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Banker Needs for Accounting Information

by

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(ABSTRACT)

This research examines the extent to which user needs are affected by differences in the size and ownership characteristics of reporting entities. Bank loan officers constitute the target group of financial statement users and the study focuses on the perceived need for sixteen financial statement items. Among these are twelve items for which differentiation in financial reporting has been proposed (key items), and four items that bankers generally require when evaluating a loan application (control items). The research model is based on the hypothesis that perceptions of accounting information are affected by the decision context, complexity of the organization in which the decision is being made, and the behavior response repertoire of the user.

A quasi-experimental design with two treatments is utilized. The treatments are (1) a commercial loan decision involving a small privately held corporation, and (2) a commercial loan decision involving a large public corporation. A question-

naire was mailed to gather the data. Three hundred and fifteen usable responses were received, for a response rate of 21%.

The data were analyzed using multivariate analysis of variance and canonical correlation analysis. Differences in the size and ownership characteristics of commercial loan applicants were found to have a statistically significant impact on the perceived needs of bankers for financial statement information. This relationship is most observable among disclosures that are perceived to be of lesser importance in the loan evaluation process. The perceived needs for items that are considered to be of greater importance (for example, the control items) are relatively insensitive to variations in the size and ownership characteristics of commercial loan applicants. Overall, commercial loan officers tend to perceive a relatively high need for general financial statement items, but tend to downplay the importance of the more specific and detailed items.

The results also indicate that the organizational complexity of a bank, and the degree to which its commercial loan officers are committed to the work ethic of the banking profession, are significantly related to the perceived need for financial statement disclosures.

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## CHAPTER I

### INTRODUCTION

#### 1.1. NATURE OF THE PROBLEM

Accounting standards overload has been a significant accounting issue since the early 1970's. Standards overload is usually perceived in terms of high costs and relatively low benefits of complying with numerous and complex accounting standards by small and nonpublic enterprises. Alternatives for dealing with the perceived problem are frequent sources of conflict in financial accounting and reporting. Proposed solutions range from the use of different bases of accounting depending on the size and ownership characteristics of an enterprise, to a unified basis of accounting for all businesses.

A fundamental issue is the desire for consistency with the basic financial reporting objective of satisfying user needs. The literature indicates that if size and ownership characteristics are shown to affect user needs, then there would be strong justification for standards that use different accounting and reporting methods for entities with different characteristics.

This dissertation focuses on a major category of financial statement users -- commercial bank loan officers -- and examines whether size and ownership characteristics affect their perceived needs for accounting information. The issue is examined within the framework of the perception formation process as described in the organizational behavior literature. This literature indicates that variations in the perceptions of individuals in organizations have their sources in differences in the characteristics of the individual and differences in the nature of the environment facing the individual.

The remainder of this section is devoted to a discussion of the standards overload issue and the positions of some of the major parties in the conflict.

#### 1.1.1. The AICPA and Standards Overload

Four committees of the American Institute of Certified Public Accountants (AICPA) have addressed the issue of accounting standards overload. They are: (1) the Committee on Generally Accepted Accounting Principles for Smaller and/or Closely Held Businesses (1976), hereafter referred to as the Werner Committee; (2) The Special Committee on Small and Medium-sized Firms (1980), hereafter referred to as the Derieux Committee; (3) The Sunset Review Committee (1982); and (4)



The Special Committee on Standards Overload (1983), hereafter referred to as the Scott Committee. These committees recognized the existence of a problem and made specific recommendations for relieving it. Exhibit 1.1 summarizes the recommendations of the four committees.

Each of the four committees recommended differentiation in financial reporting on the basis of size and ownership structure. Differentiation in financial reporting refers to the adoption of different disclosure, recognition, or measurement standards for reporting entities on the basis of their characteristics. In 1976, the Werner Committee recommended differentiation in disclosures but rejected differentiation in recognition and measurement standards. Subsequent committees, however, recommended differentiation in both disclosure and measurement standards on the basis of size and ownership structure.

In addition to recommendations for differentiation in the application of Generally Accepted Accounting Principles (GAAP), the AICPA has attempted to reduce the cost of complying with GAAP for nonpublic enterprises. One example is the AICPA's Statement on Auditing Standard (SAS) No. 14, which makes available Other Comprehensive Bases Of Accounting (OCBOA). This standard permits an auditor to express an opinion on financial statements prepared in accordance with

Exhibit 1.1

Positions and Recommendations of AICPA Committees

COMMITTEE	POSITION & RECOMMENDATIONS
The Werner Committee (1976)	<p>Recommended differentiation between required and analytical or additional disclosures.</p> <p>Objected to differentiation in measurement.</p>
The Derieux Committee (1982)	<p>Noted that some measurement standards are neither useful nor economically justified for small private enterprises.</p> <p>Argued that differentiation is needed in both measurement and disclosure standards.</p> <p>Recommended appointment of a committee to study ways of providing relief.</p>
The Sunset Review (1982)	<p>Recommended differentiation in both measurement and disclosure standards.</p> <p>Cited eleven standards that are candidates for differentiation.</p>
The Scott Committee (1983)	<p>Recommended differentiation in both measurement and disclosure standards.</p> <p>Cited eight standards that are candidates for differentiation. Recommended immediate differentiation for three of those.</p> <p>Proposed the income tax basis of accounting as an alternative to GAAP for small closely-held enterprises.</p>

a comprehensive basis other than GAAP. Examples of OCBOA include a basis prescribed by a regulatory agency for filing with that agency, an income tax basis, and the cash basis. Thus, an independent CPA can issue an opinion on the statements if an enterprise uses a comprehensive basis of accounting other than GAAP. Small enterprises may, therefore, obtain some relief as a result of the lower costs associated with OCBOA such as the income tax basis.

Robbins, in a 1985 review of tax basis financial statements, discussed the increased attention being given to this approach to differentiation in financial reporting<sup>1</sup>. In August 1984, the National Society of Public Accountants published Standards of Generally Accepted Tax Accounting Principles, which documents guidelines for the use of income tax laws as a basis for financial reporting<sup>2</sup>. Although the guidelines were intended to implement a major recommendation of the Scott Committee, the AICPA cited "major deficiencies" in the document and cautioned institute members against using it as a source of guidance<sup>3</sup>. Nevertheless, tax basis financial

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<sup>1</sup> B. Robbins, "Perspectives on Tax Basis Financial Statements," Journal of Accountancy, (August 1985) pp. 89-100.

<sup>2</sup> National Society of Public Accountants, "Standards of Generally Accepted Tax Accounting Principles," The National Public Accountant, (August 1984) pp. 20-48.

<sup>3</sup> "AICPA Warns of 'Legal Hazards' in NSPA Tax Accounting Document," Journal of Accountancy, (October 1984) p. 13.

statements continue to gain support among public accountants as a short term approach for alleviating the standards overload problem.

The creation of the Accounting and Review Services Committee in 1978 represents another action by the AICPA for providing relief to nonpublic enterprises. This committee, which issues statements to guide practitioners in their accounting and review services, issued its first statement (SSARS 1) in 1979. SSARS 1 began a new era in financial reporting for nonpublic companies. Prior to that time, CPAs were compelled, by the implications of Rule 203 and SAS 1, to adhere to GAAP for all businesses.

SSARS 1 does not provide for deviations from those rules, but it makes an authoritative distinction between the kinds of CPA involvement in the financial statements of an enterprise. The statement seeks to clarify the nature of non-audit services performed by CPAs and identifies three types of CPA involvement in the financial statements of an enterprise -- compilation, review, and audit. Adoption of the statement was based on the belief that users of financial statements are better served by clearer, more specific reports on non-audit

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See also "NSPA Responds to AICPA Criticism of GATAP," The National Public Accountant (February 1985) pp.15-17.

services performed by CPAs. Moreover, compilations and reviews are often less expensive than audits. Thus, it was expected that small, nonpublic entities, which are the major users of CPA non-audit services, would be among the primary beneficiaries.

#### 1.1.2. The FASB and Standards Overload

The Financial Accounting Standards Board (FASB) has also examined the standards overload issue and, like the AICPA, is concerned about it. A chronology of the actions and positions taken by the FASB in dealing with the problem is provided in Exhibit 1.2. The Board has made some differentiation in required disclosures on the basis of size and ownership structure (see Exhibit 1.2) but has consistently objected to differentiation in recognition and measurement on that basis. In fact, the Board takes the position that financial statement users need the same information about similar transactions and events, regardless of the size and ownership structure of the reporting enterprise.

Statement of Financial Accounting Concepts (SFAC) No. 1 provides that financial reports should contain information that is useful to present and potential investors and creditors in making rational investment, credit, and other decisions. Under this objective, if users of financial statements of

**EXHIBIT 1.2**  
**Chronolgy of FASB's Actions**  
**in Relation to Standards Overload**

YEAR	POSITION & ACTIONS
1976	Expressed the view that there is no fundamental difference between the needs of users of financial statements of nonpublic companies and users of financial statements of public companies -- SFAS 14.
1977	Chairman, Marshall Armstrong, reiterated 1976 position <i>Journal of Accountancy</i> (August 1977).
1978	Included in agenda a project to distinguish between disclosures to be made by all companies and disclosures to be made only by certain companies.  Suspended EPS and Segment Reporting for nonpublic companies -- SFAS 21.  Appointed seven member Small Business Advisory Council -
1979	Issued SFAS No. 33 (Financial Reporting and Changing Prices) which does not apply to private companies.
1981	Issued invitation to comment on Financial Reporting by Private and Small Public Companies.
1982	Issued SFAS No. 69 which exempts private oil and gas companies from certain disclosures.
1983	Chairman, Donald J. Kirk, responded to AICPA concerns about the the Board's position with regards to standards overload. Responses include: <ul style="list-style-type: none"> <li>(a) agreement that changes are needed in standards relating to leases, income taxes, business combinations, interest capitalization but concluded that available evidence does not support re-examination of other standards as suggested the Sunset Review.</li> <li>(b) recommends <i>timely guidance</i> and dialogue on technical issues as one of the solutions to accounting standards overload.</li> <li>(c) rejected differentiation in measurement as a solution but conceded that persuasive evidence showing that size and ownership characteristics affect user needs could justify differentiation (Status Report No. 150).</li> </ul>
1983	Published two empirical research reports on the issue which suggest no fundamental difference in user needs that depend on size and ownership characteristics: <ul style="list-style-type: none"> <li>(a) FASB Special Report, "Financial Reporting by Privately Owned Companies: Summary of Responses to FASB invitation to Comment", February 1983.</li> <li>(b) Abdel-khalik et al, <i>Financial Reporting by Private Companies: Analysis and Diagnosis</i>, August 1983.</li> </ul>
1984	Issued SFAS No. 79 which exempts private companies from the requirement to provide pro forma disclosures on business combinations.  Appointed advisory group which includes small business managers, small business lenders and CPAs with small business practices.
1985	Disclosed that future plans are to integrate small business concerns into each agenda project as opposed to a separate small business project -- Status Report No. 165.  Reported that the Board's standards overload research project has been completed -- Status Report No. 165.

small nonpublic companies have information needs that are different from those of users of financial statements of large public companies, that difference could point to a need for differentiation in financial reporting requirements on the basis of size and ownership structure<sup>4</sup>. Thus, a need for differentiation in financial reporting could arise if user needs depend on size and ownership characteristics of a reporting entity.

#### 1.1.3. RMA and Standards Overload

The issue of differentiation in financial reporting has also been addressed by Robert Morris Associates, a professional association of commercial bank loan officers. The association's position has consistently been in support of a unified GAAP for all businesses, regardless of size and ownership characteristics<sup>5</sup>. This position assumes that the needs of commercial banks for accounting information is unaffected by a reporting entity's size and ownership characteristics. Yet, the solutions that have been proposed and implemented for relieving the problem of standards overload

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<sup>4</sup> FASB Special Report Financial Reporting by Privately Owned Companies: Summary of Responses to FASB Invitation to Comment (Stamford, Conn.: FASB, 1983) p. 2.

<sup>5</sup> Robert Morris Associates, "RMA's Position on Accounting Principles and Auditing Procedures," Journal of Commercial Bank Lending, (August 1985) pp.27-31.

tend to support differentiation in financial reporting on the basis of size and ownership characteristics.

#### 1.1.4. Public Accountants and Standards Overload

Public accountants have frequently argued that GAAP are primarily intended to aid public investors who are sophisticated and not closely associated with the business entity<sup>6</sup>. They further contend that users of financial statements of small nonpublic businesses are more closely associated with the entity and, therefore, have access to alternative sources of information<sup>7</sup>.

Another major contention is that users of small nonpublic company financial statements do not need the complex array of information aimed at satisfying the needs of their large public company counterparts. An underlying assumption is that there are differences between the information needs of users of financial statements of public companies and users of financial statements of small nonpublic companies<sup>8</sup>. This sug-

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<sup>6</sup> See, for example, AICPA Report of the Committee on Generally Accepted Accounting Principles for Smaller and/or Closely Held Businesses (New York: AICPA, 1976).

<sup>7</sup> See, for example, Tentative Conclusions and Recommendations of the Special Committee on Accounting Standards Overload (New York: AICPA, 1981).

<sup>8</sup> R. A. Abdel-khalik et al., Financial Reporting by Private



gests that public accountants perceive some degree of association between the size and ownership characteristics of a company and the needs of financial statement users. The discussion of the professional literature that follows also supports existence of this perception.

As early as 1972, Arnstein questioned the relevance of income tax allocations and earnings per share to the financial statements of private companies<sup>9</sup>. Max Block similarly argued that disclosures required for public companies do not necessarily represent relevant information about the typical closely held company<sup>10</sup>. He specifically identified earnings per share, imputation of interest, the equity method of accounting, and the statement of changes in financial position as requirements that may not be relevant for privately held companies.

Hepp and McRae, in a discussion of the nature of standards overload, suggest that some accounting standards are not relevant for small businesses, and others are not significant

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Companies: Analysis and Diagnosis., (Stamford, Conn.: FASB, 1983), p.23.

<sup>9</sup> P. Arnstein, "Arnstein Opinion", Journal of Accountancy (December 1972) pp. 83 - 84.

<sup>10</sup> Max Block, "Duality in the Accounting Profession", CPA Journal (July 1974) pp. 29 - 34.

in certain situations<sup>11</sup>. Such differences in relevance and significance, they argue, contribute to the problem of standards overload. Presumably, these standards are relevant and significant for large public enterprises.

