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A Comparative Analysis of the Settlement Process in the Securities Industry

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A COMPARATIVE ANALYSIS OF THE SETTLEMENT PROCESS IN THE SECURITIES INDUSTRY

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ABSTRACT

This thesis will focus on the settlement process in the securities industry and the different methods and frequencies by which securities firms disburse payments to their customers.

Many brokerage firms have realized the value of technological advancements in cash management services and have invested large dollars in their systems capabilities to remain competitive. Other firms do not have the resources to invest in such systems. To stay competitive, many firms are now looking at customer service, focusing on customer payments as a marketing tool.

Historically, securities firms exploited the financial success in their customers' accounts to offset the lack of modern payment practices. Checks for sales of securities were mailed weekly at best, while dividend checks were often mailed monthly. As long as their portfolios grew, customers were willing to overlook late payments.

Soon the Federal Reserve developed measures to

control the risk associated with float in the payments system. Kiting scandals and Ivan Boesky highlighted the ethics within the securities industry. Firms, eager to increase their market share, made changes in the payments systems. Clients became aware of the time value of money.

The objective of this study was to examine various firms payments method to their clients. Specifically, this study targeted the disbursement process as a marketing tool and a competitive advantage. Has technology brought the brokerage firms a new tool to gain the competitive edge? Will the younger generation of investors, brought up in the age of electronics, look for a firm with this technology?

The hypothesis tested the theory that securities firms will need to be cognizant of payments to clients, and that technology, customer awareness and new entrants into the industry will drive firms to re-evaluate their settlement policies.

Survey results from 26 participating firms and subsequent interviews supported this hypothesis. Brokerage firms are becoming increasingly mindful of their client's awareness of settlements options. Additionally, other firms are already offering other

payment options, most notably electronic payments and interest bearing accounts, to gain a competitive advantage.

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Chapter I

INTRODUCTION

Recent events within the securities industry have highlighted questionable and illegal activities by highly respected firms. The E. F. Hutton check kiting scheme of 1985 resulted in millions of dollars in fines for illegal and intentional fraud of banks. Hutton's blatant misuse of the delay in the payment process ended with over 2,000 felony counts of intentional wire and mail fraud. The trials and convictions of Ivan Boesky and Michael Milken have brought to public attention the enormous amounts of money to be made by securities firms and their employees. Most recently, Salomon Brothers was found to be manipulating the government bond auctions, bidding for more than its allowable portion through customer accounts (Heinemann 4).

These episodes within the securities industry highlight the need for more ethical conduct and decision-making by management and the firm's employees. With millions of dollars at stake, individuals and firms often look the other way when actions of a questionable nature occur.

While traders of securities stand to gain substantial amounts of money through unethical practices, the firms themselves can realize significant gains by exploiting the payments and collection process within their cash management system. This review will explore the various means of processing payments and collecting receivables, generally referred to as cash or float management.

Cash Management

Cash management has become one of the most important developments in corporate finance in the last fifty years. Interest rate fluctuations have driven corporations to develop and maintain sophisticated cash management systems. New techniques and products have been developed to cope with the characteristics of payment and collections systems, as well as the banking structure of the United States.

To fully understand the issues surrounding cash management and float issues within the securities industry, it is important that the reader understand the purposes of cash management and its role in the corporate finance structure. Of special importance is its role in the banking structure and the payments

systems, since delivery and receipt of payments is the prime component of cash flow.

Cash management encompasses several key roles within a corporate treasury function, including:

1. Collecting cash from customers.
2. Concentrating cash in the most efficient location.
3. Disbursing cash to vendors or customers when due.
4. Investing surplus cash.
5. Borrowing to meet deficiencies.
6. Managing bank relations and activities.
7. Forecasting future cash flows,
8. Managing internal float, i.e. speed of cash flow or its time line. (The Globecon Group 2)

The development of cash management is a function of recent changes in the payments system. These changes include interest rate volatility, advanced technology, growth in transaction volume, emphasis in marketing and bank products, deregulation, mergers and acquisitions, bank risk, and the role of the Federal Reserve (15).

Float Defined

Float is defined as "the amount of funds in the process of collection represented by checks in the possession of one bank but drawn on other banks, either local or out-of-town" or the difference between the amount granted to payees but not yet charged to the payors (NCR Company 22). Ledger balances reflect all deposits posted to the customer's account. However, the true available balance is ledger balance less any float on items deposited. Because of improvements in the delivery systems, float today has been reduced to one-day, two-day, or three-day increments. As float becomes collected by the bank of deposit, it is included in the customer's "collected" balance, making it available for investment or disbursement purposes.

The flow of cash is either collected into or disbursed out of an organization. Both directional flows of funds create float. When disbursing funds for payments to customers or vendors, float is the amount of time that it takes for the payment to be charged against the corporate cash account at the organization's bank. Several factors might delay this posting, including mail time from the payor to the

payee, processing time by the payee, and check clearing time within the clearing system (National Corporate Cash Management Association 6-2).

Collection float is created when an organization cannot receive and process its payments in such an efficient manner as to receive available credit at their bank quickly. In essence, one corporation's effort to increase its disbursement float is competing directly against another corporation's efforts to process payments faster (5-2).

Evolution of Payments Systems

The evolution of the United States payments system dates itself back to colonial times when the Constitution gave Congress the power to mint coins and determine their value. The National Banking Act of 1863 established a system of national banks, with uniform currency and reserve requirements. This act was intended to tax the state banks out of existence. However, this did not occur, as state banks quit issuing bank notes and used demand deposits to raise funds. Still, there was no mechanism to regulate money supply and credit (Globecon 4).

Eventually, the Federal Reserve Act of 1913 was

enacted to provide for the foundation of our current banking system. In lieu of centralization of monetary policy, the system was comprised of twelve regional reserve banks. All national banks were required to become members and comply with reserve requirements. Each Federal Reserve bank was empowered to issue currency and conduct open market activities to expand or contract the money supply (4).

The Federal Reserve system provided the basis for the United States payments system. National check collection and settlements were established in 1915. In 1918, interdistrict settlements were introduced through leased wires and the Morse code system, marking the beginning of the wire transfer. Teletype was installed among member banks in 1937 (5).

As transaction volume grew in the early 1960's, banks began investing in automated clearing systems to facilitate the flow of checks. Local clearing houses were established in major metropolitan areas to expedite the clearing of items. Major banks offered check clearing services to smaller institutions, competing directly against the Federal Reserve Banks.

In 1969, the Federal Reserve installed a computer link between all member banks for faster money

transfers. The first automated clearing house (ACH) was formed in California in 1972 to facilitate the large volume of payments. Other heavily populated areas formed their own clearing house, leading to the National Association of Clearing Houses Association (NACHA) in 1974 (5).

The payments system now consists of settling or nonsettling networks. Settling networks provide the medium for funds movement from one bank to another to settle their net positions for the bank's own accounts, as well as customer money transfers. The Fedwire system is the primary settling network in the United States. It is a "credit transfer system", meaning that funds are sent upon the request of the depository institution that is sending the transaction. It is an electronic funds transfer (EFT) network and is the major domestic payment system. All payments received are final and irrevocable (Federal Reserve Bank of New York 9).

Nonsettling networks simply provide information used for money transfers. The Clearing House Interbank Payments System (CHIPS), established in 1969 by the major New York banks, is the second largest wholesale EFT system in number of payments, but is the largest in

dollar volume. It is a net settlement network, meaning net amounts which are due among the participants are settled at the end of each day by use of the Fed Wire system. This end of day settlement process is called same day settlement. However, prior to the use of the wire transfer system, payment was made with checks, which would not clear the issuing bank until the next day. This settlement process was referred to as next day settlements or clearing house funds. It is important to note that since next day settlements reflect payments received on one day which are still in the process of collection by the bank of deposit, float has been created.

The Role of the Federal Reserve

The Federal Reserve system is the major player in the operation of the nation's payments mechanism. Aside from the more familiar services of check collection and currency and coin production, the Federal Reserve provides a less familiar service, yet one that exceeds all other services in terms of dollar volume. Security transfers and electronic funds transfers, both wire transfers and ACH payments, accounted for over one trillion dollars in value each

day in 1990. This compares to 1970, when the total for the year was only $7.2 trillion (Federal Reserve Bank of New York 1).

The Fedwire system is used principally for the large-dollar transfer of funds and securities between depository institutions and major corporate customers. In 1988, the average wire transfer was $2.9 million in size, versus the average check of $900 (1). It is important to note that there are no restrictions on dollar size for money transfers over Fedwire. Nor are wire transfers restricted to large corporations. Any individual or small business can use the Fedwire system when the need for immediate and final payment arises.

In addition to the Fedwire system, the Federal Reserve facilitates the transfer of ownership and safekeeping of Treasury securities. This book-entry system enables ownership records to be maintained and transferred as entries on computer files at the Federal Reserve Banks. This eliminates the potential for loss or theft when securities are transferred physically. Only Treasury securities and certain government agency securities are eligible for book transfer.

The Fedwire system is a highly integrated and sophisticated system consisting of three basic

components:

Table 1

Three Basic Components of the Fedwire System

1. A high-speed communications network electronically linking all the Federal Reserve Banks and their branches;
2. A computerized processing and recordkeeping capability at each of the Federal Reserve Banks to process and account for funds and securities transfers as they occur, and
3. Local Federal Reserve District electronic networks linking depository institutions in each district to their respective bank or branch.

SOURCE: The Federal Reserve Bank of New York. "The Federal Reserve Wire Transfer Network," August (1989)

Nearly 99 percent of all securities and funds transfers initiated and processed over the Fedwire system are entered by financial institutions "on-line" (6). These "on-line" transfers are entered directly into the Fedwire system, bypassing any processing by the reserve banks. Generally, these transactions are entered through dial-up terminals, such as a personal computer with a modem connection, a leased line by the institution from the reserve bank, or a direct mainframe computer to computer link.

Currently, more than 12,000 financial institutions maintain accounts at the Federal Reserve Banks across the country. Of these, approximately 10,000 actively

use these account to facilitate electronic funds transfers (10).

As in any payments system, there is a risk factor to be considered. Within the wire transfer system, the primary risk exists when funds are transferred resulting in an overdraft in the sending institution's account at the reserve bank. Since the receiving reserve bank will give final and irrevocable credit to the receiving institution, the sending reserve bank cannot recover the shortage in the account. In effect, the branch has now assumed a creditor relationship with the sending institution. As such, the sending institution may be called upon to absorb whatever loss should the customer fail to make payment.

The magnitude of this risk is not trivial, since these intraday overdrafts total approximately $70 billion daily (18). The causes of daylight overdrafts vary, but generally relate to cash management practices of both the depository insitutions and their large corporate customers.

