FINANCE AND RETAIL MARKET OPPORTUNITY ANALYSIS

INPUT

About INPUT

INPUT provides planning information, analysis, and recommendations to managers and executives in the information processing industries. Through market research, technology forecasting, and competitive analysis, INPUT supports client management in making informed decisions.

Continuous-information advisory services, proprietary research/consulting, merger/acquisition assistance, and multiclient studies are provided to users and vendors of information systems and services (software, processing services, turnkey systems, systems integration, professional services, communications, systems/software maintenance and support).

Many of INPUT's professional staff members have more than 20 years' experience in their areas of specialization. Most have held senior management positions in operations, marketing, or planning. This expertise enables INPUT to supply practical solutions to complex business problems.

Formed as a privately held corporation in 1974, INPUT has become a leading international research and consulting firm. Clients include more than 100 of the world's largest and most technically advanced companies.

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DECEMBER 1989

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FINANCE + RETAIL MARKET OPPORTUNITY ANALYSIS

1989
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AUTHOR

TITLE

DATE LOANED	BORROWER'S NAME

Preface:

Important Note to Readers of this Report

Readers of this volume should be aware that it presents only two of thirteen vertical industry reports developed by INPUT for Moore IDS. These vertical reports, in turn, are followed by a final cross-industry report that serves the central mission of this project: to provide market opportunity recommendations that will help Moore IDS to focus strategically on a very limited number of high-value opportunities—whether within a single industry or across several.

Therefore, readers of this report should keep in mind several considerations while reviewing the findings presented here:

- To serve the central mission of helping Moore IDS to achieve strategic focus on a limited number of market opportunities, INPUT has applied a tight screening process to the applications examined in each vertical industry. The selection criteria targeted mission-critical, high frequency, repetitive variable-imaging applications that would represent an ongoing base of predictable revenue, as opposed to the current mix of ad hoc, project-oriented overflow work with peaks and valleys of a less predictable nature.

- Due to this tight screening process, readers may find that these vertical reports fail to mention certain applications, even though they represent currently viable Moore IDS revenue sources.

- Finally, recommendations presented in this volume must be recognized by readers to be somewhat out of context:

- An opportunity that looks excellent—relatively—within a single industry may turn out to be dwarfed by applications in other industries.

- An application that looks to be of minimal attractiveness in a single industry may prove to be closely paralleled in several other industries—in such a way that together they constitute a preeminent cross-industry opportunity.

INPUT discusses such findings in the cross-industry report. Note that these cross-industry recommendations are the primary objective of this project, and thus they supersede those of the individual vertical market reports. The final cross-industry report should be examined for such perspective by any reader of this volume.

It is hoped that this note will help readers place these findings in the proper perspective, especially in cross-referencing this single-industry viewpoint with the final report's cross-industry findings and recommendations.

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Note: This volume consists of four major divisions, each with its own independent page and section numbering.

INTRODUCTION

FINANCE

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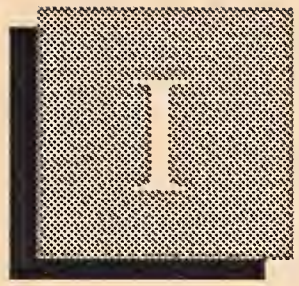

Introduction

Introduction

A Research Objectives

INPUT has conducted this research to meet objectives agreed upon with Moore Business Forms' Information Distribution Services division (Moore IDS). See Exhibit Intro-1.

EXHIBIT INTRO-1

Finance/Retail: Key Research Objectives

- Evaluate business opportunities for both basic and enhanced services
- Achieve focus on leading opportunities
- Assess sales and delivery requirements
- Provide data for cross-industry evaluation

To meet the objective of providing Moore with a comprehensive evaluation of its potential business opportunities, a fundamental distinction is made between basic and enhanced application service opportunities. These application/service type definitions are outlined in Exhibit Intro-2.

IDS wishes to achieve focus on a limited number of key opportunities within each industry studied. This will serve a more proactive (rather than reactive) marketing thrust, as well as helping to limit the planning and investment required to develop new mechanisms—including equipment, facilities, and other technology—that are necessary to sell and deliver additional services.

Looking forward to the future delivery by INPUT of information on opportunities in a wide range of target industries, this research also serves to gather data that can be cross-referenced among industries at a later date.

EXHIBIT INTRO-2

Finance/Retail: Application/Service Type Definitions

Basic Services: ("Moore IDS business today")

- Variable-image printing or embossed cards, plus related mailing services such as:
  - stuffing
  - sealing
  - metering
  - sorting
  - post office delivery

Enhanced Services ("Moore IDS future business")

- Basic services as defined above, plus any value-added front-end or back-end services—typically of information services content (e.g., data base management), but also including other business services (e.g., lockbox)

and/or

- Electronic solutions as a replacement for, or supplement to, paper-based business communication (e.g., electronic data interchange)

B

Scope of this Report

This volume combines the analysis of two related vertical markets, finance and retail. Because of the close association of the finance market with credit cards and the retail market, these two market reports have been combined in a single volume.

In addition to standard printing and mailing applications, these reports both investigate the production and use of various forms of transaction cards (e.g, credit cards, ATM cards, etc.). In particular, the emphasis is placed on embossed, magnetically striped cards which require production processes distinct from the standard variable-image laser printing.

Whether used for identification or transaction purposes, cards are essentially a retail market phenomenon. Although *issued* by a wide variety of industries—finance, retail, transportation, etc.—to both individual con-

sumers and corporate employees/users, they are most often used to conduct retail transactions.

From Moore's standpoint, the market is with the issuing firm or organization; this is where the plastic is cut, the statement printed and mailed, and the payment processed. Since the individual characteristics of these markets determine the demand for these services, the requirements for card production are included along with the requirements for printing/mailing and enhanced services in the individual market reports.

C

Format and Organization of this Report

Because of the strong similarities of the markets covered in this volume, the research methodology and questions are similar. Therefore, the common methodology will be discussed in the following paragraphs.

The remainder of this volume is divided into the following sections:

- Transaction Processing Issues
- Finance Market Opportunity Analysis
- Retail Market Opportunity Analysis

These individual sections on market opportunities follow the standard outline for other reports in this series. In particular, the scope of each market analysis—including the segmentation of each market and the names of the organizations interviewed—is included in the "Scope" portion of the report section for that individual market.

D

Methodology

To conduct this research, INPUT used a standard methodology for interview-based custom research, as shown in Exhibit Intro-3.

The questionnaire which was developed for these interviews contained policy-oriented questions about both printing and mailing applications, and about card applications. In addition, separate forms were developed to collect statistical data on card applications and on printing/mailing applications. The card portion of these questionnaires and forms was also used in other industries where there is a card-based application.

In developing opportunity valuations for the individual applications, INPUT used a combination of its own internal estimates, pricing estimates derived from interviews, and estimates provided by Moore marketing staff. The basis for each of these estimates is documented in Appendix B, so that different assumptions may be factored in and the impact on the opportunity valuation easily assessed.

EXHIBIT INTRO-3

Finance/Retail: Research Methodology

- Two-day meeting with Moore IDS Finance and Card Marketing Managers to develop research plan:
  - define scope of research (industry/submarket coverage)
  - identify categories of firms/organizations to interview
- Development of draft questionnaire and review with Moore IDS staff
- Test interviews and revision of questionnaire
- Telephone interviews
  - "Cold calls" to find first senior executive, each firm
  - "Networking" as required to secure interviews
- Moore IDS review of preliminary findings
- Analysis and report writing

Transaction Processing Issues

Transaction Processing Issues

A Introduction

In both the finance and retail areas, the highest volume and most complicated mailings are the statements associated with transaction accounts:

- checking/savings
- bank credit card
- retail credit card

One of the main things that links the retail and finance markets is that there are credit cards in both areas, and these are the primary areas in which credit cards appear. Within retailing INPUT includes not only department and specialty stores, but oil companies as well. Since these accounts are the primary means of payment for retail purchases, their associated account statements are also the logical vehicle for a wide variety of advertising and promotional literature:

- High-quality, first class mailings are delivered on a timely basis and always opened by the customer.
- Mailings are generally monthly, providing frequent contact with the customer.
- Detailed listings of previous purchases or payments get people thinking about buying.

The combination of high mail volume (statements/month), high data volume (large amounts of variably-imaged transaction data), and multiple/complex inserts or variably-imaged promotional material would appear to make these mailings an ideal target for IDS services. However, there are a variety of reasons why it may be difficult to achieve deep penetration in these markets.

Specific market opportunities are discussed in detail in the individual vertical market reports. This section provides a background and perspective for some of the issues which are common to both markets covered in this report.

B

Retail Credit Accounts Processing

In the retail area, it is generally only the largest department and specialty stores such as Macy's, Nordstrom, Neiman-Marcus, etc. that issue their own credit cards. In those cases, they do their own application processing, assume the credit risk, and handle all of the card processing in-house as well. All of these stores have POS systems in place, so the transaction authorization and capture is simple and on-line.

A major motivation for in-house processing is that these stores are very service-oriented and want to maintain tight control over their customer relationships. In addition, they want to get new cards into the hands of a potential purchaser as soon as possible, so their applications processing and card issuance are tightly linked. Also, these organizations have a large enough cardholder base that they can achieve the necessary economies of scale to do their own processing—including the payments processing.

Smaller retailers who issue private brand cards have several alternatives available to them. Many handle the card issuance and statement printing in-house, sending the statements out to a mailing house for inserting and mailing. Most of these smaller retailers also subcontract their payments processing to a bank lockbox operation. Those that do not want to handle any of the processing themselves can contract the entire operation to a commercial bank or card processing vendor which offers private label card services. In these cases, the bank analyzes the application, grants or withholds the credit in the name of the retail store, and handles all of the billing and payments processing.

While this is a large market, it will probably be a difficult one for IDS to penetrate. Retail firms either want to subcontract the entire processing—including credit risk assumption, card issuance, billing and payments processing—or they wish to retain in-house control of the processing and statement rendition. Where there is subcontracting, it seldom involves variable-imaging applications.

C

Retail Lockbox Operations

On the back end, in the enhanced services area, the primary opportunity for Moore is in the area of lockbox processing. This function is not only relevant to the retail and finance areas; lockbox processing services are utilized in other industries such as insurance and services. Here, however, Moore is at a competitive disadvantage with a bank, because a bank has more direct access to channels for collection of checks than Moore does. In addition, the payments processing area is one in which there is a

high degree of skill and specialization required, there are significant economies of scale, and the technology is changing rapidly as imaging systems are suddenly become economically feasible for these types of applications.

Nonetheless, should Moore choose to enter this market, it also has a potential advantage over the banks. If Moore has generated the mailing or coupons in the first place, it can have access to the data base of outstanding payments. This means direct validation of payments and updating of the customer's data base, providing faster processing and improving quality of service by minimizing errors in the posting of payments.

D

Retail EFT and Lockbox

Electronic funds transfer is still in its infancy as a retail accounts payment mechanism. There is an important distinction between electronic *transactions* and electronic *accounts payment*. Electronic transactions such as ATM/POS debits or EDC (electronic draft capture) for credit cards provide an immediate debit to a transaction account such as a checking account or credit card account. These transactions are rapidly increasing and will continue to do so for the foreseeable future.

Electronic account payments, on the other hand, involve the credit of an account for a balance due. There are two basic categories of such accounts:

- installment accounts, with equal periodic payments due

- open accounts, with debit transactions posted during the month and a variable balance due at month-end

The electronic account payment is most frequently used with fixed payment installment accounts such as:

- insurance premiums
- mortgage loans
- other installment loans (car, personal, etc.)

It is seldom used with variable-amount billings such as utility bills, revolving credit accounts, etc. One of the most important reasons is that, with variable-amount billings, people want to retain control over the key aspect of their payment:

- amount
- source (which account to debit)
- timing

In most cases of electronic payment, the creditor (insurance company, bank, etc.) originates the debit transaction and passes it through the banking system via the ACH mechanism. This is largely due to the

creditor's economies of scale and systems capabilities. Very few financial institutions have retail standing instruction systems which allow an individual person to schedule outward credits (e.g., for monthly rent or insurance payments). The only options generally available today are either having it done for you by the bank's trust department (if you are rich), or doing it yourself via a home banking computer system (if you are poor).

Despite rosy market projections and aggressive promotion, home banking systems have grown very slowly since they were introduced in 1983 (e.g., Chemical Bank's Pronto system). It is INPUT's belief that such systems are still a long way from becoming a significant force in the market. This means that electronic billing and consumer-initiated electronic payments will not be a threat to the current paper-based billing/payments system.

There is little interest by department stores and oil companies in initiating ACH debits for payment of retail credit accounts. Nor is this of apparent interest to utilities and other organizations that have variable monthly billings. Among other reasons,

- There are no savings in mailing costs; the customer still needs to be notified of the amount due and the backup details.
- It is perceived as a file maintenance headache for the firms.
- It would deprive the customer of desired flexibility in handling payments.

Therefore, it appears that retail lockbox activities will continue to be of significant importance in the payments system for the foreseeable future.

Again, there is certainly a strong trend toward electronification of *transactions*. Debit cards can increasingly be used in place of checks, and modern cash registers and other POS devices are creating a dramatic increase in electronic draft capture. But the ultimate result of all these transactions is still a monthly statement. And for credit accounts, there is still a monthly bill to be paid. This will not change, no matter how much improvement there is in draft capture. The only thing that might change this picture would be a wholesale shift from credit usage to direct debit, thus eliminating the need for monthly payments. Such an event is so unlikely it is not worth considering.

E

Card Issuance

In the banking area, there is less emphasis on rapid issuance of credit and ATM cards than there is in the leading retail stores. There is often a sufficiently complex linkage of multiple accounts through the ATM card that it takes more file maintenance to set up and validate the card than does a simple retail card. By the same token, since bank credit cards are

commonly linked to other accounts within the same bank for cross-selling, overdraft protection and credit offset purposes, there is often a similar delay in issuance processing for these cards as well.

Bank cards or any cards which use a magnetic stripe for reading have a recommended maximum life of two years. These card replacement standards are set by VISA and MasterCard for a variety of reasons, including quality control on the wear of the stripe as well as cleaning up issuer files and eliminating the need to maintain permanent stops on closed accounts when the cards do not have an expiration date. (Note: the expiration date is a standard field in the Track II stripe used by financial institutions.)

In retail credit cards, the tradition has been to use cards without magnetic stripes, expiration dates or complicated security features. There are several reasons for this. First of all, in POS systems, there is a great deal of key entry, bar code scanning, etc. to record product identification data. There is so little time to be saved by using equipment that will read a standard magnetic striped card (which costs so much more) that sales clerks still key in the customer account number rather than swipe cards through expensive readers.

In addition, since a retail credit card is used only in the issuing store, which has a direct link to its own data base for validation of the account number, there is not the problem of external controls and standards to allow third-party use that is required in the case of bank credit cards.

As POS technology has become increasingly widespread and less expensive, the trend has shifted to the use of mag-striped cards. However, many of these cards are still issued without an expiration date, and the account number is still entered manually rather than through a mag-stripe reader. Since the retail card is used only in the issuing store, and the store has direct, independent means of entering the account number if a card reader were to fail, the reliability of the stripe is not as important an issue as it is in the case of an ATM or bank credit card. Without an expiration date in the retail cards, there is little need for the kind of periodic mass reissues that are common in the bank card arena.

Because of the control issues and turnaround time involved, most banks and retail firms will probably continue to emphasize outsourcing of mass reissues over outsourcing of new card production. Many card vendors cannot provide less than one week turnaround for new card production, and this is simply too long for many potential clients.

F

Proprietary Supermarket ATM/ Debit Cards

There is an increasing trend toward use of POS systems in supermarkets. These systems reduce checkout times and improve cashier accuracy by scanning the UPC bar codes on products instead of having the cashier key in the item price. In addition, these systems help manage the stores' inventories by maintaining a running inventory balance of products sold.

A related trend is the drive to improve customer service and to cut costs by maximizing the throughput of checkout counters. POS systems are part of this approach, but their primary contribution to this objective relates to calculating the amount of the bill. There is still the process of handling the payment.

People still cash large volumes of checks in supermarkets—both payroll and personal, and this will probably continue for the foreseeable future. In some geographic markets you can assume that most people who have checking accounts also have an ATM card, and this is clearly the direction of the future. However, in other markets there is not much ATM usage.

There are several alternatives to consider in evaluating how to handle checks:

- Who assumes the credit risk for the check
  - the store
  - a credit authorization service such as Telechek or Cashex

- Where the authorization transaction is handled
  - "off-line," before the customer enters the checkout line
  - at the checkout counter

The best approach—in terms of customer service—is immediate authorization at the checkout counter, with minimal associated overhead (e.g., data recording, supervisory approval, credit checking, etc.).

Systems which require keyed data entry or authorization phone-in at the checkout counter (e.g., Telecredit) are too slow for supermarkets. These approaches are more suitable for smaller and/or slower-paced stores. Off-line (pre-checkout) authorization takes unwanted customer time, and will typically cost either excess management time or a transaction guarantee fee (e.g., the Cashex system).

In addition to the continued demand for check cashing in supermarkets, there is an increasing demand for payment (including cash-back) via ATM/debit cards. To accommodate these multiple demands, the best approach for a store is to have a dedicated, on-line system at the checkout counter which can accept ordinary ATM/ debit cards as well as handle check cashing authorization. Again, there are several choices:

- ATM/debit card systems only
- Proprietary store card system only
- Combined system (accepts both bank-issued and proprietary cards)

With an *ATM/debit card system*, the store maintains no customer information, provides no card or document to the customer, and strongly discourages cashing of checks. Customers can often check their available debit balances on a separate terminal in the store prior to entering the checkout line. At the checkout counter, they swipe their card through a reader and enter their PIN. The cashier enters the transaction amount (including any cash back), and the customer enters a code indicating acknowledgement of the transaction amount. The transaction is then switched over an ATM network for authorization and debit, and the store takes no credit risk. The major limitation from the customer standpoint is whether or not his bank is on the network(s) that the store participates in.

While providing the capability to use bank ATM/debit cards, a *proprietary store card system* typically allows additional capabilities, including check cashing authorization and electronic debit for people without ATM cards. Customers typically fill out an application and provide the store with a sample check from their bank. After a credit check and validation of the bank account, the customer is issued a card which can be used in the checkout terminal.

The customer sees the same transaction authorization process with this approach as with the ATM/debit card system. However, authorization is typically through a proprietary negative file maintained by the store, indicating which customers have had return items. Both checks and electronic debits are authorized in the same way, and electronic debits are processed through an ACH. To minimize costs of issuance, the customer may be given a mass-produced, prenumbered card (similar to Cashex cards). When the customer receives the card and selects the PIN, the prenumbered card is electronically linked to the customer record.

Obviously, the proprietary card system offers more convenience and flexibility to the customer, and some supermarkets feel that this is an important marketing capability. However, this approach has several disadvantages versus an ATM/debit system only:

- Costs more to implement and operate
- Increases store credit exposure because of lack of immediate debit

There is no question that supermarket POS/debit systems are increasing in popularity. For Moore, there are two questions:

- Which type of system will predominate?
  - ATM/debit card system
  - Proprietary store card system
  - Combined system

- How lucrative a market is there for the proprietary or combined system alternatives?

In INPUT's judgement, the bank-issued ATM/debit card system will dominate this market, for the following reasons:

- Cost to implement/operate is less
- Credit risk is less
- Cash availability is better
- ATM networks will increase in market coverage and interchange capability
- Bank-issued cards will find increasing acceptance and use as
  - more people carry them
  - more retail outlets accept them
- POS/debit transactions will increasingly replace checks as the debit card finds increasing acceptance and use

If more retail outlets accept bank ATM cards, and more people shift to these cards instead of checks, this will tend to erode the competitive advantage of proprietary card systems. The inherent nature of a supermarket operation (low margins, good mass media advertising coverage) generally does not lend itself to individually targeted/mailed customer promotions. In general, supermarkets do not care who their customers are, they just want to pull everyone possible in the door as frequently as possible and make it as easy as possible for them to spend.