In a 1985 article, Derieux reiterated support for differentiation in financial reporting on the basis of size and ownership<sup>12</sup>. He observed that, while the FASB seems to support selective differentiation in disclosures, many of the standards about which CPAs complain involve measurement and recognition. These include capitalization of leases, capitalization of interest, and deferred taxes. Rather than wholesale differentiation, he proposes differentiation only in those measurement standards that CPAs and businessmen regard as overly complex.

Some professional accountants have, however, objected to differentiation in financial reporting on the basis of size and ownership structure. Naus, for example, strongly opposes differentiation for the following reasons: (a) improvements in reporting to one group of users should result in improve-

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<sup>11</sup> G. W. Hepp and T. W. McRae, "Accounting Standards Overload: Relief is Needed," Journal of Accountancy (May 1982) pp. 52-62.

<sup>12</sup> S. Derieux, "GAAP and the Privately-held Company," Corporate Accounting, (Summer 1985) pp. 18-24.

ments to other user groups; (b) all companies operating in the same environment face similar economic conditions and could have the same type of transactions; (c) most companies belong to a common trade group or industry and differential reporting could distort comparisons and result in meaningless multi-company financial summaries; and (d) most private companies eventually go public<sup>13</sup>.

Armstrong (a former chairman of the FASB) criticized size and ownership structure as bases for differential reporting. He argued that differential reporting based on size and ownership structure is founded on several assumptions of dubious validity, including: (a) owners of a company of modest size need less information because they are already fully knowledgeable about its operations; (b) the use of financial statements can be confined to those for whom they were originally prepared; and (c) all closely held companies are simple and relatively uncomplicated<sup>14</sup>. Armstrong points out that

financial statements designed for the sole use of management may be utilized by others, for example, bank credit officers, who usually need, want and expect the

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<sup>13</sup> James Naus, "Unaudited Financial Statements Revisited", Journal of Accountancy (January 1974) pp. 77 - 79.

<sup>14</sup> Marshall S. Armstrong, "The Impact of FASB Statements on Small Businesses", Journal of Accountancy, (August 1977), pp. 88 - 90.

disclosures mandated by generally accepted accounting principles for general purpose statements<sup>15</sup>.

Murray and Johnson, in a critical analysis of the relationship between differentiation in financial reporting and the FASB's conceptual framework project, noted that support for differentiation can be found in SFAC 1 and 2 if it can be demonstrated that user needs are affected by the size and ownership characteristics of a reporting enterprise<sup>16</sup>. They argue that, although there is no theory to suggest that users of the financial statements of large companies will have information needs different from their small-company counterparts, it does not follow that one set of GAAP will necessarily satisfy both groups if they indeed have different information needs<sup>17</sup>.

In a recent article, Larson and Kelly contend that the issue of differentiation in financial reporting on the basis of size and ownership structure involves, among other things, a "relevance issue", which begs the question: "Can differen-

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<sup>15</sup> Ibid, p. 88.

<sup>16</sup> D. Murray and R. Johnson, "Differential GAAP and the FASB's Conceptual Framework," Journal of Accounting Auditing and Finance, (Fall 1983) pp.4-15.

<sup>17</sup> Ibid

tial measurement be justified on the basis of user needs<sup>18</sup>?" They note that although some empirical studies have examined the question, the research findings and conclusions are weak and cannot be used to support accounting policy<sup>19</sup>. Moreover, studies that examined the issue employed weak research designs and failed to control for important cues that could affect user perceptions of accounting information. These weaknesses are discussed in Chapter II.

## 1.2. RESEARCH OBJECTIVE

This research examines the impact of firm size and ownership structure on the needs of commercial loan officers within the context of a loan decision. Loan officers are used to study the issue because they consistently use financial statements of companies of various sizes and ownership structures in making economic decisions of a similar nature.

Although a number of researchers have examined the information needs of loan officers, several features distinguish this study from prior research. Among them are (1) an improved research design, (2) use of specific behavioral

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<sup>18</sup> Rholan E. Larson and Thomas P. Kelly, "Differentiation Measurement in Accounting Standards: The Concept Makes Sense", Journal of Accountancy (Nov. 1984), pp. 78 - 82.

<sup>19</sup> Ibid

referents to control the cues used by respondents in their assessment of financial reporting items, and (3) examination of the impact of bankers' heterogeneity on their perceived needs.

It is assumed that the standard setting process in financial accounting first identifies user needs and then promulgates standards designed to satisfy those needs. Accordingly, the existence of an accounting standard should indicate, ex post, a need for the information required by the standard. The study, therefore, evaluates existing disclosure, recognition, and measurement standards to determine whether loan officers' perceptions of their utility in a lending decision are affected by the size and ownership characteristics of a commercial loan applicant. Sixteen financial statement items, including four control items, are examined. The control items include information that bankers usually require in evaluating a loan. The other items were derived from the standards overload debate.

While several empirical studies have examined bankers as a user group in accounting research, none has recognized explicitly that the group is not homogeneous and that personal and environmental differences can represent major sources of

variation in perceptions within and among groups<sup>20</sup>. Two basic factors that contribute to differences in individual perceptions are (1) behavioral response repertoire, which includes experience, education and professional orientation; and (2) the complexity of the organization in which individuals work<sup>21</sup>. The present research incorporates these factors into an examination of the impact of size and ownership characteristics of a reporting entity on the accounting information needs of commercial loan officers. Professional orientation and organizational complexity are briefly discussed in the remainder of this section.

#### 1.2.1. Professional Orientation

Organizational behavior research suggests that individuals working in organizations have different types of professional orientations. Gouldner<sup>22</sup>, who pioneered research in this area, distinguishes between two professional types -- cosmopolitans and locals. Locals have high loyalty to organiza-

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<sup>20</sup> H. K. Downey and J. W. Slocum, "Uncertainty: Measures, Research, and Sources of Variation," Academy of Management Journal, (September 1975), pp. 562-577.

<sup>21</sup> J. A. Litterer, The Analysis of Organizations, (New York: John Wiley & Sons, Inc., 1973), p. 103.

<sup>22</sup> A.W. Gouldner, "Cosmopolitans and Locals: Towards an Analysis of Latent Social Roles I and II," Administrative Science Quarterly (December 1957, March 1958) pp. 281-306, 444-480.

tions, low commitment to professional skills, and are likely to use an inner referent group for assessing their behavior and values. Cosmopolitans, on the other hand, have low loyalty to organizations, high commitment to professional skills, and use an outer referent group for assessing their behavior and values. The global characteristic of locals is their loyalty to organizations while that of cosmopolitans is emphasis on expertise or specialty.

Gouldner reports that professional orientation has implications for the approach used in problem solving. Locals are more likely to use formal rules and regulations in problem solving than cosmopolitans. Cosmopolitans tend to be more independent in their views and evaluate issues more objectively than locals. Thus, cosmopolitan loan officers would, in theory, emphasize expertise and specialization, and should, therefore, be more objective in their evaluation of the utility of GAAP. Locals, however, are likely to have opinions that are consistent with the official position of an internal referent group and are likely to use the norms of that group in assessing the utility of GAAP, whether or not the group's position results in an objective assessment. Thus, it is expected that perceptions of financial accounting information would be affected by the professional orientation of a commercial loan officer.



### 1.2.2. Complexity

Banks, like other organizations, employ bureaucratic procedures to ensure that the behavior of organizational participants is coordinated and controlled effectively. One factor that explains the extent of bureaucratic control is the complexity of an organization. Complexity refers to the extent of horizontal, vertical, and spatial differentiation that exists in an organization<sup>23</sup>. A highly complex organization is characterized by many occupational roles, divisions, and departments (horizontal differentiation), many levels of authority (vertical differentiation), and many operating sites (spatial dispersion)<sup>24</sup>.

When faced with a high degree of complexity, organizations tend to become formalized in order to control and coordinate their activities. As a result, procedures become more standardized and the demand for documentation increases<sup>25</sup>. One would expect, therefore, that as the complexity of a bank

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<sup>23</sup> Richard Hall, Organizations: Structure and Process, (Englewood Cliffs, N.J.: Prentice Hall, 1982).

<sup>24</sup> J. L. Price and Charles W. Mueller Handbook of Organizational Measurement, (Marshfield, Mass.: Pitman Publishing, 1986, p. 100).

<sup>25</sup> J. Child, "Predicting and Understanding Organization Structure," Administrative Science Quarterly (June 1973) pp. 168-165.

increases, the demand for standardization and documentation in its lending activities also increases. A strong demand for the application of one unified GAAP by all commercial loan applicants, irrespective of the size and ownership characteristics, seems consistent with the demand for standardization and documentation that would exist in more complex banks. The net effect could imply a strong association between the extent of emphasis on GAAP and the level of complexity of a bank.

This section has described the basic objective of this dissertation and highlighted areas in which the dissertation is expected to differ from prior research. Examination of the impact of size and ownership characteristics on the perceived needs of bankers for accounting information is the major objective. The research is undertaken within the framework of the perception formation process as described in the organizational behavior literature and, accordingly, recognizes that behavioral response repertoire of an individual and characteristics of his or her environment affect perceptions. Thus, the association between perceived need for accounting information, and behavioral response repertoire and organizational complexity, are also explored.

The next two sections present justifications for the research and describe the organization of the study.

### 1.3. JUSTIFICATION

This research provides insights into variations in user needs that are dependent on size and ownership structure of a reporting enterprise. Currently, standards overload represents an area of major conflict in financial accounting policy. Public accountants continue to support differentiation in financial reporting as a means of providing relief from the burden of accounting standards overload. The AICPA also recognizes a need for differentiation. The FASB, however, has questioned the need. That board has indicated that only persuasive evidence which shows that firm size and ownership structure are associated with user needs will justify differentiation in financial reporting<sup>26</sup>. Robert Morris Associates takes the position that the needs of commercial lenders are best satisfied by a unified GAAP, and has consistently lobbied for the application of a unified GAAP for all companies, regardless of size and ownership characteristics<sup>27</sup>. By examining the impact of size and ownership structure on the accounting information needs of commercial lenders, the present research provides an empirical basis for resolving this conflict.

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<sup>26</sup> FASB, Status Report, (No. 150: Nov. 22, 1983).

<sup>27</sup> This appears to be a political position rather than one based on empirical evidence or theory.

Accounting researchers who examine bankers as a user group may also benefit from this research because it provides evidence on the extent of bankers' heterogeneity and the impact on perceived information needs. It also provides a basis for assessing whether variations in environmental complexity and professional orientation of bankers are sufficiently strong to affect the validity of prior studies that treated bankers as a homogeneous group.

#### 1.4. ORGANIZATION OF THE STUDY

The next chapter, Chapter II, provides a review of the relevant empirical literature. Prior research findings and methodological weaknesses in the existing literature are described and the background to the research questions is presented.

Chapter III discusses the methodology used in addressing the research questions. The chapter describes the research design, the population to be studied, the dependent and independent variables, and development of the instrument. The chapter also highlights the research questions and discusses major hypotheses and statistical techniques used to analyze the data.

Chapter IV presents the data and analyzes the results of the study. Chapter V presents a discussion of the results in relation to the research model and in relation to the 16 financial statement items included in the study. Limitations of the study are also presented in the chapter. The final chapter, Chapter VI, examines the implications of the findings and presents suggestions for future research. The chapter also includes a final summary of the findings and conclusions.

## CHAPTER II

### LITERATURE REVIEW

This chapter reviews relevant empirical studies that have examined the issue of differentiation in financial reporting. The perception formation process and a model for examining bankers' perceptions of financial accounting information are also discussed.

The chapter is divided into two sections. The first section examines prior research on the impact of size and ownership characteristics on perceived needs for accounting information. The second section reviews the literature on the perception formation process in organizations and develops a model for examining bankers' perceptions of accounting information.

#### 2.1. PRIOR EMPIRICAL STUDIES

This section discusses the studies that have examined the issue of differentiation in financial reporting and highlights some of their major weaknesses. For discussion purposes, the studies are categorized into the following three groups:

1. those that examine whether bankers view their accounting information needs as being affected by size and ownership characteristics of an enterprise, hereafter referred to as "general opinion studies";
2. those that examine the perceived usefulness of financial statement items that have been criticized as less relevant for small business decisions, hereafter referred to as "perceived usefulness studies"; and
3. those that use experimental design techniques to examine differences in perceived importance of financial statement items that depend on size and ownership characteristics of a reporting entity, hereafter referred to as "designed studies".

#### **2.1.1. General Opinion Studies**

Three research studies are examined in this section. They are:

1. a survey by Abdel-khalik et al. on financial reporting problems of private companies that relate to the standards overload debate<sup>28</sup>;

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<sup>28</sup> Abdel-khalik et al., op. cit., 1983

2. a survey by Nair and Rittenberg on alternative accounting principles for smaller businesses<sup>29</sup>; and
3. a special report published by the FASB that summarizes and discusses responses to an invitation to comment on financial reporting by privately-owned companies<sup>30</sup>.

A common characteristic of these studies is that they surveyed bankers' reactions toward using the same kind of accounting information in commercial loan decisions for all companies. Each of the three studies required bankers to express their opinions on certain broad statements relating to the use of accounting information in loan decisions involving companies of different size and ownership characteristics. For example, Abdel-khalik et al. included the following items in their survey:

- Although most privately held companies have fewer or more simple activities than do most publicly held companies, they cannot account for these activities differently without making the financial statements less useful to you.
- When you make decisions about privately held companies, you typically need the same amount of information as when you make decisions about publicly held companies.

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<sup>29</sup> R. D. Nair and L. E. Rittenberg, "Alternative Accounting Principles for Smaller Businesses: Proposals and Analysis," Journal of Commercial Bank Lending, (April 1983), pp.2-21.

<sup>30</sup> FASB Special Report, op. cit., 1983



- When you make decisions about privately held companies, you typically rely less on the financial statements of those companies.
- Do lending officers typically expect the same level of disclosure in financial statements of each type of company?
- Do lending officers expect the same accounting principles to be followed by each type of company<sup>31</sup>?

Abdel-khalik et al. concluded that bankers do not view private companies as having distinctive features that affect financial reporting. They report, however, that companies of different sizes are perceived as providing different amounts of financial disclosure but bankers expect all companies to follow the same accounting principles.

The researchers provide no information to indicate whether commercial loan decisions involving companies of different sizes are affected by differences in the level of disclosure among those companies. They note, however, that enterprises are perceived as providing different levels of disclosure. If such differences in perceived disclosure do not affect similar commercial loan decisions involving entities of different sizes, one cannot conclude that bankers need the same financial statement information for companies of all sizes.

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<sup>31</sup> Abdel-khalik et al., op. cit., 1983.

To arrive at such a conclusion, one has to show that items perceived to be omitted from the financial statements of smaller companies are not relevant in lending decisions involving companies of all sizes.