However, the risk is smaller than than this number would imply. In order for the Federal Reserve system to realize such a loss, the overdrawn insititution would have to fail without warning. As such, the

Federal Reserve Banks are constantly monitoring the activity and stability of any member banks who are financially unsound. In light of this risk and the alarming number of institutional failures, the Federal Reserve System is now considering charging a fee on intraday overdrafts or "loans".

Statement of Purpose

It is important for the reader to understand the definitions explained earlier in this chapter. The concepts of cash management, including its purpose and role in corporate decision making should be clearly understood in order to be built upon during this review.

As part of this understanding, an examination of corporate cash flow and its impact on management, investors, and creditors and how it has evolved to its present state of technology will assist the reader in comprehending what drives corporations to devote large sums of money to effectively manage their cash position. By analyzing the settlement process within the securities industry, the reader will be able to understand the magnitude and risk of daily cash flows within the system. Finally, the reader will need a

clear understanding of cash management practices and principles, the focus of this study within the securities industry.

This review will conclude with a comprehensive survey within the securities industry of brokerage firm's float management policies. Brokerage firms of various sizes will be solicited to answer questions regarding their management of float and payments, including any operational issues that pertain to cash management and the settlement process. This process of data collection will be fully documented to provide a basis for examination of management policies and procedures versus varying criteria.

Chapter II

LITERATURE REVIEW

Current Trends in Cash Management

Most recent studies regarding corporate cash flow have been centered on its impact on financial reporting, shareholder value, technology and risk control. Increased creditor and investor awareness have made proper disclosure of cash flows in financial statements a requirement. Shareholder value can now be equated on a per share basis. Technological advances in personal computers and treasury workstations have come of age. Risk controls within the payments system are constantly being evaluated.

Cash Flow Disclosure and Shareholder Value

In 1988 the Financial Accounting Standards Board (FASB) issued Statement no. 95, Statement of Cash Flows. The primary purpose of this statement was to provide relevant information about a corporation's ability to generate cash receipts and payments during a measurable period. These payments include disbursements to customers, creditors and vendors, as

well as dividend payments to shareholders. The FASB implies that not only creditors, but investors, use this information to evaluate:

Table 2

Uses of Statement of Cash Flows

1.	an enterprise's ability to generate future positive cash flows,
2.	an enterprise's ability to meet its obligations and to pay dividends, and its need for external financing,
3.	the reasons for differences between net income and associated cash receipts and payments, and
4.	the effects on an enterprise's financial position of both its cash and noncash investing and financing transactions during the period. (63)

SOURCE: The Journal of Accountancy. "Developing Ratios for Effective Cash Flow Statement Analysis", November (1991)

It is important to note that the FASB targets investors as well as creditors as evaluators of this statement. This highlights the increasing importance of cash flow and shareholder value analysis.

The statement of cash flows requires disclosure of sources and uses of cash from functional areas of operations, investment activities and financing. Previous emphasis had centered on investing and financing cash flows. Operational cash flow can include an assorted mix of transactions representing a

variety of different events. When reviewing the statement of cash flows, the evaluator should be aware of variations from normal operations when forecasting and analyzing cash flow, particularly when using cash ratios such as interest coverage, debt coverage, and dividend coverage (Carslaw et al 63).

The cash interest coverage ratio compliments the more traditional interest coverage ratio by detailing the number of times cash outflows for debt interest is covered by cash flow from operations. This indicates the ability of a company to meet interest payments. It will also determine the extent to which cash flows may decline before the company risks defaulting on interest payments. This is calculated by dividing cash flow from operations before interest and taxes by total interest (64).

Closely associated with interest coverage is debt or principal coverage. Financial institutions are particularly interested in this ratio as it indicates the ability to generate principal payments in addition to interest payments from operational cash flow. This ratio is calculated by dividing cash flow from operations less dividends by total debt (64).

Investors, particularly large institutions, pay

detailed attention to cash dividend coverage. This ratio evaluates the ability to meet current dividend payments from normal operating cash flow. Different approaches can be used, depending on the type of dividends to preferred or subsidiary stockholders. For common stockholders, this ratio would be calculated by dividing cash flow from operations less preferred dividends by common stock dividends (67).

Cash flow returns are now being evaluated on a per share basis, as well as an asset, debt and equity basis. These ratios contain primarily historical cash flow information. They do not provide information regarding provisions for future outlays of cash. Therefore, they must be used with caution and in conjuction with other profitability measures. Because of this, FASB prohibits the reporting of cash flow per share information in financial statements. However, it should be noted that cash flow per share is the most frequently calculated and used cash flow ratio used by financial analysts (70).

These ratios and others provide a basis for further analysis of financial statements. Individually, these ratios provide little value to the analyst. However, when evaluated as part of the analysis process in

comparison with historical data and industry norms, they provide valuable insight to the impact of cash flow on financial decision-making.

Cash flow and cash generation is now an important measurement of shareholder value when analyzing the performance of corporations. While earnings per share and growth are important components of a company's productivity, shareholder value is an equally accepted standard for performance evaluations. Shareholder value, or SVA, is defined as:

> the process of analyzing how business decisions afect the company's economic value (the net present value of expected cash flows discounted at the cost of capital (Wenner et al 52).

This is based on the theory that economic value is the correct measurement of business performance. SVA reflects not only the risk involved in operating an enterprise, but the time value of the money needed for the firm to grow (52).

Economic activity has been highlighted by the surge in takeover activity. This has influenced senior managers to target their efforts toward maintaining their corporation's economic value at levels as high as possible, proving to the shareholders that they are the

best officers to manage the company's future (52).

Cash flow plays a major role in developing the strategies necessary to maximize the shareholder's value. Incorrect applications of cash flow analysis can result in an option or strategy for future growth to be undervalued or overvalued. For example, discounted cash flow analysis doesn't directly recognize the value of new growth opportunities, thereby undervaluing the strategy. These growth options heavily weight the market's interpretation of potential economic value (Day et al 156).

Conversely, cash flows can overstate the value of the strategy in several ways. Cash flow evaluations are historical in nature, creating facts and opinions that usually dominate strategy alternatives. Past successes overshadow potential new opportunities. Cash flow also biases managers to withhold information when projecting to protect their own interests. For example, conservative estimates of cost reductions can result in overstating the value of strategic options (158).

To ensure the success of shareholder strategies, managers must consider the context of cash flows and the impact on projections. Management must also

consider the close relationship of cash outflows and inflows, i.e. "whether cash outflows contribute to a competitive advantage and to what extent cash inflows are dependent on those advantages" (160).

Technology and Personal Computers

Technological advances, particularly the introduction of personal computers, have brought treasury professionals a quick and efficient tool for decision-making. Powerful personal computers and various software applications such as spreadsheets, data base managers, word processors, and other business programs, are eminently suited for cash management.

The introduction of personal computers reshaped the cash management function during the 1980's. Treasury workstations came into existence, bringing technology and cash flow analysis into one package. Users now can communicate on-line with their bankers, obtaining balance and transaction information. So dependent had cash managers become, that a survey taken in 1988 of regional cash management association presidents indicated that 70% agreed that a cash manager could not do an acceptable job without a personal computer. Additionally, Phoenix-Hecht, a treasury consulting

firm, reported that 94% of all companies have at least one personal computer in their treasury/finance areas (Journal of Cash Management 24).

This continuing evolution will take the cash manager to the next level of informatin management during the 1990's. Improvement will come in three general areas. First, more powerful and less expensive systems with greater intelligence will make expert systems more cost effective. Internal security can now be built into programs without slowing the processing time. Cash managers will take advantage of powerful spreadsheets to run multiple "what if" scenarios. Brokerage firms will now be able to analyze interest rate risks, hedging and trading techniques quicker and more effectively (26).

The ability to store tremendous amounts of data and retrieve it quickly for analysis is the second area of improvement. By reducing storage devices to a tiny chip installed in the memory board, the cash manager will be able to store and operate far more complex programs in a smaller and faster environment. Already CD-ROMs (compact disks for read only purposes) have been introduced. Experts agree that technology will be soon moving toward CD memory-based systems for reading

and writing. This would replace today's conventional hard and floppy disk drives. One banker has predicted that by combining lower-cost satellite advances with faster data processing, satellite distribution and transmission dishes will be commonplace by the year 2000 (27).

Increased development and standardization of communication is the third area of improvement. Soon personal computers will have translators so that any program can run on any type of PC, adding flexibility and mobility within the industry. Hence, software will be more user friendly and manageable. Local area networks (LANs) will expand rapidly, allowing decentralized processing and operations, but with centralized control. Electronic mail will become standard within companies with LANs (27).

The potential advantages presented by these improvements also introduce some risks associated with advancement in technology. Most notable of these risks is security versus potential fraudulent transactions. Security advocates are promoting authentication and encryption as standard procedures for personal computer users (27).

These technological advancements will shift the

focus of the cash manager to information management. Float will become less of an issue as electronic transfers replace the traditional payment system. Information processing and effective use of it will be a key role for the cash manager. The effective cash manager will emphasize productivity and creativity.

These changes will make technology one of the most important issues affecting cash management, offering increased speed at a lower cost with less errors. Financial institutions will race to offer these new products in an effort to distinguish themselves from the others. How brokerage firms use these products to benefit their customers will distinguish them from their competitors.

Risk Control

Technological advancements within the payments system have created opportunities for fraudelent transactions that go unnoticed until such time that the corporation has no recourse (Smith 16).

For example, expanded access to automated clearing house payments (direct charges and deposits to bank accounts) allows almost anybody to process information with the correct bank account number and routing

information. Additionally, laser printers and desktop publishers have made duplication of corporate checks easier (Taylor 34).

If not detected in a timely manner, these erroneous transactions may not be detected in time to comply with the Uniform Commercial Code's rules for dealing with return items. Unless the corporation reconciles these accounts daily, these items will go unnoticed until the reconciliation is finalized (35).

Financial institutions are now offering positive pay services to commercial customers. These services include maintaining an outstanding list of checks issued by the corporate customer on the bank's data processing system. As items are presented for payment, these items are matched against the outstanding file. Items not found are returned and not paid. This service serves to protect not only the customer against fraudelent checks being presented for payment, but also the institution from incurring legal fees for determining liability.

Security and fraud risk requires early detection and procedures and policies to restrict access to these types of vital systems. Attempts to access these restricted systems should be recognized immediately.

Another risk associated with cash management services involves regulatory involvement. Issues involving liability have caused the Uniform Commercial Code to invoke new rules such as UCC 4A, the model that deals with electronic payments. This regulation invokes serious complications upon responsible parties when losses occur through negligence (Smith 18).

Payment or settlment risk is inherent in our payment system. Because the system is geared toward delayed settlement, the risk that one or more of the delivery providers will become insolvent is created with each transaction. This risk is particularly applicable to automated clearing house (ACH) transactions. By design ACH transactions are originated in advance of settlement date. Therefore, risk is introduced to financial institutions from corporations failing to settle their ACH activity and to companies when their financial institution fails. As in checks presented for payment, there is also the risk of returned items for insufficient funds when the debit arrives at the receiving institution (18).