Even in those stores which choose to implement or maintain a proprietary card system, the market does not seem attractive for Moore. As in the proprietary department/specialty store arena, the supermarket card cannot be used in any store other than the issuing store. Therefore, the card security is less rigorous than with bank-issued cards. Prenumbered, mass-produced cards do not have the matched mailer requirement that other cards do, and in many cases these cards are never mailed anywhere except in a batch to the store.

Due to cost considerations, it is not likely that many supermarket chains will produce and mail individually embossed cards, since there is no need for embossing or any other visible form of customer identification on the card. Finally, the volume of new cards produced appears to be so low—especially given that these systems will also accept bank-issued ATM cards—that production is not a problem for the supermarket.

On balance, INPUT believes that proprietary grocery store cards generally represent a low-volume, non-mailed product opportunity that is more akin to the forms business than the type of opportunities that IDS might be interested in pursuing.

There is, however, a major unknown here. Due to the limited number of interviews allocated to this market segment, INPUT has not been able to establish how the growth of these systems may differ from one regional market to another. It is clear that ATM/debit cards and networks have achieved far greater penetration in some markets than in others. And one reason why some supermarkets have developed their own proprietary systems is the lack of an adequate ATM/debit card infrastructure in their local market.

Other industries show similar differences by region: Southern California auto dealers essentially give away cars in order to sell finance, whereas in Iowa the rule is "cash on the barrelhead." It may well be that there are significantly different trends in grocery marketing in different regions of the country, and these trends could easily include different strategies regarding proprietary systems which bring the store in closer contact with the consumer. INPUT recommends that Moore extend its research to analyze this market on a regional basis as part of an overall strategic plan for the card business. Despite an overall assessment that this is not an attractive market, there may well be some profitable niches that could be exploited in specific regions of the country.

Finance

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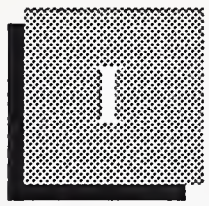


Introduction

A Objectives

INPUT has conducted this research to meet objectives agreed upon with Moore Business Forms' Information Distribution Services division (Moore IDS). See Exhibit I-1.

EXHIBIT I-1

Finance:
Key Research Objectives

- Evaluate business opportunities for both basic and enhanced services
- Achieve focus on leading opportunities
- Assess sales and delivery requirements
- Provide data for cross-industry evaluation

This finance industry study covers one of thirteen specific markets which will be the subject of the cross-industry evaluation mentioned in Exhibit I-1. Because of the close association of the finance market with credit cards and the retail market, the finance and retail areas are analyzed in a single combined volume.

Each of these market areas is treated as a separate study and documented in a separate section in this combined volume. Since the overall project

objectives and methodology are identical for both of these market areas, they are covered in the Introduction section of this volume.

Following the introduction to this volume is a separate section titled Transaction Processing Issues. This section covers a number of topics which are relevant to both market studies, and should be read as background for both.

The remainder of this chapter discusses the scope of the finance market study, including the industry categories analyzed, and the companies and categories of individuals interviewed. The remaining chapters of this finance section then discuss the specific finance opportunities identified by INPUT as being appropriate targets for further cross-industry evaluation in the next phase of this project.

B

Scope

Agreements between INPUT and Moore IDS as to the scope of the research to be conducted included both the finance market segments to be covered (also noting those to be excluded) and the size of companies to be interviewed (see Exhibit I-2).

EXHIBIT I-2

Finance:
Research Scope—Market Segments

- Market segments covered:
  - Banks
  - Thrifts
  - Fund Managers/Brokers
  - Full-Line Brokerages
  - Credit Unions
  - Non-Depository Credit Institutions (Retail Finance Companies)
  - Servicing Vendors (Mortgage Servicing Companies)

- Size of organizations contacted:
  - Almost all mid-sized
    - . Midscale Banks: excluded the top 100 banks (large) and those with less than $10 million in assets (small)
    - . Midscale Thrifts: excluded the top 25 thrifts (large) and those with less than $25 million in assets (small)
    - . Brokerage Sector: excluded the top 10 full-line brokerage firms (large)
  - "Non-small" Credit Unions: excluded those credit unions with less than $5 million in assets (small)

The largest banks, thrifts, fund managers and brokers were excluded due to the fact that they are not generally users of Moore IDS services. Moore IDS and INPUT agreed that, based on the business mailing volumes of these large organizations, there was a strong likelihood that existing in-house operations would prove difficult for Moore IDS to compete with.

Small companies were excluded due to the presumption that their smaller volumes would make them less attractive to Moore IDS, especially regarding the value to them in pioneering enhanced services.

The interview process was terminated after the completion of 29 interviews (see Exhibit I-3), although the number of interviews for two segments fell short of the number of interviews planned for these segments. Trends within these segments had become apparent and matched the findings in other segments, such as in the case of banking and thrift organizations. In addition, the overall number of interviews already exceeded the total planned.

EXHIBIT I-3

Finance:
Interviewing Sample

- Planned 28 interviews
  - 4 Banks
  - 4 Thrifts
  - 4 Fund Managers/Brokers
  - 4 Full-Line Brokerages
  - 4 Credit Unions
  - 4 Finance Companies
  - 4 Mortgage Servicing Companies
- Completed 29 interviews
  - 3 Banks
  - 5 Thrifts
  - 3 Fund Managers/Brokers
  - 4 Full-Line Brokerages
  - 5 Credit Unions
  - 4 Finance Companies
  - 5 Mortgage Servicing Companies

For the names of financial institutions of the individuals interviewed, refer to Exhibit I-4.

Approximately half of the individuals interviewed were data processing executives. Most of the rest were in operations or administrative functions. See Exhibit I-5 for a distribution of the interviewees by job category.

EXHIBIT I-4

Finance: Companies Interviewed

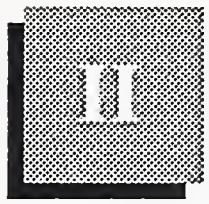
- **Banks**
  - California First Bank
  - Boatman's National Bank
  - Trust Company Bank
- **Thrifts**
  - Heart Federal Savings and Loan
  - American Saving and Loan Association of Florida
  - Columbia Savings
  - Benjamin Franklin Savings Bank
  - World Savings
- **Fund Manager/Brokers**
  - American Fund Group
  - Putnam Investors
  - Keystone
- **Full-Line Brokerages**
  - First Boston
  - Alex Brown
  - Dain Bosworth
  - Inter-Regional Financial Group
- **Credit Unions**
  - School Employees Credit Union
  - Los Angeles Teachers Credit Union
  - Electric Boat Community Credit Union
  - First Community Credit Union
  - Defense Mapping Federal Credit Union
- **Finance Companies**
  - Avco Financial Services
  - First Franklin Financial
  - Norwest Financial
  - USA Financial Services
- **Mortgage Servicing Companies**
  - United Mortgage
  - FBS Mortgage
  - Standard Mortgage
  - Gulf Coast Investment
  - Gershman Investment

EXHIBIT I-5

Finance: Categories of Interviewees

- 13 Information Services/Data Processing
- 13 Operations/Administration/Support
- 3 Business Management

Note: All interviewees understood what was meant by variable-image printing when the concept was explained, and all knew how their mailing operations were handled.



Executive Overview

A Research Summary

INPUT conducted telephone interviews with executives and managers from 29 organizations in the banking and finance industry. Roughly half the interviewees were senior-level executives, and the rest were midlevel managers. Most of the interviewees were from either the information systems/data processing function or the operations/administration function (evenly split), with only a few interviews from business management functions (see Exhibit I-5.)

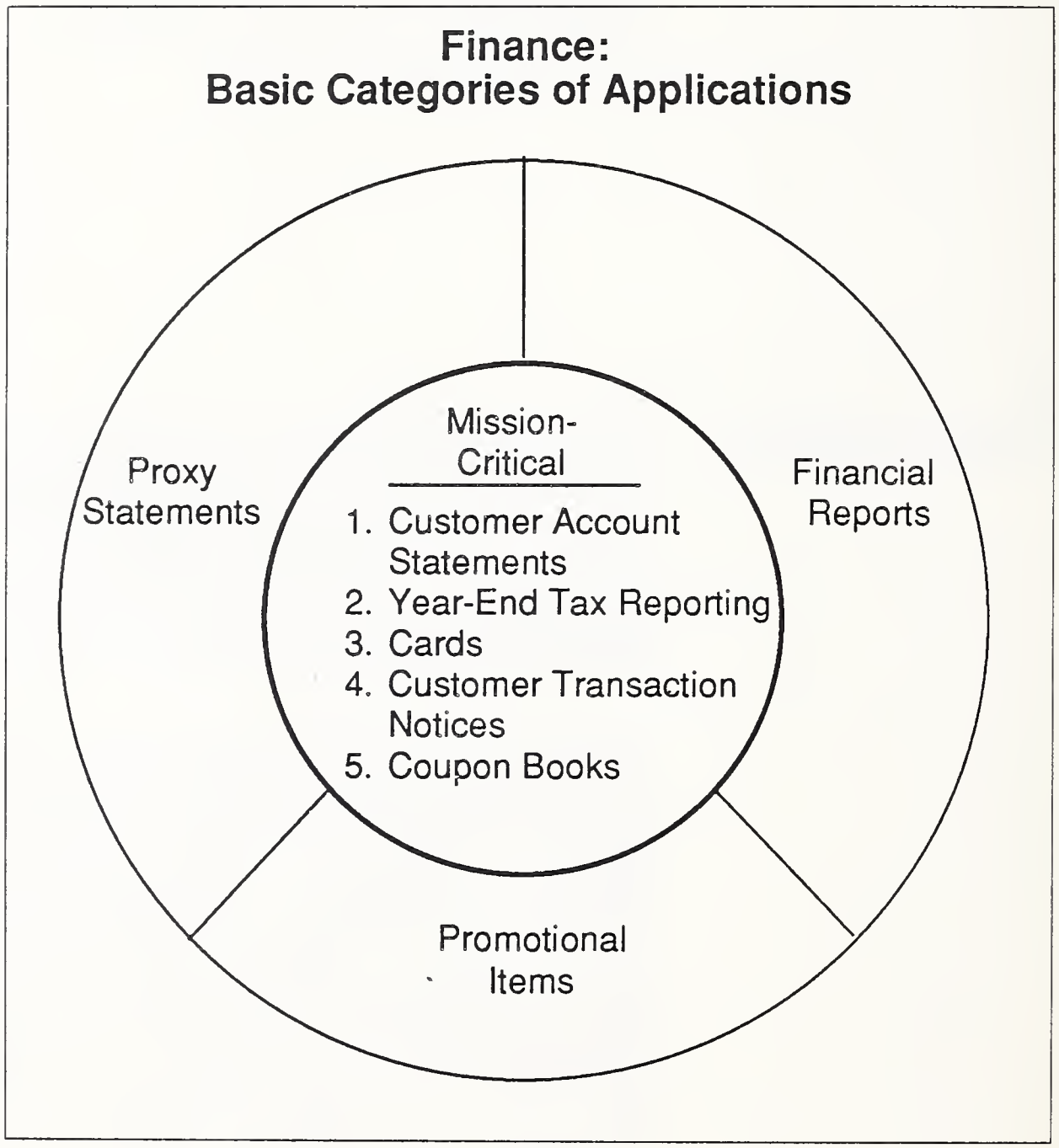
Interview results varied slightly as far as which applications were outsourced, with the exception of year-end reporting applications such as tax reporting. Many banks and other financial institutions have chosen to outsource these applications. Some firms outsourced their entire printing and mailing operations, in addition to some front- and back-end operations. However, most firms interviewed handle the bulk of their printing and mailing as well as their front- and back-end operations in-house, outsourcing only one or two applications or parts of applications. The reasons for selecting the particular applications for outsourcing vary from firm to firm. For example, the application may be disruptive in nature, such as year-end tax reporting, or the firm may not be equipped to handle the application in-house due to volume or other issues.

Few real problems are cited by interviewees, and few desired improvements were identified. In those cases where problems were identified, they had to do with time/quality issues, non-automated functions, and disruptive mailings. Other problems that these firms may have experienced in the past have, in many cases, been solved, through avenues such as outsourcing.

The types of printing and mailing applications that banking and finance companies identified are summarized in Exhibit II-1. Of these applications, many were considered to be "mission-critical" including all

customer account statements, year-end tax reporting statements, cards, customer transaction notices, and coupon books. Many respondents reported that all applications listed, including proxy statements and financial reports, were mission-critical.

EXHIBIT II-1



Each of these general applications categories covers a wide variety of specific mailings. Examples of these mailings are outlined below:

- *Customer account statements* - includes checking account statements, savings account statements, combined checking/savings account statements, installment loan statements, mortgage loan statements, credit card statements, trust account statements, brokerage account statements, and credit union member account statements

- *Customer transaction notices* - includes trade confirmation statements, late statements for installment/mortgage loans, bounced check notices, and returned item notices

- *Coupon books for installment/mortgage loans* - may be in a wide variety of formats, including OCR and MICR, with punched holes, etc., and assembled in a variety of sizes (1-year, 2-year, 5-year, etc.)

- *Cards* - includes Mastercard and VISA bank credit cards, ATM/debit cards, and check guarantee cards

- *Year-end tax and miscellaneous reporting* - 1042s, 1098/99s, 5498s, W2Ps, W4s, W8/9s, and year-end evaluation for retirement accounts

- *Proxy statements* - typically includes a copy of the annual report and proxy statement, as well as a ballot and return envelope for shareholder voting

- *Financial reports* - separately mailed annual reports, quarterly reports, etc.

- *Promotional items* - various bulk-mailed material

Since the last two categories of mailings do not involve variable imaging beyond name and address labels, they have been excluded from this analysis, despite the characterization of financial reports as mission-critical by some interviewees.

In addition to these basic printing and mailing applications, INPUT identified a potential enhanced service involving two major financial applications. An enhanced service is one which goes beyond the scope of Moore IDS' current business offerings:

The enhanced service identified is in the area of retail lockbox services. The two major application areas include:

- *Bank credit card payment processing services* - Bank credit card payment processing (lockbox) services could be provided in addition to the printing and mailing of cards and statements.

- *Loan payment processing services* - Loan payment processing (lockbox) services could be provided in addition to printing and mailing of coupon books and loan statements for both installment and mortgage loans.

However, these businesses should be approached with caution. There is a general opportunity for IDS to expand its business in data processing and lockbox functions for a variety of industries. However, the level of skill

and expertise necessary to compete in this arena would make it difficult to achieve success without some compelling strategic advantage.

B

Application Opportunity Size

A methodology was applied to develop rough opportunity sizing measures for quantitative comparison of the basic applications (number of pieces x frequency of mailing x revenue/piece = opportunity size). In addition, for enhanced services, the value of the additional data processing services was estimated using a similar approach. This provides Moore IDS with a measure of total latent potential expenditures for the service without regard to rate of adoption, in-house versus external solutions, competition, and so on (see Exhibits II-2 and II-3).

EXHIBIT II-2

Finance:
Basic Opportunities Sizing
($ Millions)

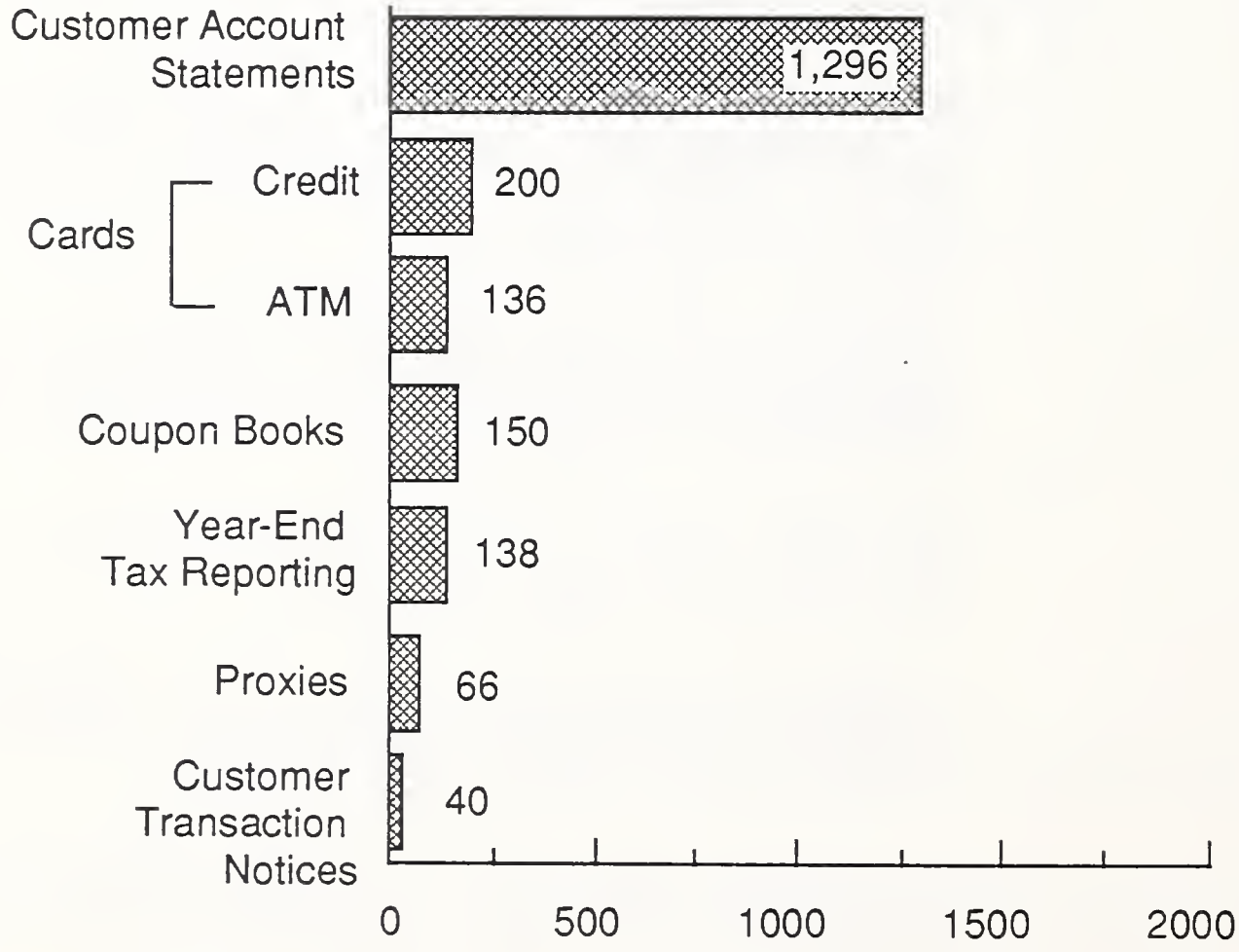
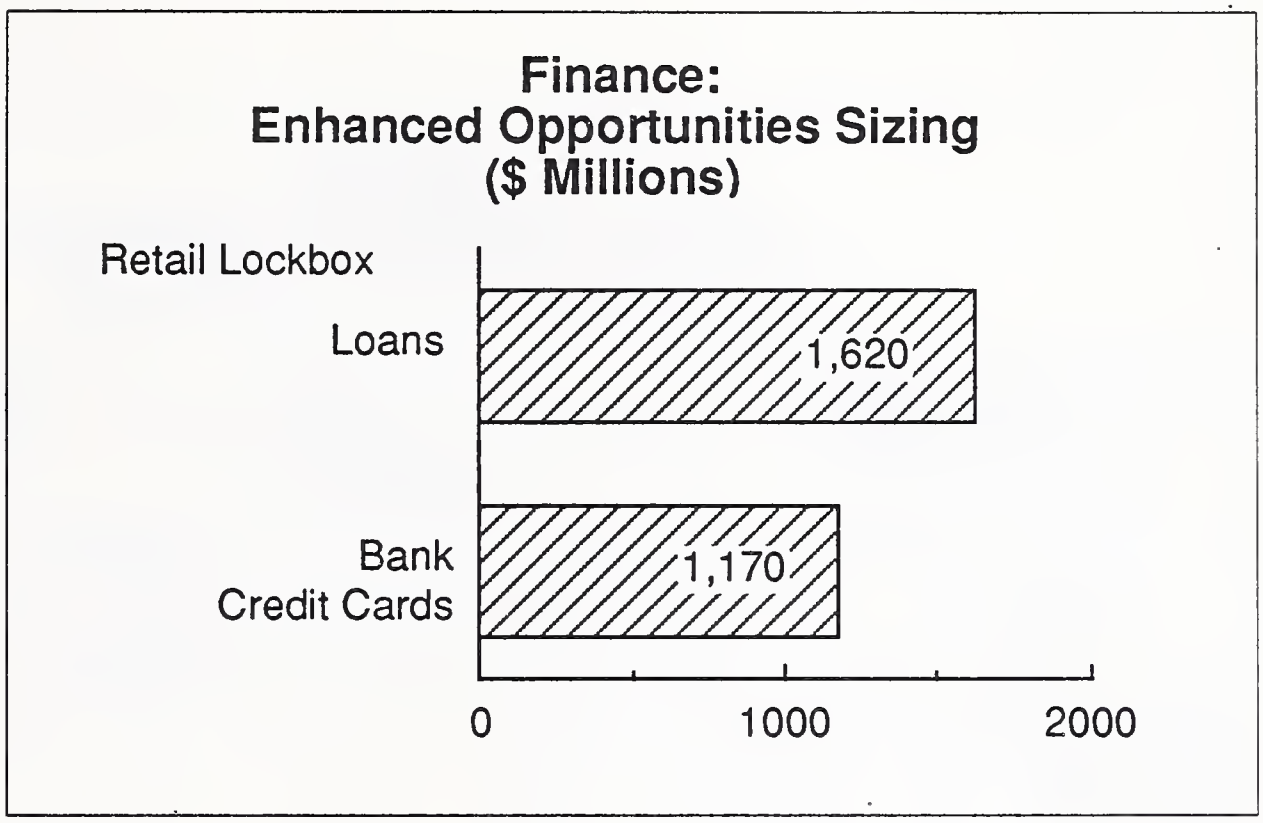


EXHIBIT II-3



C

Application Opportunity Attractiveness

Exhibits II-4 and II-5 use a standard rating methodology to balance the opportunity size calculated with two other key criteria distilled from the interviews: firms' willingness to outsource, and their level of "pain" or problem, each with respect to a particular application.