The study by Nair and Rittenberg is similar to that of Abdel-khalik et al.<sup>32</sup> Like Abdel-khalik et al., the authors were interested in whether bankers view their information needs as being affected by size and ownership characteristics of an enterprise. Thus, their survey instrument included a set of statements that were almost identical to those used by Abdel-khalik et al.. For example, the following statements were included in the instrument used by Nair and Rittenberg:

- Users of small business financial statements do not rely on financial statements of small businesses as much as large businesses.
- Decisions made by users of small business data are different than decisions made by users of large business data.
- Since there is no active market for small businesses, there is less need for the types of disclosure required for larger firms<sup>33</sup>.

Nair and Rittenberg report that bankers neither agreed nor disagreed with the first statement, disagreed with the sec-

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<sup>32</sup> Nair and Rittenberg, op. cit., 1983

<sup>33</sup> Ibid., p.11.

ond, and agreed with the third. These results suggest that bankers might perceive firm size and ownership characteristics as factors that affect their information needs. However, such an interpretation does not appear to be consistent with the researchers' conclusion that major users of small business financial statements do not perceive their needs to be substantially different from those of decision makers who deal primarily with large companies. In fact, Nair and Rittenberg's research design did not distinguish between nor compare the responses of users that deal with large firms and users that deal with small firms. Thus, given their research design, their conclusion does not appear to be appropriate.

The final study in this category, the FASB's Special Report, sought to determine whether users distinguish between size and ownership characteristics of an enterprise in obtaining and processing financial information. The approach used by the researchers in examining this issue is almost identical to those of Abdel-khalik et al. and Nair and Rittenberg. Respondents were required to indicate their reactions to a set of broad questions relating to the issue. For example, the following questions were included in the invitation to comment:

- Do creditors have essentially the same financial information needs for private as for public companies?

- Do creditors rely less on financial statements of private than of public companies?
- Because most small companies have fewer or simpler activities than do most large companies, can they account for their activities differently than do large companies without reducing the usefulness of their financial statements to you<sup>34</sup>?

Unlike the previous two studies that focused on the extent of agreement or disagreement with the statements included in the respective surveys, the FASB was interested in specific answers (yes or no) to the above questions. Although this (yes/no) approach could bias responses and limit the amount of information available from the survey, the study provides some insight into bankers' perceptions of their information needs.

The study suggests that bankers view their information needs as being robust to size and ownership characteristics of a loan applicant. Similarly, the researchers concluded that bankers do not view themselves as relying less on the financial statements of private than of public companies. It is of interest, however, that the majority of bankers (52%) who had a position on the issue, indicated that small companies can account for their activities differently without reducing

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<sup>34</sup> FASB Special Report, Op. cit., 1983.

**EXHIBIT 2.1**  
**Summary of Responses**  
to  
FASB's Invitation to Comment (1981) Question:  
Can small companies account for their activities  
differently without reducing the usefulness of their  
financial statements to you?

BANK SIZE (DEPOSITS)	YES	NO	NOT SURE	TOTAL
Over \$3 billion	16	18	12	46
Under \$500 million	21	9	5	35
Total	37	27	17	81

Chi-square statistic = 5.26, df = 2, p < .10.

Source: Adapted from FASB, 1983, p. 14.

the usefulness of their financial statements. This suggests some support for differentiation among bankers.

A breakdown of responses by bank size adds another dimension to the results. The breakdown shown in Exhibit 2.1 indicates that bank size is associated with respondents position on the issue of differentiation at the 10% level of significance. Bankers at smaller banks appear to favor differentiation whereas bankers at larger banks are split on the issue. One must, however, exercise caution in interpreting these results because, as indicated in Exhibit 2-1, approximately 21% of the respondents were not sure of an answer. A possible reason for this high level of uncertainty is the absence of a precise behavioral referent in responding to the questions. This problem, along with other weaknesses of the studies reviewed in this section are discussed in the following section.

#### **2.1.1.1. Weaknesses of general opinion studies.**

The "general opinion studies" are affected by at least three deficiencies. First, the studies do not provide a basic set of contextual factors that could be used as a consistent frame of reference in responding to the survey. Some of the important factors, according to a survey by Diamond, Arnold and Keller, include loan size, capital structure of the com-

pany, nature of the loan, and company size<sup>35</sup>. The absence of adequate contextual factors implies an inappropriate behavioral referent and, as a result, unreliable response profiles<sup>36</sup>.

Of the three studies in this group, only the FASB's invitation to comment provided contextual information on company size. A small company was defined as one "whose operations are relatively small, usually with revenues of less than \$5 million". Abdel-khalik et al. included a flowchart in their survey instrument to emphasize the stage in the loan evaluation process in which they were interested but provided no basic contextual information about the loan or the applicant. Similarly, Nair and Rittenberg specified no contextual information. It is therefore possible that in each of these studies, bankers used different behavioral referents in responding to the surveys. In such situations, comparisons within or between groups are not valid. Thus, a possible reason for inconsistency in the findings of these studies is

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<sup>35</sup> See for example M. A. Diamond, J. L. Arnold and E. C. Keller, "Loan Officers' Experiences with and Reactions to Compilation and Review of Financial Statements," Journal of Commercial Bank Lending, (December 1981), pp. 32-42.

<sup>36</sup> D. J. H. Watson, "Students as Surrogates in Behavior Business Research: Some Comments," The Accounting Review, (July 1974), pp. 530-533.

differences in perceived environmental characteristics of a small company among bankers.

Another weakness relates to the failure of these studies to control for the "subjective norm" of bankers. An individual's opinion may be conditioned by his or her motivation to comply with the opinions of a referent group<sup>37</sup>. Thus, the propensity to hold a particular opinion about the utility of financial statements could depend more on the potency of an individual's subjective norm than on experience with the statements.

The studies in this group required bankers to make comparisons between their accounting information needs for large and small companies. Robert Morris Associates, a potentially strong reference group for loan officers, has consistently echoed the theme that there should be no distinction in the accounting information needs for small and large enterprises. The response profile of bankers in the survey could, therefore, depend on their propensity to comply with the official position of Robert Morris Associates. It is possible, therefore, that responses to the survey represented a measure of the propensity to comply with the official position of Robert

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<sup>37</sup> I. Ajzen and M. Fishbein, Understanding Attitudes and Predicting Social Behavior, (Englewood Cliffs, NJ: Prentice Hall, 1980).



Morris Associates rather than a measure of the perceived need for accounting information.

A third weakness of the general approach studies is that they considered the issue at an aggregate level and, therefore, required subjects to compare their overall accounting information needs for small and large companies. No attempts were made to determine whether specific accounting information items were perceived differently depending on size and ownership characteristics. Thus, even if bankers indicated that their accounting information needs differed, the studies provide no evidence to indicate whether specific financial statement items are perceived differently for small versus large companies. Yet, differential utility of specific accounting information items is one of the major concerns in the standards overload debate.

### **2.1.2. Perceived Usefulness Studies**

The studies reviewed in this section were designed to support descriptive statements about the perceived usefulness of selected financial statement items. These studies do not compare perceptions across enterprises with different characteristics. Rather, attention is focused on user perceptions of financial statement items that have been deemed less relevant and/or highly complex for small business en-

terprises. Included in this group are studies by Campbell<sup>38</sup>, by Siebel and Dennis<sup>39</sup>, as well as sections of the Abdel-khalik et al.<sup>40</sup> study and sections of the FASB's summary of the invitation to comment on financial reporting by privately held companies<sup>41</sup>.

Campbell used protocol analysis to study the usefulness to bank loan officers of four financial statement items for smaller closely-held companies. Four commercial loan officers from two midwestern banks were used in the experiment. Subjects were divided into two groups with one group receiving a "Big-GAAP" case and the other receiving a "Little-GAAP" case. Both cases contained information about a loan request for a small closely held company, including a full set of financial statements. Information on earnings per share, deferred income taxes, capitalized leases, and inflation adjustments were, however, omitted from the "Little-GAAP" case. All the contextual information (other than the four items

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<sup>38</sup> J. E. Campbell, "An Application of Protocol Analysis to the "Little GAAP" Controversy," Accounting Organizations and Society, (Vol. 9, No. 3/4, 1984), pp. 329-342.

<sup>39</sup> J. D. Siebel and D. M. Dennis, "Attitudes of Commercial Loan Officers Regarding the Accounting Standards Overload Issue," Journal of Commercial Bank Lending, (April 1983), pp. 22-33.

<sup>40</sup> :Abdel-khalik et al., op. cit., 1983.

<sup>41</sup> FASB Special Report, op. cit., 1983.

omitted in the "Little-GAAP" case) were the same for each group.

Campbell observed that bankers who received the "little-GAAP" case did not request three of the omitted items although they were told that additional information would be provided upon request. Omitted items not requested by subjects were earnings per share, deferred taxes, and information about inflation adjustments. Campbell therefore concluded that "there is little or no evidence to indicate earnings per share, deferred income tax and inflation adjusted information was useful to the subjects<sup>42</sup>." Because lease information was requested, the author concluded that the item was useful.

Although Campbell's research uses a small unrepresentative sample and, therefore, lacks the level of external validity that one may desire in a study of an accounting policy issue, it provides some interesting insights. Extrapolating from Campbell's research, it appears that bankers may not perceive earnings per share, deferred taxes, and inflation adjusted information as having an impact on their commercial loan decisions involving small companies. However, the researcher's failure to use a large company control treatment implies that one cannot determine whether the size of the experimental

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<sup>42</sup> Campbell, op.cit., 1983, p.341.

company had anything to do with the findings about the financial statement items. In other words, the same results might have been found if Campbell's research focused on a large company. Nevertheless, the author's findings strongly support a need for further research of the issue.

Another empirical study that is relevant to the current research is a survey of 223 members of Robert Morris Associates by Siebel and Dennis. The researchers asked respondents to express their opinions on 15 changes in GAAP as applied to small, closely-held companies proposed in the accounting standards overload literature<sup>43</sup>. They defined a small company as one with less than \$20 million in sales and with no publicly traded securities.

Three proposals of the fifteen received marginal support from bankers. The three marginally supported proposals relate to requirements for interest capitalization, compensated absences and interest rate imputation. Bankers indicated little support for changes in GAAP requirements for other items. It is of interest, however, that only 47.4% of respondents reported that they support application of the same measurement and disclosure rules for all businesses regardless of size and dispersion of ownership.

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<sup>43</sup> Siebel and Dennis, op. cit., 1983.

Bankers were also asked to indicate the extent of their agreement with six alternatives to the future development of accounting derived from the Scott Committee's Tentative Conclusions and Recommendations<sup>44</sup>. The researchers report that none of the suggested approaches to the development of accounting principles received overwhelming support from bankers. A small majority were, however, reported to support three of the six alternatives - (1) develop a new comprehensive basis of accounting (55%), (2) eliminate some disclosure rules for small businesses (52.6%), and (3) differentiate between accounting principles for small and large businesses if convincing evidence is available showing that the costs of applying the rule in financial statements of smaller companies exceeds the total benefits (55.5%). With regard to the income tax basis of accounting, 78% of the respondents indicated that statements prepared under that basis were less useful than statements prepared under GAAP.

Taken at their face value, these results support some degree of preference for differentiation in GAAP for small and large companies. Yet, the authors conclude that commercial loan officers support the maintenance of the existing accounting requirements for small businesses. This contradiction in the

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<sup>44</sup> AICPA, Tentative Conclusions and Recommendations of the Special Committee on Accounting Standards Overload, (New York: AICPA, 1981).

reported results suggest a need for further research in the area.

Abdel-khalik et al.<sup>45</sup> also provided useful insight into bankers' feelings about differentiation at the item-specific level by asking respondents to indicate the desirability of continuing to require private companies to follow ten accounting requirements. Bankers recommended continuing all ten requirements. Support was particularly strong for requirements involving capital leases, deferred taxes, the statement of changes in financial position, inventories accounted for at the lower of cost or market, and loss contingencies. The authors cautioned, however, that because no contextual factors were provided, responses varied depending on each individual's definition of a small company. Hence, they acknowledged that their results "only indicate leanings rather than very precise evaluations of attitudes or perceptions"<sup>46</sup>.

Additional insight into bankers' feelings about differentiation at the item specific level is provided by the FASB's Special Report. In its invitation to comment, the FASB asked bankers to identify the kinds of GAAP information with which

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<sup>45</sup> Abdel-khalik et al., op. cit., 1983.

<sup>46</sup> Abdel-khalik et al., op. cit., p.89.

they were not "very satisfied". Almost none was critical of specific measurement or disclosure requirements. Instead, they focused their dissatisfaction on the level of CPA involvement. The report reveals, however, that bankers acknowledge that they frequently accept financial statements that omit a substantial number of disclosures, as well as statements prepared on another comprehensive basis, for making loans to small companies. This suggests that the lending decision can be made without some of the required disclosures from GAAP-based financial statements. One must be cautious, however, about deriving such a conclusion from the FASB's Special Report because there are unresolved inconsistencies in the findings of the FASB's Special Report.

#### **2.1.2.1. Weaknesses of perceived usefulness studies**

The findings of the studies reviewed in this section are weak and contradictory. Campbell, for example, reports that bankers do not perceive GAAP requirements relating to earnings per share, capitalized interest, and deferred taxes to be useful in a lending decision. Similarly, Siebel and Dennis provide evidence indicating marginal support among bankers for changes in GAAP requirements relating to imputed interest, capitalized interest, and compensated absences. Abdel-khalik et al., however, report findings that contradict Campbell's results with regard to capitalized interest and

deferred taxes. Their results suggest that bankers need both of these items in evaluating a loan. Further, they conclude that bankers want private companies to make all disclosures that are required by GAAP but often use financial statements that omit a substantial number of the required disclosures in evaluating the loan requests of small, privately held companies.

With the exception of Campbell, none of the researchers used a specific behavioral referent. Thus, no precise information about the attitudes or perceptions of bankers with regard to the utility of accounting items is provided by these studies<sup>47</sup>.

Each of the studies make the assumption that certain financial statement items are less helpful to users of small business financial statements. Their research focuses on alternatives to those items and tests of user preferences for alternatives to existing GAAP requirements for small and privately held companies. They do not examine the same factors with respect to large and/or publicly held companies. Thus, the perceived usefulness studies can, at best, provide only limited information on the fundamental issue of whether

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<sup>47</sup> Abdel-khalik et al., op. cit., 1983, p. 89.



user needs are associated with size and ownership characteristics of a reporting entity.

### 2.1.3. Designed Studies

Research by Stanga and Tiller<sup>48</sup> represents the only available study that expressly sets out to obtain evidence on the association between firm size and the perceived needs of bankers at the item-specific level.