Subsequent review of the clearing and settlement process within the securities industry will focus on risk factors involving various payment mechanicisms.

Increased market risk on securities transactions will highlight the need for change in ths process.

Securities Terminology

This review will now focus on cash management issues and the factors that impact decicions regarding cash management within the securities industry. Because of heavy regulation and peculiarities regarding the payment and disbursement process, it is important that several key terms, phrases and regulations be identified and defined. This will enable the reader to fully understand the impact of payment and disbursement float on the settlement process.

While the principle behind the purchase and delivery of products is the same as other industries, the terminology is quite different within the securities industry when referring to the settlement process. This process involves payments to and from their customers and other broker dealers. While the majority of the disbursements and collections are to customers, it is the transactions with other brokers that represent the majority of the dollar volume.

Trade vs. Settlement Date

There are two key dates within the time line to

consider when referring to securities transactions, trade date and settlement date. Trade date is the date the order is executed or entered. Trades may be entered contingent upon certain prices and movements in the market. The trade will be executed only when these contingencies have been met.

Settlement date is the day when payment is due and may occur in three different ways. Regular way settlement is delivery on the fifth business day after the trade date. The buyer also has the option of purchasing a security and settling on a cash, or same day basis. The third type of settlement is called seller's option. This process entitles the seller the right to deliver the security to the buyer on the date the seller's option expires or before, provided one day's written notification is given to the buyer. Seller's option deliveries are normally not made before six business days following the transactions or after sixty days. Transactions involving government securities are an exception. Regular way settlement for governments means payment and delivery are due the next business day instead of five (Downes et al 371).

If an order is placed to purchase a security, then

the buyer is granted under Regulation T of the Federal Reserve Board an additional two days grace period to deliver the payment to the broker. Should payment not be received during this period, the firm has the right to sell, or liquidate the security they purchased for the customer. Any loss resulting from this "sell out" is charged against the customer's account. However, should a profit be realized, the firm has the right to recognize the gain (334).

If an order was placed to sell a security, then the firm must initiate payment proceedings to the customer on settlement date. This payment is most usually in the form of a check disbursed by the firm. However, many firms offer money market investment accounts to their customers so that this money will "sweep" into their accounts and start earning interest on settlement date. Conversely, these money market accounts will effect payment on settlement date should the order be a buy. Additional forms of payment to customers may be in the form of wire transfer, which is a same day settlement, or direct deposit (ACH) to the customer's bank account, which is next day settlement. Firm to firm payments are rarely paid in check form, but rather are paid directly to each other or through clearing

houses by either wire transfer or ACH.

The Customer Billing Cycle

The normal five day settlement period emphasizes the importance of receiving the customer's payment by settlement date. The trade confirmations, which also serves as the bill of sale or invoice, must be mailed, received by the customer, and returned with payment within this five day period. Because the buying and selling firms are obligated to deliver payment upon receipt of the security on settlement date as well, it is important that the customer remittance be received in and credited to the customer's account as quickly as possible.

The timing of this collection cycle is impacted by the sophistication employed by the firm's cash management systems. First and foremost is a timely preparation and mailing of the customer's confirmation. This confirmation is formal notice of the trade detail given to the customer (Downes et al 72). It also acts as the remittance advice if the customer does not have a money market investment account to charge on settlement date.

The time that elapses between the mailing of the

confirmation and receipt of payment by the firm is called mail float. This time usually ranges from 0-5 days depending on mail delivery. Many firms will generate these confirmations from regional sights to reduce the mail delivery time to their customers. This expedites the return payment by getting the confirmation to the customer faster. This is dependent on the size and resources of the firm, consequently, many of the smaller firms must mail confirmations from a central location (NCCMA 5-2).

Consideration must be given to the quickest way to receive and process these payments. Once received, the collection process enters the second stage of the cycle or processing float. This represents the time it takes the payee to process the checks and make the deposit. This process can range from 0-3 days, depending primarily on where the checks are received (5-2).

One primary tool of collections is the lockbox service offered by most major banks. A lockbox is where a third-party, usually a bank, will receive, process and deposit the items. The other alternative is a company processing center, where the company does its own processing and depositing. Most firms use the lockbox system for three reasons. First, it

facilitates receipt of the payment from the customer prior to the firm's payment to the selling broker. Second, payments are usually high dollar amounts which would be delayed by processing at a company center. Since lockboxes are priced on a per item basis, high dollar/low volume items will justify the cost of operating a lockbox, whereas low dollar and high volume checks are hard to cost justify. Third, lockbox locations can be spread out on a regional basis, negating the mail delivery time from the customer to the bank (5-3).

The last part of the billing cycle is recognizing the availability of funds deposited. This is the time from the deposit of the checks until the firm's account is credited with collected funds. The primary factor that influences availability is the depositing bank's availability schedule. This schedule is based on the bank's ability to process and send checks into the clearing system for collection (5-3).

This collection process is more important to the securities industry than most other industries. When customer purchases are not always from the firm's inventory, the firm must buy the security from another dealer. This obligates the buying firm to receive the

security and effect payment in five days. Most retail merchants carry their goods in inventory, having already paid for them with cash or debt transactions. Should a firm not receive payment prior to settlement date, the firm in effect must borrow the cash to settle the trade with the selling broker.

The optimal collection system should minimize the costs associated with float and processing. Float can be minimized by reducing mail float through increasing or improving the number of collection and processing points. Processing time is decreased by establishing procedures to deposit checks as soon as possible. Availability time is reduced by locating collection banks near the customer's banks (5-3).

Fail to Deliver/Receive

Another key term within the securities industry is a failed transaction, either a fail to receive or a fail to deliver. This term describes the delivery of stocks or bonds purchased from other broker dealers. When a broker has a customer who purchases an investment not held in the firm's inventory, the broker must contact other firms who have customers selling the same security. This second transaction between brokers

has the same trade and settlement date as the original transaction. However, payment between brokers is due upon the buyer acknowledging receipt of the security, regardless of trade date (Downes et al 123).

A fail to deliver occurs when the broker on the sell side of the transaction is unable to 'deliver' the security to the buyer. A failed delivery is classified as an asset or receivable since they are due payment upon delivery.

The other side to a fail to deliver is a fail to receive. A fail to receive is where the broker on the buy side of the transactions has not received delivery of the securities from the broker selling the securities. A fail to receive transaction creates a liability on the firm's balance sheet, since they have inititiated a purchase, but have not paid for it. As long as the fail to receive exists, the selling broker will not receive payment (123).

Failure to deliver a security to the purchasing firm creates float, since the buying firm has received customer payment, but has not paid for the security because of lack of delivery. A fail to deliver is usually the result of a broker not receiving delivery of the security from its selling customer. As long as

the failure to deliver exists, the seller will not receive payment. This is negative float. Conversely, when the firm pays for a "good" delivery and the customer exercises his two-day grace period for payment, the firm recognizes positive float. (This is an oxymoron within cash management, where float used to the firm's advantage is referred to as negative.)

Free Customer Credits

When customers pay for their trades prior to settlement date, or when they leave unapplied or unused cash in their trading accounts, this creates what is referred to as free credit balances. This money represents a liability to the firm or a credit on their balance sheet.

These credit balances do not represent float once collected and available. However, they do have a major impact on the firm's cash resources and segregation requirements. This free cash can be used in the firm's daily cash position, either to invest or reduce borrowings. Therefore, it is to the firm's advantage to collect payments as quickly as possible to increase their cash positions until pending trades are settled.

Securities firms are required by Rule 15c3-2 of the

New York Stock Exchange to notify customers with free credit balances in their statement of account of such balances. The period should not exceed three months. The statement should include written notification that these funds are not segregated and may be used in the operation of the firm's business. It also notifies the customers that these funds are payable upon demand by the customer (The New York Stock Exchange 401)

The Importance of Liquidity

A firm's liquidity position is another key factor when considering cash management practices. Liquidity is defined as the ability to convert assets into cash to pay maturing obligations promptly. Liquidity also means that the firm realizes trade discounts and benefits from good credit ratings. Additionally, it allows changes in cash management strategy when market conditions fluctuate (Downes et al 213).

An increasingly important aspect of liquidity is its impact on the creditworthiness of the firm. In difficult times, if liquid, a firm can deal with cashflow problems. If not, it is left with few options (Moodys 12).

Two factors adversely affect the traditional view

of a security firm's liquidity. With the bulk of their assets in cash or cash equivalents, resale agreements, trade receivables (margin loans), and inventory, securities firms would normally be viewed as highly liquid. However, the recent trend toward dealer versus agency transactions has created large security positions on the firms books that do not turnover quickly. A dealer transaction occurs when a firm buys securities for its own account and assumes the market risk. By holding these securities until subsequent sale, the firm may recognize a loss should the market move against the inventory. Whereas, an agency transaction is buying and selling for the account and risk of the customer (Downes et al 89).

The second factor that has hindered liquidity for some firms is diversification into merchant banking activities and security swaps (Moodys 12). Merchant banking activities include investment banking, merger and acquisition negotiations, portfolio management for clients, and participation in commercial ventures. Swaps are exchanges of current portfolios for other bonds or stocks with different maturities or quality. These swaps usually are a result of changes in investment strategy and are facilitated by the tax

advantages associated with the loss incurred (Downes et al 415).

The traditional securities firm did not rely on unsecured credit to meet cash demands because it was not available. Firms had quality assets which secured their lines of credit. However, subsequent changes in lending policies at major financial institutions, extended unsecured lines of credit to securities firms. Additionally, the influx of commercial paper financing provided further cash inflows. This added cash availability destroyed the automatic liquidity discipline maintained when unsecured credit was not available (Moody's 12).

The effect of liquidity will have a major impact on treasury management in future years. Banks will be reluctant to provide lines of credit to firms, regardless of collateral, if the firm's creditworthiness is questionable (12).

Furthermore, banks have become less inclined to involve themselves with broker loans. Broker loans are loans made to securities firms by banks. These extensions of credit by banks are secured by the stocks and bonds that the firm's customers have purchased on margin. Sudden drops in market value of securities, as

experienced in October 1987, reduce the value of the collateral securing these lines of credit. These securities are rehypothecated by the customer to the firm, allowing them to be used as collateral for loans (Downes et al 45).

Broker loans are generally low yielding assets, and banks are starting to steer away from them as net interest margins shrink. There is also the risk that the securities industry as a whole will extend margin credit beyond the bank's need for these type loans (Moody's 13).

Bank lines of credit and cash management services are important tools in managing a firm's cash position. Maintaining good relations with commercial lenders and making prudent use of available financing are sound cash management practices. Demonstrating to the firm's creditors the ability to effectively manage the liquidity of the firm and its cash availability will provide for future bank lines of credit and services when needed.