As shown, a five-point rating scale is applied to each criterion, where a "1" indicates a criterion that is negative to Moore's interest in winning—or likely ability to win—such business, while a "5" shows a very positive criterion. By rating each of the criteria and then multiplying the ratings (the multiplication shown in the tables as "Relative Size x Willingness to Outsource x Level of Pain or Problem"), the product is a "Relative Rating Value" that represents the overall attractiveness to Moore, doing so in a fashion that combines the quantitative opportunity-volume sizing with the other two essentially qualitative criteria. This analysis indicates that larger opportunities are not necessarily more attractive, and that those of roughly equal size can have very different levels of attractiveness.

Basic services show a high average rating on willingness to outsource, reflecting the fact that a good deal of financial institution data processing and card production is already outsourced. In the enhanced services area, however, the situation is different.

One of the common phenomena in the financial services arena is that there is a tendency to outsource entire product lines. In credit card applications, for example, there is a significant amount of back office operations and data processing associated with the business. When the underlying business application is outsourced, this includes all the associ-

EXHIBIT II-4

Finance: Relative Attractiveness Ratings of Basic Services Opportunities

Application opportunity ($ in millions)		Criteria ratings (range: 1 = negative to IDS, 5 = positive)			Overall attractiveness (range: 1 = lowest 125 = highest)
Type	Size	Relative Size X	Willingness to Outsource X	Level of Pain or Problem	= Attractiveness Rating Value
Year-End Tax Reporting	138	2	4	5	40
Customer Account Statements	1,296	5	2	2	20
Cards					
• Bank Credit	200	2	3	3	18
• ATM	136	2	3	3	18
Coupon Books	150	2	5	1	10
Proxies	66	1	4	1	4
Customer Transaction Notices	40	1	1	2	2
Total	2,026				112

ated operations, data processing, basic printing and mailing, and card production. In such cases, the organization with the underlying business application has nothing left to outsource. In the case of the enhanced applications identified here, there would be a much greater willingness to outsource the entire line of business (e.g., credit card processing) than only a part of it (the lockbox, or payments processing aspect).

EXHIBIT II-5

Finance: Relative Attractiveness Ratings of Enhanced Services Opportunities

Application opportunity ($ in millions)		Criteria ratings (range: 1 = negative to IDS, 5 = positive)			Overall attractiveness (range: 1 = lowest 125 = highest)
Type	Size	Relative Size X	Willingness to Outsource X	Level of Pain or Problem =	Attractiveness Rating Value
Retail Lockbox Services for:					
• Loans	1,620	5	2	2	20
• Credit Cards	1,170	5	1	2	10
Total	2,790				30

Even if there were a greater willingness to outsource a part of the application, Moore faces another difficulty in addressing this market. Since information processing is at the core of their business, financial services organizations are not likely to be interested in outsourcing processing services to a firm which has no track record in these activities.

D

Target Audience of the Enterprise Served

Exhibits II-6 and II-7 organize opportunity size and attractiveness measures by the target audience of the applications considered. While this is done for purposes of later cross-industry analysis at the conclusion of INPUT's research project, it is clear that the dominant applications in the finance market deal with year-end tax reporting, customer account statements, card issuance, and loan payment processing (lockbox) services. All of these services involve mailings directed toward individual consumers—either the customers of the financial services firm, or the customers of its clients.

EXHIBIT II-6

Finance:
Opportunity Size by Target Audience
($ Millions)

Type of Service	Target Audience					Total
	Owners	Employees	Customers	Suppliers	Internal Efficiency	
			Business / Consumer			
A. Basic						
• Cards						
-Bank Credit			200			200
-ATM			136			136
• Customer Acct. Statements			1,296			1,296
• Customer Transaction Notices			40			40
• Coupon Books			150			150
• Proxies			66			66
• Tax Reporting			138			138
Subtotal			2,026			2,026
B. Enhanced						
• Loan Lockbox Services					1,620	1,620
• Bank Card Lockbox Svcs.					1,170	1,170
Subtotal					2,790	2,790
Total			2,026		2,790	4,816

EXHIBIT II-7

Finance:
Opportunity Attractiveness by Target Audience
(Attractiveness Rating Score)

Type of Service	Target Audience					
	Owners	Employees	Customers	Suppliers	Internal Efficiency	Total
			Business / Consumer			
A. Basic						
• Cards						
- Bank Credit			18			18
- ATM			18			18
• Customer Acct. Statements			23			20
• Customer Transaction Notices			2			2
• Coupon Books			10			10
• Proxies			4			4
• Year-End Reporting			40			40
Subtotal			112			112
B. Enhanced						
• Loan Lockbox Services					20	20
• Bank Card Lockbox Svcs.					10	10
Subtotal					30	30
Total			112		30	142

E

New Sales and/or Delivery Mechanisms Required

Exhibit II-8 outlines the new sales and delivery mechanisms required in this market.

EXHIBIT II-8

Finance:
New Sales and Delivery Mechanisms Required

Opportunity	Sales/Mgmt Expertise	Printing Equipment	Information Technology	Alliances/ Acquisitions
Loan Payment Processing (Lockbox) Services	Knowledge of Lockbox Processing and Treasury Management Issues	(none)	Lockbox Processing Software Coupon Scanners Check Sorters Data Transmission	Lockbox Vendors Banks

Within the finance market area, there is one major opportunity to provide an enhanced service-payment processing (lockbox) services, which does not involve new printing or other technology. However, it is a new business area for Moore IDS.

In order to sell loan payment processing services, Moore IDS will require knowledge of lockbox operations, in addition to knowledge of the financial issues faced by a corporate treasurer. In other words, Moore IDS will need to gain understanding of lockbox operations from the vendor perspective as well as the customer perspective.

Due to the high competition and specialized nature of these services, it would be helpful for Moore to pursue any business development in this area with other, complimentary business opportunities to support these services. For example, there are similar lockbox opportunities available in the retail area and in the services area, and these back-end lockbox opportunities are also associated with basic printing and mailing opportu-

nities for the same customers. As pointed out in the retail report, there are significant advantages in handling lockbox processing if you have access to the database which produced the original statements or bills.

F

Threats and Opportunities

Exhibit II-9 lists a number of environmental threats and opportunities relevant to the applications associated with the finance market. The most ambiguous issues are those surrounding outsourcing, as there are conflicting trends both increasing and decreasing the attractiveness of this opportunity.

EXHIBIT II-9

Finance: Environmental Threats and Opportunities

Threats

- Decreasing cost of hardware and increasing availability of software packages/ turnkey systems makes it easier for firms to bring currently outsourced applications in-house
- Investments already made by financial institutions in printing and mailing equipment, and the learning curve involved with handling printing and mailing operations in-house may deter firms from outsourcing

Opportunities

- The trend toward consolidation within this industry may present Moore with opportunities as firms attempt to merge their data processing, printing and mailing operations. (This is a logical time for these firms to consider outsourcing, since they will be making a number of changes anyway.)
- Postage may rise 25% in 1991, increasing the importance of sophisticated mailing systems which can take advantage of automated processing discounts from the Post Office.
- Outsourcing of DP functions is increasing across all industries (e.g., Kodak's contract with IBM).

G

Competition

In general, there are two forms of competition in this market: processing services vendors (including banks), and in-house processing.

Individual vendors can handle some or all of the outsourced applications. For example, card vendors can emboss and encode bank credit cards or ATM cards, print related materials to be sent out with the cards, and mail the cards. Processing services vendors send out statements and provide collection (lockbox) services, and may have card production capabilities as well.

In addition, in-house processing can be used to handle all printing and mailing operations as well as any required front- and back-end processing. A bank or other financial institution has a choice of which operations to perform in-house and which to outsource. For example, a bank may handle customer account statements, credit card processing and customer transaction notices, but outsource the printing and mailing of coupon books, proxies, financial reports, year-end tax reporting and card production.

H

Summary Conclusions

In summary, INPUT has several observations regarding potential applications in the finance market (see Exhibit II-10):

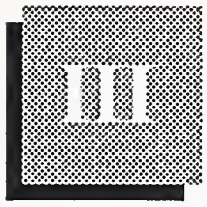
EXHIBIT II-10

Finance:
Market Observations/Recommendations

- From customer's standpoint, tax-reporting is clearly most attractive
- Card production better market than statement processing, as it represents more of a problem to customer and is frequently outsourced as basic service
- Statement processing is high volume, but less frequently outsourced as basic service—more frequently as part of outsourcing total processing
- Coupon books should be good market, as nearly all outsourced already. However, low cost and specialized nature of product may make market financially challenging
- In enhanced services area, emphasize loan processing lockbox services over credit card processing

The finance area is clearly one of the most complex markets that Moore has to address. Decisions regarding outsourcing of basic applications are complicated by the fact that so much of the processing is already outsourced to other vendors. Therefore, some of Moore's opportunities may lie with subcontracting to other vendors, rather than directly with financial institutions.

Because of the complexities of this industry, it is imperative that Moore develop a strategy which defines how it wishes to participate in the market.



Market Opportunities

Before discussing the opportunities identified by INPUT, it will be useful first to set the stage by summarizing findings about outsourcing by organizations in the finance market, as well as interviewees' expressed attitudes about future outsourcing and their descriptions of problems they now face or improvements they wish to make.

A Introduction

Exhibit III-1 summarizes how the six potential applications identified by INPUT are applicable to the seven segments of the financial services market.

Several important patterns emerge:

For Moore IDS' purposes in identifying opportunities to provide basic and enhanced services to the financial community, banks, thrifts and credit unions can be viewed as identical markets. These organizations all provide essentially these same kinds of services to retail customers, and all have similar requirements for printing and mailing applications, including all major variable-imaging applications identified for finance.

Fund managers/brokers and full-line brokerages form a second category of markets with similar, though less extensive, applications. Since neither of these organizations makes installment loans, they do not produce coupon books. In addition, full-line brokerage firms such as Merrill Lynch may offer "credit cards" (actually, VISA cards which debit customers' brokerage accounts), while the fund management companies such as Putnam do not. Both types of firms provide customer account statements, customer transaction notices (although full-line brokerages do so at a higher volume), and send out proxies and financial reports.

EXHIBIT III-1

Applications by Market Segment

Application	Banks	Thrifts	Credit Unions	Fund Mgrs./ Brokers	Full Line Brokerage	Finance Companies	Mortgage Service Co.
	Type of Financial Institution						
Cards Bank Credit ATM	* *	* *	* *		*		
Customer Account Statements	*	*	*	*	*	Optional	Optional
Customer Transaction Notices	L	L	L	L	H	VL	VL
Coupon Books	*	*	*			*	*
Proxies	*	*	*	*	*		
Tax Reporting	*	*	*	*	*	*	*

Key: * = Application found in that market segment
VL = Very low volume
L = Low volume
H = High volume

Finance companies and mortgage servicing companies are also similar in the variable-imaging applications in which they are involved. These companies provide coupon books and year-end tax reporting, as well as a relatively low volume of customer transaction notices. Other than at year end, periodic customer account statements are optional for both finance companies and mortgage servicing companies.

The following patterns regarding attitudes towards outsourcing emerged from INPUT's interviews with financial companies:

- Few banks and thrifts outsource all of their printing and mailing functions; however, many outsource one or two applications, such as the printing and mailing involved in sending out bank credit card/ATM cards. Issues that come into play involve account control, data security, investment in equipment and training, and cost-effectiveness in doing the printing and mailing in-house.

- Often the year-end tax reporting and other intermittent printing jobs, such as proxies, are outsourced. This is true for banks and thrifts, as well as all financial companies, due to the disruptive nature of these jobs. In addition, most outsource the printing of coupon books and the manufacturing of cards.

- Fund managers and brokerage firms tend to outsource customer account statements more often than do banks and thrifts, as well as proxies and year-end tax reports. However, all fund managers/brokers interviewed reported that trade confirmation statements, which are sent out on a daily basis, are done in-house. The requirement for immediate (same-day) turnaround on these items means that trade confirmations are not a viable application for outsourcing.

- Although the applications that credit unions handle exactly match the applications of banks and thrift organizations, credit unions are much more likely to outsource their entire printing and mailing operation. The great majority of credit unions are smaller than the midscale banks and thrifts that have been identified as potential targets for Moore IDS. Therefore, credit unions generally do not have the resources to handle these functions; nor do they handle the same high volume of printing and mailing required to achieve economies of scale in-house.

- Finance companies handle most variable-image printing and mailing applications in-house, with the exception of year-end tax reporting and coupon books. In addition, they often outsource the loan payment processing (lockbox) part of their operations.

- Mortgage servicing companies, on the other hand, handle most applications in-house, with the exception of the printing and mailing of coupon books and year-end tax reporting. Mortgage servicing companies are essentially loan processing companies. The very nature of the mortgage servicer's business mandates that it perform the loan processing. For this reason, mortgage servicing companies are not a good target for loan payment processing services.

- All financial companies interviewed reported that they utilize disaster recovery services, which involve the use of "hot sites" and regular, often daily, backup of data to one or more sites. With the exception of checking account statements, the printing, insertion and mailing of financial statements is a straightforward application that can be handled

at any backup site, with the mailing functions contracted out to a local mailing house. Card production is not generally viewed as being as time-critical as the other production functions, and there are a number of vendors that can pick up this process on an emergency basis when required.

For a summary of outsourcing patterns for printing and mailing functions by financial companies, see Exhibit III-2.

EXHIBIT III-2

Finance: Outsourcing Patterns

- Account control, data security, investment in equipment and training, and cost-effectiveness of performing printing and mailing functions are all issues in determining whether an application is handled in-house.
- Banks and thrifts generally outsource one or two applications, such as year-end tax reporting, printing of coupon books, mortgage loan business, and bank credit/ATM cards.
- Fund managers/brokers sometimes outsource customer account statements, as well as proxies and year-end tax reporting; however, all trade confirmation statements (customer transaction notices) are handled in-house.
- Credit unions often outsource all variable-image printing and mailing applications, due primarily to the fact that they often do not handle a high enough volume to achieve economies of scale in-house.
- Finance companies handle most applications in-house, except year-end tax reporting and coupon books. Also, they often outsource loan payment processing services.
- Mortgage servicing companies handle all applications in-house, except the printing of coupon books and year-end tax reports. This group is not a good candidate for loan payment processing services.
- All financial companies utilize disaster recovery services.

Many companies reported they were satisfied with current front-end, printing and mailing, and back-end operations and were currently experiencing no problems. These companies appear to have found solutions to their problems, sometimes by purchasing new equipment and keeping operations in-house and sometimes by outsourcing. Problems that these companies have experienced at one time or another are outlined in Exhibit III-3.

EXHIBIT III-3

Finance: Problem Areas

- Some organizations do not have the capacity in-house to simultaneously handle all applications quickly and maintain high quality .
- Year-end tax reporting disrupts normal business printing and mailing activities.
- If the inserting process is performed manually, the process is labor-intensive and time-consuming.
- Obsolete hardware and software slows the printing and mailing process.
- Respondents reported that payment processing is somewhat problematic. Some financial companies are using old systems and manually key-punching data to perform this function.

B

Leading Application Opportunities

Basic service opportunities identified by INPUT include year-end tax reporting, customer account statements, and cards. The enhanced service opportunity identified was loan payment processing (lockbox) services.

1. Basic Services Opportunities

a. Year-end Tax Reporting

This is an application that was identified by all types of financial companies as being problematic in that it is disruptive to the normal business mailing operations. Many companies currently outsource this application.

b. Customer Account Statements

These statements represent a good opportunity as well, even though many banks and other financial institutions perform this application in-house. The fact that a tremendous volume of customer account statements are distributed each month and there is some degree of willingness to outsource this application led INPUT to recommend it as a basic service opportunity for Moore IDS.

c. Card Issuance

The basic opportunity here is in the production and mailing of the cards themselves, including printing of variable information on the carrier and inserting various forms, brochures, etc. (e.g., accompanying Reg Z notices). Many banks and other financial institutions are either currently outsourcing this function or expressed a willingness to outsource it. In addition, a moderate level of pain/problem was associated with the application.

2. Enhanced Services Opportunities

a. Loan Payment (Lockbox) Processing

This opportunity was better than credit card payment processing services, because most banks and other financial institutions that handle credit card processing either handle the entire processing function in-house, including application processing, transaction processing, statement rendition and payment processing, or outsource the entire operation. It would not make sense for the banks that do their own credit card processing in-house to outsource the payment processing portion. Since it is unlikely that Moore IDS would become a full-service credit card processing provider, and because loan payment processing is outsourced by finance companies, credit unions, and other financial institutions, loan payment processing is a much better opportunity.

C

Application/Service Opportunity Sizing and Ratings

The previous section detailed the leading application opportunities, approaching the subject qualitatively. This section applies quantitative methods to place approximate numeric dollar-sizes on each opportunity and to rate their attractiveness.

Appendix A, Calculation Worksheets, provides the detailed backup for unit volume estimates of all applications considered. Basically, transaction volumes were projected as follows:

- Estimates were made of the total size of the population involved (e.g., number of households within the U.S.).

- Estimates were then made of the number of various types of accounts per household, number of cards issued per account, etc. Wherever possible, these data were cross-checked with statistics provided by Moore (e.g., from Nielson reports), and with similar ratios reported in the interviews.

- Estimates were then made of the average number of variably-imaged mailings required for each financial application.

- The results were then multiplied by estimated unit-prices for each type of application, yielding a figure for the total dollar opportunity size for each mailing type. Note that this methodology includes the estimated value of enhanced services—e.g., bank credit card and installment and mortgage loan lockbox revenue.