Stanga and Tiller's research design used two versions of a questionnaire that required bankers to indicate the perceived level of importance for forty financial statement items. The two versions were identical except for the contextual factors that defined firm size and ownership. One version of the questionnaire -- the small firm version -- provided contextual factors that described a small firm while the other version described a large firm -- the large firm version. A small firm was defined as one with total revenues less than \$5 million, while a large firm was described as one with total revenues greater than \$125 million. Respondents were told to assume that they were dealing with:

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<sup>48</sup> K.G. Stanga and M.G. Tiller, "Needs of Loan Officers for Accounting Information From Large Versus Small Companies," Accounting and Business Research, (Winter 1983), pp. 63-70.

1. a typical new customer in the context of relatively tight money;
2. a significant term loan that was less than their legal lending limit;
3. items that were significant in amount from the applicant's most recent financial statements<sup>49</sup>.

Forty financial statement items were included and importance was measured on a five point scale ranging from "not important" to "extremely important". Banks were stratified by size into a small and large group. Bankers from the small group were mailed the small firm version of the questionnaire while bankers from the large group were mailed a large firm version (see Exhibit 2.2).

No significant difference in perceived importance across firm size was found. Accordingly, the authors concluded that their findings suggest that the needs of loan officers who make lending decisions involving large public companies are similar to the needs of loan officers who make lending decisions involving small private companies. They noted, however, that their findings are tentative and that further research would be needed before accounting policy changes are recommended<sup>50</sup>.

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<sup>49</sup> Ibid., p. 64.

<sup>50</sup> Ibid., p. 69.

Exhibit 2.2  
Quasi-experimental Design  
Used by Stanga & Tiller (1983)

Bank Size	EXPERIMENTAL COMPANY SIZE	
	LARGE	SMALL
Small Bank	_____	Small version questionnaire
Large Bank	Large version questionnaire	_____

One should observe, however, that the design used by the researchers is not appropriate for examining differences in perceived importance across firm size because bank size acts as a confounding factor. Large and small banks are not homogeneous in their operations. Further, differences in the structural characteristics of the work environment of commercial loan officers could represent a major source of variation in their perceptions<sup>51</sup>. Thus, one cannot disaggregate the impact on perceived importance in terms of differences resulting from the treatment (different size and ownership characteristics of the reporting entity) and those resulting from variations in bank size. The authors, therefore, failed in their attempt to test the impact of size and ownership characteristics on user information needs.

Imprecise manipulation of the treatment effect is also a major weakness of this study. Firm size was defined in terms of upper and lower limits for sales, the loan amount was defined in terms of the respondents legal lending limit, and the customer was described as "typical". Because subjects were in effect asked to assume their natural lending environments, it is highly unlikely that the behavioral referent was the same among different subjects. This, therefore, re-

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<sup>51</sup> Downey and Slocum, op. cit., 1975.

sulted in another source of unaccounted variability in the research findings.

#### 2.1.4. Section Summary

The first section of this chapter has highlighted the research undertaken in the area of differentiation in financial reporting. These studies suffer from a number of methodological weaknesses including failure to provide appropriate contextual factors that could affect perceptions of accounting information and failure to control for bankers' subjective norm. In general, the studies have failed to present evidence on whether financial accounting information items are perceived differently depending on size and ownership characteristics of a reporting entity.

Stanga and Tiller's study represents the only available research that attempts to examine the issue. However, their research fails because of an inappropriate research design and improper manipulation of contextual factors. None of the other studies compared perceptions of accounting data across reporting entities with different size and ownership characteristics. Campbell used protocol analysis to compare the relative usefulness of different GAAP's - "big-GAAP" and "little-GAAP" for a small company. Siebel and Dennis examined attitudes toward proposed changes in financial reporting for

small companies. The FASB sponsored projects examined bankers' views on differences in financial reporting for small and large companies.

Prior research in the area of differentiation in financial reporting has not considered the factors associated with the perceptions of bankers. Because no theoretical model has been developed in the literature to explain bankers' perceptions of financial accounting information, it seems appropriate to draw from another discipline in order to develop a research model. The organizational behavior literature, which has examined managerial perceptions in some depth, indicates that several factors may be responsible for differences in perceptions among individuals working in the same organization or profession. This literature is therefore used in the next section as the basis for an exploratory research model for examining the impact of size and ownership characteristics on loan officer needs for financial accounting information.

## 2.2. PERCEPTIONS IN ORGANIZATIONS

This section discusses perceptions from the perspective of organizational behavior. It draws from the organizational behavior literature to identify and discuss variables that are associated with managerial perceptions. The perception

formation process in organizations is described and applied to the banking environment. Finally, the section presents a model that is used as the basis for examining bankers' perceptions of financial accounting information within the context of a lending decision.

### **2.2.1. Perception Formation Process**

Perception is a process that entails being sensitized to facts or developing certain interpretations of stimuli. Because people act on the basis of what they see or understand, the process is highly important in understanding behavior in organizations<sup>52</sup>.

Research on individual perceptions has demonstrated that individual differences can influence the way individuals view their environments. Zalkind and Costello, for example, concluded that individuals' needs, values, and cultural background are important factors associated with their perceptions<sup>53</sup>. Litterer, on the other hand, presented a model of perceptions that indicates that variables, in addition to personal differences, are associated with the per-

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<sup>52</sup> Litterer, op. cit., 1973.

<sup>53</sup> S. S. Zalkind and T. W. Costello, "Perception: Implications for Administration," Administrative Science Quarterly, (September 1962), pp. 218-235.

ception formation process in organizations<sup>54</sup>. Variables included in Litterer's model are stress, group pressure, interaction, reference groups, role, organizational position and job, and reward system.

According to Litterer, perception formation consists of three mechanisms (Exhibit 2.3). The first is selectivity in which certain pieces of information are identified for further consideration. The second, closure, involves compiling the selected pieces of information into a meaningful whole. In the third mechanism, called interpretation, previous experiences aid in judging the information collected. Information admitted into the process by the selectivity mechanism is given meaning by either closure or interpretation, or both. Interpretation and closure interact with selectivity to determine what information will be selected (see Exhibit 2.3).

Downey and Slocum, in a discussion of environmental uncertainty, proposed that perceptions are derived from a process of "mapping" environmental stimuli and that variability in perceptions can be explained in terms of a series of factors that are similar to those proposed by Litterer<sup>55</sup>. According to Downey and Slocum, these factors include the individual's

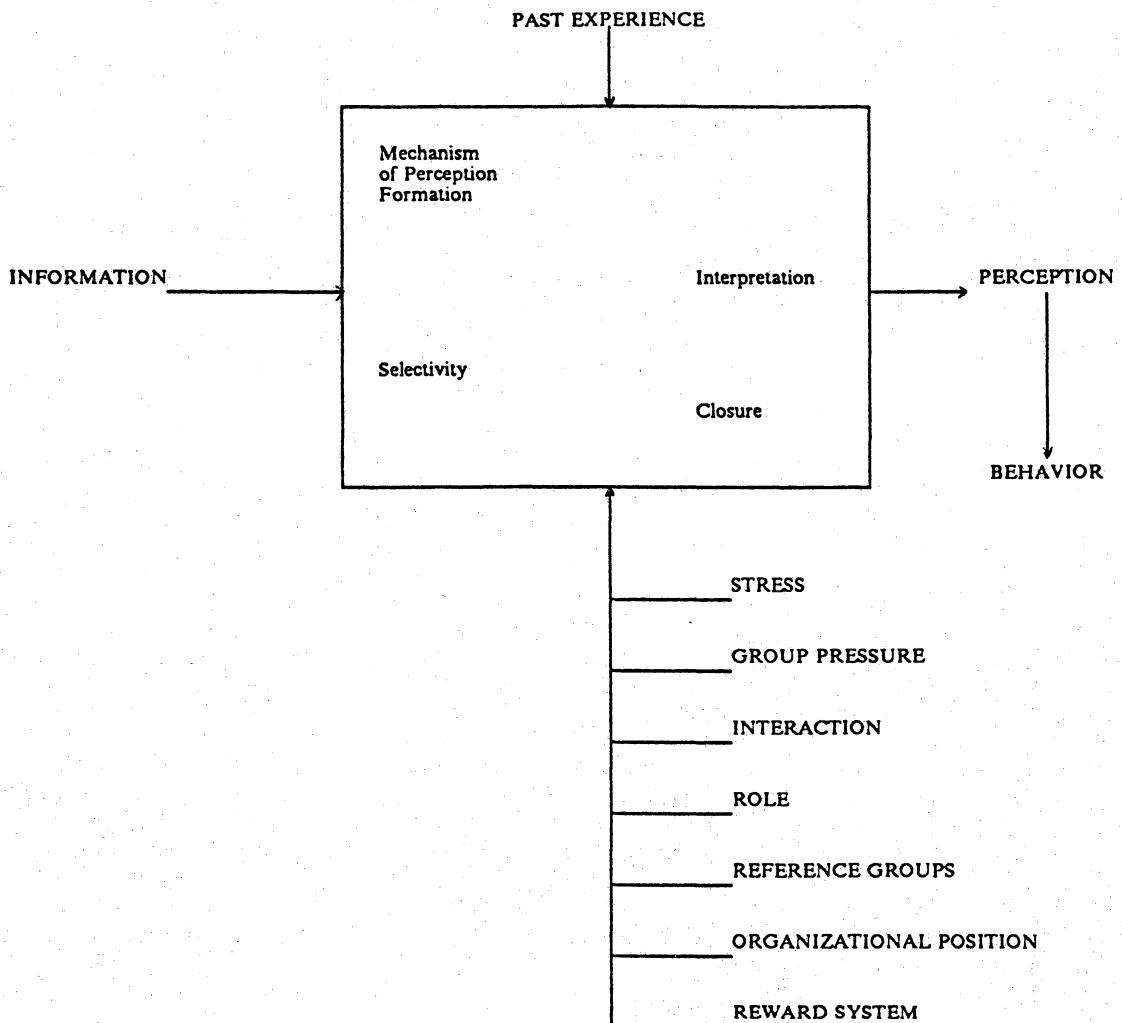
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<sup>54</sup> Litterer, op. cit., 1973.

<sup>55</sup> Downey and Slocum, op. cit., 1975.



**EXHIBIT 2.3**  
**Perception Formation Process**



Adapted from:  
J. A. Litterer, *The Analysis of Organizations*,  
(N.Y.: John Wiley and Sons, 1973), p. 103.

environmental characteristics, cognitive processes, behavioral response repertoire, and social expectations<sup>56</sup>. Exhibit 2.4 displays the process as explained by Downey and Slocum. These factors along with empirical and theoretical research that support the process as described by Downey and Slocum are discussed in this section.

The link between environmental characteristics and perceptions among organizational members as proposed by Downey and Slocum was empirically demonstrated by Duncan in his study of organizational environments and perceived uncertainty<sup>57</sup>. Duncan characterized organizational environments along two dimensions - complexity and dynamism. A dynamic environment is one in which the relevant factors for decision making are in a constant state of change. Complexity, on the other hand, relates to the number of factors in the decision unit's environment and the relationship between them<sup>58</sup>.

The individual's environmental characteristics do not by themselves cause perceptions. Characteristics of the indi-

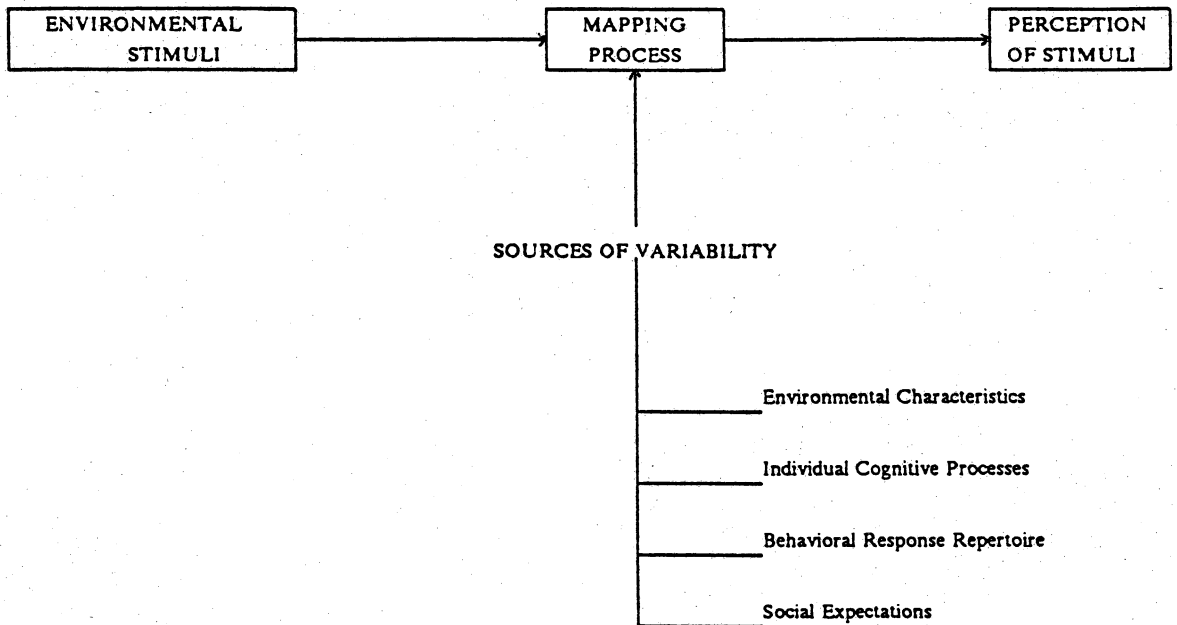
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<sup>56</sup> Ibid.

<sup>57</sup> R. Duncan, "Characteristics of Organizational Environments and Perceived Environmental Uncertainty," Administrative Science Quarterly, (September 1972), pp. 313 - 327.

<sup>58</sup> Ibid., p.315.

**EXHIBIT 2.4**  
**The Mapping Process in Perception Formation**



Adapted from:  
H. K. Downey and J. W. Slocum, "Uncertainty: Measures, Research,  
and Sources of Variation," *Administrative Science Quarterly*,  
(September 1975), p. 573.

vidual's cognitive processes, the individual's behavioral response repertoire, and social expectations act as intervening variables in the mapping process.

