolio Mgmt. or Business Unit/Portfolio Mgmt.
Basis for compensation for loan origination	Volume	Risk-Adjusted Performance
Pricing	Grid	Risk Contribution

The firms that responded to the 2000 Survey of Credit Portfolio Management Attitudes and Practices indicated overwhelmingly that they were in the process of moving toward a portfolio approach to the management of their loans.

- Ninety percent of the respondents (originators of loans and investors in loans) indicated that they currently or plan to mark loans to market (or model).
- Ninety-five percent of the investors indicated that they have a credit portfolio management function in their organization.

And the respondents to the 2000 survey also indicated that they were moving away from "originating and holding" toward "underwriting and distributing": We asked the loan originators about the bank's hold levels for noninvestment grade loans that the bank originates. The respondents to this survey indicated that the maximum hold level was less than 10% and the target hold level was less than 7%.

Drilling down, we were interested in the goals of the credit portfolio management activities. As summarized in the following table, both banks and institutional investors in loans ranked increasing shareholder value as the most important goal. However, the rankings of other goals differed between banks and institutional investors.

What are the goals of the Credit Portfolio activities in your firm? Rank the following measures by importance to your institution. (Use 1 to denote the most important and 5 to denote the least important.)

	Reducing Regulatory Capital	**Reducing Economic Capital**	**Reducing Size of Balance Sheet**	**Diversification**	**Economic or Shareholder Value Added**
Banks	3.4	2.3	4.1	2.9	2.0
Institutional investors	4.5	3.5	4.0	1.8	1.3

When asked to characterize the style of the management of their loan portfolio, 79% of the respondents indicated that they were "defensive" managers, rather than "offensive" managers.

We also asked respondents to characterize the style of the management of their loan portfolios in the 2002 Survey. In 2002, 76% of the respondents still characterized themselves as "defensive" managers.

2002 SURVEY OF CREDIT PORTFOLIO MANAGEMENT PRACTICES

In March 2002, Rutter Associates, in cooperation with the International Association of Credit Portfolio Managers (IACPM), the International Swaps and Derivatives Association (ISDA), and the Risk Management Association (RMA), surveyed the state of credit portfolio management practices. We distributed questionnaires to the credit portfolio management area of 71 financial institutions. We received responses from 41—a response rate of 58%. The following provides an overview of the type of institutions that responded to the survey.

2002 Survey Response Summary

	Commercial Banks	Investment Banks
North America	18	3
Europe	15	1
Asia/Australia	4	
Total	37	4

However, the 2000 Survey suggests that the respondents may not be as far along in their evolution to a portfolio-based approach as their answers to the questions about marking to market (model) about the credit portfolio management group implied. In Exhibit 1.1, we note that, in a portfolio-based approach, the economics of the loans would be owned by the credit portfolio management group or by a partnership between the credit portfolio management group and the business units. The 2000 Survey indicates not only that the line business units still exclusively own the economics of the loans in a significant percentage of the responding firms but also that there is likely some debate or misunderstanding of roles in individual banks.

	Portfolio Managers Exclusively	Portfolio Management/ Line Units Partnership	Line Units Exclusively
Responses from the originators of loans	25%	25%	44%
Responses from the investors in loans (including loan portfolio managers)	24%	48%	19%

CAPITAL IS THE KEY

Why Capital?

Ask a supervisor "Why capital?" and the answers might include:

- Since it is a measure of the owner's funds at risk, it gives incentive for good management.
- I want to make sure there is enough capital to protect uninsured depositors.
- I want there to be sufficient capital to protect the deposit insurance fund.

And the traditional view from a supervisor would be that more capital is better than less capital.

Ask the managers of a financial institution "Why capital?" and the answers are similar to those above but significantly different:

- Capital is the owner's stake in a firm and is a source of financing—albeit a relatively costly source of financing.
- Capital provides the buffer needed to absorb unanticipated losses and allow the firm to continue (i.e., it provides a safety margin).
- Capital is the scarce resource. When a financial institution maximizes profit (or maximizes shareholder value), it does so subject to a constraint. And capital is that constraint.

Relevant Measures of Capital

Broadly defined, capital is simply the residual claim on the firm's cash flows. For banks and other financial institutions, capital's role is to absorb volatility in earnings and enable the firm to conduct business with credit sensitive customers and lenders. Bankers deal with several different definitions of capital—equity (or book or cash) capital, regulatory capital, and economic capital. Let's use the stylized balance sheet in Exhibit 1.2 to think about various measures of capital.

Equity capital turns out to be remarkably hard to define in practice, because the line between pure shareholder investment and various other forms of liabilities is blurred. For our purposes a precise definition is not necessary. By equity capital we simply mean the (relatively) permanent invested funds that represent the residual claim on the bank's cash flows. In Exhibit 1.2, we have restricted equity capital to shareholder's equity and retained earnings.

Regulatory capital refers to the risk-based capital requirement under