Using the opportunity-sizing methodology just described, customer account statements and retail lockbox services for loan processing provide excellent opportunities—in excess of $1 billion per year. The other recommended applications—card production, coupon books and year-end tax reporting—also provide substantial opportunities, in the $100-200 million range (see Exhibits III-4 and III-5).

In addition to those enhanced services opportunities identified and sized here, INPUT sees a potentially significant opportunity in the area of disaster recovery services. However, since this is a cross-industry market, and could not be sized with any degree of accuracy, it is discussed in Chapter V under Other Application Opportunities.

EXHIBIT III-4

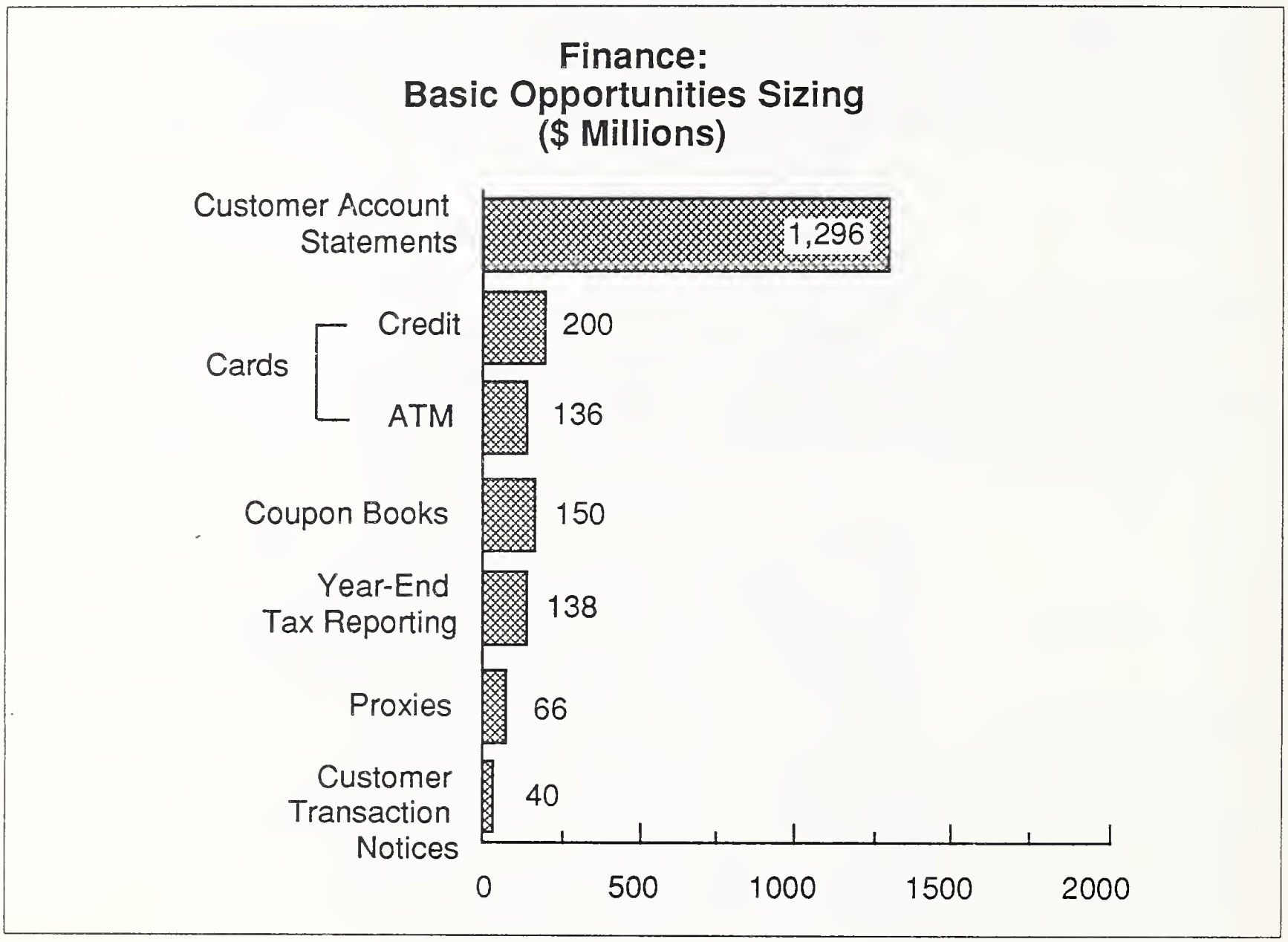
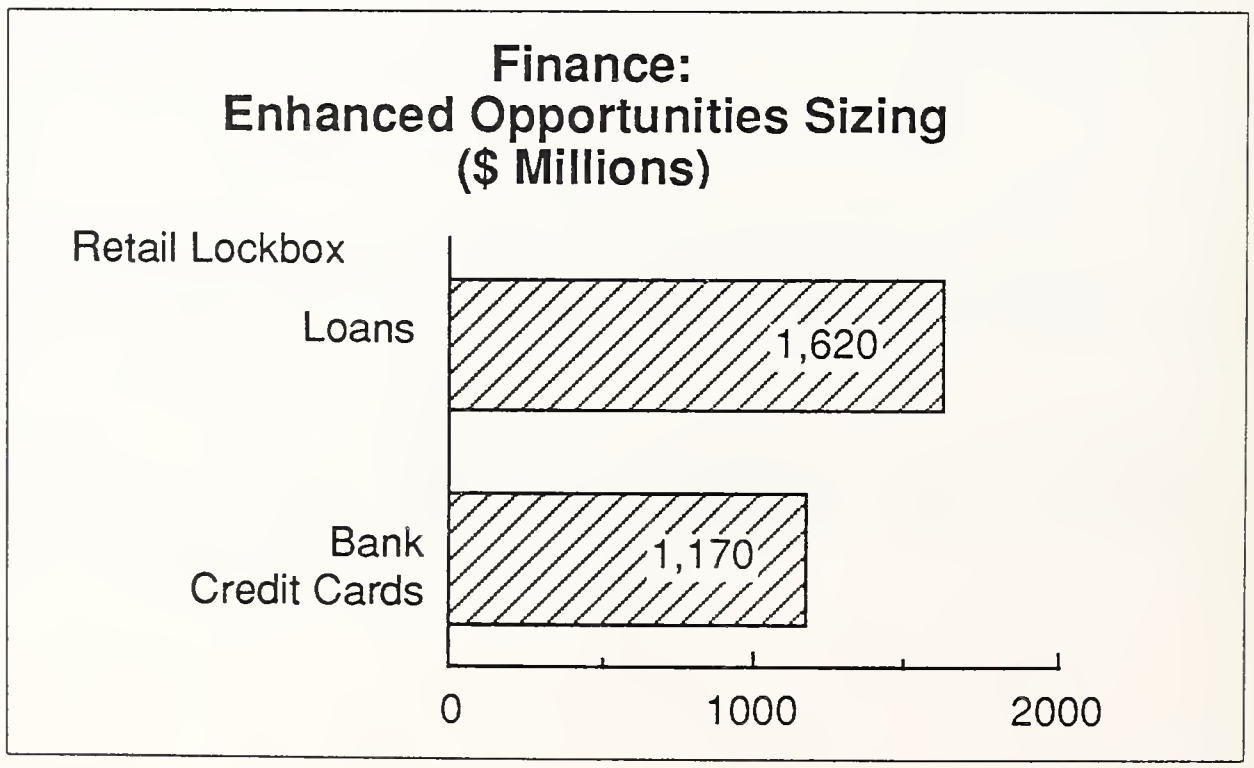


EXHIBIT III-5



Following this analysis of opportunity size, INPUT applied a standard rating methodology to factor the size of the opportunity just shown with two other key criteria distilled from the interviews: willingness to outsource and level of pain or problems associated with the application (see Exhibits III-6 and III-7).

As shown along the top of the exhibit's table, a five-point rating scale is applied to each criterion, where a "1" indicates a criterion that is negative to Moore's interest in winning--or likely ability to win—such business, while a "5" shows a very positive criterion. By rating each of the criteria and then multiplying the ratings (the multiplication shown on the table as "Relative Size x Willingness to Outsource x Level of Pain or Problem"), the product is a Relative Rating value that represents the overall opportunity to Moore IDS in a fashion that combines the quantitative opportunity-volume sizing with the other two essentially qualitative criteria.

Relative size ratings are determined as follows:

Size Range ($ millions)	Rating
1-100	1
101-300	2
301-700	3
701-1,000	4
>1,000	5

The rationale is that an application opportunity is not of any strategic interest unless its size is at least $50 million, because a 10% development of the latent potential would be only $5 million per year in IDS revenue. Likewise, any opportunity over $1 billion is top rated (i.e., a "5") no matter how many billions of dollars it represents.

In the area of basic services, the average rating on willingness to outsource reflects the fact that a good deal of financial institution data processing, card production and printing/mailing is already outsourced, even though it is all deemed mission-critical. The low rating for customer transaction notices reflects their low volume combined with their time-critical nature, and the high ratings for proxies and year-end tax reporting reflect the fact that these are the two most frequently outsourced applications.

The outsourcing situation is quite different in the area of enhanced services. In these cases, Moore would be attempting to provide core financial industry processing services to financial institutions in direct competition with large banks and other processing services vendors.

EXHIBIT III-6

Finance: Relative Attractiveness Ratings of Basic Services Opportunities

Application opportunity ($ in millions)		Criteria ratings (range: 1 = negative to IDS, 5 = positive)			Overall attractiveness (range: 1 = lowest 125 = highest)
Type	Size	Relative Size X	Willingness to Outsource X	Level of Pain or Problem =	Attractiveness Rating Value
Year-End Tax Reporting	138	2	4	5	40
Customer Account Statements	1,296	5	2	2	20
Cards					
• Bank Credit	200	2	3	3	18
• ATM	136	2	3	3	18
Coupon Books	150	2	5	1	10
Proxies	66	1	4	1	4
Customer Transaction Notices	40	1	1	2	2
Total	2,026				112

EXHIBIT III-7

Finance: Relative Attractiveness Ratings of Enhanced Services Opportunities

Application opportunity ($ in millions)		Criteria ratings (range: 1 = negative to IDS, 5 = positive)			Overall attractiveness (range: 1 = lowest 125 = highest)
Type	Size	Relative Size X	Willingness to Outsource X	Level of Pain or Problem =	Attractiveness Rating Value
Retail Lockbox Services for:					
• Loans	1,620	5	2	2	20
• Credit Cards	1,170	5	1	2	10
Total	2,790				30

The willingness of a bank or other financial institution to outsource credit card lockbox services is rated low at "1" for the following reasons. While many banks and other financial institutions offer credit cards, most of them subcontract their processing to a few large banks and processing vendors that specialize in this business. In this case, the financial institution does not handle the payments processing and therefore has nothing to subcontract.

If processing is done in-house, the bank is by definition a credit card processing company, and the likelihood of outsourcing the payment processing portion of their credit card business is low. It would be difficult for Moore IDS to obtain a bank's card payment processing business without becoming a full-fledged card processing vendor.

On the other hand, financial institutions perform other functions than payments processing. The smaller banks, thrifts, etc. that outsource some or all of their data processing still borrow and lend money and assume the credit risk of their loan portfolios. Since payments processing is one of

the more burdensome and paper-intensive aspects of the financial services business, it is not unusual for smaller banks to handle loan origination while outsourcing the processing. Therefore, the opportunity for handling installment loan payments, as opposed to credit card payments, has been given an attractiveness rating of "2".

The "Level of Pain or Problem" ratings reflect a combination of workload and control issues facing financial institutions. The lowest level of problem is with low-volume items that have low security and time criticality requirements —coupon books and proxy statements. Statements and transaction notices, while time-critical, are a routine and low security core activity. For those organizations that handle card production in-house, the pain/problem level is higher due to the security issues involved. And even in dealing with outside vendors, there are time and security issues to consider. The most obvious problem is with year-end reporting, all of which falls into a one-month timeframe and interferes with normal daily processing workloads.

Given these ratings, INPUT rates the year-end tax reporting, customer account statements, card production and loan payment processing services as the leading opportunities. Note, however, that this methodology does not account for the difficulty of developing and/or delivering a service opportunity, on the assumption that these are primarily investment questions: what corporate resource commitments are required to implement the objective? Unfortunately, the implementation costs, low profit margins and competitive risks may prove prohibitive. Some of the most attractive things for customers to outsource are periodic overloads which, coming at the same time from all customers, can create severe problems for Moore—tax reporting, for example.

There is an important implication of this methodology. While the highest relative rating value possible here is 125 (5 x 5 x 5), three moderate ratings of 3 each yields a product of only 27. Clearly this is not 50% of the top rating of 125, and yet it is actually quite instructive: an opportunity that is totally positive to IDS's interests in all ways—three ratings of 5 each—certainly should be far ahead of any moderately-sized application for which customers now express a moderate willingness to outsource and experience only moderate pain or problems.

D Summary Conclusions

In summary, INPUT has several observations regarding potential applications in the finance market (see Exhibit III-8):

EXHIBIT III-8

Finance: Market Observations/Recommendations

- From customer's standpoint, tax-reporting is clearly most attractive
- Card production better market than statement processing, as it represents more of a problem to customer and is frequently outsourced as basic service
- Statement processing is high volume, but less frequently outsourced as basic service—more frequently as part of outsourcing total processing
- Coupon books should be good market, as nearly all outsourced already. However, low cost and specialized nature of product may make market financially challenging
- In enhanced services area, emphasize loan processing lockbox services over credit card processing

The finance area is clearly one of the most complex markets that Moore has to address. Decisions regarding outsourcing of basic applications are complicated by the fact that so much of the processing is already outsourced to other vendors. Therefore, some of Moore's opportunities may lie with subcontracting to other vendors, rather than directly with financial institutions.

Because of the complexities of this industry, it is imperative that Moore develop a strategy which defines how it wishes to participate in the market.

IV

Implementing Enhanced Services: Sales/Delivery Mechanisms Required

Basic opportunities that have been identified represent processing capabilities which Moore IDS has available with its current equipment. The only exception may be the area of coupon books, in which Moore IDS may not currently have the equipment available to produce the wide variety of coupon formats found in the marketplace today (OCR, MICR, punched holes, etc.).

The new sales and delivery mechanisms that will be needed for Moore IDS to offer the loan payment processing enhanced services are outlined in Exhibit IV-1.

EXHIBIT IV-1

Finance:
New Sales and Delivery Mechanisms Required

Opportunity	Sales/Mgmt Expertise	Printing Equipment	Information Technology	Alliances/ Acquisitions
Loan Payment Processing (Lockbox) Services	Knowledge of Lockbox Processing and Treasury Management Issues	(none)	Lockbox Processing Software Coupon Scanners Check Sorters Data Transmission	Lockbox Vendors Banks

See the following sections for column-by-column discussions on this exhibit.

A

Sales and Management Expertise

In order to sell loan payment processing services, Moore IDS will require knowledge of lockbox operations and treasury management issues. In other words, Moore IDS will need to gain understanding of lockbox operations from the bank and customer perspectives as well as the vendor perspective. In addition, the sales staff will have to understand the competition in this field, and how to structure situations that may require joint operations with competitors.

B

Printing Equipment Required

No new printing equipment is required in the lockbox type of operation.

C

Information Services Technologies Required

The new information technology required will depend on the services to be provided. At a minimum, processing software and coupon scanners will be required to automate the capture of payment data. Obviously, some additional data processing hardware will also be required to run the systems.

If more of a high-end service is to be provided, some customers will want payment data transmitted electronically on a daily basis. This may be in the standard BAI lockbox standard format, or other customer-specific formats. For large customers, Moore must be ready to do custom programming to provide payment data in the format desired.

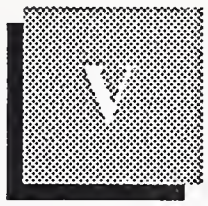
As a minimum, Moore must also batch prove checks and send them to a bank for deposit processing. Taking on more of the bank's work, such as encoding and sorting checks, would provide added revenue, but would also require added investment.

D

Potential Alliances/ Acquisitions

A number of firms would be potential allies and/or acquisition candidates for Moore IDS. These include companies that currently provide lockbox services with which Moore IDS could form a third-party relationship or acquire, as well as banks which are currently providing these services, with which Moore IDS could also form an alliance.

Some such acquisitions would probably be a strategic necessity in order for Moore to gain the credibility and expertise required to handle lockbox operations. In addition, from a purely operational standpoint, unless Moore buys or creates a bank in every location where it provides lockbox services, it must work with the customer's bank(s) in handling the deposits, and strong coordination will be required between Moore and the bank to reconcile the payment records with the deposit records, and to handle the return item processing.



Other Observations

A

Data Processing/ Information Services Issues

Entering the loan payment processing business would require that Moore IDS acquire an indepth knowledge of the lockbox business and the technology involved with it, such as the software systems used, specialized peripheral equipment such as scanners, check sorters, etc. In addition, it would likely require a significant investment in processing hardware (mainframes, workstations, etc.) and a highly skilled staff to run the systems and provide technical and operational support to the customers.

Imaging technology is decreasing in cost and is being more widely used in lockbox processing. Since this is a leading-edge technology, driven by large financial institutions (and insurance companies), Moore IDS would have to make a strong financial and technical commitment to staying abreast of this technology. These investments may tend to become obsolete in the short term and would require continued investment to stay on the leading-edge.

B

Environmental Threats and Opportunities

A number of environmental threats and opportunities are relevant to the applications outlined above for the finance industry. These have been identified in Exhibit II-8. The most interesting of these is the impact of the trend toward consolidation of firms and concentration of the industry.

The analytical scheme which INPUT has used to measure the attractiveness of applications is based on three factors:

- Value (number of items mailed x cost of mailing)
- Willingness to outsource
- Pain or problem involved (i.e., motivation or priority level)

The total value of an application is unrelated to the number of financial institutions providing the application. Instead, it is based on demographic factors such as number of households times average number of credit cards per household. Thus, increasing industry concentration will not change potential application values.

Willingness to outsource is generally a function of the size of an organization, with the smaller ones more willing than the larger ones to outsource. By the same token, the level of pain or problem associated with an application is often a function of size, with the largest organizations having no problems with anything but year-end tax reporting. Thus, increasing concentration will probably decrease both the average willingness to outsource and the motivation to outsource.

In combination, these factors mean that the total market size for a given application (in-house and outsourced) will continue to grow as demographics improve, while at the same time becoming more difficult to penetrate.

C

Competition

For Moore, there are two forms of competition in this market: outside vendor processing and in-house processing. The major form of competition for Moore is the in-house processing option, as far more processing is done in-house than is outsourced.

It is important to recognize that competition for printing and mailing applications in this market is not driven by printing and mailing issues; rather, it is driven by the market for processing services. In general, it is more common for a financial institution to outsource all of a given application and keep other applications in-house than it is to outsource parts of a number of different applications.

Banks, thrifts and other financial institutions have long been users of information processing systems, and the production and mailing of statements, cards, etc. has long been a core aspect of their operations. Whether or not some or all of this business is already subcontracted, most financial institutions are experienced and comfortable with their current approach to handling these activities.

One of the unique things about this industry is the modularity of its applications and outsourcing choices. There are a large number of independent processing services vendors that can handle part or all of the outsourced applications. For example, these vendors can handle the accounting for any kind of application, manufacture bank credit cards or ATM cards, print related materials to be sent out with the cards, mail cards, send out statements and provide collection (lockbox) services, and provide any of the services alone or in any combination desired. As processors themselves, they are not likely prospects for any of Moore's offerings.

Some financial institutions are themselves major processing services vendors, servicing other banks, thrifts, etc. There is very little likelihood that these firms would themselves be prospects for Moore's enhanced services, and they represent a major external source of competition in that area. Also, given their economies of scale, they are not likely prospects for basic services either.