Segregation

The Securities and Exchange Commission (SEC) administers statutes designed to promote full disclosure and protect the investing public against malpractice in the securities markets. One of these statutes is rule number 15c3-3, Customer Protection - Reserves and Custody of Securities. This rule addresses the segregation of fully paid securities held in firm name and cash (New York Stock Exchange 501).

Securities held in firm name, also referred to as street name, are securities held for the customer in the name or custody of the broker. This facilitates the book transfer of securities instead of having to deliver physical certificates (Downes et al 408).

Segregation of cash is required when customer credits exceed customer debits on the firm's balance sheet. A net credit balance would represent a net liability on behalf of the firm to its customers. SEC rules state that the firm shall set aside money or qualified government securities in a special account designated for the benefit of customers to cover the excess credit position. This segregated cash cannot be decreased until the net position is recalculated the following week. Should the net credit position

increase, additional cash would have to be segregated (Downes et al 366).

Debit balances used to offset these credit balances consist primarily of margin loans to customer and fails to deliver. Margin loans are deposits of securities and cash a customer maintains with the broker when borrowing from the broker to purchase securities. Fail to delivers represents receivables on the firm's books, since these are customer securities not delivered as instructed and payment has not been received (220).

The impact of this rule on cash management decisions is extensive. Several favorable factors would adversely affect a firm's net position. A large amount of outstanding customer checks would generate favorable float, yet also increase credit balances. As in other industries, securities firms recognize float on their outstanding checks until presented for payment. This represents a large book overdraft or cash credit balance on the firm's books. As checks clear, funds are transferred to this disbursement account. This combination of mail, processing, and disbursement float is a major component of controlling cash flow within an organization.

Free customer credit balances can be used in the

normal operations of a security firm. However, these same credit balances increase the amount required for segregation. Cash segregated for a week represents funds unavailable for daily cash positions. A firm may have to borrow against lines of credits to fund a segregated position.

Therefore, the segregation rule of the SEC mandates that treasury professionals in the security industry make prudent use of available funds and consider all sources and uses of funds when making cash decisions.

E.F. Hutton: A Case History

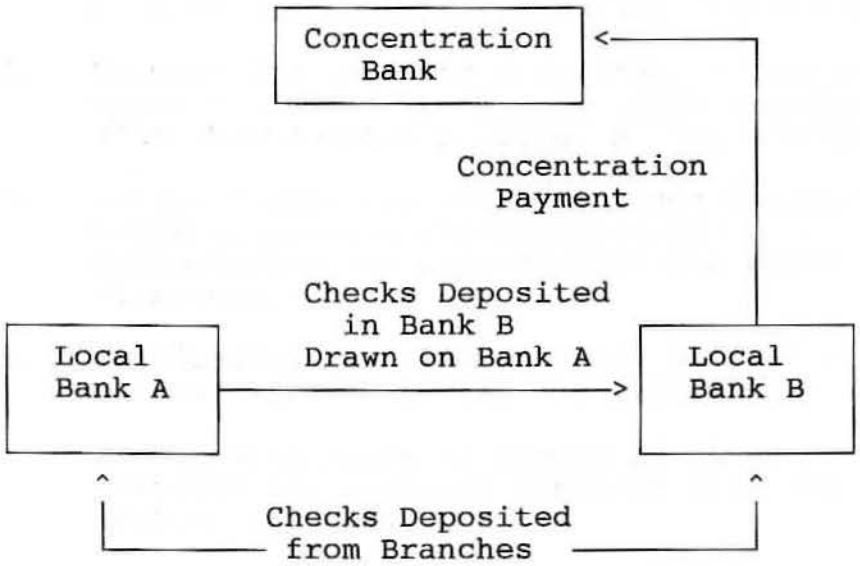
Perhaps the best example of blatant mismanagement of float within the securities industry was the E. F. Hutton scandal in May, 1985 when Hutton pleaded guilty to 2,000 felony counts of intentional mail and wire fraud and was fined $2,000,000, the maximum allowed by law. Additionally, the firm reserved $8,000,000 for restitution claims and had to repay the government $750,000 to cover the costs of the investigation. This one case, and its results, was a catalyst for defining the ground rules of cash management ethics within the brokerage industry (The Globecon Group 16).

This case centered around a massive check-kiting

scheme which artificially inflated cash balances at Hutton's banks. The thrust of the Justice Department's investigation was that these unsecured, interest-free loans were potentially dangerous to the smaller banks, representing an extreme example of float creating practices that the Federal Reserve System had criticized (17).

Check-kiting is a term used within the financial industry to describe the intentional actions of an individual or corporation to take advantage of the time element of the check collection system. Kiting involves multiple accounts at different banks. Checks are issued from one account at a distant city and deposited at another bank. While this deposited item is in the process of collection, the individual or corporation writes checks off the uncollected portion of the account. The account the initial deposit was written out of is then covered from another account in a different city, thereby creating "chain" of banks involved.

Chaining or Kiting



SOURCE: Essentials of Cash Management: A Study Guide. Exhibit from "Chapter 5: Collection Systems," by The National Corporate Cash Management Association (1985)

Institutions can prevent "kiting" by not paying checks against uncollected balances. The inquiry into E. F. Hutton was instigated by a $8,100,000 check that was returned for insufficient funds. This refusal to pay resulted in the chain being broken.

As the same time it was handing out criminal penalties, the Justice Department also restrained E. F. Hutton under civil law, 18 U.S.C. 1345, Injunctions Against Fraud" from seven specific practices:

1. Failing to disclose in writing to each financial institution all money management techniques and practices regarding concentration and intracompany transfers,

2. Drawing down amounts unrelated to customer deposits and covering subsequent overdrafts with checks drawn on other Hutton accounts,

3. Intentionally transferring funds between banks to inflate the balances and manipulating the time element for check clearings,

4. Withdrawing uncollected funds without a written agreement with the institution,

5. Withdrawing funds in excess of those received for customer deposits with the written agreements,

6. Creating float by "retarding, delaying, or obstructing" checks deposited in depository accounts, and

7. Issuing checks in identical amounts at different banks and cross depositing these checks (The Globecon Group 21).

Hutton's treasury specialists had designed an extensive banking system, including over 400 banking relationships. Because of the size of the system, Hutton used regional concentration banks as well as a central concentration bank in New York. In effect, Hutton operated its own check clearing system (23).

When customer deposits were made, branch offices telephoned deposit and availability amounts to regional

headquarters. Regional headquarters deposited checks drawn on branch banks in regional concentration accounts. The New York office used the same procedure to draw funds from the regional banks. The amounts of the checks were intended to coincide with the availability of deposits (24).

However, the actual use of the system deviated drastically from the intended plan. Line branch managers and regional vice presidents had no functional relationship with the staff who designed and oversaw the system. Additionally, the money management staff had no incentive to monitor the day-to-day performance of the system. The branch managers had control over the daily concentration procedures as well as an incentive to abuse the system. For internal reporting purposes, branch profits included interest income earned at local branch banks. Also, the branch manager's compensation included ten percent of branch profits (24)

Several questions were raised by the E. F. Hutton scandal. Most importantly, was this an example of cash management practices that were happening throughout the corporate community? Where did the Justice Department intend to go from here and what future legislation was

to be implemented? These and other important issues brought cash management issues into the boardroom of corporations for review.

Economic factors encouraged Hutton to abuse its collection system. High interest rates in the early 1980s and increasing concern over bottom line results motivated corporations to use new techniques and banks to develop new products. Treasury professionals were pushed to maximize efficiency and test the system. There had been no previous cases pointed to abusive or unethical practices. The Hutton incident was the catalyst that brought cash management issues to the attention of corporate America.

Clearance and Settlement Reform

In November 1992, the Securities and Exchange Commission challenged a task force of senior managers of securities firms to review clearance and settlement risk associated with the payments system in the securities industry. The task force was asked to review the safety of the current settlement system and propose changes necessary to achieve an improved payments method. Five factors, listed in Table 3, were found to contribute to increased risk in the settlement

process.

Table 3

Five Factors Influencing Risk Exposure

1. The ever-increasing volume of transactions,
2. The complexity of both products and transactions,
3. The increasingly international nature of transactions resulting from active global markets,
4. The speed with which transactions today take place, and
5. A rapid increase in on and off balace sheet proprietary and contra-credit credit.

The Bachmann Task Force, Report on Clearance and Settlement Reform in U.S. Securities Markets, Washington, D.C., May 1992

Completed in May 1992, the findings were presented to Richard C. Breeden, Chairman of the United States Securities and Exchange Commission in Washington, D.C. Several of the recommendations proposed by this group will significantly impact the cash management practices of brokerage firms (Bachmann Task Force 1).

The settlement process within the United States securities industry has remained basically unchanged despite drastic increases in transactional volume and

products. As global markets have implemented progressive settlement procedures and technological advancements to reduce market risk, the domestic clearing system in the United States has changed little. However, the sudden drop in the market in October 1987 highlighted the need for payment reform and risk control. E. Gerald Corrigan, President, Federal Reserve Bank of New York, in his remarks before the Money Marketeers of New York University in June 1990, concluded:

> "As I see it, one cannot help but conclude that the risks in the financial system are greater today than they were in the past, if for no other reason than the fact that the speed, value, volume and complexity of financial transactions create elements of interdependencies and linkages on a truly global scale that are different in degree, if not kind, from anything we have seen in the past." (4)

The findings of the task force were summarized in the equation "Time equals Risk". This equation recognizes that the longer a contract is unfulfilled, the greater the risk one party can default. In reviewing their proposals, the task force considered market risk as the primary factor in the settlement process. The major recommendaton of this group was to shorten the payment cycle from five to three days, or

T+5 to T+3. The National Securities Clearinghouse Corporation (NSCC), a major New York clearinghouse, projected a reduction in market risk by 58% if settlement was shortened to T+3 (16).

Market risk is incurred when a contract to perform delivery of a security is open or unfilled. Should the seller default, then the buyer incurs the risk of purchasing the security from another broker at a higher price. The longer it takes to complete the transaction, the higher the risk that an unexpected event will occur and materially affect the transaction.

The task force made ten key recommendations to reduce market risk exposure. Included within these ten recommendations are three that will materially impact cash management policies at brokerage firms. As mentioned earlier, the first and major recommendation is to shorten the settlement period from five to three days. Implementing this change will require streamlining of the payment and collection process and expedite the use of electronic payments (17).

The second recommendation is to revise the Automated Clearing House (ACH) system to settle retail trades more quickly and become more cost effective in lieu of payments by check. The ACH system is not same

day settlement, but next day. Furthermore, returned debits or credits to customer accounts take an additional day to return, and another day to inform the initiating firm. These delays will need to be eliminated to make the ACH system a more effective tool for retail payments (21).

