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CORPORATE LIQUIDITY

MANAGEMENT & MEASUREMENT

Corporate Liquidity:

Management and Measurement

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Preface

The subject of corporate finance has evolved rapidly over the past decade. The sweeping impact of (over)leverage, internationalization, technology, regulation and the economic environment have drastically changed the rules under which domestic and foreign companies play. While in most educational settings, such as MBA programs, the emphasis is very strongly into long-term corporate decisions - capital budgeting, capital structure and dividend policy - this understates the importance of decisions that are more short-term in orientation. While the more global corporate finance issues are crucial to the firm's success, recent events have shown that management of cash, credit, inventory, short-term borrowing and investment can be at least as important to the corporation. Furthermore, these issues are vital to firms of all sizes and in all countries.

This book addresses itself to two principal goals:

- The identification of problems in the liquidity management of a corporation. These problems range from creditworthiness and financial distress considerations to inefficiencies in managing the individual short-term corporate finance functions.

- The analysis of decisions that constitute the liquidity-related (working capital) decisions of the firm. These include the following areas: management of the firm's liquid resources: cash, short-term investments, accounts receivable and inventory; management of the firm's access to borrowing; controlling the diverse dimensions of risk; managing the information flows needed to identify performance.

Viewed in this light, the overall liquidity of a firm encompasses these strongly interconnected functions. There are also other reasons a unified treatment of this subject is important:

- An economic climate of retrenchment rather than growth has placed a greater emphasis on operational efficiency and has highlighted the need for liquidity.

- The pervasiveness of the computer (and generally increasing technical skills of management) have allowed more firms of all sizes to adopt automated information and management techniques.

- The regulatory environment has changed the impact of traditional policies, especially in the areas of cash and credit management.

- The changing nature of banking influences many of the areas of corporate liquidity. Because of risk and down-sizing, banks can no longer perform many of their traditional roles, thus their credit and non-credit product offerings and pricing have dramatically changed in just a few years.

- Finally, it is clear that policy making in current asset management is made difficult by the problem of evaluating the costs and benefits of alternative strategies. These are best evaluated by analyzing the firm's overall performance, rather than the performance of any subarea.

There are several good textbooks in this area. We believe the key differences between this text and others in the field are the following:

- A suitable mix between theoretical and practical content. Both authors have been active in teaching, research and practice in this subject and we have worked very hard to try to balance what firms really do and what corporate finance and investment theory is saying what firms should do. Both views are very important.

- Broader coverage of the evolving topics, such as EDI, innovative investment and borrowing tools, financial distress and new approaches to credit management.

- A fuller treatment of the interface between short-term and long-term financial management running throughout the text.

- An integrated and extended treatment of international finance.

The book has also been improved by the insight of three (anonymous) academic reviewers. While not all of their suggestions have been incorporated into this version, this book and its future versions have benefited from their review.

Finally, we would like to acknowledge the many people at Irwin who have worked worked hard to take this project to its completion. We are especially grateful to Mike Junior, Stephanie Britt and Mary Jo Parke.

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Chapter 1

Introduction and Overview

> *The problem is that liquidity is a matter of degree. A Treasury bill is less liquid than cash, but it is still a highly liquid security because it can be sold and turned into cash easily and almost instantaneously. Corporate bonds are less liquid than Treasury bills; trucks are less liquid than corporate bonds; specialized machinery is less liquid than trucks; and so on. The broad question is therefore not "How much cash should the firm hold?" but "How should it divide its total investment between relatively liquid and relatively illiquid assets?"*
>
> *Brealey and Myers (1991)*

This book is about how firms manage their liquid reserves. These reserves take on many forms ranging from the tangible - cash, accounts receivable and inventory - to the less tangible, such as commitments for credit. This book also addresses how the firm's liquidity should be measured. Again, this measurement has many dimensions, from the evaluation of the performance of different asset classes to the assessment of a firm's failure potential.

The material covered in this text falls under several different names; these include working capital management, short-term corporate finance and treasury management. All of these are adequate descriptions of the individual decisions; however, this book attempts to place more emphasis on the key questions of how all of these discrete components of a firm's overall liquidity fit together within the current corporate finance environment. Throughout the book the concepts will be illustrated with an analysis of actual examples of corporate practice.

This is not a book about theory, although throughout more or less formal frameworks for analysis are developed and analytical tools are presented that have been shown to have practical value. Neither is it a book about accounting. While accounting measurements play an important role in many sections of this text, the primary focus is on corporate decision making.

Briefly stated, this is a text that tries to interpret corporate liquidity issues in the modern context of the firm and the rapidly evolving technological, institutional and regulatory environment. Corporate liquidity issues are greatly influenced by a number of key factors. These factors include:

Technology: The pervasiveness of the computer has allowed for a far more complete analysis and development of the internal and external data bases, permitting a firm to make decisions based on timely and accurate information. One of the most important technological advances is **electronic data interchange (EDI)** - the evolving ability of business entities to exchange business documents (purchase orders, invoices, payment instructions etc.) in a standardized form. This innovation has had broad impact across inventory, credit and cash management.