D

Leverage Potential

There is potential to establish a business relationship through one service, and then expand to others. This may prove especially important as Moore IDS proposes enhanced services that increasingly tie customers' information services operations to Moore IDS operations. This could potentially lead to Moore IDS takeovers of in-house data centers, where trust in the vendor will be of premium value. This would be a major strategic extension of Moore's interest in providing facilities management to the printing/mailing operations, and would pose the same kind of questions about Moore's capabilities that will arise if Moore chooses to enter the processing services business.

This is one area where a strategic alliance with established facilities management vendors in this industry might prove valuable.

E

Marketing Ideas

Relevant marketing ideas include the use of an operations study as a "Trojan horse", high-level sales calls on financial executives to cost-justify Moore IDS services through the postponement of more laser printer purchases, and substituting bar code-assisted and/or all-electronic image filing for printing and filing of extra paper copies.

F

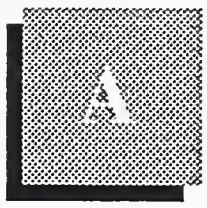
Other Application Opportunities

Purely promotional mailings were excluded from the scope of INPUT's research mandate by Moore IDS, and were not mentioned spontaneoulsy by interviewees.

Also, the printing and mailing of financial reports was excluded from basic application opportunities due to the fact that the printing and mailing of these reports does not involve variable imaging.

Finally, in addition to retail lockbox services identified as an enhanced service opportunity, INPUT also views the area of disaster recovery services as an enhanced service opportunity. All financial institutions interviewed reported that they utilize disaster recovery services, which include "hot sites" and daily backup of data. Backup and recovery of the data processing function is legally required, and that includes backup and recovery of the printing and mailing functions as well.

The major disaster recovery service vendors, such as Sungard, support multiple industries which have similar printing and mailing requirements. Since the client's primary contact would be with the disaster recovery computer services vendor, INPUT recommends that Moore IDS contact these vendors directly, possibly establishing a third-party relationship with these vendors to provide disaster recovery services for their own clients.



Appendix: Calculation Worksheets

These worksheets show the assumptions underlying the unit-volume and dollar-value estimates for the identified application opportunities.

The basic services assumptions include only the variable-image printing and associated processing costs. Postage is *not* included, nor is the cost of preprinted bulk insert materials. For enhanced services, the additional revenue from data processing functions is included.

Basic Services

Cards

- **Bank Credit Cards**
  - 190 million cards with a 2-year replacement cycle = 95 million cards/year
  - 190 million cards with a 20% turnover rate = 38 million cards/year
  Total: 133 million cards/year @ $1.50/card
  $200 million

- **ATM cards**
  - 130 million cards with a 2-year replacement cycle = 65 million cards/year
  - 130 million cards with a 20% turnover cycle = 26 million cards/year
  Total: 91 million cards/year @ $1.50/card
  $136 million

Customer Account Statements

- 90 million households

- 6 statement-generating accounts per household:
  - 2.5 bank accounts
  - 1.5 bank credit cards

- 1 finance co./mortgage servicing co. account
- 1 brokerage/fund/retirement account

Total: 540 million accounts x 12 statements/year @ $.20/statement
$1,296 million

Customer Transaction Notices

- 5% of customer accounts require some type of customer transaction notice (e.g., bounced check notice, returned item notice, late notice) each month

Total: 5% x 540 accounts x 12 months @ $.13/notice
$40 million

Coupon Books

- 50 million coupon books mailed per year

Total: 50 million books @ $3.00/book
$150 million

Proxies

- Average number of proxies received by each household/year = 3
- Additional 30 million proxies sent to shareholders of non-publicly-traded financial institutions (e.g., credit unions)

Total: [(90 million households x 3 proxies/household) + 30 million proxies] @ $.22/proxy
$66 million

Year-End Tax Reporting

- 1 tax report per year for every customer account
- Additional 10 million reports for finance employee filings and other miscellaneous filings

Total: [(540 million accounts x 1 report/account) + 10 million reports] @ $.25/report
$138 million

Enhanced Services

Retail Lockbox Services

- **Bank credit card payments**
  - 30 million bank credit card payments/month
    Total: 130 million payments/month x 12 months @ $.75/payment
    $1,170 million

- **Loan payments**

  - 180 million installment and mortgage loan payments (50% generated from statements, 50% from coupon books)/month
    Total: 180 million payments/month x 12 months @ $.75/payment
    $1,620 million

IV

Retail

Table of Contents

Table of Contents (Continued)

Exhibits

I Introduction

A Objectives

INPUT has conducted this research to meet objectives agreed upon with Moore Business Forms' Information Distribution Services division (Moore IDS). See Exhibit I-1.

EXHIBIT I-1

Retail: Key Research Objectives

- Evaluate business opportunities for both basic and enhanced services
- Achieve focus on leading opportunities
- Assess sales and delivery requirements
- Provide data for cross-industry evaluation

This retail industry study covers one of thirteen specific markets which will be the subject of the cross-industry evaluation mentioned in Exhibit I-1. Because of the close association of the retail market with credit cards and the finance market, the retail and finance areas are analyzed in a single combined volume.

Each of these market areas is treated as a separate study and documented in a separate section in this combined volume. Since the overall project objectives and methodology are identical for both of these market areas, they are covered in the Introduction section of this volume.

Following the introduction to this volume is a separate section titled Transaction Processing Issues. This section covers a number of topics

which are relevant to both market studies, and should be read as background for both.

The remainder of this chapter discusses the scope of the retail market study, including the industry categories analyzed, and the companies and categories of individuals interviewed. The remaining chapters of this retail section then discuss the specific retail opportunities identified by INPUT as being appropriate targets for further cross-industry evaluation in the next phase of this project.

B

Scope

The retail sector is composed of a wide variety of firms, from the local "mom and pop" store to giants such as Sears Roebuck. The entire range of retail firms has been reviewed for potential IDS applications, based on the professional judgement of INPUT and Moore IDS marketing staff.

In many areas there was no apparent market for IDS services, as neither INPUT nor Moore could identify potential mailing or card applications. In general, these were areas where the firms were too small, the average transaction size was too small, or the customers too transient to justify identifying the customers and maintaining a customer data base for marketing or credit purposes.

Based on this analysis, INPUT and the Moore IDS marketing staff divided retail market prospects into the following three categories:

- Department (general merchandise) and specialty (apparel/accessory) stores
- Oil company retail operations
- Supermarkets

The department and specialty store area is dominated by the department stores. Specialty retailers include such names as Nordstrom, Neiman-Marcus and Saks—essentially the high-end apparel/accessory chains. The basic mailing target here is the large card-based proprietary credit operation.

In the oil company area, there is a great deal of concentration in the retail operations, and only the large retailers offer their own credit cards. This credit operation also offers Moore opportunities.

Some of the largest supermarkets issue proprietary cards cards for check cashing, and as in-store alternatives to a bank debit card. However, none of them have proprietary credit accounts. Because of the strong penetration of EDI on the supply side and the general lack of direct customer mailing on the demand side of the grocery industry, discussions with supermarkets were limited to card production applications only.

Exhibit I-2 summarizes the agreed-upon definition and scope of the retail market, including the areas in which no potential applications have been identified.

EXHIBIT I-2

Retail: Research Scope—Market Segments

	SIC	Industry/Business Opportunity
(N)	52	Building materials, hardware, garden supply, mobile homes
	53	General merchandise stores
	54	Food stores
	55	Automotive dealers and gasoline service stations
	56	Apparel and accessory stores
(N)	57	Home furniture, furnishings and equipment stores
(N)	58	Eating and drinking places
(N)	59	Miscellaneous retail

(N) = No targets identified

In order to confirm the initial judgements made by INPUT and the Moore IDS marketing staff and select the target firms to be interviewed, INPUT reviewed industry lists of retail firms grouped by size and market segment (SIC number). None of the excluded segments was found to contain any firms which had retail credit applications. From the selected segments, a group of large, medium and small department and specialty stores was selected for interviews. In addition, a set of supermarkets was selected, consciously including several which had been identified as having ATM/debit card systems in place.

The final interview sample is shown in Exhibits I-3 and I-4.

Given the emphasis on potential applications, the people targeted for interviews included both the business managers who would control internal data bases and use mailings, and the data processing managers who would handle in-house printing operations. Also, in some cases it was necessary to interview several people at one company to get a complete picture of the operation.

EXHIBIT I-3

Retail: Organizations Interviewed

Organizations Interviewed	Annual Revenue ($ Millions)
Department and Specialty Stores	
• Dayton-Hudson	10,600
• Nordstrom	1,920
• Federal Employees Distribution	683
• Lechmere	636
• Hartmax	450
• H.C. Prange	378
• AAM, Inc.	317
• Goudchaux/Maison Blanche	293
• S. Grumbacher & Sons	220
• Glosser Bros, Inc.	213
• Zons Coop Merchantile Institution	184
• Gottschalks, Inc.	156
Oil Company Retail Operations	
• Chevron	28,000
• Philips 66	10,700
• Marathon	8,333
• Ashland	7,270
• Agway Energy Products	620
Supermarkets	
• Lucky Stores	6,920
• Vons	3,270

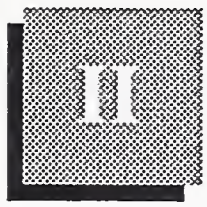
EXHIBIT I-4

Retail: Categories of Interviewees

- 8 Information Services/Data Processing
- 1 Operations/Administration/Support
- 12 Business Management

Note: All interviewees understood what was meant by variable-image printing when the concept was explained, and all knew how their mailing operations were handled

As part of its search for enhanced services, INPUT also evaluated the potential for EDI applications. INPUT has a major EDI research service which has developed detailed estimates of the size of the EDI market for the retail industry. A team of INPUT senior consultants took the most recent INPUT research studies, estimated EDI market penetration in the retail industry, and projected the total potential size of the EDI opportunity by dividing the market size by the penetration rate. This estimate was then included with other enhanced opportunities.



Executive Overview

A Research Summary

INPUT conducted telephone interviews with executives and managers from 19 firms in the retail field (see Exhibit I-5). Roughly half the interviewees were senior-level executives, and the rest were midlevel managers. Also, roughly half the interviewees were from information systems or data processing function, while the rest were from business management or operations/administration functions.

The focus of the interviews in the department/specialty store (D/S) and gasoline (Gas) retailing areas was on the overall credit operations of these firms. Since there is no proprietary credit activity in supermarkets, the focus of this area was on proprietary, in-store check cashing and debit cards.

Interview results differed by segment within the retail market area. This is largely due to the different nature of the market for the products of these areas. D/S is a high margin business, but only the high-end stores in this area provide proprietary credit cards. These stores typically sell high-priced merchandise and engage in extensive catalog-based promotions. There is strong customer loyalty in these stores, and their mailing lists are extremely valuable assets in themselves. When these stores solicit new credit customers, it is typically through purchased mailing lists of new homeowners in high-income areas, or through mailing lists of other high-end specialty firms.

By contrast, oil retailing is a low-price, low-margin, commodity business. Oil retailers do not engage in any separate mail promotions to their credit customers, relying instead on common stuffers in their monthly billings. On a periodic basis, oil companies will also do mass solicitations for new cardholders, using purchased mailing lists. While the largest retailers may differentiate their stuffers by region of the country, the majority of mailers are seasonal promotions—e.g., for snow tires and batteries.

Although only a few supermarkets were interviewed, the results seemed to be fairly consistent; firms either did not want to be involved in having

a card of their own, or embraced it reluctantly because of the lack of local market acceptance of bank-issued debit cards and the continued market demand for check cashing services.

Few real problems were cited by interviewees, and most of these were mechanical issues associated with production of mailing pieces and actual mailing operations themselves. In addition, few desired improvements were identified. While some people fantasized about eliminating the headaches associated with their mailing operations, their ideas were all unrealistic projections of electronic communication with the consumer.

As might be expected, the importance of these applications differed from one market segment to another. In the D/S area, card issuance and statement mailings were considered "mission-critical" activities, while the oil companies accorded them far lower average importance. Although the supermarkets that issued cards considered them important marketing and credit control tools, in no case were they characterized as mission-critical applications. The major categories of applications identified by interviewees are identified in Exhibit II-1.

EXHIBIT II-1

Retail:
Basic Categories of Applications

Based on this analysis, INPUT believes that the most viable applications in the retail market will be found in the department/specialty store segment. In addition to the basic card production and statement printing/mailing opportunities in the retail market, INPUT has identified two application opportunities defined as enhanced services—new services which go beyond the scope of Moore's current business offerings:

- Capture of detailed customer purchase profile data as an offshoot of the billing process, and use of this data base in a variety of ways

- Traditional lockbox (payments) processing

These enhanced service businesses should be approached with caution. There is an obvious general opportunity for IDS to expand its business in data processing and lockbox functions for a variety of industries. However, the competition and low margins in this arena make it a difficult one in which to achieve success without having some compelling strategic advantage.

Lockbox processing has been identified as an opportunity in several other industries, and it is clearly an advantage in handling retail lockbox processing when the data base that generated the bills is directly available to the processor for updating. This is an advantage that Moore could capture through handling both the mailing and the payments processing. Capturing the transaction data as it is printed for use in updating a customer purchase profile data base is a low overhead way to leverage a messy business (printing and mailing) into an elegant information-based product.

In addition, INPUT has also identified EDI as a major enhanced services opportunity for Moore. EDI is rapidly penetrating the wholesale and retail distribution areas as firms search for ways to speed data exchange and control inventories. And a large number of major manufacturers, distributors and retailers have developed EDI as a strategic application to maintain control of their distribution channels.

As both a major growing IS application area and one which tends to displace printing and mailing operations, EDI is an especially important and attractive opportunity for Moore.

B

Application Opportunity Size

A methodology was applied to develop rough opportunity sizing measures for quantitative comparison of the basic applications (number of pieces x frequency of mailing x cost/piece = opportunity size). In addition, for enhanced services, the value of the additional data processing services was estimated using a similar approach. This provides Moore IDS with a measure of total latent potential expenditures for the service without regard to rate of adoption, in-house versus external solutions, competition, and so on (see Exhibits II-2 and II-3).

EXHIBIT II-2

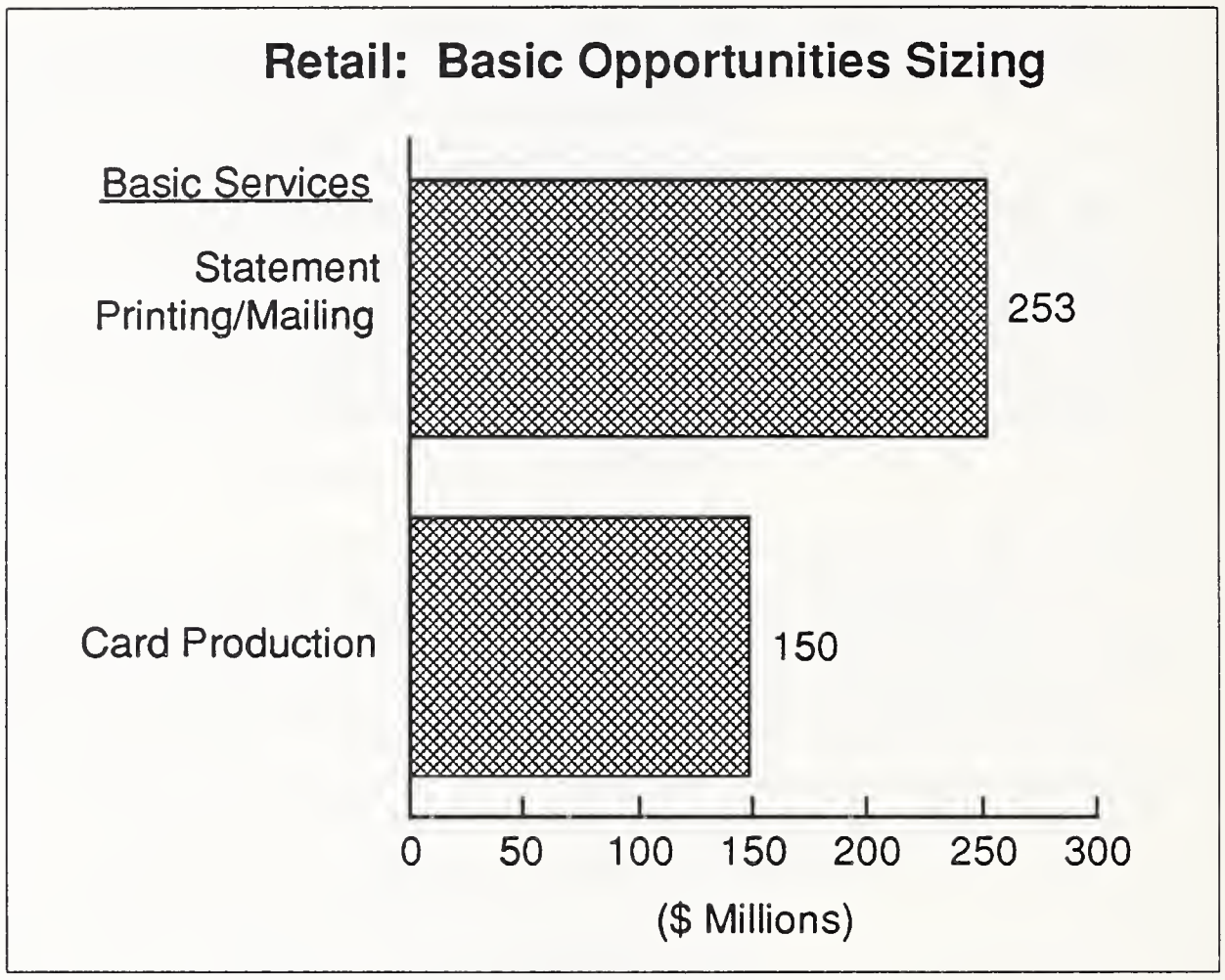
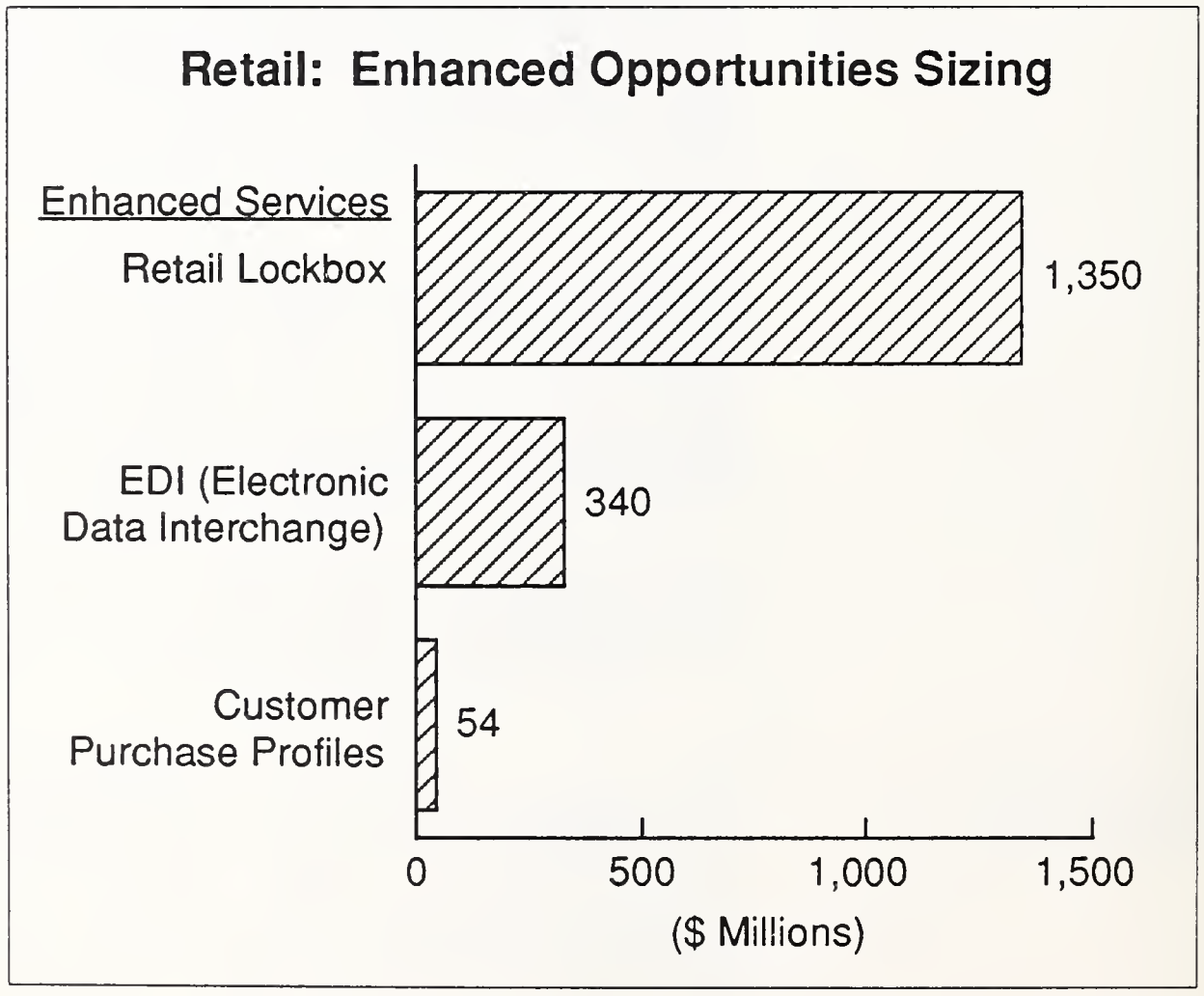


EXHIBIT II-3



C

Application Opportunity Attractiveness

Exhibits II-4 and II-5 use a standard rating methodology to factor the opportunity size calculated by two other key criteria distilled from the interviews: firms' willingness to outsource, and their level of "pain" or problem, each with respect to a particular application.