The third recommendation to impact a firm's cash practices includes settling all transactions in same-day funds, eliminating the next day settlement, or clearinghouse funds, currently being used. This recommendation would require more advanced treasury systems that would link up with the clearing houses, to track net settlements on a same day basis. In essense, tomorrow's funding needs will shift from the future to the present (30).

The committee believes that the settlement cycle can be shortened by changing the settlement system and clearly stating rules regarding settlement practices. Retail and institutional investors will need to be educated to these changes. These proposed changes to reduce risk will necessitate more effective use of technology and productivity by brokerage firms. Firms will incur increased operational costs, which in turn will be passed on to the consumer.

Impacts on Profitability

The Hutton incident has indicated that decisions affecting the procedures and policies of treasury operations can clearly impact the profitability of a firm's earnings. Fraudulent use of cash flow procedures to benefit bottom line earnings is illegal and subject to stiff penalties. However, normal and ethical payment practices lend themselves to available cash management products which would also benefit earnings.

As previously stated, the most common form of customer payment has been a check disbursed payable to the customer. The volume of these payments makes use of a controlled disbursement point a prudent procedure. A controlled or remote disbursement account offers two distinct advantages to the organization. First, the bank is able to provide early notification of the amount of checks that will be presented for payment that day. This allows the cash manager to maintain invested funds until needed to fund clearings. Second, disbursement accounts also extend the length of time needed to clear the check, providing the organization with extended used of the money. Controlled

disbursement has been defined by the Federal Reserve as "arrangements made to delay the collection and final settlement of checks." While this procedure provides the firm with the amount of clearings prior to posting, thereby allowing for increased opportunity return, it in most cases delays the availability to the customer upon deposit (NCCMA 5-3).

Other forms of payment also provide income opportunity for firms. Fees for wire transfers and direct deposits can be established to cover transaction costs and loss of float and to encourage payment by check or full service account. A full service account is offered to eliminate these payments. It will post the transaction to an interest bearing account upon settlement. However, there are no rules within the industry regarding the timeliness of posting.

Because of the lack of standards regarding the timeliness of payments within the securities industry, firms must determine how and when payments are initiated to the customer on settlement date. How the firm elects to initiate payment on settlement date determines the availability of funds to the customer.

A good example is how often firms issue checks for dividends to customers or allow excess cash to start

earning interest. While a few firms issue checks daily, others still issue them weekly or monthly, thereby delaying payment. Other firms may also elect not to post to interest bearing accounts daily.

Cash management practices lend themselves to profit opportunities in any financial organization which incurs large volumes of payments. Lack of standards regarding the timeliness of payments would enhance the profitability of abusing the payments system.

Whether or not the treasury function should be true profit center of the organization is a controversial subject. A profit center is a segment of a business organization that is responsible for generating profit on its own (Downes et al 310).

Proponents argue that the treasury function is an important source of revenue. Opponents contend that this goes beyond the intent of treasury management whose main purpose is to protect the assets of the firm. In a survey conducted in 1986 by the National Corporate Cash Management Association, less than 15% of corporate members were structured as profit centers (NCCMA 1-8).

The performance standards for the treasury function should include three important criteria as stated in

Table 4. The implementation of this performance system should include establishing guidelines for ongoing and special activities. Measurement standards for cash managers should be established and reviewed regularly.

Table 4

Three Criteria of Performance Standards
For the Treasury Function

1.	It must reflect the firm's risk attitudes, expected rewards by the participants, orientation toward achievement, attitudes toward peer competition and attitudes toward a diversity of skills and experience.
2.	It must meet effectiveness criteria such as measurability, controllability, supportability, comparability and timeliness.
3.	It must also involve key persons such as the cash manager, his or her superiors and senior financial management (1-8).

SOURCE: Essentials of Cash Management: A Study Guide. The National Corporate Cash Management Association (1985)

Survey results from the Globecon survey indicated that 60% of the respondents measure the performance of the treasury function by the average level of cash versus target balances. Other responses indicated that return on invested cash and bank compensation versus targets, as well as ratios for sales outstanding and accounts receivable turnover (Globecon 40).

Nonquantitative measures have become increasingly important as the treasury function has developed. Overall quality of the bank relationship was cited by 90% of the respondents in the Globecon survey. This majority also listed investment strategy and risk analysis, ethics, use of technology, quality of cash forecasts, liquidity and quality of information to management as nonquantitative measurements (40).

As the securities industry prepares for the twentieth century, many firms will be forced to choose whether to expedite the customer payment process at the expense of earnings or risk losing securities revenue to other firms who have chosen to focus on commissions and fees as the true source of revenue. This loss of float created by the traditional forms of payment will compel firms to re-evaluate the performance standards of the treasury function as well as the policies and procedures regarding customer payments.

Statement of Hypothesis

Changes in the settlement and payments process will necessitate that firms not only adapt to current technology, but increase their services and products as a measure to stay abreast of the competition. No longer will firms be able to lag in payments to customers, or delay paying interest.

Clearly, the dramatic growth in securities transactional volume and globalization of market settlements emphasize the importance of proper cash management practices to reduce risk and still offer optimum customer service. As firms are regulated to collect funds faster and settle same day with clearinghouses, they in turn will be pressured by the customers to reciprocate with the disbursement process.

There are no current regulations regarding disbursement practices by securities firms. Brokers can disburse the proceeds of securities transactions daily or weekly. Their services can differ when paying dividends on securities held in firm name as well, paying not when received from the paying agent, but as their policy states, either daily, weekly, or in some cases monthly. Another difference between firms is

their full service accounts. Some firms elect not to start paying interest upon deposit, but rather wait until 2-7 days later.

This paper will research the various ways by which firms of differing sizes monitor and manage their cash positions. These varying policies will support the hypothesis that as the settlement and payments systems are reviewed and modified to reduce risk, brokerage firms will need to change their internal concentration, disbursements and credit operations to actively compete with the market. The degree to which a firm differs from its competitors regarding customer payments and collections, will clearly impact the profitability and future of many brokerage houses.

Chapter III

RESEARCH METHODOLOGY

Methods Introduction

To collect data regarding cash management practices within the securities industry, a survey was administered to firms subject to the rules and regulations of the Securities and Exchange Commission. An introduction letter and 25 questions regarding the settlement process were sent to treasury professionals within selected firms. Results from these questions should support or disprove the hypothesis of this study, that securities firms will need to review and change their settlement policies to remain competitive.

This testing is based on the assumption that all firms participated with full assurance that confidentiality will be honored to eliminate any bias that may occur if identification is required and encourage full participation. All responding firms were offered the results of the survey for participating.

Subject Selection

The total population for this survey was all firms registered with the Securities and Exchange Commission. The 1991 Annual Report of the SEC for the year ending 1990 indicates there were 8,437 broker dealers that registered with the SEC. This annual report did not publish statistical data for year end 1991, only through 1990 (SEC 105).

It is important to note that within this total population, carrying and clearing firms totaled only 947 for the same period. Carrying and clearing firms are those firms that "clear securities transactions or maintain possession or control of customers' cash and securities." This group produced 86% of the industry's total revenues in calendar year 1990 (SEC 108).

The Securities Industry Association (SIA) is the nationally recognized trade association for the securities industry. The 1992-93 Securities Industry Yearbook lists 404 member firms as of January 1, 1992. The SIA membership represents about 90 percent of the securities business in North America, and is composed of organizations which practice in all financial

markets and phases of corporate and public finance. Those firms who are members of the SIA was included in the sampling frame (SIA 17).

Any sampling of this industry must take into account the number of large firms in comparison to the industry as a whole. Appendix A indicates that within the sampling frame chosen, the top 25 firms in capital size represent 84% of the groups capital. These same 25 firms also dominate the number of employees and registered representatives.

Whether a firm was primarily an institutional or retail trader did not enter into the selection. While many of the large firms are primarily institutional traders, they still maintain a portion of retail accounts. An institutional trader is a broker who buys and sells for institutional clients such as pensions, bank, mutual funds, and insurance companies. Institutional trades are higher in volume, but lower in per unit costs, resulting in lower commissions. Institutional traders also realize substantial profits from underwriting fees (Baron's 183).

Because these 25 firms comprise a large percentage of the total capital of the sampling frame, it would be reasonable to assume that these firms also generate a

large portion of the securities revenue as well. The source of this revenue needs to be addressed in the survey. If the firm's primary source of revenue is institutional sales, then the payment and collection process is not as much a factor as it would be with a retail oriented firm, since these large transactions would be settled electronically on a same day basis, usually by wire transfer. Therefore, the survey asked each participant to estimate their revenue mix and active customer accounts for both institutional and retail sales. This mix will be used to determine if any correlation exists between a firm's size, revenue and customer mix and their perception of changes in the settlement process.

To attain a fair sample for surveying, a disproportional sample was done to eliminate any sample bias. The decision to use a disproportional survey was to fairly represent the smaller firms. Based on 404 firms within the sampling frame, 25% or 101 firms were sent surveys. Appendix B also provides a full breakdown of the planned sample within the sampling frame by firm capital size.

Within each planned sample, firms were chosen using the personal computer software program RANSAM. This

program is a standard auditing tool used to randomly select data for confirmation or review. Appendix C lists all firms selected.

Instruments

A questionnaire was mailed with an accompanying cover letter to each selected firm. There are two important factors to note regarding the cover letter and questions. First, the participating firm is requested not to identify themselves. There are also no questions regarding capital size or securities revenue which might lead to the firm's identity. The focus of the questions are on the settlement process and related issues and should be considered confidential material. Requiring identification may impart some bias when answering or deter any response. A copy of the cover letter and questionnaire are found in Appendices D and E.

The second important consideration was the author's choice to send the cover letter under the firm's letterhead. This would identify the author as the Cash Manager of a large broker dealer. This was done to indicate the the information was solicited on a good faith basis, and not to be used as a marketing tool.

This should also encourage open communication from selected firms if necessary.

The cover letter was written to introduce the importance of the settlement process with the industry. Changes in technology, competition, profitability, pricing and transaction volume were highlighted as reasons for increased awareness of settlement policies. The letter also introduces the author, reason for the survey, and the hypothesis to be tested.

In summary, the cover letter introduces the questions to the reader and reinforces the desire for confidentiality. Participants are offered the opportunity to call and discuss the survey. Participating firms may receive results of the survey.

The questions focus on those issues regarding disbursement and collections procedures. Questions were limited to twenty five with the purpose of making the process direct and to the point. The author felt that a long and detailed survey would discourage participation.

Questions were grouped into three categories. The first two focus on the disbursement and collection process. Ranges were given regarding transaction volume and methods of payment and collection. The last

category contained primarily yes and no questions regarding issues that impact the settlement process.

Procedures

The author's concern for confidentiality precluded any personal contact with the selected firms. To maintain this level of confidentiality, the firms were asked to complete the questions at their location without direct intervention by the author. Sufficient time was allowed for the firm to circulate the questions to attain the answers from the most knowledgeable person.