Changes in the banking environment: The huge shifts in banking, domestically and internationally, have radically altered the corporate-banking relationship. This greatly influences corporate borrowing and also non-credit services, such as cash management, as banks cut back on non-profitable operations and generally downsize. Another aspect of this is the spillover to corporate decisions from the Federal Reserve's attempts to control bank risk, for example, in how it affects how firms can move money and which banks should be used to handle corporate funds.

Risk: This includes greater levels of firm risk, in part due to the overleveraging of the 80's and the (perhaps coincidental) economic malaise that opened the 90's. This has placed a much greater emphasis on the corporation's cash flow management and on how firms assess the creditworthiness of their debtors and their banks. It has further led to the development of many forms of credit enhancement: tools that enable a deal to be made by shifting the risk (of whatever type) onto a party more prepared to bear it.

Internationalization: The growing linkages and radical changes in the world economy influence corporate borrowing and investment and the overall business environment.

Financial innovation: The 80's produced an overwhelming variety of financial tools for investment, borrowing and risk shifting. Darwinism has pared down this population somewhat, but an incredible diversity is available to the corporate manager.

Corporate structure: During the 1980's the structure of the U.S. corporation came under fire. In particular, its traditional organization into functional areas was questioned in light of new technologies and competitive threats. The modern corporation is shifting towards organization based on processes, such as filling a customer's order, rather than specific areas such as finance or accounting.

This chapter presents an overview and some general perspectives that will subsequently be developed throughout the book. The chapter's major sections are about:

Corporate organization: This deals with how the functional areas of the firm are organized to handle the functions analyzed in this book.

The environment: This section describes the major players that influence the corporate liquidity function.

Ethics and corporate guidelines: This section is a description of some of the ethical issues that are part of short-term corporate finance.

Integrating the short-term corporate finance functions: The final section outlines some of the concepts that are used throughout the rest of this book. It introduces an important paradigm, the cash flow timeline.

1. Corporate organization

The management of corporate liquidity crosses over a number of different functional areas. This is a major reason that an integrated approach to corporate liquidity is important. The areas covered in this book include:

- **Corporate cash management**: This encompasses the ways in which corporations collect, disburse and concentrate funds.
- **Inventory management**: This describes how firms determine the amount of a given product to inventory and the timing of reordering.
- **Credit management**: This analyzes standards for granting credit, monitoring existing credits and controlling different aspects of credit risk.
- **Debt and investment management**: This includes the firm's short-term borrowing and investment decisions.

Exhibit 1 illustrates a functional treasury organization for a typical large corporation. Although individual organizations will differ, the essential treasury functions are represented in the figure.

These areas may not all be included in the typical treasury organization of a firm; some may report to another operating area, such as accounting. One or more of these functional areas may be combined, depending on many of the factors discussed below.

The emphasis of this book is on inventory, credit and corporate treasury. While the first two are, depending on the firm's size and organizational structure, often somewhat self-contained, the functions of corporate treasury function are woven into the operations of all of the other areas. This can be illustrated by examining the linkages in the treasury management function; its major areas are forecasting, funds movement, money market administration and banking system administration.

Forecasting involves coordinating and consolidating short-term projections of cash needs and surpluses from the major users and providers of cash throughout the organization. The analysis of the variance between actual results and prior estimates is also an important task for this area in order to pinpoint forecasting problems or those factors that affect the precision of the forecast. The standard analysis provided by forecasting is often viewed as a guide for the other areas of treasury management, one that assists in the daily planning of treasury management activities.

Funds movement is the nerve center of treasury management, entailing the daily cash position maintenance for the corporation, monitoring and controlling key operating bank accounts, and regulating the flow of funds to, from and within the corporation. This function interacts with the corporation's banking network as well as with the local operating units and other financial areas as appropriate. It may also be involved with international units by processing funds transfers to and from overseas points. Its activities are influenced by other needs of treasury management in many ways, for example:

- It utilizes the cash forecasts to anticipate or plan for major cash flows.
- It provides funds for or requests funds from money market administration, depending on the net liquidity requirements.
- It uses the banking network established by banking system administration and maintains the target balances for compensation and liquidity purposes.

Money market administration functions as the provider of short-term funds when needed or the investor of short-term excesses when available. In the past, this function was considered the primary and perhaps only role of corporate treasury management, especially at the central staff location. Today, of course, the entire scope of treasury management has been expanded much further. In many corporations money market activity may not be of sufficient size to require a separate staff and may be incorporated into the funds movement activity. In other companies, however, this function is very important and is a separate activity that must interact and coordinate with the daily cash position management of the firm.