As shown, a five-point rating scale is applied to each criterion, where a "1" indicates a criterion that is negative to Moore's interest in winning—or likely ability to win—such business, while a "5" shows a very positive criterion. By rating each of the criteria and then multiplying the ratings (the multiplication shown in the tables as "Relative Size x Willingness to Outsource x Level of Pain or Problem"), the product is a "Relative Rating Value" that represents the overall attractiveness to Moore, doing so in a fashion that combines the quantitative opportunity-volume sizing with the other two essentially qualitative criteria.

This analysis indicates that larger opportunities are not necessarily more attractive, and that those of roughly equal size can have very different levels of attractiveness. It is noteworthy that the enhanced (IS- and operations-based) opportunities facing IDS in the retail market are rated far more attractive overall than basic services currently offered to this vertical market (88 versus 4 total rating points). This is largely due to the strategic importance of EDI.

EXHIBIT II-4

Retail:
Attractiveness Ratings of
Basic Service Opportunities

Application opportunity ($ Millions)		Criteria ratings (range: 1 = negative to IDS, 5 = positive)			Overall attractiveness (range: 1 = lowest 125 = highest)
Type	Size	Relative Size X	Willingness to Outsource X	Level of Pain or Problem =	Attractiveness Rating Value
Statement printing and mailing	253	2	1	1	2
Card issuance	150	2	1	1	2
Basic Total	403				4

EXHIBIT II-5

Retail: Attractiveness Ratings of Enhanced Services Opportunities

Application opportunity ($ Millions)		Criteria ratings (range: 1 = negative to IDS, 5 = positive)			Overall attractiveness (range: 1 = lowest 125 = highest)
Type	Size	Relative Size X	Willingness to Outsource X	Level of Pain or Problem =	Attractiveness Rating Value
EDI	340	3	5	5	75
Retail lockbox	1,350	5	2	1	10
Customer purchase profiles	54	1	3	1	3
Enhanced Total	1,744	9			88

By definition, EDI is an outsourced service. The majority of the market is for the public network/mailboxing services which translate, store and forward EDI traffic between parties in the distribution chain. EDI therefore rates a "5" on willingness to outsource. And because of the strategic nature of EDI and the fact that it is often mandated by significant trading partners, the importance ("Pain or problem") is also rated at "5."

D

Target Audience of the Enterprise Served

Exhibits II-6 and II-7 organize opportunity size and attractiveness measures by the target audience of the applications considered. This is done for purposes of later cross-industry analysis at the conclusion of INPUT's research project. In the retail area, it is clear that the dominant applications deal with various aspects of consumer billings.

EXHIBIT II-6

Retail:
Opportunity Size by Target Audience
($ Millions)

Type of Service	Target Audience					Total
	Owners	Employees	Customers	Suppliers	Internal Efficiency	
			Business / Consumer			
A. Basic			Statement printing/mailing (253) Card issuance (150)			
Subtotal			403			403
B. Enhanced			Customer purchase profiles (54)	EDI (340)	Retail lockbox (1,350)	
Subtotal			54	340	1,350	1,744
Total			457	340	1,350	2,147

EXHIBIT II-7

Retail: Opportunity Attractiveness by Target Audience

Type of Service	Target Audience: Owners	Employees	Customers: Business	Customers: Consumer	Suppliers	Internal Efficiency	Total
A. Basic				Statement printing/mailing (2) Card issuance (2)			
Subtotal				4			4
B. Enhanced				Customer purchase profiles (3)	EDI (75)	Retail lockbox (10)	
Subtotal				3	75	10	88
Total				7	75	10	92

E

New Sales and/or Delivery Mechanisms Required

Exhibit II-8 summarizes the new sales and delivery mechanisms required to support the three enhanced services identified above.

Within the retail market area, there are two opportunities for enhanced services. One requires the expansion of Moore's internal data processing capacity so that it can capture information and build data bases from the basic statement printing and mailing data provided by IDS customers. The other lies in the area of lockbox/payments processing. Neither of these involve new technology—printing or otherwise. However, they are areas which are new to Moore.

EXHIBIT II-8

Retail: New Sales and Delivery Mechanisms Required

Opportunity	Sales/Management Expertise	Printing Equipment	Information Technology	Alliances/ Acquisitions
Retail payment processing (lockbox) services	Knowledge of lockbox and treasury management issues	(none)	Lockbox processing software Coupon scanners Check sorters Data transmission	Lockbox vendors Banks
EDI	Knowledge of customers' business transactions and EDI transactions	(none)	EDI software Data transmission	Ordernet GEIS
Customer purchase profiles	Market research	(none)	Data base management	Market data sources

Given that Moore already has the customer's data and must process it to produce the basic printed output, it should not require a major incremental investment to add the computer hardware and data base software to capture the customer data and build the data bases. However, the potential returns on this investment might be relatively low by comparison with the revenues associated with the basic printing/mailing and card production services.

Lockbox processing would require major new investments in capacity and operations, as well as a retraining of the sales force. Nevertheless, in the retail area, the customer for the basic printing and mailing is often the same as, or closely related to, the customer for lockbox—a Vice President of Credit Operations, a Corporate Treasurer, etc. It should be relatively easy for the IDS salesman to get the foot in the door; the problem will be with Moore's credibility as a new entrant into the field. Due to the high level of competition, required geographic dispersion of opera-

tions, low margins, and commodity nature of these services, INPUT suggests a good deal of caution in pursuing business development in this area.

As noted above, EDI is primarily a network services business. However, there is also a component of software and consulting associated with the provision of these services. Various EDI vendors have come to specialize in certain industry markets, establishing a high degree of competence in the specific characteristics of that industry and making competitive entrance by other vendors difficult. GEIS (General Electric Information Services), IBM and Sterling Software's Ordernet Division are major players in the EDI market. The only reasonable way to enter this market may be acquisition of a strong, independent competitor such as Ordernet.

F

Threats and Opportunities

Exhibit II-9 lists a number of environmental threats and opportunities relevant to the applications associated with the retail market. The most ambiguous issues are those surrounding outsourcing, as there are conflicting trends both increasing and decreasing the attractiveness of this opportunity.

EXHIBIT II-9

Retail: Environmental Threats and Opportunities

Threats

- Increasing competition and cost pressures in the retail market tend to drive firms toward the least expensive operations alternatives
- Other vendors (e.g., IBM) producing sophisticated printing equipment and encouraging other firms to develop complimentary mailing equipment

Opportunities

- Postage may rise 25% in 1991, increasing importance of sophisticated mailing systems which can take advantage of automated processing discounts from the Post Office
- Outsourcing of DP functions is increasing; e.g., the Kodak contract with IBM (affects all industries, but primarily the very largest firms)

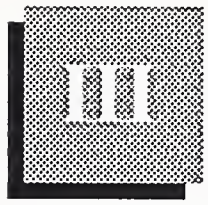
G

Competition

For printing and mailing operations, there are two forms of competition in this market: mailing houses and in-house processing. The in-house alternative is by far the strongest of these.

Only one of 16 firms interviewed outsourced both printing and mailing, and that firm was unwilling to disclose who they outsourced to. Over half did both in-house, and 6 out of 16 handled the printing in-house and used a mailing house for inserting and mailing. The issues of cost and control were mentioned so strongly and so often in the interviews that these will be strong barriers to overcome in attempting to take the printing/mailing business away from in-house competition.

In the lockbox area, competition is split more evenly between banks and in-house operations. In the case of simple, high-volume operations such as oil companies and large retailers, most of the work is done in-house due to the economies of scale available to them. Since a retailer only has to deal with one type of input from one set of customers, and can directly access the data base which created the bills in the first place, it does not need the overhead and flexibility of a bank's lockbox operation and is likely to be able to beat bank pricing when its volume level reaches approximately 100,000 payments/month.



Market Opportunities

A Introduction

After careful evaluation, INPUT believes that the ongoing market opportunity for Moore in the oil company arena is very small. The situation with oil companies is relatively straightforward: their volumes are so high and there are so few of them in the market that each one is totally self-sufficient and has no problems with their retail credit operations—card issuance, statement rendition and payments processing. All five oil companies interviewed did 100% of their processing in-house, and all cited cost as the dominant reason why they would not consider outsourcing any of their ongoing operations. The one opportunity might be an occasional mass reissue of cards, but this is not something to build a business on.

The situation with supermarkets is more complex and is discussed in a separate part of this report (see Section F, "Proprietary Supermarket ATM/Debit Cards" in the introductory chapter on Transaction Processing Issues at the front of this volume). While INPUT believes that there may be regional, niche market opportunities in proprietary supermarket cards, this does not appear to be a major, ongoing potential market. The difficulty with this market is that there may well be significant regional differences which are beyond this project's charter. INPUT believes further research in this area is justified and should be undertaken as part of the planning for the overall card market.

Before discussing the primary opportunities which were identified by INPUT, it will be useful first to set the stage by summarizing the general research from the retail market interviews, including findings about current outsourcing patterns and interviewees' expressed attitudes about future outsourcing.

1. Content of Mailings

Variable-image printing in the retail area essentially consists of straightforward account statements or billings. There were no matched mailing applications identified in any of the interviews, and the physical content of the mailings was similar with all companies interviewed: the statement, a return envelope, and advertising inserts.

Approximately two-thirds of the companies interviewed did variable inserting, based on simple criteria such as ZIP code. For example, a new store announcement was selectively mailed or a coupon sent to cardholders living in a particular area, to increase traffic in a particular store.

The variable inserting process followed by the companies seemed to be relatively simple, suggesting that companies are not exploiting computer technologies to a great extent. Only one respondent mentioned a somewhat sophisticated process. In this case each account was coded with a one-byte code for different mailings. The coding was done in the credit office. This would enable the company to selectively insert based on male/female, income, ZIP code, etc.

2. In-house Production versus Outsourcing

Nearly all the department and specialty stores interviewed handled the printing functions in-house:

In-house/Outsourced	Respondents
100% in-house	4
Partially in-house	6
100% outsourced	1

"Partially in-house" refers to the company doing the printing in-house and contracting with a mail house for inserting and mailing. The one company that outsourced 100% of its printing and mailing had just made the decision to outsource these operations, and the interview was done on the day of effective transfer. A DP manager was interviewed and unfortunately he was not aware of the reasons behind the change. Followup interviews resulted in a refusal to indicate either the reasons for the change, or the new vendor.

The major factor in deciding in-house versus outsourcing issues is cost, mentioned by all the respondents. Other key factors include control and flexibility. Typical comments are as follows:

> "We can do it better in-house. We have the equipment, the records, the people, etc. We would like to have control since we mail every day."

"Very easy to do it in-house. We have the hardware, people, etc. We can do it in-house as reasonably as an outside vendor."

"The printing is done in-house. We use outside vendors for mailing. Reason is costs. It is cheaper to print in-house and then give it to an outside company for stuffing and mailing."

"We did use outside vendors until July. Then we brought it in-house. Main reason is cost. It is cheaper. Also, more efficient."

Companies that used outside vendors for some of their operations like inserting and mailing did so because it was more economical and also because they may not have the equipment to do it in-house.

3. Promotional Mailings

Almost all companies mentioned promotional mailings. These include flyers, brochures, letters, catalogs, sale notices, post cards, etc. These were mailed to the existing customer base and to others based on criteria such as ZIP code.

One mailing that assumes importance in terms of quantity is solicitations. Retail stores and particularly oil companies mail letters to prospects inviting them to apply for a credit card or to accept a pre-approved credit card. Solicitations involve large quantities, usually a few million. The frequency of mailing ranges from a few mailings a year to once in two years. Some companies do a mass mailing and also a reduced mailing on a regional basis.

Solicitations are particularly important for the oil companies. This is because many of the companies have service stations only in a limited geographic region. As consumers move out of the region, the oil company has to add new customers to maintain the same number of card holders. This becomes important if the company has a policy of trying to derive a certain percent of its business from card holders. These companies purchase mail lists based on new home owners, new college grads, etc. In view of the large quantities involved, and the fact that the lists must be purchased, the printing and mailing is outsourced.

4. Credit Cards

Most cards were plastic with a magnetic stripe. One respondent mentioned a paper/plastic combination custom-made for them, and another mentioned plastic without the magnetic stripe. The physical content of the card issuance mailing consists of the card in a carrier. Only a few respondents mentioned inserts such as letter, advertising insert, and 25% off coupon for a single purchase, and none of these was variably imaged.

All the retail companies interviewed issued cards that didn't have an expiry date. Three of the four oil companies surveyed issued cards that had an expiry date. In two cases the companies followed a cycle method, and in one case all the cards expired at the end of every three years. Of the two companies that followed cycles, one adopted 12 cycles a year and another followed 10 cycles a year, in 10 months, and issued 250,000 - 300,000 cards per cycle.

The turnaround time for issuing individual cards varied from 1 day to 3 weeks. In the larger stores such as Nordstrom, minimizing the turn-around time was deemed critical and the card production system was an inherent part of the application processing/ credit approval system. Card production was handled in-house in all but two cases. These two companies provided a tape to the outside vendor for printing and mailing.

5. Problem Areas Identified by Users

Half the respondents stated that all aspects of their operation work well, and most of the rest indicated that the front end of their operations was also satisfactory. The reasons given for the front end working the best were that it represented a more stable portion of the business, has been around a number of years, is fairly solid, etc.

Approximately one-third of the respondents mentioned the back end as being a problem—i.e., the collections, remittances, and payments area. Issues of timeliness, efficiency, and accuracy were mentioned.

Only a few respondents mentioned the printing and mailing operations as areas where they would like to see improvement. Of these, one mentioned the need to deliver the statements to customers in a timely manner and the other bemoaned the problems associated with manual inserting. Other respondents stated that they would like to see improvements in the direct mail area, to establish a better link between the credit card data base and the direct mail activity, and to be more selective and discriminatory in targeting non-customers.

6. Choice of Vendors and Willingness to Outsource

The decision-maker for in-house versus outsourcing issues is usually a team consisting of managers/VPs from the data processing and credit departments. In some cases, senior management is also involved.

The primary factors that influenced choice of vendor were quality of service and costs. Regarding distance to vendor, respondents were about evenly divided, with some saying that distance did not matter, and some expressing a preference for the vendor to be close (< 100 miles) so that problems could be easily resolved.

Approximately half the companies were willing to outsource more of their mailing operations provided it would result in dollar savings. Even though these companies theoretically are willing to outsource, they said they are unlikely to do so because they believe it is cheaper to do it in-house. Therefore, it is important to recognize that "willingness to outsource" does not translate into "likely to outsource."

Nearly all companies had adequate capacity for their data processing needs and to handle growth and expansion. Only one respondent said that enhancements (including the installation of laser printers) are planned.

Opinion was divided among the respondents regarding the desirability of outside evaluation studies. One-third were willing to have an evaluation of their printing and mailing operations by an outside company, a third were unsure, and the remaining third were not supportive of the idea. Respondents who were willing said they were always looking for ways to cut costs, but would have to be convinced of the benefits of an outside evaluation. Some other companies were unwilling because they had recently completed an evaluation study; otherwise they might have been receptive to the idea.

7. Facilities Management

Not a single respondent expressed an interest in facilities management. Some of them (DP managers) felt insulted when this question was asked. They felt it was a reflection on their capabilities. Many respondents hadn't even thought of the idea. Respondents were generally satisfied with their management of their data processing facilities. They had the equipment, the people, etc. and wanted control over their DP operations.

8. Backup and Disaster Recovery

All companies followed a practice of daily, weekly, and monthly back-ups. Companies followed one of the following methods for disaster recovery: reciprocal arrangements with similar companies in the industry, contracts with vendors for hot sites or cold sites, arrangements to use other systems within the company, or agreements with vendors.

Since all but one of the companies did their own printing, and all had simple inserting/ mailing requirements that could be (and often were) handled by an outside mailing house, there was little emphasis on separate backup planning for printing and mailing operations as distinct from the basic computer system backup.

9. Electronic Transactions

The oil companies interviewed mentioned the use of POS systems for data capture and the approval of the credit card. Other than increasing

use of EDI with suppliers, the retail companies didn't foresee any of their processing applications being replaced with electronic transactions. Only one respondent stated that instead of printing mailing labels and delivering it to a printer, they may electronically provide this information.

10. Five-Year Fantasy

Only half the respondents were able to fantasize in the true sense of the term. The other half merely fantasized that their problems would go away and described the problems they faced along with a solution. Both fantasies are described below.

"Problem" fantasies

> "It would have to do something with the collection of receivables and the reduction of bad debt. That is the area that is most dynamic for us."
>
> "Satellite communications to speed up communications."
>
> "An off-site printer that will enable us to do printing, inserting, and mailing at one location. At present, printing is done at one location, trucked to another location and then stuffed and mailed."
>
> "Instead of promotional materials being printed in one city, stuffed in another and so on, it will all be consolidated in one location."
>
> "First class mail costs too much and takes too long. There is too much back work that we have to do for the post office. I hope that this becomes more expeditious."

"Genuine" fantasies

> "Fax everything to everybody's house."
>
> "Electronic mail process. Presenting to the customer an electronic mail message rather than a physical piece. Eventually it will all be e-mail."
>
> "Each household has its own PC. My billing to them would be directly downloaded from my mainframe to them. They would press a button. This would debit their checking account and credit my account."
>
> "Voice response. Tell the system what you want in the mailing. Dynamic data base to select how you want to "cut" the information, customer demographics, etc. No programming required."

"Total elimination of oil company proprietary cards, replacement with bank-issued debit/credit cards."

11. Summary

Exhibit III-1 summarizes the outsourcing patterns found in the retail market.

EXHIBIT III-1

Retail: Outsourcing Patterns

- Printing/mailing applications are generally simple
- Nearly all firms do their data processing and printing/mailing in-house for cost reasons
- Smaller organizations which cannot afford in-house mailing equipment outsource inserting and mailing to mailing houses
- Smaller organizations outsource their lockbox operations, but many have a large enough volume to justify in-house payments processing

No consistent and significant problems in basic printing/mailing operations were identified by interviewees. Aside from occasional complaints about the inconvenience of coordinating the delivery of printed materials and inserts from the few companies that do partial outsourcing, this was a smooth and stable operation. Cost and control are the driving forces in outsourcing, and many firms that are large enough to have their own proprietary credit card operation have sufficient volume that they can handle the operations themselves. Satisfactory in-house processing was reported by firms with as few as 10,000 statements/month.