According to Downey and Slocum, cognitive processes include tolerances for ambiguity and ability to cope with complexity. Based on the works of Emery<sup>59</sup>, and of Vannoy<sup>60</sup>, Downey and Slocum describe two general approaches that managers use to cope with complexity. First, they downgrade complex types of environments as a defense mechanism. Managers who use this approach will unilaterally redefine their environments to attain their goals whenever they feel unable to perform the behaviors required by the environment. Another approach is reliance on values as behavioral guides in order to cope with complex environments. Managers using this approach ignore the facts about their environments and rely on their value systems as behavioral guides in problem solving situations. Both approaches contribute to differences in perceptions among managers and other organizational participants.

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<sup>59</sup> F. Emery, "The Next Thirty Years: Concepts, Methods, and Applications," Human Relations, Vol. 20 (1967), pp. 199 - 237.

<sup>60</sup> J. Vannoy, "Generality of Cognitive Complexity -- Simplicity as a Personality Construct," Journal of Personality and Social Psychology, Vol. 2 (1965), pp. 385 - 396.

Behavioral response repertoire refers to the individual's capacity to display appropriate behavioral responses to given environmental characteristics. This relates mainly to capacities stemming from past experiences. One expects an increased amount of learning to be associated with increased experience. Increased learning increases the probability that the individual will elicit more appropriate responses when faced with a specific environment. This proposition is consistent with Taylor's findings indicating that age and experience are important factors in explaining managerial information processing and decision making<sup>61</sup>.

Capacity to respond to a given environmental situation is also conditioned by an individual's professional orientation. Individuals in organizations have a variety of social identities and roles. Certain roles and identities are consensually regarded as relevant to organizational goals while others intrude and affect group behavior<sup>62</sup>. Gouldner referred to the former as manifest social identities and the latter as latent social identities. Latent identities are important because they exert pressure upon methods and pro-

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<sup>61</sup> R. N. Taylor, "Age and Experience as Determinants of Managerial Information Processing and Decision Making Performance," Academy of Management Review, (March 1975), pp. 74 - 83.

<sup>62</sup> Gouldner, op. cit., 1957

cedures prescribed by group or professional norms. By contrast, manifest identities focus on the manner in which group norms yield prescribed behavior and beliefs among persons belonging to the same profession.

Individuals who orient themselves toward the latent identities of a particular group or profession assume identities that are prescribed by the group. As a result there is usually a high level of commonality in the perceptions of such individuals and those of the group. This contrasts with other individuals who orient themselves toward latent identities of persons outside the work-group or profession, thereby yielding perceptions that are not entirely consistent with group norms.

Gouldner posited that there are two types of latent identities -- cosmopolitan and local -- and that differences in beliefs and behavior of individuals with identical manifest identities and roles may be explained in terms of variations in their latent identities<sup>63</sup>. Three variables for differentiating latent identities were proposed and tested by Gouldner: loyalty to the organization, commitment to professional skills and values, and reference group orientation<sup>64</sup>.

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<sup>63</sup> Gouldner, op. cit., 1957.

<sup>64</sup> Gouldner, op. cit., 1958.

Locals have high loyalty to organizations, low commitment to professional skills, and are likely to use an inner referent group for assessing their behavior and values. Cosmopolitans, on the other hand, have low loyalty to organizations, high commitment to professional skills, and use an outer referent group for assessing their behavior and values.

In a factor analytic study of the construct, Berger and Grimes found a total of five factors that distinguish latent identities. They are scientific research ethic, institutional work ethic, risk of work ethic, reference group orientation, and loyalty to the organization<sup>65</sup>. Originality in the work ethic refers to the extent to which the need for originality is considered in formulating ideas and carrying out assignments. Loyalty to the profession relates to agreement with the professions' goals and values, and willingness to remain in it. Institutional work ethic relates to the extent to which organizational goals and rewards are considered in formulating ideas and carrying out assignments. Risk of work ethic is defined as the general concern for risks in formulating ideas and carrying out assignments. Finally, reference group orientation relates to the context of the individuals' frame of reference. The first three factors are

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<sup>65</sup> P. K. Berger and A. J. Grimes, "Cosmopolitan-Local: A Factor analysis of the Construct," Administrative Science Quarterly, (June 1973), pp. 223 - 235.

consistent with Gouldner's "commitment to professional skills and values". The other two are identical to those posited by Gouldner. Thus Berger and Grimes supported the construct as proposed by Gouldner.

The final factor in the Downey and Slocum model is social expectations. This factor derives from the form of the organizational and professional socialization, and influences the way in which an individual views problems and processes information. An individual's social expectations are also related to the expectations of others. Thus, the role expectations attached to a particular position could affect the perceptions of an individual.

Organizations are also involved in the "mapping process" and as a result contribute to the perception formation process. Based on their mappings, organizations develop policies and strategies for coping with their environments. Strategies and policies are translated into roles and functions and imprint upon individuals in the organization to shape perceptions and related behaviors. Organizations also institutionalize roles and functions via structural characteristics that continuously interact with individual characteristics to affect the perception formation process.



The empirical literature that has examined the association between structure and perceptions supports the proposition that structural characteristics influence perceptions. Carter, for example, reported findings that indicate an association between structure and top management's perceptions<sup>66</sup>. Based on the findings of a laboratory experiment to determine the impact of information and structure on perceived uncertainty, Huber, O'Connell and Cummings concluded that perceptions of the environment are influenced by structural characteristics, both external and internal to an organization<sup>67</sup>.

McKinley, Panny, and Reckers report evidence suggesting that perceptions of structural characteristics external to an organization could affect perceptions<sup>68</sup>. These researchers were interested in the impact of CPA firm type and size and the amount of management advisory services performed on loan officer perceptions. They report that CPA firm size affected

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<sup>66</sup> E. Carter, "The Behavioral Theory of the Firm and Top-Level Corporate Decisions," Administrative Science Quarterly, (December 1971), pp. 413 - 428.

<sup>67</sup> G. P. Huber, M. J. O'Connell and L. L. Cummings, "Perceived Environmental Uncertainty: Effects of Information and Structure," Academy of Management Journal, (December 1975), pp. 737.

<sup>68</sup> S. McKinley, K. Panny and P. Reckers, "An Examination of the Influence of CPA Firm Type, Size, and MAS Provision on Loan Officer Decisions and Perceptions," Journal of Accounting Research, (Autumn 1985), pp. 887 - 896.

perceptions of financial statement reliability and auditor independence. Similarly, the FASB in its summary on the invitation to comment on financial reporting by privately owned companies, reported findings which suggest that bank size is related to the perceived utility of GAAP for small and large enterprises (see Exhibit 2.1).

Although the above discussion focuses on managerial perceptions, it may be extended to commercial loan officers and their perceptions of accounting information. From the standpoint of a loan officer, accounting information is intended to reduce the uncertainty involved in a lending decision. However, perceptions of accounting information are not necessarily based on objective assessments of the utility of the information. These perceptions should be subject to the same mapping process described in the above discussion. This implies that variability in the perceptual processes of loan officers are related to environmental characteristics, cognitive processes, behavioral response repertoire, and social expectations. Bank strategies and policies which are institutionalized through structural characteristics also interact in the perception formation process by prescribing formal behavioral constraints and role expectations among commercial loan officers. On the other hand, latent identities and roles intrude on beliefs and behavior of commercial

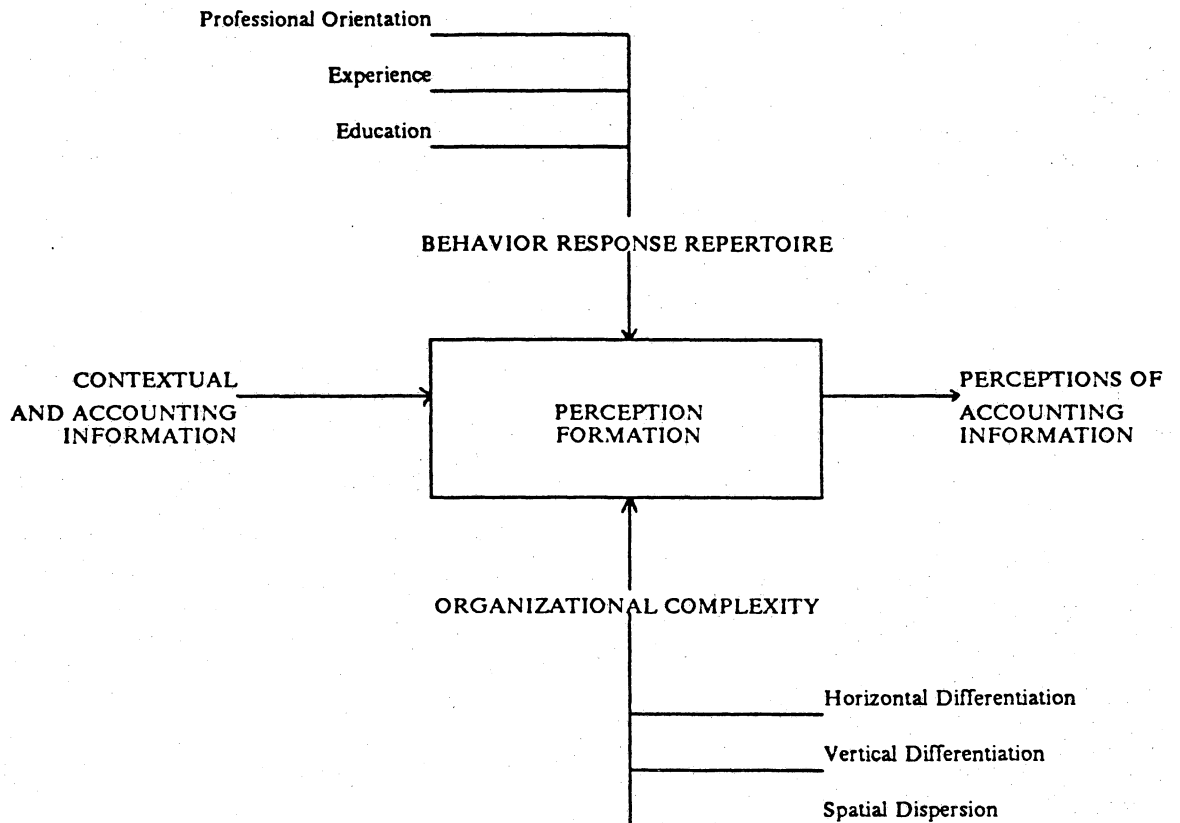
loan officers resulting in differences in the levels of emphasis on prescribed rules and regulations.

### **2.2.2. Perceptions of Accounting Information**

A model for examining perceptions of accounting information is developed based on the above discussion of managerial perceptions. The model is depicted in Exhibit 2.5 and represents an adaptation of the format for understanding the perception formation process as presented by Litterer and Downey and Slocum. The model is based on the theory that individual perceptions are influenced by characteristics of the individual and by characteristics of the environment. It depicts perception of accounting information as being influenced by the contextual information about a decision, the nature of the accounting information, behavioral response repertoire, and the complexity of the organization within which the decision is being made (see Exhibit 2.5). Individual characteristics, represented by behavior response repertoire in Exhibit 2.5, include professional orientation, experience, and education.

Professional orientation affects the extent to which latent identities external to the organization or profession of users intrude upon their manifest roles or identities. This intrusion affects problem solving techniques and the strength

**EXHIBIT 2.5**  
**Research Model**



of subjective norms on perceptions, attitudes, and behavior<sup>69</sup>. One would expect, therefore, that the extent to which loan officers emphasize the norms of a reference group in evaluating the utility of a financial statement item could be related to their professional orientation. However, one also expects that experience and education would affect the propensity of the individual to elicit appropriate behavioral responses to the contextual and accounting information items<sup>70</sup>.

Characteristics of the environment in which financial statements are used is the other major factor affecting the perception formation process. The model (Exhibit 2.5) limits this factor to the complexity of the organization in which the user works. Complexity relates to the degree of formal structural differentiation within an organization. Highly complex organizations are characterized by highly structured occupational roles and role expectations and by many subunits, levels of authority, and operating sites<sup>71</sup>. Occupational roles and subunits illustrate horizontal differentiation, different levels of authority represent vertical differentiation, and the existence of many operating

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<sup>69</sup> Gouldner, op. cit., 1957.

<sup>70</sup> Taylor, op. cit., 1975.

<sup>71</sup> Price and Muller, op. cit., 1986, p. 100.

sites is a feature of spatial dispersion. Thus, as an organization becomes more complex, one would expect an increase in the number of environmental factors that contribute to perception formation.

Organizational complexity has implications for understanding perceptions in organizations. Structural differentiation in organizations leads to differences in attitudes and behavior on the part of members of the differentiated organizations<sup>72</sup>. Similarly, as Litterer noted, the place or position a person occupies in an organization has considerable influence on the way things appear to him or her<sup>73</sup>. Horizontal differentiation places people at the same authority level across the traditional organizational chart. People in different organizational units perceive things differently because of differences in tasks and role expectations.

Vertical differentiation also has an important influence on the perception of people. Managerial positions at lower levels in the hierarchy are typically confronted with problems of an immediate nature requiring relatively quick action. At higher levels in the hierarchy, problems are more long term

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<sup>72</sup> P. R. Lawrence and J. W. Lorsch, "Differentiation and Integration in Complex Organizations", Administrative Science Quarterly, (June 1967), pp. 1 - 47.

<sup>73</sup> Litterer, op. cit., 1973.

in nature and frequently necessitate more interaction among organizational subunits.<sup>74</sup>. The position that a user of financial statements occupies in a complex organization will therefore affect perceptions of the accounting information.

Variations in the level of complexity across organizations will also affect perceptions. First, decision makers in more complex organizations are likely to confront a wider range of factors than their counterparts in less complex organizations<sup>75</sup>. Second, as a result of variations in complexity, there may be differences in the level of emphasis on formal roles and expectations. Differences in the number of factors confronting an individual and variations in roles and role expectations are major influences in the perception formation process<sup>76</sup>.

The level of complexity of the organization also has a major impact on the extent of formalization and documentation employed by the organization<sup>77</sup>. When faced with a high degree of complexity, organizations tend to become formalized in order to control and coordinate their activities. As a re-

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<sup>74</sup> Litterer, op. cit., 1973.

<sup>75</sup> Duncan, op. cit., 1972.

<sup>76</sup> Downey and Slocum, op. cit., 1975.

<sup>77</sup> Child, op. cit., 1972.

sult, procedures become more standardized and the demand for documentation increases<sup>78</sup>. One would expect, therefore, that as the complexity of a bank increases, the demand for standardization and documentation in its lending activities also increases. A strong demand for the application of one unified set of GAAP by all commercial loan applicants, irrespective of the size and ownership characteristics, is consistent with the demand for standardization and documentation that would exist in more complex banks.