The surveys were not be coded to identify the firms responding. Therefore, second requests could not be issued, nor could follow-up calls be made. The questions have been designed to eliminate any confusion on the readers part and to encourage quick and accurate answers.

Three factors will effect a successful response rate. First is the assurance of the confidentiality of the response. The hypothesis of this paper is the competitive uses of the settlement process. Should the responding firm concur with the hypothesis and perceive that by identifying their firm's settlement policies they would lose a competitive edge, they may not choose

to participate. Given this factor and the opportunity to share in the results would encourage the reader to respond.

The second factor is the brevity and directness of the questions. A short, yet detailed question that can be answered quickly and correctly is more likely to be answered and returned.

The last factor is the time the material is mailed to the selected firms. Should the survey arrive at a peak time, such as monthend reporting, the reader might lack the time to complete the questions. Therefore, the material was mailed on the fifth working day of the month so as to arrive well after monthend reporting. A response in a enclosed self addressed envelope was expected within 30 days.

The survey material was addressed to the Cash Manager at the selected firms as identified in the SIA 1992-93 Yearbook. However, the author may choose to forward the material to professional contacts at the firms.

Data Analysis

The returned questionnaires were entered into a database management program and sorted by account mix, revenue mix and whether the cash management function is a profit center or not. These three sorts will be examined for trends to indicate whether the firms' customer base is determining their settlement practices and if they actively seeking to extend the settlement process to recognize the benefits from the float.

An examination of the disbursement answers, when compared against the institutional versus retail revenue and account mixes determined the current level of sensitivity the firm has regarding payments to retail customers. A retail oriented firm should be more oriented towards optimum customer service, since this customer base provides the substantial source of revenue, whereas an institutional firm may be less sensitive to retail settlements, since it derives the majority of its revenue from institutional trades.

All firms, regardless of revenue or account mix, should strive to collect their money as quickly as possible. By examining the collection procedures against these mixes, the author aspires to come to a

conclusion regarding capital investments for collection systems versus disbursement systems.

Final examination of disbursement and collection procedures when compared to the firms cash management's profit center status, will indicate whether the firm is making a concentrated effort to control and recognize the float generated by the settlement process. However, it would be unfair to assume that just because a firm's cash management area is not a profit center, that they do not recognize float savings. Therefore, question #22 addresses the possibility of recording and measuring float contributions without use of a profit center.

Additionally, volumes of checks and dollars were reviewed versus disbursement sights. A large number of disbursement sights might indicate a network of paying banks selected to maximize clearing time. Consolidation of reconciliations, simplicity of cash accounts and reduced reconciliation expenses might lead a firm to only one disbursement sight. Clearing times can be evaluated versus volumes and number of sights. These disbursement factors will be reviewed to determine if a trend exists between the size of the firm and its settlement practices with retail

customers.

The future of the settlement process will change with the Bachmann Task Forces recommendations are implemented. As retail firms become more focused on their customer segments and the products they offer, then larger firms were forced to re-evaluate their policies regarding customer payments and collections.

Chapter IV

PRESENTATION OF RESULTS

General Results

The survey yielded 26 responses from the initial 101 that were mailed. These responses, received over a 45 day period, were entered into a database management system upon receipt. The answers to the questions posed to each participating firm were analyzed to specifically support or refute the hypothesis.

Much of the analysis centered on various questions and their relationship to the firm's institutional and retail account and revenue mixes. The summary of the respondents for these mixes is demonstrated in Table 5. The relationship of these values against other answers will be discussed in detail later in this chapter.

Another question used to analyze disbursement and collection practices centers on the cash management function as a profit center. Only 8, or 30.7% of the responding firms answered in the affirmative. Eleven of the respondents, including 7 of those currently operating as a profit center, felt that the cash management function should be a profit center.

Table 5

Summary of Account and Revenue Mixes

	Retail	Institutional
Account Mix		
Mean	76.7	12.1
Median	92.0	8.0
Mode	90.0 (6)	10.0 (6)
High	100.0 (2)	99.0
Low	0.0 (2)	1.0
Revenue Mix		
Mean	64.7	20.5
Median	90.0	10.0
Mode	95.0, 90.0 (4)	5.0, 10.0 (4)
High	100.0 (2)	99.0
Low	0.0 (2)	1.0

Finally, 21, or 80.8% of the responding firms, indicated that they issued checks off a controlled disbursement point. All of the 5 remaining firms which do not use controlled disbursement, had average outstanding checks of less than one million dollars. Additionally, 22 of the participants concentrated into less than 3 accounts.

Population Response

As stated previously, 26 of the 101 firms responded to the survey request. This 25.7% response rate was somewhat less than the 33% that was felt was necessary

to accurate assess the data to either support or refute the hypothesis. However, after reviewing and analyzing the results, enough consistency was found among the participants to base a conclusion.

There were possible several reasons for the less than expected response rate. The survey was addressed to the senior finance manager at each firm. This position, particularly in the larger firms, is often far removed from the day to day cash management function. In retrospect, the cover letter and survey should have been addressed to the Cash Manager or Operations Manager. This would have increased the likelihood of the most knowledgeable and interested person completing the survey. As it was, 15 requests were received to review the results.

Since the survey was disproportional to target the medial capitalized firms in order to attain a fair number of retail based firms, fewer surveys were mailed to the larger firms. However based on the response and the requests for sharing the survey results, at least one of the larger firms responded to the survey. This firm replied that both 99% of its revenue and account were institutional, thereby lowering the medians previously listed. Conversely, 2 firms responded that

both their revenue and account mixes were 100% retail. Therefore, the targeted response of retail oriented firms was obtained, with a fair representation of the institutional impact included in the analysis.

Also impeding the results was the inability to follow up with second request for data. The timeliness of the delivery of the survey was accounted for so as not interfere with the standard monthend accounting cycle. However, other responsibilities may have delayed the participant's attention, until such time as it was forgotten. Ideally, direct interviews would have been the best approach, but the confidentiality of the questions and the time needed to contact and question 101 firms precluded this type of survey.

Therefore, given the response rate versus the expected rate and subsequent analysis of the data, it was determined that enough responses were received to accurately access the statement of hypothesis.

Disbursement Results

The first ten questions targeted the disbursement practices of the firms, segregating questions between proceeds checks from the sales of securities and dividend and interest checks. Most firms chose to

track these payments as two separate systems and disburse on different schedules. Twenty-four of the participants issued their proceeds checks on a daily basis, while the other 2 issued proceeds checks weekly and bi-weekly. However, the disbursement of dividend and interest checks were more varied. Half of the firms issued dividend and interest checks on a weekly basis. Of the remaining 13 participants, 6 firms issued their checks on a daily basis, 4 on a bi-weekly basis, and 3 on a monthly basis.

This raises the issue regarding whether interest is being earned by the customer while awaiting payment. Of the 13 firms issuing dividend and interest checks weekly, only 8 paid interest on free customer balances. All 4 of those issuing checks on a bi-weekly basis paid interest, while only one of the 6 firms issuing checks weekly and one of the 3 firms issuing checks monthly paid interest.

Only 2 of the firms have recently changed their frequency of issuing dividend and interest payments, now checks issuing bi-weekly and weekly. All other firms have not changed their frequency of payment since prior to 1991.

All responding firms offer some mechanism to

transfer or "sweep" money from cash balances to a money market account. Since the minimum amount required varies by firm and would only effect full service accounts, the minimum amount required to sweep was not included on the survey. However, the frequency of sweeping money into an interest bearing account was requested. Twenty of the firms sweep cash daily, while 5 sweep weekly and 1 monthly. Cross examination versus the paying of interest on free customer balances reveals 3 of the 5 pay interest as well as the firm that sweeps monthly.

Clearing times for both proceeds and dividend and interest checks are displayed in Table 6.

Table 6

Summary of Check Clearing Times

	Proceeds	Dividend/Interest
Mean	3.7 days	4.5 days
Median	5.0 days	5.0 days
Mode	3.0, 4.0 days (8)	5.0 days (10)

Seventeen of the check clearing times were the same for both types of disbursements. Of the remaining firms, 6 firms' dividend and interest clearing time was

at least 2 days greater than proceeds checks.

Twenty-one of the firms issued checks from a controlled disbursement point. Sixteen of these firms issued checks from multiple locations, while 2 issued from multiple locations but did not utilize controlled disbursement.

Nine of the respondents offered direct deposit or electronic payment for both proceeds and dividend and interest checks. Of these 9, 6 firms offered both payment options to their customers. Thirteen of the remaining 17 firms indicated that they have or are considering direct deposit as an alternative to issuing checks.

Collection Results

Questions 11-18 targeted the collection practices of the firms. Twenty-two firms maintained at least 3 main concentration accounts. Two firms used 4 to 6 concentration accounts, while 2 used more than 10. Additionally, 10 of the participating firms used at least 1 lockbox to collect payments.

Table 7 indicates the response to questions regarding the transaction and dollar volumes of concentration methods commonly used. The answers to

these questions were included to determine the most frequently used method to concentrate funds. Comparing this data versus other questions, such as number of outstanding checks and number of concentration accounts, allowed an insight as to the size of the firm and it's ability to use the most cost effective means of concentrating funds.

Table 7

Summary of Transaction and Dollar Concentration Volumes

	Number	Median	High	Low
Transactions				
ACH	17	74.2%	100.0%	1.0%
DTC Check	9	26.3%	70.0%	1.0%
Fed Wire	18	35.8%	100.0%	1.0%
Other	10	40.7%	95.0%	5.0%
Dollars				
ACH	16	59.1%	100.0%	5.0%
DTC Check	9	41.0%	90.0%	15.0%
Fed Wire	18	45.0%	100.0%	2.0%
Other	11	35.5%	85.0%	1.0%

Other Results

The final 7 questions were used to gather information that would be used to analyze the different disbursement and collection practices. For example, the relationship of interest on free customer credits

versus frequency of dividend and interest check disbursements was examined. Additionally, the results from the questions regarding revenue and account mixes and the profit center concept within the cash management structure were already depicted at the beginning of this chapter.

Other information requested in this section was used to compare different firms. Within the responding firms, 50% felt that the change from trade date plus 5 to trade date plus 3 would significantly impact their firm. Ten felt that this change would only have a minor impact, whereas 3 felt that there would be no impact at all.

Confirmations for trades were printed at central locations for 12 of the firms. The remaining 14 firms printed confirms from multiple locations, either regionally or locally.

Summary

The results from the participating firms will be analyzed in Chapter V of this project. A more detailed analysis of the correlation between several of the questions will be made and conclusions will be drawn to either support or refute the statement of hypothesis.

A detailed listing of the survey questions and answers can be found in Appendix E.