Lockbox operations are more complex and problematic, and a much larger scale of operations—in excess of 100,000 payments per month—is required for an internal lockbox operation to be cheaper than a bank lockbox service. This activity was outsourced by a much larger proportion of the interviewees, and there are few impediments (other than cost) to outsourcing this type of service.

B

Leading Application Opportunities

Four application opportunities have been identified as worthwhile prospects for Moore to pursue. Two of these are basic printing/mailing opportunities and two are enhanced service opportunities. In all four cases, these opportunities appear in the department/specialty store area. As noted above, INPUT has not found viable opportunities in supporting either oil company retail credit operations or supermarket proprietary card operations.

1. Basic Services Opportunities

a. Statement Printing and Mailing

This is the basic production of monthly statements for retail installment credit accounts. In total, the estimated volume is 150 million mailings per month, or 1,800 million per year.

The typical statement mailing consists of the statement itself, a return envelope, and several inserts. Variable insertions are generally simple and few.

One of the clients' key issues is the turnaround time from close of the statement period to mailing of the statement. There is often a target mailing date associated with each statement cycle, and either early or late mailing is a problem for the client.

b. Card Issuance

This is the replacement/reissue of old cards as well as the issuance of new cards to people who open new accounts. Total estimated volume is 200 million cards per year.

This volume projection assumes a 4-year replacement cycle for old cards against an existing base of 400 million retail cards outstanding. It does not include oil company cards. The long replacement cycle reflects the fact that many retail cards are still not magnetically striped and most do not have an expiration date. Included in this average replacement cycle volume is the mass reissue of cards when a retailer decides to convert to magnetically stripe or date-limited cards.

2. Enhanced Services Opportunities

a. Lockbox (Payment) Processing

This is the collection of payments received against the statements sent out in the statement printing and mailing application. Transaction volumes are slightly less than the volume of mailings, as some statements simply show the previous month's payment and a zero balance.

The unique thing about this application is that IDS could gain significant efficiencies from having done the mailing which generated the payment. Being able to directly access and update the customer's data base, rather than creating a transaction file which must be passed to the customer's data processing organization, means faster and more accurate processing of payments. In addition, by being responsible for generating the turnaround documents that are used in lockbox processing, Moore can maintain high levels of quality and will have minimal coordination problems

between statement rendition and payments processing. Both of these are significant competitive advantages which would be impossible for a competitor to match—except by also being on both ends of the statement/payment process.

b. Customer Purchase Profiles

Since Moore has to print the details of a customer's purchases on the statement, it is an easy follow-on step to capture and summarize these details in a data base for future use by the retailer. Although some retailers may already do this as part of their accounting systems, it appears that most do not. By having Moore do this for them, the retailer does not have to develop or modify existing systems to meet the ever-changing research objectives of the marketing department. This is especially important when the retailer's data processing group is probably overworked anyway, and trying to focus on POS, EDI and other high-priority applications.

This is a very open-ended application. Having captured the data, there is a variety of ways it could be used. For example, retailer marketing departments could use data base management systems (DB2, FOCUS, NOMAD, etc) to do ad hoc research on customer buying patterns, select groups for targeted mailings/inserts, etc. Moore could provide the computer system, capture data and build the data bases, and provide users with their own direct access to the data. The data base could also be linked to the statement printing/mailing systems to direct variable insertions or custom-printed marketing messages on statements.

Moore could also provide a service of enriching this data base through geographic information systems, for example, by using census data to group individual data base records by average age, size of household, value of home, etc. By spreading the cost of acquiring and using this demographic data over a number of customers, Moore may be able to provide these research capabilities at a lower cost than the individual retailers would otherwise have to pay.

In estimating the value of this application, it was assumed that the retailer would pay a penny per statement extra for data capture, and a penny per statement extra for using the data base to drive highly focused variable insertion. In addition, it was assumed that marketing departments would perform four studies per year at a cost of two cents per account for the data processing and analysis.

c. Electronic Data Interchange (EDI)

A major factor in reducing retailers' costs and improving their inventory performance is the increasing use of electronic data interchange (EDI). In addition, a large number of major manufacturers, distributors and

retailers have developed EDI as a strategic tool to maintain control of their distribution channels. It is not possible today for a major retailer to operate without EDI, and the volume of electronic transactions is projected to increase at a significant rate over the next five years.

By definition, EDI is an outsourced service. The majority of the market is for the public network/mailboxing services which translate, store and forward EDI traffic between parties in the distribution chain. Large retailers such as Sears, Dayton Hudson, etc. order goods from both wholesalers and manufacturers. When a manufacturer or wholesaler sends an EDI message to a retailer, the cost of that transaction is counted in the manufacturing or wholesale market segments. In turn, the retailer's data transmissions to its trading partners are counted in the retail market segment.

Because of the strategic nature of EDI, it should also be counted as a mission-critical application. The growth of this application is virtually assured as the largest players at all levels of the manufacturing/distribution/retail chain force their trading partners to adopt EDI, "...or else!"

The most interesting thing about EDI as an application is its cross-industry nature, and the fact that to sell a single item at retail requires a significant amount of back-and-forth EDI traffic from three or four distinct market segments:

- Manufacturing
- Wholesale Distribution
- Transportation
- Retail Distribution

Although the total estimated potential size of the retail EDI application is $340 million, the combined size of these four EDI markets is nearly $1,500 million—more than four times the retail market alone. Thus, in looking at the attractiveness of the EDI market, the potential in any one industry significantly understates the total opportunity associated with a set of related cross-industry transactions.

C

Application/Service Opportunity Sizing and Ratings

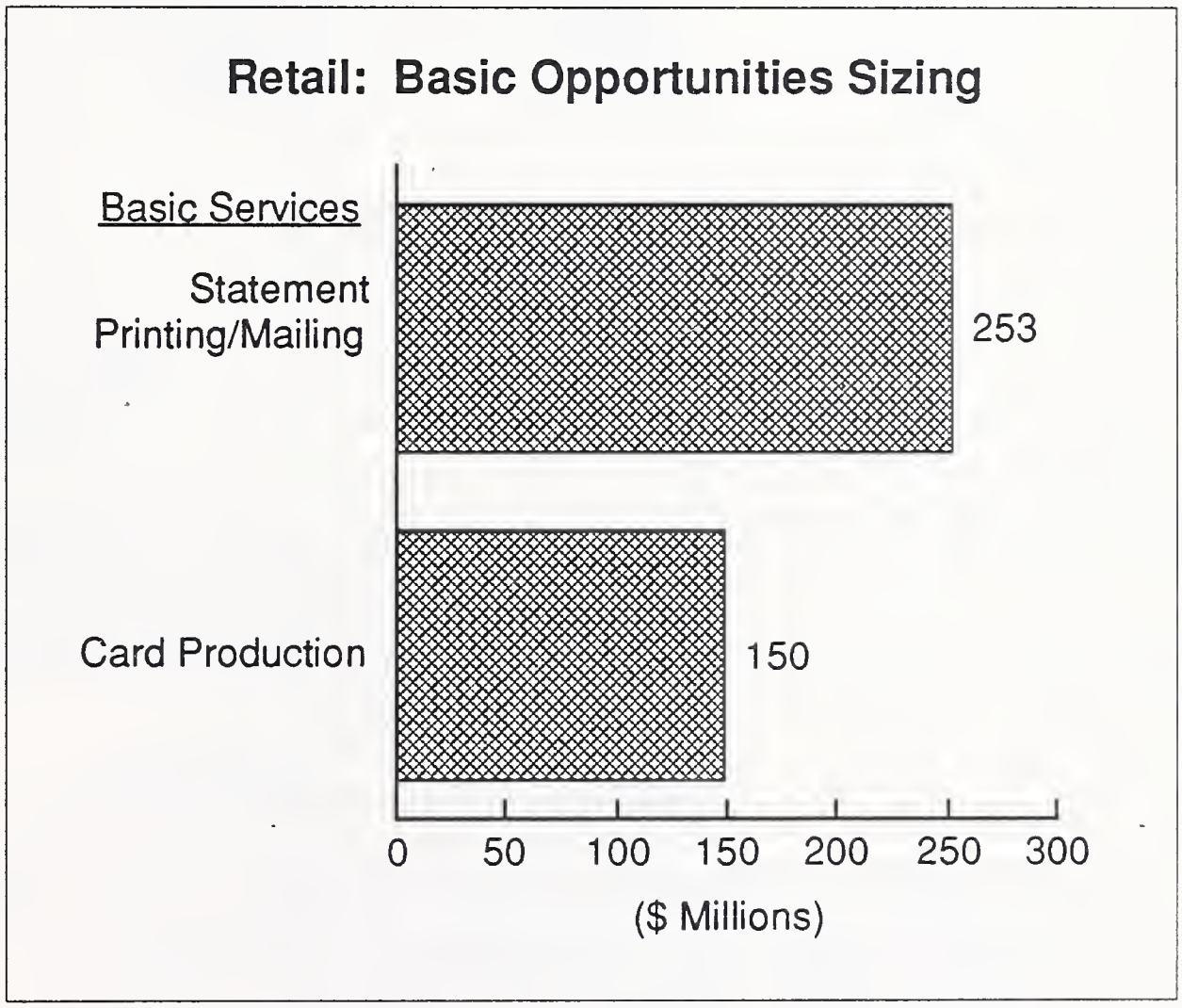
The previous section detailed the leading application opportunities, approaching the subject qualitatively. This section applies quantitative methodologies to place approximate numeric dollar-sizes on each opportunity and to rate their attractiveness.

Appendix B, Calculation Worksheets, provides the detailed backup for unit volume estimates of all applications considered. Basically, transaction volumes were projected from estimates of the total size of the population involved (e.g., number of retail charge cards outstanding), multiplied by the proportion of that population that would likely receive variably-imaged mailings (statements, bills, etc).

The results were then multiplied by a Moore-provided figure for unit-pricing such a document (using a working assumption that such unit-pricing by Moore IDS is roughly equivalent to customers' in-house costs), yielding a figure for the total dollar opportunity size for each document type. Note that this methodology includes the estimated value of enhanced services—e.g., data processing or lockbox revenue.

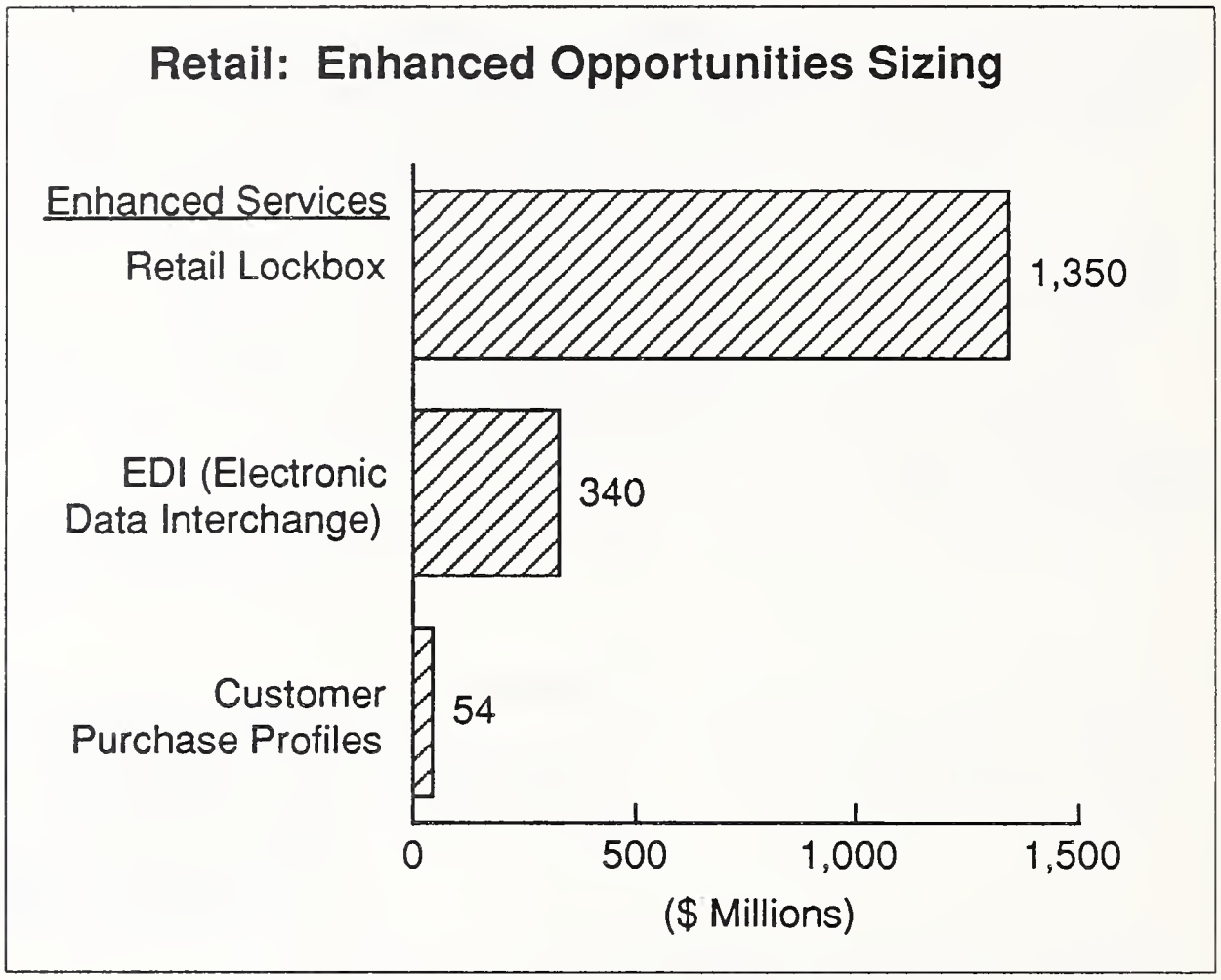
Using the opportunity-sizing methodology just described, both of the basic services applications provide approximately equal opportunities—in the $200 million range (see Exhibit III-2).

EXHIBIT III-2



By contrast, in the area of enhanced services, the lockbox application is a far larger opportunity in total dollar terms than either of the basic applications, while the customer purchase profile is only a fraction of the value of the basic applications (see Exhibit III-3).

EXHIBIT III-3



In Exhibits III-4 and III-5, INPUT uses a standard rating methodology to factor the opportunity size just shown by two other key criteria distilled from the interviews: willingness to outsource and level of pain or problems associated with the application, each with respect to a particular application.

As shown along the top of the exhibit's table, a five-point rating scale is applied to each criterion, where a "1" indicates a criterion that is negative to Moore's interest in winning—or likely ability to win—such business, while a "5" shows a very positive criterion. By rating each of the criteria and then multiplying the ratings (the multiplication shown on the table as "Relative Size x Willingness to Outsource x Level of Pain or Problem"), the product is a Relative Rating value that represents the overall opportunity to Moore IDS in a fashion that combines the quantitative opportunity-volume sizing with the other two essentially qualitative criteria.

Relative size ratings are determined as follows:

Size Range ($ millions)	Rating
1-100	1
101-300	2
301-700	3
701-1,000	4
>1,000	5

EXHIBIT III-4

Retail: Attractiveness Ratings of Basic Service Opportunities

Application opportunity ($ Millions)		Criteria ratings (range: 1 = negative to IDS, 5 = positive)			Overall attractiveness (range: 1 = lowest 125 = highest)
Type	Size	Relative Size X	Willingness to Outsource X	Level of Pain or Problem =	Attractiveness Rating Value
Statement printing and mailing	253	2	1	1	2
Card issuance	150	2	1	1	2
Basic Total	403				4

EXHIBIT III-5

Retail: Attractiveness Ratings of Enhanced Service Opportunities

Application opportunity ($ Millions)		Criteria ratings (range: 1 = negative to IDS, 5 = positive)			Overall attractiveness (range: 1 = lowest 125 = highest)
Type	Size	Relative Size X	Willingness to Outsource X	Level of Pain or Problem =	Attractiveness Rating Value
EDI	340	3	5	5	75
Retail lockbox	1,350	5	2	1	10
Customer purchase profiles	54	1	3	1	3
Enhanced Total	1,744	9			88

The rationale is that an application opportunity is of little strategic interest if its size is less than $100 million, because a 5% development of the latent potential would be only $5 million per year in IDS revenue. Likewise, any opportunity over $1 billion is top rated (i.e., a "5") no matter how many billions of dollars it represents.

Moving to "willingness to outsource," interview results indicate that there is a very limited willingness to outsource key aspects of both the recommended basic applications. In the statement printing area, it is mailing house tasks that are generally outsourced, not the variable imaging. In the card area, most retail firms want to control the new card issuance in-house, and there is only a sporadic and limited market for mass reissue of cards due to the lack of an expiration date. Therefore, both applications are given a rating of 1.

In the enhanced applications, the outsourcing picture is more favorable. A significant number of firms outsource lockbox processing now, although the largest do it in-house. (The cost breakeven point is approximately 100,000 payments/month.) However, Moore has no experience in this area, and the decision to outsource lockbox is a critical and complex one involving the corporate treasurer, credit manager, data processing manager, etc. Therefore, a score of 2 was assigned to lockbox.

A score of 3 (moderate) was assigned to customer purchase profiles on the basis that marketing departments typically buy some outside data bases and research, but the data processing department might view Moore as a competitor if it were building data bases from internal information. In addition, it would be easily possible for the internal data processing departments to do the same thing proposed here, if they were given the resources.

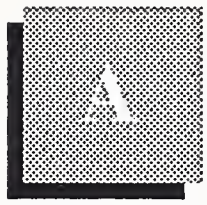
Finally, looking at "level of pain or problem," interviewees say that they generally have few problems with their current operations.

Since by definition EDI is an outsourced service, it rates a "5" on willingness to outsource. Because of the strategic nature of EDI and the fact that it is often mandated by significant trading partners, the importance ("Pain or problem") is also rated at "5."

Given these rating scores, the "Attractiveness Rating" methodology ranks EDI as by far the most attractive opportunity, well ahead of any others in this industry. Lockbox processing is the next leading opportunity, followed by customer purchase profiles. All of these enhanced services rank above the basic printing and mailing applications. Note, however, that this methodology does not account for the difficulty of developing and/or delivering a service opportunity, on the assumption that these are primarily investment questions: what corporate resource commitments are required to implement the objective? In addition, it

ignores dependencies among the opportunities. In this case, two of the enhanced services depend for their opportunity on already having the contract for the basic printing and mailing service.

There is an important implication of this methodology. While the highest relative rating value possible here is 125 (5 x 5 x 5), three moderate ratings of 3 each yields a product of only 27. Clearly this is not 50% of the top rating of 125, and yet it is actually quite instructive: an opportunity that is totally positive to IDS's interests in all ways—three ratings of 5 each—certainly should be far ahead of any moderately-sized application for which customers now express a moderate willingness to outsource and experience only moderate pain or problems.



Appendix: Questionnaire

Basic Mailings Questionnaire
Application Data Spreadsheet

Industry: Retail

Note: Card mailings recorded on separate spreadsheet

Company Interviewed _____ Person Interviewed/Title _____ Interview Date/By _____

Business Mailing Categories	Physical Content of Mailing	Variable Information Content/Prod Hardware	Import	Overall Mail Volume		Dist. of Prod. (Percent) In-house	Notes/Comments (factors which determine vols; anticipated chgs)
				Mlg/Yr.	#/Mailing		
1. Credit card accounting statements							
2. Custom/personal promo materials							
3. Proxy/financial report materials							
4.							
5.							
6.							
7.							
8.							
9.							