Thus, given similar decision situations, financial statement users in different organizations are expected to perceive the utility of accounting information differently. Differences in the structural characteristics of organizations that constrain the behavior of the users represent an important source of such variations in perceptions pertaining to the utility of accounting information.

Organizational size, a phenomenon closely associated with complexity, is another factor that has implications for user perceptions of accounting information. The size of an organization has been identified in the organizational behavior literature as the attribute having the greatest single influence on the extent to which the organization develops bu-

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<sup>78</sup> Ibid.



bureaucratic structures<sup>79</sup>. Organization size causes bureaucratic structuring through its effect on intervening variables such as the frequency of decisions and social control<sup>80</sup>.

In general, the larger an organization, the greater the range of resources and opportunities under the control of a manager. Thus, decision makers in larger and more complex organizations are likely to perceive more scope for alternatives than their counterparts in smaller and less complex organizations. Similarly, decision-makers in more complex organizations are likely to have more specialists involved in analyzing and evaluating decision problems. In addition, there is usually greater emphasis on standardization and documentation of the decision making process in larger and more complex organizations. Such differences could lead to variations in the perceived utility of accounting information in the decision making process of different organizations in the same industry.

In summary, the model (see Exhibit 2.5) suggests that perceptions of accounting information will vary among individ-

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<sup>79</sup> See for example, Hall, op. cit., 1982.

<sup>80</sup> D. S. Pugh et al., "The Context of Organizational Structure", Administrative Science Quarterly, (March 1969), pp. 91 - 114.

uals, depending on the decision context, behavioral response repertoire, and the complexity of the organization in which the decision is being made. Thus, one would expect that by varying the decision context (e.g. small loan applicant decision context versus large applicant decision context), and holding the type of accounting information constant, variations in the perceptions would depend on behavior response repertoire, organizational complexity and the manipulation of contextual information.

### 2.3. CHAPTER SUMMARY

This chapter has provided a review of the relevant empirical studies on the issue of differentiation in financial accounting. The studies were classified into three groups for discussion purposes. They are:

1. studies that surveyed the general opinion of bankers with regard to their needs for accounting information for small and large companies;
2. studies that examined the perceived usefulness of financial statement items that have been deemed less relevant (or not relevant) to the needs of users of the financial statements of small companies; and

3. studies designed to examine differences in perceived importance of financial statement items that depend on size and ownership characteristics of a reporting entity.

These studies suffer from a number of methodological weaknesses and failed to present reliable evidence on whether size and ownership characteristics of a reporting entity have an impact on user needs for accounting information.

The chapter also discussed the perception formation process in organizations. The discussion drew heavily from the organizational behavior literature which indicates that variations in perceptions between individuals could be explained by differences in the characteristics of the individual and differences in environmental characteristics facing the individual. These basic propositions about the perception formation process were applied to the banking environment and used to develop a research model for this dissertation.

The next chapter highlights the research questions and hypotheses derived from the discussion in this chapter. The chapter also describes the methodology and procedures used to explore the hypotheses of interest.

## CHAPTER III

### EMPIRICAL STUDY - RESEARCH METHODOLOGY

This chapter describes the research methodology used to examine factors that affect banker's perceptions of accounting information. Specifically, the study examines whether size and ownership characteristics of a commercial loan applicant affect bankers' perceptions of accounting information. The impact of behavior response repertoire and organizational complexity on bankers' perceptions of accounting information is also examined.

The chapter is divided into five main sections. First, the variables used in the research are defined. Second, research questions are detailed and related hypotheses are formulated. The third section describes the population and the sample used in the survey. The fourth and fifth sections discuss questionnaire development and data analysis techniques, respectively.

#### 3.1. DEFINITION OF TERMS

This study focuses on perceptions of senior commercial loan officers. Senior commercial loan officers are defined as bank lending officers with a designation of Vice President

or above. Therefore, all data collection efforts are aimed at this group of bankers because their knowledge and experience contribute toward the validity and generalizability of the study.

The dependent variables surrogate the perceptions of senior commercial loan officers with respect to items of financial accounting information. Perceptions are operationalized in terms of (1) perceived importance of an item of financial accounting information, (2) likelihood of using the item, (3) perceived adequacy of the item, and (4) perceived impact of not disclosing (impact of omitting) the item on a lending decision. This approach to perceptions differs from previous approaches which simply asked respondents to indicate perceived importance<sup>81</sup>. Importance, likelihood of use, and impact of omitting an item from the financial statements are complementary and are jointly intended to measure the perceived need for accounting information items. Perceived adequacy supplements the three indices of perceived need.

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<sup>81</sup> See, for example, Stanga and Tiller, op. cit., 1983; M. Firth, "A Study of the Consensus of Perceived Importance of Disclosures," The International Journal of Accounting, (Fall 1978), pp. 54-70; K. Stanga, "Disclosure in Public Annual Reports," Financial Management, (Winter 1976), pp. 63-70; G. Chandra, "A Study of the Consensus on Disclosure Among Public Accountants," The Accounting Review, (October 1974), pp. 733-742.

The financial accounting information examined in the study includes twelve financial statement items that have been featured in the standards overload debate and four items about which there has been less controversy. These items are listed in Exhibit 3.1.

The first twelve items are "key items" in the standards overload debate. That is, a considerable amount of controversy has surrounded the need for these items in the financial reports of small and private companies<sup>82</sup>. Some of these items were also examined in empirical studies by Abdel-Khalik et al.<sup>83</sup>, Campbell<sup>84</sup>, Siebel and Dennis<sup>85</sup>, and Stanga and Tiller<sup>86</sup>. The last four items are control items. There has been relatively little controversy about their relevance for businesses of all sizes and ownership characteristics.

Among the "key items" are four measures (primary earnings per share, fully diluted earnings per share, segment disclosures,

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<sup>82</sup> See, for example, The Werner Committee Report, 1976; The Derieux Committee Report, 1980; The Scott Committee Report, 1983; the Sunset Review, 1982; FASB Special Report, op. cit., 1983.

<sup>83</sup> Abdel-khalik et al., op. cit., 1983.

<sup>84</sup> Campbell, op. cit., 1984.

<sup>85</sup> Siebel and Dennis, op. cit., 1983.

<sup>86</sup> Stanga and Tiller, op. cit., 1983.

**EXHIBIT 3.1**  
**List of Financial Statement Items Examined**

Financial Reporting Items	Major Authoritative Source	Previously Examined By	Usefulness Highly Debated?	Currently Required For All Companies?
Primary Earnings Per Share	APB 15; SFAS 21	Campbell, 1984.	Yes	NO
Fully Diluted Earnings Per Share	APB 15; SFAS 21	Campbell, 1984.	Yes	No
Lease Capitalization	SFAS 13	Abdel-Khalik <i>et al.</i> , 1983. Siebel and Dennis, 1983. Stanga and Tiller, 1983.	Yes	Yes
Deferred Taxes	APB 11	Campbell, 1984 Abdel-khalik <i>et al.</i> , 1983. Siebel and Dennis, 1983.	Yes	Yes
Impact of Changing Prices	SFAS 33	Campbell, 1984. Stanga and Tiller, 1983.	Yes	No
Capitalized Interest	SFAS 34	Abdek-khalik <i>et al.</i> , 1983. Siebel and Dennis, 1983.	Yes	Yes
Pensions		Abdel-khalik <i>et al.</i> , 1983. Siebel and Dennis, 1983.	Yes	Yes.
Present Value of Long-term Payables	APB 21	Abdel-khalik <i>et al.</i> , 1983. Siebel and Dennis, 1980.	Yes	Yes
Present Value of Long-term Receivables	APB 21	Abdel-khalik <i>et al.</i> , 1983. Siebel and Dennis, 1983.	Yes	Yes
Segment Reporting	SFAS 14; SFAS 21	Stanga and Tiller, 1983.	Yes	No
Loss Contingencies	SFAS 5	Abdel-khalik <i>et al.</i> , 1983	Yes	Yes
Income From Continuing Operations		Stanga and Tiller, 1983		
Compensated Absences	SFAS 43	Abdel-khalik <i>et al.</i> , 1983	Yes	Yes
Cost of Goods Sold		Stanga and Tiller, 1983.	No	Yes
Fixed Asset Composition			No	Yes
Statement of Changes in Financial Position	APB 19	Stanga and Tiller, 1983.	No	Yes

and disclosures about the impact of changing prices<sup>87</sup>) that privately held companies are not required to disclose under existing GAAP. Presumably, these items are perceived to be more relevant for large, public companies. Thus, differentiation has been formally implemented for these items. The available literature has not, however, demonstrated that size and ownership characteristics affect loan officer needs for those items.

The independent (explanatory) variables in the model are behavioral response repertoire and organizational complexity. Behavioral response repertoire refers to the set of variables that contribute to the capacity of individuals to respond appropriately to environmental situations they encounter. The variables associated with this construct include education, professional orientation, and experience<sup>88</sup>. Each of these factors affects an individual's capacity to respond to his or her environment.

Education refers to the highest college degree earned and the college accounting background of a respondent.

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<sup>87</sup> Subsequent to this survey, the FASB issued Statement 89 (December 1986) which makes the inflation disclosure requirements of SFAS 33 voluntary for all companies.

<sup>88</sup> See, for example, Downey and Slocum, op. cit., 1975; and Litterer, op. cit., 1973.



Professional orientation relates to the concept developed by Gouldner<sup>89</sup> to classify attitudes, values, perceptions, and behavior of professionals in complex organizations. Based on the works of Berger and Grimes<sup>90</sup>, the construct was applied as an attitudinal-type index with five components: originality in the work ethic, loyalty to the profession, institutional work ethic, risk of work ethic, and reference group orientation. Each of these factors is defined in Chapter II. Membership in a professional banking organization (such as Robert Morris Associates and American Bankers Association) was also tested as an independent variable in order to supplement the professional orientation construct. Experience refers to the number of years that a respondent has been involved in commercial lending and financial statement evaluation.

Organizational complexity is defined as a structural characteristic of a bank. It relates to the extent of horizontal differentiation, vertical differentiation, and spatial dispersion<sup>91</sup>. Horizontal differentiation applies to the subdivision of tasks among organizational members, while

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<sup>89</sup> Gouldner, op. cit., 1957.

<sup>90</sup> Grimes and Berger, op. cit., 1970; Berger and Grimes, op. cit., 1973.

<sup>91</sup> Hall, op. cit., 1982.

vertical differentiation relates to the depth of an organizational hierarchy. Spatial dispersion is defined as the number of locations at which the output of the organization is produced.

Finally, size and ownership characteristics refer to the total assets and sales of a reporting entity and to whether the entity is privately held or public. A privately held company is one whose securities are not publicly traded. A public company, on the other hand, is one whose securities are publicly traded.

### **3.2. RESEARCH QUESTIONS AND HYPOTHESES**

This study was undertaken to gather data that could be used to examine research issues developed in chapters I and II.

Accordingly, the following questions are examined:

1. Are the perceived needs of users of financial statements affected by the size and ownership characteristics of a reporting entity?
2. Is there an association between perceived needs and organizational complexity?
3. Is there an association between perceived needs and behavioral response repertoire, including professional orientation?

The first question is the major issue under study. The other questions are exploratory and are intended to test some of

the factors that might be associated with perceived needs. Hypotheses deriving from each of the three research questions are presented in the remainder of this section.

Professional accountants have argued that some of the financial statement items required by GAAP are more relevant to the needs of users of financial statements of large companies. The FASB's Special Report on financial reporting by privately owned companies, for example, states that:

A majority of public accountants perceive fundamental differences in the needs and practices of creditors depending on whether the company is private or public ... they perceive that creditors rely less on financial statements of private than of public companies<sup>92</sup>.

The report also states that almost 60% of public accountants indicated there should be differentiation in financial reporting on the basis of size and ownership characteristics<sup>93</sup>. Abdel-khalik et al. provide similar evidence on the preference of public accountants for differentiation<sup>94</sup>. Accountants' preference for differentiation in financial reporting is also documented in the Sunset Review (1982), the Derieux Committee Report (1982), and the Scott Committee Report (1983).

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<sup>92</sup> FASB, Special Report, op. cit., 1983, p. 4.

<sup>93</sup> ibid., p. 5.

<sup>94</sup> Abdel-khalik et al., op. cit., 1983.

As discussed in Chapter 1, GAAP could accommodate differentiation on the basis of size and ownership characteristics if it can be demonstrated that those company attributes affect user needs for accounting information<sup>95</sup>. Thus the following hypothesis was formulated:

**H01:**        Size and ownership characteristics of a reporting entity have no impact on the accounting information needs of commercial loan officers.

The alternative hypothesis tested is that the accounting information needs of commercial loan officers are affected by size and ownership characteristics of a reporting entity.

An underlying theme in the accounting standards overload literature is that certain measurement and disclosure requirements under GAAP are more relevant to users of financial statements of large companies than to users of financial statements of smaller nonpublic enterprises. It is argued that, because large publicly held corporations are more complex than small privately held corporations, more complex information would be needed for decision making relating to the former. This suggests that proponents of an accounting standards overload perceive a positive association between user needs and size and ownership characteristics of a reporting entity.

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<sup>95</sup> Murray and Johnson, op. cit., 1983.

Assuming that the amount of disclosure provided in the financial statements of an enterprise is user driven, support for a positive association may also be found in a series of studies on the "extent of disclosure" among corporations. These studies have generally reported a positive association between the extent of disclosure and size and ownership characteristics of a reporting entity<sup>96</sup>. Thus, it is expected that bank loan officers will report a greater need for accounting information when dealing with a large company than when dealing with a small company.

The literature on perceptions in organizations indicates that organizational structural characteristics are related to the perception formation process<sup>97</sup>. Structural characteristics not only affect role expectations, but also impact on the number of factors that must be considered in a particular decision situation. Organizational complexity is a construct that incorporates the structural characteristics of an enterprise. The relationship between complexity and perceptions

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<sup>96</sup> See, for example, A. Cerf, Corporate Reporting and Investment Decisions, (Institute of Business and Economic Research, Berkeley, CA, 1961.); S. S. Singhvi and H. B. Desai, "An Empirical Analysis of the Quality of Corporate Disclosure," The Accounting Review, (January 1971) pp. 129-138; M. Firth, "The Impact of Size, Stock Market Listing and Auditors on Voluntary Disclosure in Corporate Annual Reports," Accounting and Business Research, (Autumn 1979) pp. 273-280.

<sup>97</sup> Downey and Slocum, op. cit., 1975.

was highlighted in Exhibit 2.5. Based on this relationship, it is hypothesized that:

**H02:** Organizational complexity of a bank is not associated with the perceived needs of its commercial loan officers.

The alternative hypothesis tested is that organizational complexity is associated with the perceived needs of commercial loan officers for accounting information. Because more complex organizations are characterized by higher levels of documentation and standardization, it is expected that loan officers at more complex banks will indicate a greater need for accounting information than their counterparts in less complex environments.