Chapter V

DISCUSSION

Results

The results of the survey indicate that securities firms are becoming more cognizant of the settlement process and the impact it has on customer relations. Firms are now offering, and others are now considering, direct deposit (ACH) of payments as an alternative to checks. Monthly payment plans are now available, either by check, direct deposit, and wire transfer to their customers. The timing change from trade date plus 5 to trade date plus 3 will be a determining factor in future settlement policies. Finally, the measurements of profit contribution of the treasury function, encompassing recognition of float, is important enough to be recognized by seven of the firms.

While the majority of the firms have not altered their check disbursement frequency since prior to 1991, it appears that all firms are making strategic decisions to encourage electronic payments and full service accounts. These alternatives would eliminate

the check disbursement process, while offering more a timely and reliable payment system. The frequency of free cash balances sweeping to interest bearing account on a daily basis was the preference of twenty of the twenty-six firms. Systematic payments, via direct deposit or monthly check plans, were also offered by most of the responding firms. Subsequent interviews with those who've been in the securities industry indicate that these new products and their frequency of payment differ greatly from where the industry was ten years ago, when monthly payment plans were not offered and dividend and interest checks were printed and mailed weekly at best.

These same interviews also revealed the trend toward the distribution of dividend and interest checks. Fifty percent of the firms that responded issue these type checks on a daily basis, though not as much as the 77% that issue proceeds checks daily. This also represents a change from the industry's past preference. As little as four years ago, the author's firm issued dividend checks on a weekly basis. The interviews with other firms indicated that weekly was the preferred frequency of dividend and interest payments, and that subsequent actions by other firms to

move to a daily distribution, encouraged a change in their policy.

Controlled disbursement points were used by twenty-one of the firms, indicating that those with large volume of outstanding checks utilize this important cash management tool. While allowing advanced notification of check clearings, controlled disbursement points typically extend the check clearing time, or float, of paying checks, maximizing the use of funds. The average clearing time was five days for both types of checks. The benefits realized from the float that accompanies the disbursement practice often becomes invisible, until changes in settlement options threaten the use of checks. Nine firms already offer direct deposit of proceeds and/or dividend checks. Of the remaining seventeen firms, thirteen indicated that they have reviewed electronic payments as an option. This indicates that firms are have included the float impact on the cost benefit analysis of electronic payments, and that several have already made the decision to eliminate as many checks as possible.

While disbursement practices are changing to reduce distribution costs, collection practices are being reviewed and revamped in order to speed up the

collection process. The shrinking funds availability time frame from collection to disbursement will impact the funding requirements of securities firms. Reducing the number of concentration accounts to a manageable number reduces costs and time. Twenty-one of the firms maintained between one and three concentration accounts.

The heavy retail mix of the respondents supports the assumption that most transactions are small dollar, high volume. These type transactions are typically payments to brokers in checks form for settlements of trades. To expedite this process, ten of the firms utilized lock boxes to collect payments. Once the funds were processed and became available, the majority of the firms used electronic transfers, either ACH or wire transfer to collect funds into their concentration accounts. This practice again indicates increasing awareness of electronic tools as a means of moving money efficiently and quickly.

Surprisingly, only ten of the responding firms felt that the change in trade date plus 5 to plus 3 would have a significant impact. Within the thirteen respondents that felt there would be little or no impact, eleven concentrate the vast majority of their

funds electronically. Additionally, five of these firms offer electronic payments to their customers in lieu of checks. There are three points of interest to consider when comparing these results. First, the change from trade date plus 5 to plus 3 has been considered before and has the backing of the SEC that it currently has with the Bachmann Task Force recommendations. Because of this, firms may not be taking this change seriously, although sixteen of the firms indicated they have reviewed means of concentrating funds faster. Secondly, those firms that feel it will significantly impact their funding requirements may not have the technology available to them to address concentration or disbursement alternatives. And lastly, all the futuristic payment options will not offset poor financial performances and recommendations by an investment representative. The bottom line is that the customer's financial goals are the number one priority, not when they receive their payment.

Summary

The settlement process within the securities industry is a focal point when considering customer

relations and could be an effective tool when marketing the firm's services to potential retail clients. Several key results of this examination would support the hypothesis that technology will impact the settlement process, providing a potential competitive advantage to those firms utilizing these resources.

The major points evaluated during this study focused primarily on the disbursement practices of the firms in relationship to collection procedures and other information gathered during the study. The results highlighted the trend toward electronic sources of payment, primarily ACH direct deposit and wire transfer. In addition to these new payment alternatives, firms now offer systematic payment options to their customers from the cash account. Some firms elect to pay interest on free credit balances in lieu of offering a money market or full service account. And many of the responding firms if not already offering the service, are considering direct deposit as an alternative to checks.

The cash management function as a profit center was explored to reach some conclusion as to the firm's awareness of financial contributions to the earnings of the firm. Eight of the respondents answered that their

firm operated their cash management function as a profit center. Four who were not profit centers felt that they should be.

This awareness of earnings impact by cash management practices by the responding firms indicates that the decision to change settlement practices could be overshadowed by any lost earnings power. While these contributions are important, it is equally important for firms to recognize that their primary source of revenue is the sale and purchases of securities for their customers. Any cost associated with serving customers, whether it be a prospectus or a check, should be taken into account when the service is priced. In no way should the customer bear the inconvenience of inadequate service to profit the industry.

Finally, technology will greatly influence the manner with which firms serve their customers. As firms come to the realization that a successful combination of outstanding financial performance for their clients and superior customer service, they will be more futuristic and look beyond the current service environment and focus on the desires of their customers when considering the competition.

Generally, the same resources are available to the all firms when considering the financial recommendations for their clients. Assuming the track record of these recommendations is equal from firm to firm, the deciding factor could very well be the customer service offered by the firm. And while there are other sides to customer service besides the products themselves, the deciding factor could be the ways and means that the customer receives monetary payments.

Therefore, based on the analysis of the data received from the survey, it was determined that the hypothesis is acceptable. Firms will need to adapt to current technology to maximize the efficiency of their operations and stay competitive with other firms acting on these same decisions. This degree of increased customer awareness could be the difference between a new customer or a lost customer. Younger generations will bring new ideals and needs to their financial advisor. The surviving firms will be ready to fulfill those needs.

Limitations

Previously discussed in Chapter IV were factors that negatively affected the response rate of the survey. Other limitations were noted after the completion of the study and should be reviewed prior to future study of the settlement process.

As stated, the response rate was less than desired, though enough responses were received to support the hypothesis. However, an increase response rate would lend more validity to the findings.

Another limitation was the inability to identify the firms responding. The purpose of soliciting revenue and account mixes was to ascertain the responsiveness of the firms to their retail customers. These mixes were an adequate measure of the customer base, but an argument could be made as to the correlation between revenue and account mix versus responsiveness to customer payments. Future studies should address a better way to solicit retail oriented firms for participation.

The confidentiality aspect of the study also prevented follow-up with respondents for incomplete

surveys. Although most were returned completed, a few were returned with qualified answers. A review of the confidentiality aspect of the survey and its impact should be considered in future studies.

Suggestions for Future Research

Future studies on this subject should include solicited responses from participating firms. An introductory telephone call would ascertain the person responsible for and, in most instances, the most interested person to participate in the survey. This would also give the surveyor a direct contact to follow-up to clarify answers or responses not received. Contacting the firm would also identify the firm. This would also allow the firm the opportunity to decline to participate because of the confidentiality of the information,

After the introduction and the firm's acceptance to participate, a short concisely written survey should be mailed directly to the contact. Since the firm has accepted the invitation and is expecting the mailing, there is a good probability that the survey will be received and completed within a reasonable time frame.

Another alternative to a written survey, would be

to solicit the answers to the questions telephonically. This would open up the questions to discussion, possibly providing some insight into the answers.

Questions should be focused on the disbursement process. The concentration questions provided information for the author to make assumptions about the firms' positions on cash management, particularly the handling of float. However, it did not materially impact the decision to support the hypothesis. Future studies could include a separate and distinct study of this process alone, focusing on technology and strategies to increase the receivables turnover of customer trades.

Another change to be considered would be a more direct solicitation of the retail oriented firms. Even though the large capitalized firms account for the vast majority of securities revenue, there is not a clear method of determining revenue mix. Researching the Securities Industry Association for primarily retail oriented firms would provide a base to study those most impacted by competitive changes in the settlement process.

Finally, direct contacts would allow for feedback from each respondent after the survey results had been

completed and returned to the participants. Following up with each firm to get their perspective of the results would further lend validity to the results of the study.

The key to future studies on the settlement process is to encourage retail firms to participate openly and honestly to maximize the information for all involved to analyze and draw their own conclusions. Those responding to the results must be assured of a timely response time by the interviewer. A smaller group of willing and active participants would probably yield more fruitful results to the study than a group from a larger sample population.

APPENDIX A

LIST OF TOP 25 SIA FIRMS
BASED ON TOTAL CAPITAL FOR FISCAL 1991
1992 SECURITIES INDUSTRY YEARBOOK
(amounts in 000's)

RANK	FIRM	CAPITAL (000's)	% OF TOTAL
1	Merrill Lynch & Co., Inc	$11,783	20.7 %
2	The Goldman Sachs Group, L.P.	6,390	11.2 %
3	Morgan Stanley Group Inc.	5,422	9.5 %
4	Shearson Lehman Brothers Inc	5,002	8.8 %
5	Salomon Brothers Inc.	4,122	7.2 %
6	Paine Webber Group Inc.	1,866	3.3 %
7	The Bear Stearns Companies Inc.	1,836	3.2 %
8	Dean Witter Reynolds Inc.	1,424	2.5 %
9	Prudential Securities Incorporated	1,155	2.0 %
10	The First Boston Corporation	1,119	2.0 %
11	Smith Barney, Harris Upham & Co. Inc.	1,059	1.9 %
12	Donaldson, Lufkin & Jenrette, Inc.	900	1.6 %
13	Kidder, Peabody & Co. Incorporated	892	1.6 %
14	Nomura Securities International Inc.	684	1.2 %
15	The Bank of Tokyo Trust Company	668	1.2 %
16	J.P. Morgan Securities Inc.	646	1.1 %
17	UBS Securities Inc.	445	0.8 %
18	A.G. Edwards, Inc.	417	0.7 %
19	Daiwa Securities America Inc.	332	0.6 %
20	Citicorp Securities Markets, Inc.	314	0.6 %
21	Kemper Securities Group, Inc.	295	0.5 %
22	Deutsche Bank Captial Corporation	292	0.5 %
23	Charles Schwab & Co., Inc.	286	0.5 %
24	Greenwich Capital Markets, Inc.	272	0.5 %
25	Van Kampen Merrit Inc.	269	0.5 %
	Total of Top 25 Firms	$47,890	84.1 %
	Total of All Member Firms	$56,941	100.0 %
	Top 25 Firms - Employees	181,875	70.0 %
	Top 25 Firms - Reg. Representatives	57,596	67.6 %