Card Mailings Questionnaire
Application Data Spreadsheet

Industry: Retail

Note: General mailings recorded on separate spreadsheet

Company Interviewed _____ Person Interviewed/Title _____ Interview Date/By _____

Card Types	Purpose	Format	Follow-up	Phys Content of Mailing	VAR Information Content	Batch Mail Volume			Cont. Mail Volume			In-house Prod. (%)	Outstanding Cards		Notes/ Comments
						Mlg/Yr.	#/Mailing	Trnard	Mlg/Yr.	#/Mailing	Trnard	Batch	Cont	Number	Tx/Mo	
1. ATM/debit cards																
2. Credit cards																
3. Check guarantee/ courtesy cards																
4.																
5.																
6.																

Purpose I = Identification
T = Transaction

Followup: N = none
Y = notification

Format P = Paper stock
L = Light plastic (printed, not embossed)
E = Embossed only (standard plastic)
X = Embossed/encoded (electronic transaction card)

N = None
Y = Notification

Batch mailings are large-volume issues of new cards or replacements/renewals of old cards.

Continuous mailings are low-volume issues of new cards, and emergency replacement of old cards.

Trnard = Required turnaround time (from receipt of data file to mailing)

Number = Total outstanding cards (K)

Tx/Mo = Total transactions per month from entire card base (K)

-or-

average transactions per month per individual card (indicate which in notes)

Company _____ Date/time: _____

Interviewer _____ Duration: _____

INTRODUCTION

[Used for qualification/networking to verify that the right person is being reached. If the respondent is already qualified, skip the items on this cover page.]

INPUT is a computer industry management consulting firm. As one of our current research projects, we are looking at the future role of information services in supporting business mailing and credit card operations across a wide variety of industries.

Two examples of the kinds of mailings we are studying are:

- Monthly Billing Statements sent to charge customers, and
- Credit Cards sent to these same charge account customers.

I have a short series of questions on these operations that can be handled right here on the phone. Can you assist with this research project by answering these questions?

[If No:] Can you suggest someone else in your organization who might be able to answer them?

Ref: _____ at

( ) _____ *[phone]*

[If Yes:] These questions will take about 20 minutes to complete, is this a good time for you?

[If not, reschedule for] _____ **day/date at**

_____ **[local time] /** _____ **[California time]**

[Questionnaire Topic Outline]

Please note that the objective of this study is to determine industry-wide trends. We will be putting your responses together with many others to analyze broad patterns and key business-mailing issues, so your particular responses will be held in confidence and not cited individually. I mention this to encourage you to be as open and frank as possible, so that INPUT can develop a comprehensive picture of the Retail industry's uses for business mail.

Do you have any questions before we get started?

[If they ask whether INPUT will be publishing the results, answer ...

...Since we don't know yet whether we will find good opportunities for information services to help improve business mailings, we have not yet determined whether any published report will result from this research.]

[If they ask whether this research is for a specific client, answer...

...No, it is a part of INPUT's continuing program of research in how information services are used in different industries.]

[If they ask whether they can get a copy of the findings of the research, answer...

...As a way of thanking you for your time, we can send you a high-level overview of the results, if that would be of value to you.]

[If Yes, note name and mailing address here, and flag on cover sheet that respondent needs to get summary:]

_____

_____

_____

_____

For our interview, I have a structured set of questions of several types: some yes/no questions, some asking for 1-to-5-style ratings, and some open ended. We will be asking about both current and future business mailing operations.

Before we start, let me again assure you that your frank responses will be valuable to the success of the research project, and all information you provide will be held in strict confidence.

QUESTIONS

[Skip question 1 if these answers are known from previous qualification/networking, but transfer the data here for later reference.]

1. Can you answer questions about business mailing operations with reference to the entire organization, or are you in a position to speak about only one or more specific divisions or departments?

_____

[If divisions/departments only:]

1.a. Which division (*or* department) will you be speaking about?

_____

_____

Which other divisions (*or* departments) also have sizable business mailing operations?

_____

_____

_____

[Make next question fast; likely will not use]

1.b. Who would be a good person to talk with in [that/those] other division[s] or department[s] to understand their business mailing operations?

Div. or Dept. / Name / Phone

_____

_____

_____

2. I would like to start by reviewing a list of typical, leading categories of business mailings in the Retail industry. Our list includes items such as Monthly Billing Statements and Credit Cards. **Because of their unique characteristics, we will talk about cards separately**. Let me go through this basic list one by one. **[Read list]**

For each of these business mailing categories, I'd like to briefly note the physical content of the mailing and the printing technology you are using. For example,

- What kind of information and material is included in each mailing
- What information is custom-printed for each item, and what equipment do you use to print each item's "unique information content"
- How is the information that is different for each item (e.g., statements) merged with information or material that is standard (e.g., brochures)

2.a. Let's first take Monthly Billing Statements... Do you produce ...

[Read "industry standard" items from spreadsheet list. For each type of mailing, answer descriptive questions on spreadsheet form, then move down the list on the form. If an item does not pertain, ask why, cross out the title in the spreadsheet form and indicate the answer to "why" in the Notes/Comments column.]

[At end of the "standard" list, ask:]

2.b. Did I miss any important categories of your business mailings?

[List any such new categories in blanks on form and take appropriate answers for them here and in subsequent sections of questionnaire.

If some kind of card is mentioned as a primary mailing piece, indicate that it will be covered in a later stage of the interview.]

2.c. Now I'd like to determine how important each of these "standard categories" of business mailing is to your company (*or* division/department). The key question is:

Which of these business mailings is really "critical" to the "mission" of your organization, that is, critical in importance -- documents you really connot operate without -- whether or not they are large in terms of the quantities you mail?

[As each "mission critical" category is named, it should be assigned a value of "5" under "Overall import" on the chart.

Then ask about each one not mentioned by the interviewee. If it is really "mission critical" also, give it a "5" ... if not, determine whether it is of moderate importance ("3") or minor importance ("1") --realtively-- and record the numbers.

If the document is government-required, write "req" instead of a number]

2.d. We would also like to get approximate quantities of each of these mailings, in terms of total numbers of documents produced --not total pages printed. Let's take them in order once again:

[Complete "Overall mail volume" questions for each document type.]

2.e. Which of these mailings do you handle in house, and which do you now send to outside printing and mailing services?

[Complete "Dist of Prod %" questions for each document type. Record answer in terms of % produced in house; generally, it will be either 100% or 0%]

2.f. What factors in the operations of your organization determine the particular volumes you cited in each category? For example, number of customers, etc.

Also, which categories of mailings are likely to change significantly over the next few years, either in volumes or in other ways, and why?

[Answer in "Notes/Comments" section of spreadsheet]

---

3. [If no outside vendors used for basic mailings, go to 3.a; otherwise, go to 3.b.]

3.a. Why have you chosen not to use any outside vendors for printing and mailing functions?

_____

_____

_____

_____

_____

_____

_____ **[To 3.c]**

3.b. **[If any outside vendors used:]** For those applications which you do have handled outside, could you please indicate:

- who the vendor is,
- how you made your choice of vendors (cost/size/credibility/etc.),
- why you have chosen to contract out that application, and
- how much it is costing you to go outside.

_____

_____

_____

_____

_____

_____

3.c. **[If no outside vendors used:]** Would you consider contracting outside for any complete printing and mailing operations for business mailings?

[or, if some outside vendors used:] Beyond those you now contract outside for, would you consider contracting outside for any other complete printing and mailing operations?

3.d. **[If 3.c No:]** Why not?

_____

_____

_____

_____ **[To 3.g]**

3.e. **[If 3.c Yes:]** Which operations or mailings would you consider or are you considering outsourcing, and why? Do you already have any specific plans for doing so?

_____

_____

_____

_____

3.f. **[If 3.c Yes:]** Which groups in your organization would need to participate in evaluating whether to outsource **[some or more]** of your printing and mailing operations? Who is the key decisionmaker?

_____

_____

_____

3.g. To summarize, using a 1-to-5 scale, how likely are you to outsource **[any or more]** of these printing and mailing operations?

[Circle number, or indicate if Not Applicable]	N/A	1	2	3	4	5
	Not applicable	*Not likely*				*Very likely*

What are the reasons behind that rating?

_____

_____

_____

4. Now let's talk about cards. Do you now issue, or plan to issue, any kinds of cards that would be mailed out as part of your standard business mailings. These could be for any purpose -- identification or transaction cards, and in any format -- paper or plastic, embossed or printed, with or without magnetic stripes, etc.

[[If no, go on to 6. (pg. 10)

Following definition of Transaction vs. Identification cards is optional -- may be easier to explain this distinction when they ask, rather than reading it to them up front.....

As with the standard business mailings, we have developed a list of the kinds of cards that are typically used in the Retail industry, and we would like to ask a number of similar questions about your card mailings. But first of all, I would like to explain the way we categorize cards:

- Transaction cards are generally high quality and high security items. They are typically used in mechanical imprinters or electronic readers to automatically capture identity and account information associated with transactions, are generally both embossed and encoded with a magnetic stripe, and contain a signature panel for the cardholder to sign.
- Identification cards are often of lower quality and security, and are typically issued by companies or associations to provide evidence of group membership, insurance coverage, etc. Included in this category are cards which carry an individual's name and an ID number as "reminders" when the data is needed for a transaction (e.g., airline frequent flyer ID number). .....]]

4.a. [With these categories in mind, let's go through the list.] Do you distribute any proprietary credit cards?

[Read "industry standard" items from spreadsheet list. For each type of card, answer descriptive questions on spreadsheet form, then move down the list on the form. If an item does not pertain, ask why, cross out the title in the spreadsheet form and indicate the answer to "why" in the Notes/Comments column.]

[At end of the "standard" list, ask:]

4.b. Did I miss any important categories of cards?

[List any such new categories in blanks on form and take appropriate answers for them here and in subsequent sections of questionnaire.

4.c. We would also like to get approximate production/mailing quantities and turnaround times for these cards, in two categories:

- Large volume, batch production, such as renewals or mass new issues
- Smaller volume, continuous production, such as routine new card issues or replacements.

[Complete both "Batch" and "Cont" mail volume questions for each type of card.]

4.d. What proportion of these card mailings do you handle in house, and what proportion do you now send to outside card production and mailing services?

[Complete "Dist of Prod %" questions for each type of card, covering both batch and continuous production. Record answer in terms of % produced in house; generally, it will be either 100% or 0%]

4.e. What is the approximate number of cards outstanding in each of these card types?

[If any transaction cards:] Also, for those which are transaction cards, what are the associated monthly transaction volumes?

4.f. What factors in the operations of your organization determine the particular card volumes you cited in each category? For example, number of customers, etc.

Also, which categories of cards are likely to change significantly over the next few years, either in volumes or in other ways, and why?

[Answer in "Notes/Comments" section of spreadsheet]

---

5. [If no outside vendors used for cards, go to 5.a; otherwise, go to 5.b.]

5.a. Why have you chosen not to use any outside vendors for card production and distribution?

[To 5.c]

5.b. **[If any outside vendors used:]** For those cards which you do have handled outside, could you please indicate:

- who the vendor is,
- how you made your choice of vendors (cost/size/credibility/etc.),
- why you have chosen to contract out that application, and
- how much it is costing you to go outside.

5.c. **[If no outside vendors used:]** Would you consider contracting outside for any card production and distribution services?

[or, if some outside vendors used:] Beyond those you now contract outside for, would you consider contracting outside for any other card production and distribution services?

5.d. **[If 5.c No:]** Why not?

_____

_____

_____

_____ **[To 5.g]**

5.e. **[If 5.c Yes:]** Which operations or cards would you consider or are you considering outsourcing, and why? Do you already have any specific plans for doing so?

_____

_____

_____

_____

5.f. **[If 5.c Yes:]** Which groups in your organization would need to participate in evaluating whether to outsource **[some** or **more]** of your card production operations? Who is the key decisionmaker?

_____

_____

_____

5.g. To summarize, using a 1-to-5 scale, how likely are you to outsource **[any** or **more]** of these card production and distribution operations?

[Circle number, or indicate if Not Applicable]	N/A	1	2	3	4	5
	Not applicable	*Not likely*				*Very likely*

What are the reasons behind that rating?

_____

_____

_____

6. The next set of questions deals with INPUT's 3-part model of an organization's complete system for business mailings, so let me first explain the model to see if it fits your operations.

For business mailings that require more than just a name and address insertion or label, INPUT sees three basic parts of the complete system.

First, what we are calling the **"front end"** for business mailing operations is the information system or systems that maintain the overall data base of information required for mailings in general, and that are used to generate the specific information required for a particular mailing.

The second part of the model -- the kinds of activities we have been discussing so far -- is the **"printing and mailing process"** itself: this part includes the merging of standard information with receiver-unique data to generate a complete printed document, the actual information-printing and merging operation, and the stuffing and transportation (normally to the Postal Service) of the physical piece of mail.

Finally, the third part of a complete mailing system is the **"back end"** processes that may follow the mailing itself. While many business mailings (such as government-required notices) may be one-way, with no such back-end process, many others involve the recipient's return of a piece of mail that requires a back-end process such as processing a payment.

Does this model generally fit your organization's operations for the types of mailings we have been discussing? If not, how would you characterize these activities?

[Note any comments below. If it is unclear whether or not certain of the primary mailings indicated on the spreadsheets will generate "back end" processing, explore that at this time.]

6.a. With that introduction, here's the next question: Thinking about all three parts of your mailing system:

- the information systems front end
- the printing and mailing process itself, and
- the followup back end

what now works best for you?

In other words, what specific parts of your mailing operations are working really well for you, representing solid, on-going success stories ... or, perhaps, recently implemented improvements?

[List successes here, and followup for "why":]

6.b. In contrast, where do you have significant problems in these operations, whether in the front end, the printing and mailing process itself, or the back end?

[List problem areas below, and indicate why each is a problem.]

6.c. Although they may not be actual problems today, what areas have you identified where you would like to make improvements, whether or not you've actually developed plans yet for how to make those improvements?

7. Now let's focus specifically on the front-end and back-end operations in INPUT's model. Do you now use any outside vendors specifically for these front-end or back-end operations?

[If no outside vendors used for cards, go to 7.a; otherwise, go to 7.b.]

7.a. Why have you chosen not to use any outside vendors for these front or back end operations?

_____

_____

_____

_____

_____ **[To 7.c]**

7.b. **[If any outside vendors used:]** For those front or back end operations which you do have handled outside, could you please indicate:

- who the vendor is,
- how you made your choice of vendors (cost/size/credibility/etc.),
- why you have chosen to contract out that application, and
- how much it is costing you to go outside.

_____

_____

_____

_____

_____

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_____

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_____

7.c. **[If no outside vendors used:]** Would you consider contracting outside for any of these front or back end processing services?

[or, if some outside vendors used:] Beyond those you now contract outside for, would you consider contracting outside for any other front or back end processing services?

7.d. **[If 7.c No:]** Why not?

_____

_____

_____

_____ **[To 7.g]**

7.e. **[If 7.c Yes:]** Which operations or services would you consider or are you considering, and why? Do you already have any specific plans for doing so?

_____

_____

_____

_____

7.f. **[If 7.c Yes:]** Which groups in your organization would need to participate in evaluating whether to outsource **[some** or **more]** of your front or back end operations? Who is the key decisionmaker?

_____

_____

_____

7.g. To summarize, using a 1-to-5 scale, how likely are you to outsource **[any** or **more]** of these front or back end operations?

[Circle number, or indicate if Not Applicable]	N/A	1	2	3	4	5
	Not applicable	*Not likely*				*Very likely*

What are the reasons behind that rating?

_____

_____

_____

[Omit item 8 and go to 9 if: - **No outsourcing now** (7.c), **and**
- **No outsourcing likely** (7.g) **]**

8. When you consider outsourcing printing and mailing operations, how important is it for the vendor's printing plant and mailing facility to be physically close to you?

8.a. **[Circle number, or indicate if Not Applicable]**

N/A	1	2	3	4	5
Not applicable	*Not likely*				*Very likely*

8.b. What are the reasons behind that rating?

_____

_____

_____

8.c. **[If rating was 4 or 5:]** For purposes of this question, how close is close?

_____

_____

9. For the business mailings we have been discussing, do you have any plans over the next few years to change significantly your in-house printing and mailing capabilities or capacity?

9.a. **[If No:]** Why not?

_____

_____

_____

_____ **[To 10]**

9.b. **[If Yes:]** What are your plans?

_____

_____

_____

_____

10. Do you forsee any of your mailing applications or back end processing being eliminated and replaced with electronic transactions. For example, monthly account payments being replaced with automatic debits through the ACH.

10.a. **[If Yes:]** For each of these applications, please describe the way the replacement will occur, and estimate the volumes of electronic transactions vs. mailings for back end processing today, and in the next 3 and 5 years. For example:

> *"10% of our 50,000 monthly revolving credit payments are now made through pre-arranged debits to customer accounts at their bank. In 3 years we expect this to grow to 15% electronic out of 55,000 accounts, and 25% of 70,000 accounts within 5 years."*

10.b. Please describe any electronic networks which you think might be used in these transactions.

11. Under what conditions might you consider outsourcing all of your business mailing operations to an outside vendor? What criteria would be important in selecting a vendor (cost/size/credibility/etc.)?

12. What is your view of the possibility of having all your printing and mailing operations managed at your site by an outside vendor, under a "facilities management" contract?

13.a. What is your present approach to backup and recovery of your data processing operations.

13.b. Please describe any special provisions you have for backup of your printing and mailing operations.

14. Would your organization welcome an evaluation study to analyze your business mailing operations and recommend improvements? This would be a no-cost evaluation study.

14.a. **[If No:]** Why not?

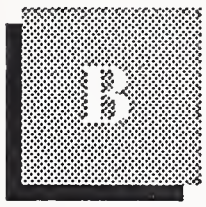
[To 14]

14.b. **[If Yes:]** What results would you expect such a study to provide?

15. Now for one last question, a chance for some "fun work" with your imagination. I'd like to ask you to enter a fantasy world where anything is possible. Please clear your mind of present limitations, close your eyes if it helps, and transport yourself mentally to 5 years in the future. You are speaking to a group of people about a major -- and very desirable -- breakthrough in business mailing that you have achieved. Please describe the subject of your talk in as much detail as possible ... forgetting for a moment whether it really "makes sense" or seems "impossible" ... just let it come out as you fantasize it.

That's my last formal question. Thinking back on what we have discussed, do you have any further thoughts about your business mailing operations and their information content, thoughts that you feel I should note for this research to be more complete?

Thank you ... very helpful... *[end]*



Appendix: Calculation Worksheets

These worksheets show the assumptions underlying the unit volume and dollar value estimates for the identified application opportunities.

The basic services revenue assumptions include only the variable-image printing and associated processing costs. Postage is *not* included, nor is the cost of preprinted bulk insert materials. For enhanced services, the additional revenue from data processing functions is also included along with the basic services revenues.

Department/Specialty Stores Statement Printing/Mailing

- 220 million retail charge accounts
- approximately 2/3 (68%) of these with activity or outstanding balances

Total: 150 million statements/month @ 13 mailings/year @ $.13/statement
$253.5 million

Department/Specialty Stores Card Issuance

- 400 million retail charge cards outstanding (excluding oil)
- 4-year replacement cycle (many not magnetic striped)
- 25% turnover/growth rate (new accounts, moves, etc.)

Total: 200 million cards/year (repl + new) @ $.75/card
$150 million

Department/Specialty Stores Retail Lockbox Operations

- 220 million retail charge accounts
- approximately 2/3 (68%) of these with activity or outstanding balances

Total: 150 million payments/month @ 12 payments/year @ $.75/payment
$1,350 million

Department/Specialty Stores Customer Purchase Profiles

- 220 million retail charge accounts
- approximately 2/3 (68%) of these with activity or outstanding balances

Subtotal: 150 million statements/month @ 12 statements/year @ $.01/statement for data capture

Subtotal: 150 million statements/month @ 12 statements/year @ $.01/statement for additional variable insertion processing

Subtotal: 220 million accounts @ 4 market analysis studies/year @ $.02/account for data processing

Total: $53.6 million