The third through fifth hypotheses are derived from the relationship between perceptions and behavior response repertoire that has been identified in the management literature<sup>98</sup>. This relationship was highlighted in Exhibit 2-5. The following (null form) hypotheses were formulated:

**H03:** There is no association between perceived need for accounting information and the experience of commercial loan officers.

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<sup>98</sup> See, for example, Litterer, op cit., 1973; Downey and Slocum, op. cit., 1975.

H04: There is no association between perceived need for accounting information and the educational background of commercial loan officers.

H05: There is no association between perceived need for accounting information and the professional orientation of commercial loan officers.

The alternative hypothesis tested in each of these cases is that there is an association between the variable of interest and perceived need for accounting information. No direction is specified for these hypotheses because of their exploratory nature.

### 3.3. POPULATION AND SAMPLE

The target group for this study is senior commercial loan officers. Because the study focuses on loans to both large and small businesses, it was necessary to limit the sample to commercial loan officers who have either the capacity to lend to both small and large businesses or the capacity to participate in lending contracts that involve large companies. Therefore the sample is limited to banks with total assets in excess of \$100 million.

The sample was selected from Polk's World Bank Directory (Fall 1985 edition). Selection was done in two stages and included banks throughout the United States except

Virginia<sup>99</sup>. First, all commercial banks with total assets of at least \$100 million were identified. Because all banks did not list their commercial loan officers, a two tier method was used to identify subjects in this stage. One commercial loan officer with a designation of vice president or above was selected from each bank that listed the names of its commercial loan officers. A total of 915 senior commercial loan officers was selected by this process. One banker with a designation of senior vice president or above was selected from each bank that did not list the names of its commercial lending officers. A total of 1589 individuals without a commercial loan officer designation was selected by this process.

The second stage involved selecting the final sample. All 915 commercial lending officers identified in the first stage were included in the final sample; 585 names were randomly selected from the other group and included in the final sample. Thus, the final sample includes a total of 1500 bankers<sup>100</sup>.

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<sup>99</sup> Virginia was omitted because the author had undertaken a similar study in that state that served as a pilot study for this one.

<sup>100</sup> Letters mailed to the non-commercial lending group included a paragraph requesting that the questionnaire be referred to an officer directly involved in commercial lending if the addressee did not feel qualified to respond.



A sample of 1500 is chosen in order to ensure that sufficient responses are received for effective data analysis. Multivariate statistical techniques that require large sample sizes are the primary data analysis methods used in the study. A useful guideline suggests that for multivariate analysis, there should be at least ten times as many subjects as variables or, in cases involving a large number of variables, at least five subjects per variable<sup>101</sup>. Because the study involves the examination of 16 financial statement items between two treatment groups, at least 300 subjects are required. In order to insure this number of subjects, an expected response rate of 20% (based upon response rates for similar studies) is used to compute 1500 subjects to whom surveys should be sent.

#### 3.4. MEASUREMENT METHODS AND QUESTIONNAIRE DEVELOPMENT

To analyze senior commercial loan officer perceptions of accounting information, data are collected on the variables of interest using a mail questionnaire survey (see Appendix A). The questionnaire is divided into three parts - Part A: perceptions of financial statement items; Part B: professional orientation; and Part C: structural and demographic charac-

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<sup>101</sup> J. Paul Peter, "Reliability: A Review of Psychometric Basics and Recent Marketing Practices", Journal of Marketing Research, (February 1979), p. 16.

teristics. The attributes of interest are perceptions, organizational complexity, and behavioral response repertoire, including professional orientation.

This section presents methods used to measure perceptions of commercial loan officers, behavioral response repertoire and organizational complexity. Procedures used to check the validity and reliability of these measurements are also detailed. The last part of the section discusses the development of the questionnaire, including the pretest.

#### **3.4.1. Perceptions**

The task of assessing user needs can be approached in numerous ways, including: (1) studying perceptions about the information items; (2) studying utilization through process tracing methodologies; (3) studying predictive ability; (4) studying the value of an item from an information economics perspective, as measured by improvement in decisions; and (5) studying the "information content" of an item as indicated by capital market reactions.

Only the first two approaches are appropriate for assessing the information needs of bankers for the purpose of making a

lending decision<sup>102</sup>. The second approach could provide detailed information about the utilization of an item, but there are significant limitations associated with the method. They include problems with the validity of verbal report data, objectivity of data coding methods and related tests, and difficulty with communicating the results<sup>103</sup>.

This study uses the first approach because it allows the collection of large amounts of data that are appropriate for hypothesis testing using sophisticated statistical techniques. This approach has also been used by a number of researchers to examine the information needs of users of financial statements<sup>104</sup>. More recently, the approach has been used to study the perceived needs of bankers for some of the financial statement items that have been criticized in the standards overload debate<sup>105</sup>.

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<sup>102</sup> Campbell, op. cit., 1983, p.330.

<sup>103</sup> R. Libby, Accounting and Human Information Processing: Theory and Applications (Prentice Hall, 1981) pp. 93-95.

<sup>104</sup> See, for example, T.R. Dyckman, M. Gibbins and R.J. Swieringa, "Experimental and Survey Research in Financial Accounting: A Review and Evaluation" in A.R. Abdel-khalik and T.F. Keller (eds), The Impact of Accounting Research on Practice and Disclosure (Duke University Press, 1978) pp. 48-105.

<sup>105</sup> See, for example, Abdel-khalik et al., op. cit., 1983; Stanga and Tiller, op. cit., 1983; and Nair and Rittenberg, op. cit., 1983.

As discussed in Chapter II, these studies suffer from a number of methodological weaknesses, including failure to provide appropriate contextual factors to control for important cues that could affect perceptions of the items. In order to correct this deficiency, the present study provides specific contextual factors about the amount and type of loan, company size and ownership, credit history, relationship with top level management of the company, and the business relationship between the bank and the company<sup>106</sup>.

Part A of the questionnaire includes a short case that was designed to serve as a consistent frame of reference for measuring perceptions about the 16 financial statement items in the instrument. Twelve of these items represent key items in the standards overload debate. The other four are used as control items in this study.

Four questions about the 16 financial statement items are used to measure perceptions in Part A of the questionnaire. The first question measured perceived importance. Likelihood of use was measured by question 2. Perceived adequacy and perceived impact of not disclosing the information on the

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<sup>106</sup> These factors were selected on the basis of empirical findings by Diamond, Arnold, and Keller, op. cit., 1981.

Exhibit 3.2  
Questions Used to Measure Perceived Needs

1. For each item, circle the number that best indicates the degree of importance that you would attach to it in evaluating GDI's application. The numbers range from (1) MINIMUM IMPORTANCE to (7) MAXIMUM IMPORTANCE.
2. For each item, circle the number that best indicates the likelihood that you would use it in analyzing GDI's financial statements. The numbers range from (1) VERY LIKELY to (7) VERY UNLIKELY.
3. Based on your past experience with (and/or feelings about) companies of this size, how likely is it that you would need sources other than the audited financial statements to obtain additional information about each item in evaluating GDI's application? Circle the number that best indicates your feelings. The numbers range from (1) VERY UNLIKELY to (7) VERY LIKELY.
4. To what extent would the outcome of your evaluation be affected if an item from the following list is not reported in the financial statements? In each box, write the number from the following scale that best describes your feelings.

0 = No effect  
1 = A very insignificant effect  
2 = An insignificant effect  
3 = Some effect  
4 = A significant effect  
5 = A very significant effect

GDI (General Detergents, Inc.) is the name of the fictitious loan applicant in the case bankers were asked to evaluate.

lending decision were measured by questions 3 and 4, respectively (See Exhibit 3.2).

The answers to questions 1 through 3 were measured on a 7-point semantic differential type scale. Those to question 4 were measured on a Likert-type scale with 6 categories. The rationale for this last scale was to ensure that bankers specifically indicate whether they feel omission of an item from the financial statements would or would not have an effect on the loan evaluation process.

**Scale Properties.** There is a great deal of controversy in the literature as to whether scales like those used in Part A are nominal, ordinal, or interval. This issue is important because it determines whether sophisticated statistical techniques that assume ratio or interval scales are appropriate for hypothesis testing.

The literature contains several criticisms of conventional scales, such as semantic differential and Likert scales used in the survey. Lodge, for example, argues that conventional scales may represent only an ordinal level of measurement, thereby denying researchers legitimate access to many of the

powerful statistical methods based on interval assumption.<sup>107</sup>.

Many researchers do not agree with Lodge's position and do see these scales as interval. Churchill, for example, states in regard to measurements using conventional scales:

A great controversy exists over whether measurement of attitudes has been accomplished with ordinal or interval scales. These scales have certainly not been ratio, since the origin is not natural, and they are definitely something more than nominal because they possess more than the identity property. The debate focuses on whether the differences in scores convey meaning other than the relative ranking of individuals. The prevailing posture in marketing seems to agree with that of psychologists that many of the scales are interval<sup>108</sup>.

Labovitz demonstrated empirically that ordinal variables can be treated as if they conform to interval scales with only a very minor effect on the statistics<sup>109</sup>. In fact, the literature indicates that most scales give a reasonable approximation of an interval scale unless severe distortions in the scale properties are noted<sup>110</sup>. It was therefore assumed that

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<sup>107</sup> M. Lodge, Magnitude Scaling, (Beverly Hills, CA: Sage Publications, 1981), pp. 5 - 6.

<sup>108</sup> G. Churchill, Marketing Research Foundations, (Hinsdale, IL: Dryden Press, 1983), p.268.

<sup>109</sup> S. Labovitz, "The Assignment of Numbers to Rank Order Categories," American Sociological Review, (June 1970), pp. 515-524.

<sup>110</sup> See, for example, M. D. Reckase, "Scaling Techniques,"

the scales used to measure perceptions of commercial lending officers with regard to accounting information are interval and could be legitimately analyzed using statistical techniques that assume interval or ratio scales. This assumption was also applied to other similar scales used in the study.

#### **3.4.2. Behavioral Response Repertoire**

The variables included in the behavioral response repertoire are education, measured by questions 10 and 11 in Part C of the questionnaire; experience, measured by question 8 in Part C; and professional orientation, measured by Part B (see Appendix A). Professional membership, measured by question 9, is also included here to supplement professional orientation.

Questions in Part B measure professional orientation. This part of the questionnaire is based on the instrument used by Berger and Grimes<sup>111</sup> in their factor analytical study of the professional orientation construct. It contains the following five attitudinal-type components:

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in G. Goldstein and M. Hersen (eds.), Handbook of Psychological Assessment, (New York: Pergamon Press, 1984).

<sup>111</sup> Berger and Grimes, op. cit., 1973.



1. originality in the work ethic (items 4, 5, 6, 7 in Part B);
2. institutional work ethic (items 2, 11, 16, 18 in Part B);
3. risk of work ethic (items 9, 12, 14, 15 in Part B);
4. loyalty to the profession (items 3, 10, 17 in Part B);  
and
5. reference group orientation (items 1, 8, 13 in Part B).

Five indexes are derived by summing responses across the items within each component in the professional orientation construct. For example, originality in the work ethic is measured by summing responses on items 4, 5, 6 and 7; "reference group orientation" is measured by summing items 1, 8 and 13 and so on.

The scale reliabilities of the original instrument used by Berger and Grimes are high enough to warrant its use in this research<sup>112</sup>. Values of coefficient alpha for the scales are presented in Exhibit 3.3<sup>113</sup>.

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<sup>112</sup> See, for example, J. Nunnally Psychometric Methods, (New York: McGraw Hill Book Co., 1967) p. 226.

<sup>113</sup> Coefficient alpha is a measure of the internal consistency of a scale used to measure a construct. It can be thought of as an upper bound of scale reliability.

**EXHIBIT 3.3**  
**Reliability Estimates**  
**for Scales Used by Berger and Grimes (1973)**

INDEX	COEFFICIENT ALPHA
Scientific Research Ethic Adapted in this study as "Originality in the Work Ethic"	.80
Loyalty to Profession	.75
Institutional Work ethic	.77
Risk of Work ethic	.65
Reference Group Orientation	.65

From:  
P. K. Berger and A. J. Grimes, "Cosmopolitan-Local: A Factor Analysis  
of the Construct," *Administrative Science Quarterly*,  
(June 1973), p. 230.

Factor analysis is used to assess the discriminant validity of the scales used in the research. If the construct is effectively measured, the analysis should result in five factors with loadings that are consistent with the Berger and Grimes factor analytical formulation of the construct. Results of the factor analysis are discussed in chapter IV. Alpha Coefficients, used as to assess scale reliability, are also presented in Chapter IV.

#### 3.4.3. Organizational Complexity

Organizational complexity has been operationalized in several different ways in the literature. Some researchers have focused on the degree of specialization and training of organizational members, thus limiting the construct to the horizontal component. For example, Hage operationalized the construct as the number of occupational specialties in an organization and length of training required by each. According to this view, the greater the number of occupations and the longer the period of training required, the more complex is the organization<sup>114</sup>. Price similarly defines complexity as the degree of knowledge required to produce the output of the system as measured by the level of education

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<sup>114</sup> J. Hage, "An Axiomatic Theory of Organizations", Administrative Science Quarterly, (December 1965), p. 294.

of organizational members<sup>115</sup>. Hage and Aiken operationalized the construct using the number of specialties and the extent of professional activity and professional training<sup>116</sup>. Because a focus on education and training is applicable to many different kinds of organizations, this approach to operationalization of the construct holds across organizations including banks<sup>117</sup>.

Another approach to the measurement of horizontal differentiation focuses on the structural characteristics of the organization. Blau and Schoenherr, for example, defined complexity as the number of different positions and different subunits in an organization. An organization with more positions and subunits than another is, therefore, regarded as more complex<sup>118</sup>. Similarly, Hall, Haas, and Johnson used a set of multiple indicators of horizontal differentiation that

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<sup>115</sup> J. L. Price, Organizational Effectiveness: An Inventory of Propositions, (Homewood, Illinois: R. D. Irwin, Inc., 1968), p. 26.

<sup>116</sup> J. Hage and M. Aiken, "Relationship of Centralization to Other Structural Properties", Administrative Science Quarterly, (June 1967), p. 79 - 80.

<sup>117</sup> Hall, op. cit., 1982, p. 79.

<sup>118</sup> P. M. Blau and R. A. Schoenherr, The Structure of Organizations, New York: Basic Books, Inc., 1971), p. 16.

included the number of specialized areas within each division as complexity indicators<sup>119</sup>.