APPENDIX B

SECURITIES FIRM SAMPLING SIZE BREAKDOWN
BY POPULATIONS, SAMPLING FRAME
AND PLANNED SAMPLE

Population Size		8,437	(1990)
Carrying and Clearing Firms		947	
Percent of Total Population			11.2 %
Sampling Frame		404	
Percent of Total Population			4.8 %
Percent of Carrying & Clearing Firms			42.7 %
Planned Sample		101	
Percent of Sampling Frame			25.0 %
Firms within Capital Rank Ranges with percents of planned sample			
Between 1 and 25		10	9.9 %
Between 26 and 100		15	14.9 %
Between 101 and 200		35	34.7 %
Between 201 and 300		25	24.8 %
Between 301 and 404		16	15.8 %
	TOTAL	101	100.0 %

APPENDIX C

FIRMS SELECTED FOR SURVEY

CAPITAL SIZE	FIRM NAME
5	Salomon Brothers Inc.
6	Paine Webber Group Inc.
8	Dean Witter Reynolds Inc.
16	J.P. Morgan Securities Inc.
18	A.G. Edwards, Inc.
20	Citicorp Securities Markets, Inc.
22	Deutsche Bank Capital Corporation
23	Charles Schwab & Co., Inc.
24	Greenwich Capital Markets, Inc.
25	Van Kampen Merritt Inc.
30	John Nuveen & Co. Inc.
35	Legg Mason, Inc.
36	Gruntal Financial Corp.
43	First Marathon Securities Inc.
46	S.G. Warburg & Co. Inc
49	Brown Brothers Harriman & Co.
51	Discount Corporation of New York
57	Janney Montgomery Scott Inc.
63	Furman Selz Incorporated
68	NYLIFE Securities Inc.
77	Weiss, Peck & Greer
82	The Zeigler Company, Inc.
89	Toronto Dominion Securities (USA) Inc.
92	Keefe, Bruyette & Woods, Inc.
97	Kankaku Securities (America) Inc.
107	The Ohio Company
108	Kirkpatrick, Pettis, Smith, Polian Inc.
111	BHC Securities, Inc.
113	First Investors Corporation
115	Llama Company
116	Dominick & Dominick, Incorporated
118	Brown & Company Securities Corporation
124	Robert Fleming, Inc.
125	John Hancock Clearing Corp.
126	First Union Brokerage Services, Inc.

FIRMS SELECTED FOR SURVEY

CAPITAL SIZE	FIRM NAME
127	George K. Baum & Company
132	Richardson Greenshields Securities Inc.
133	Execution Services Incorporated
135	Kleinwort Benson North America Inc.
144	Lewco Securities Corp.
145	J. Streicher & Co.
150	Sutro & Co. Incorporated
151	Baring Securities Inc.
154	Roney & Co.
158	Waterhouse Securities, Inc.
159	Raffensperger, Hughs & Co., Incorporated
161	Lynch, Jones & Ryan Inc.
162	Ragen MacKenzie Incorporated
163	National Securities & Research Corporation
164	Stern & Kennedy
165	Parker/Hunter Incorporated
166	Craig-Hallum, Inc.
170	Oppenheimer Fund Management, Inc.
172	Gordon Capital, Inc.
185	Hanifen, Imhoff Inc.
186	Driehaus Securities Corporation
191	Davenport & Co. of Virginia, Inc.
192	Wessels, Arnold & Henderson
195	Equitable Securities Corporation
197	Howe Barnes Investments, Inc.
205	Linsco\Private Ledger Corp.
210	Ameritrade, Inc.
212	Lebenthal & Co., Inc
215	Casenove Incorporated
221	Cantella & Co. Inc
223	People's Securities, Inc.
225	Butler, Wick & Co., Inc.
226	Porter, White & Yardley, Inc.
229	Murphey Favre, Inc.
237	Sweney Cartwright & Co.
243	Securities Corporation of Iowa
244	Miller, Johnson & Kuehn, Incorporated

FIRMS SELECTED FOR SURVEY

CAPITAL SIZE	FIRM NAME
247	Thomas James Associates, Inc.
250	Van Kasper & Co.
251	FAIC Securities, Inc.
256	Hamershlag, Kempner & Co. L.P.
264	Hazlett, Burt & Watson, Inc
278	Allmerica Investments, Inc.
279	Bersec International Corporation
288	H.C. Wainwright & Co., Inc.
289	The Feldman Investment Group, Inc.
290	Pierre R. Smith & Co.
294	Corporate Securities Group, Inc.
298	Culverwell & Co., Inc.
299	Bernard Herold & Co., Inc.
304	Tripp & Co. Inc.
311	BAll Capital Markets, Inc.
331	Hampshire Securities Corp.
337	Fuhrman-Matt Securities, Inc.
340	Marsh, Biock & Co. Inc.
342	BAC Corp Securities
350	Thomson Institutional Services, Inc.
351	McCourtney-Breckenridge & Co.
357	First Wilshire Securities Management, Inc.
370	RS&A Consulting Incorporated
372	D.S. Cooper & Co.
374	Arthur W. Wood Company, Inc.
384	Quest Capital Strategies, Inc.
390	United International Securities, Inc.
395	Ridgewood Associates Inc.
404	Cheswick Securities Inc.

APPENDIX D

Introduction Letter to Participants

DATE

(FIRM)
ATTN: Chief Financial Officer
(ADDRESS)
(CITY,ST,ZIP)

Dear Sir/Madam:

Several factors have made the settlement process and its impact on cash management policies highly visible within our industry. No longer is the treasury function considered merely a cash reconciliation role. Changes in bank services and increased transaction volume have caused senior management to consider the financial implications of the settlement policies within their firms.

As the Cash Manager for Edward D. Jones & Co., I have chosen to complete my Masters program by writing my thesis on cash management practices in the securities industry. Entitled "A Comparative Analysis of the Settlement Process in the Securities Industry", this work will focus on current and future practices involving the settlement process. The hypothesis of this paper to be tested is that securities firms will need to consider the implications of cash management practices on the settlement process to remain competitive in the future.

Knowing your time is valuable, I've enclosed a short list of questions regarding current practices and procedures regarding disbursement and collection procedures at your firm. There are also questions regarding the size of your transaction volumes. A self-addressed envelope has been enclosed for your convenience.

PLEASE BE ASSURED OF COMPLETE CONFIDENTIALITY. NEITHER YOU NOR YOUR FIRM'S NAME SHOULD APPEAR ON THE QUESTIONNAIRE WHEN RETURNED. IT IS NOT MY INTENTION TO IDENTIFY A PARTICULAR FIRM'S SETTLEMENT POLICIES.

The results of this survey will be made available to you. Should you desire a copy of the results, please call me or forward your name and address under separate cover to my attention at Edward D. Jones & Co., 201 Progress Parkway, St. Louis, MO 63043.

I would be most happy to answer any of the questions you might have. Please write me or call at (314) 851-7936. Thank you for your assistance.

Sincerely,

Woody D. Johnson
Cash Manager

Enclosure

APPENDIX E

SURVEY RESULTS

1. How often are proceeds checks printed and mailed to customers?

Daily	24
Weekly	1
Biweekly	1

2. How often are dividend/interest checks printed and mailed to customers?

Daily	6
Weekly	14
Biweekly	4
Monthly	2

3. Do you offer a money market account such that payments to customers will sweep into this account?

Yes	26
No	0

If yes, how often do you sweep these credit balances?

Daily	20
Weekly	5
Monthly	1

4. Does your firm issue checks off a controlled disbursement point(s)?

Yes	21
No	5

5. Does your firm print and issue checks from multiple locations?

Yes	18
No	8

6. What is the average dollar amount of outstanding checks, including both proceeds and dividend/interest checks?

less than 500,000	4
500,000-1,000,000	2
1,000,000-10,000,000	9
10,000,000-25,000,000	7
25,000,000-50,000,000	1
50,000,000-75,000,000	1
75,000,000-100,000,000	2

7. What is the average length of time it takes for a customer's proceeds check to clear?

1 - 3 days	8
4 days	8
5 days	7
6 days	1
7 days or more	2

8. What is the average length of time it takes for a customer's dividend/interest check to clear?

1 - 3 days	6
4 days	3
5 days	10
6 days	3
7 days or more	4

9. Does your firm offer a systematic withdrawal or payment to your customers?

Yes	16
No	10

If so, how often to your initiate payments per customer?

Daily	4
Monthly	11
Other	1

How do you initiate these payments?

Direct Deposit (ACH)	7
Fed Wire Transfer	1
Check	14

10. Do you offer direct deposit for your customer's local bank accounts for proceed disbursements?

Yes	9
No	17

Dividend/interest disbursements?

Yes	9
No	17

NOTE: Six of the above affirmative responses offer direct deposit for both.

11. How many primary concentration accounts do you maintain?

1-3	22
4-6	2
7-9	0
10 or more	2

12. Do you use lockboxes to collect payments?

Yes	10
No	16

If so, how many?

1-3	9
4-6	1
7-9	0
10 or more	0

13. Considering all means of concentrating funds, what percentage of transactions are concentrated using each of the following?

	#	Avg. %
ACH	16	74.2%
DTC Check	7	26.3
Fed Wire	18	35.8
Other	9	40.7

14. Considering all means of concentrating funds, what percentage of dollar volume is concentrated using each of the following?

	#	Avg. %
ACH	16	59.1%
DTC Check	7	41.0
Fed Wire	18	45.1
Other	9	35.5

15. On a daily basis, how many drawdowns do you initiate into your primary concentration accounts?

10 or less	11
11-25	5
26-50	4
51-100	5
101-250	0
251-500	0
over 500	1

16. Are confirmations printed and mailed from a local, regional or central location?

Local	9
Regional	4
Central	14

NOTE: One firm mail confirmations from both regional and central locations. Another mails confirmations from both a regional and local locations. Another mails confirmations from central and local locations. Two firms did not answer this questions.

17. How do you feel the change from T+5 to T+3 will impact your profitability through your concentration efforts?

No Impact	3
Minor Impact	10
Significant Impact	10
Major Impact	0

18. Considering the change in settlements, have you already addressed ways to speed up the collection process in your firm?

Yes	16
No	10

19. Does your firm pay interest on free customer balances?

Yes	14
No	12

20. Is your cash management department a profit center?

Yes	8
No	18

21. Do you think that the cash management function should be a profit center?

Yes	11
No	15

22. How long has it been since your firm has changed the frequency of payments to customers for dividend/interest payments?

1993	0
1992	2
1991	0
Prior to 1991	24

24. What is your firm's revenue mix between retail and institutional sales?

	#	Avg.%
Retail	23	76.0%
Inst.	23	24.0%

25. What is your firm's account mix between retail and institutional sales?

	#	Avg.%
Retail	24	86.3%
Inst.	24	13.7%

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