Other researchers have concentrated on vertical differentiation in measuring the construct. Myer, for example, operationalized the construct as the proliferation of supervisory levels in an organization<sup>120</sup>. Pugh, Hickson, Hinings, and Turner used the number of positions between the chief executive and employees working on the output of the organization<sup>121</sup>. Hall, Haas and Johnson used a slightly more complicated approach in operationalizing this aspect of the construct. They operationalized the construct as the number of levels in the deepest single division of the organization and the mean number of levels in the organization as a whole<sup>122</sup>.

Finally, the organizational complexity construct has also been measured as the number of locations where the business

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<sup>119</sup> R. H. Hall, J. E. Haas and N. J. Johnson, "Organizational Size, Complexity and Formalization", American Sociological Review, (December 1967), pp. 908 - 912.

<sup>120</sup> M. W. Myer, "Two Authority Structures of Bureaucratic Organizations", Administrative Science Quarterly, (September 1968), p. 216.

<sup>121</sup> Pugh et al., "Dimensions of Organizational Structure", Administrative Science Quarterly, (June 1968), pp. 72 - 79.

<sup>122</sup> Hall, Haas and Johnson, op. cit., 1967.

operates<sup>123</sup>. This approach to measuring the construct focuses on the spatial dispersion component of the construct.

Based on the above literature, the following data from Part C of the questionnaire were used as indicators of complexity in this study:

1. education and experience required for entry level commercial loan officer positions and number of divisions within the bank as measures of horizontal differentiation (Price, 1968; Hall, Haas and Johnson, 1967).
2. number of officers with the term "vice president" in their designation as a measure of vertical differentiation (Pugh, et al, 1968); and
3. number of offices as a measure of spatial dispersion (Raphael, 1967; Hall, Haas and Johnson, 1967).

These complexity indicators were used to group banks into empirical clusters based on their level of complexity. The "FastClus" procedure (SAS, 1982) was used for that purpose. Clusters were validated by checking their relationships with bank size. Because organization size is highly correlated

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<sup>123</sup> See, for example, Hall, Haas and Johnson, op. cit., 1967.

with complexity<sup>124</sup>, a strong association between clusters and bank size would be evidence in support of the construct validity of the clusters<sup>125</sup>. Bank size, measured by total assets, is also used as a surrogate for complexity in certain areas of the analysis.

#### **3.4.4. Questionnaire Development**

The questionnaire was developed in two phases. In the first phase, the contextual factors were developed and questions were designed to measure perceptions and other variables of interest. This phase yielded a draft instrument that was pretested in the second phase. Both of these phases are described in this section.

##### **3.4.4.1. Contextual factors**

In order to evaluate the research questions in this study, it was necessary to create an instrument that provides most of the contextual factors that are typically required in a lending decision. It was also necessary to manipulate these factors in order to develop appropriate experimental treat-

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<sup>124</sup> See, for example, Child, op. cit., 1971; Hall, op. cit., 1982.

<sup>125</sup> Carmines and Zeller, op. cit., 1979, p. 23.

ments for testing the hypotheses. This section describes the procedures used to develop the contextual factors used in the study.

Two experimental treatments were developed and a between-subjects design was used to test the hypotheses of interest. Thus, two versions of the instrument were developed. One version described an experimental treatment for a large publicly held company while the other version described a treatment for a small privately held corporation (see Exhibit 3.4). The nature of these treatments implied that the impact of size and ownership characteristics on perceived needs could only be jointly tested -- that is, the effects of size and ownership could not be disaggregated. This was necessary in order to minimize the number of subjects required for the study and to maintain costs and completion time at manageable levels<sup>126</sup>.

The contextual factors describing the small and large treatment groups are presented in Exhibit 3.4. These factors were derived from the banking and accounting literature and from interviews with bankers. They were manipulated in order to

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<sup>126</sup> An alternative to increasing the number of subjects is the use of a within subjects design. A between subjects design was used, however, because of the need to minimize or remove the impact of subjective norm on loan officer responses.



**EXHIBIT 3.4**  
**Summary of Contextual Factors used in Study**

FACTORS	SMALL COMPANY TREATMENT	LARGE COMPANY TREATMENT
1. LOAN		
Amount	\$135,000	\$10,000,000
Type	Unsecured Line of Credit	Unsecured Line of Credit
1. COMPANY (Loan Applicant) SIZE		
Assets	\$4,000,000	\$300,000,000
Sales	\$6,700,000	\$502,500,000
Operating Income	\$321,000	\$24,075,000
3. OWNERSHIP	Privately-held	Publicly-held
4. MANUFACTURING ACTIVITY	SIC Code 284	SIC Code 284
5. RELATIONSHIP WITH BANK	First Time Customer	First Time Customer
6. REASON FOR LOAN	Major Promotion Campaign	Major Promotion Campaign
7. CREDIT HISTORY	Good	Good
8. MANAGEMENT REPUTATION	Honest and Forthright	Honest and Forthright
9. AUDIT REPORTS (Most Recent)	Unqualified	Unqualified

maximize the amount of financial analysis that bankers would perceive to be necessary in evaluating the application. In addition, factors describing the characteristics of the loan applicant were designed to be consistent with the objective of this study and with the available literature in the area. As a result, careful attention was given to the operationalization of small and large corporations.

With regard to the definition of a small corporation, two basic approaches have been used in the literature. One approach attempts to define a small company in terms of a single dollar amount or a size ceiling. This approach has been widely used in the accounting literature. The other approach recognizes the environmental differences across industries and defines a small company in terms of size ceilings as well as industry.

Examples of the first approach are evident in the works of Abdel-khalik et al., Struck and Glassman, Stanga and Tiller, and Campbell. Abdel-khalik et al. report that about 57% of bankers in their sample would classify a nonpublic company as small if net sales were below \$4 million<sup>127</sup>. Eighty-one percent of their sample indicated that they would classify a

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<sup>127</sup> Abdel-khalik et al., op. cit., 1983.

nonpublic company as small if net assets were less than \$4 million.

Struck and Glassman report that 40% of all banks in a nationwide survey had a policy definition of a small business<sup>128</sup>. They report that the median values of banks' policy definitions of a small business are net sales of \$3 million, total assets of \$1.5 million and outstanding loans of \$500,000.

Stanga and Tiller defined a small nonpublic company as one whose operations are "relatively small, usually with total revenues of less than \$5 million and whose securities are not traded on a public market"<sup>129</sup>. Campbell, on the other hand, defined a small private company as having total assets of approximately \$1 million and average revenues of \$1.6 million<sup>130</sup>.

The above definitions are reasonably consistent and are based on a single value or a size ceiling for all types of busi-

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<sup>128</sup> P. L. Struck and C. A. Glassman, "Commercial Banking and the Small Business Sector: Observations From a Survey," Journal of Commercial Bank Lending, (February 1983), pp. 339-345.

<sup>129</sup> Stanga and Tiller, op. cit., 1983.

<sup>130</sup> Campbell, op. cit., 1984.

nesses. The Small Business Administration (SBA), however, takes the position that the diversity and complexity of the business environment precludes a single definition of a small business. According to their guidelines, a business qualifies as small if it falls under one of the following general limits specified for its particular industry:

- Retail and Service - sales of less than \$13.5 million
- Wholesale - fewer than 500 employees
- Construction - sales of less than \$17 million
- Agriculture - sales of less than \$3.5 million
- Manufacturing - fewer than 500 to 1,500 employees<sup>131</sup>.

Because of the complexity and diversity of small businesses, the current study specified a fictitious manufacturer (of detergents and specialty cleaning products - SIC Code 284) and defined a small company as one with total assets of \$4 million and net sales of \$6.7 million (see Appendix A). Summary balance sheets and income statements for two years were then constructed based on the industry averages for that

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<sup>131</sup> Office of the Federal Register, National Archives and Records Administration, Code of Federal Regulations, Part 121.2, Volume 13, 1986, pp. 276 - 290.

class of business as published by Robert Morris Associates<sup>132</sup>.

With regard to the large company treatment, it was noted that there is no precise definition of a large company. The FASB, for example, defined a large company as "a company other than a small company, and usually one whose securities trade in a public market<sup>133</sup>." Similarly, Stanga and Tiller defined a large company as one whose "operations are relatively large usually with total revenues greater than \$125 million, and whose securities are traded on a public market"<sup>134</sup>.

The current study used \$300 million of total assets and \$500 million of net sales as size characteristics of a large company. Summary balance sheets and income statements for two years were also constructed using industry averages. In order to minimize variations in perceptions that could arise as a result of differences in the structures of the financial summaries, these statements were constructed so that ratios for the small company and the large company were equal.

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<sup>132</sup> Robert Morris Associates, Annual Statement Studies, Philadelphia, PA: Robert Morris Associates, 1985.

<sup>133</sup> Invitation to Comment: Financial Reporting by Private and Small Public Companies (Stanford, NJ:FASB, 1981, p. 4.

<sup>134</sup> Stanga and Tiller, op. cit., 1983, p. 64.

#### 3.4.4.2. Pretest

The draft questionnaire developed in the first phase was pretested in one hour interviews with ten senior commercial loan officers from major banks in Virginia. During the interview, subjects were asked to complete the draft instrument by reading it aloud and verbalizing any difficulties and inconsistencies they encountered<sup>135</sup>. Six subjects completed version one of the instrument. The other six completed version two.

After completing a particular version, subjects were handed the other version and were asked to respond to Part A only<sup>136</sup>. Subjects were also asked to review the contextual factors in both versions of the instrument and discuss whether they thought the factors adequately described a small and a large company, respectively. The remainder of the time was spent discussing the issues that were raised by the subject while completing the instrument.

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<sup>135</sup> This approach was used in order to have comprehensive documentation of the problems encountered by subjects in completing the instrument

<sup>136</sup> The other part of the two versions of the questionnaire was identical.

Based on the pretest, several changes were made to the instrument. These included additions to the contextual factors consistent with the suggestions made by bankers and the addition of two questions to Part A of the instrument (questions 5 and 6 in appendix B). One of the questions (question 5) was designed to examine the degree of emphasis on financial statement analysis that bankers perceived to be necessary in evaluating the loan application. The other (question 6) was designed to evaluate the likelihood that the loan would be approved by the respondent's bank. These questions were used to assess utilization of the cues presented in the instrument.

#### 3.4.4.3. Mail survey

The final instrument and cover letter (see Appendix A) were developed along the lines of the "total design" method proposed by Dilman<sup>137</sup>. The instrument was mailed to a sample of 1500 senior bank officers throughout the United States on June 12, 1986. Second requests were mailed on July 1, 1986.

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<sup>137</sup> Two versions of the cover letter were used: one version for the 915 commercial loan officers and the other for bankers who were not listed as commercial loan officers in the data base. For a discussion of the total design method see D. A. Dilman, Mail and Telephone Surveys: The Total Design Method, (New York: J. Wiley & Sons, 1978).

All responses received prior to August 12, 1986 were included in the empirical study. The overall response rate was 21%.

### 3.5. DATA ANALYSIS

The data were analyzed in three phases. The first phase involved data manipulation procedures and checks in order to operationalize and validate the constructs used in the study. These procedures were undertaken to:

1. check for non-response bias;
2. check the discriminant validity of the items used to measure the professional orientation construct;
3. assign banks into groups on the basis of their complexity levels and to validate those groups; and
4. check for evidence of cue utilization.

The procedures used in this phase included univariate t-tests to check for non-response bias and for evidence of cue utilization, factor analysis to assess the discriminant validity<sup>138</sup> of the items used to measure professional orientation, cluster analysis to assign banks into groups on the

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<sup>138</sup> The scales used to measure a construct has discriminant validity if they clearly discriminate between the a priori components of the construct.



basis of their complexity indicators, and two-way contingency table analysis to validate the clusters.

The second phase involved a descriptive analysis of the data generated from Part A of the instrument. Accordingly, the analytical tools employed included data tabulation, graphics, and pair-wise univariate t-tests to explore observed differences in the data set.

The final phase of the analysis focused on the hypotheses of interest in the study. Multivariate statistical techniques including multivariate analysis of variance (MANOVA) and canonical correlation analysis, were the primary tools used in this phase.

The treatment groups were defined in the questionnaire and represent a small and a large commercial applicant, respectively. The bank groups were empirically determined using cluster analysis and represent banks with different levels of organizational complexity<sup>139</sup>.

The other multivariate statistical technique used in the study was canonical correlation analysis. This technique was used to explore the relationship between perceptions of fi-

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<sup>139</sup> See section 3.4.3.

nancial statement items and the explanatory variables identified in the study. In using this technique, the total asset amount was used as a surrogate for bank complexity. Other explanatory variables included in the analysis are treatment group, the five attitudinal components of the professional orientation construct, membership in an association of bankers, experience, and educational background (years of college accounting, and business degree coded as a dummy variable).

In interpreting the results of canonical correlation analysis, a subjective decision had to be made regarding the variables that should be considered. Because precise significance tests are not widely available, researchers have often relied on two basic interpretation approaches. The first approach considers the absolute size of the canonical loadings. Loadings greater than  $|.30|$  are considered significant, while loadings greater than  $|.50|$  are considered highly significant<sup>140</sup>.

The second approach considers both the magnitude of the loading and the sample size. Loadings of at least  $|.14|$  are recommended for the 5% significance level when the sample size is about 200. When the sample size is 300, loadings of

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<sup>140</sup> See for example, J. Hair, Jr. et al., Multivariate Analysis With Readings, (Tulsa, OK: Petroleum Publishing Company, 1979), pp. 186, 234.

at least  $|.11|$  are recommended for the 5% significance level<sup>141</sup> This study utilizes the first interpretation approach and, accordingly, considers variables with loadings of at least  $|.30|$  to be important. Thus, variables considered to be important in this study are also recognized as being significant at the 5% level based on the critical loadings suggested in the second approach.

Although multivariate analysis techniques possess a number of advantages that make their use particularly attractive relative to similar univariate techniques, the techniques are normally associated with a number of restrictive assumptions. In particular, the literature indicates that optimal results are obtained only if:

1. the data have interval or ratio properties;
2. the distribution of the independent (predictor) variables is multivariate normal;
3. the variance-covariance matrices are equal across the treatment groups<sup>142</sup>.

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<sup>141</sup> Ibid.

<sup>142</sup> See, for example, W. R. Dillon and M. Goldstein, Multivariate Analysis: Methods and Applications, New York: John Wiley & Sons (1984), p. 379.

With regard to the first assumption, it was noted in a previous section that the scales used in this study should have interval properties. Thus, this assumption should not impose severe limitations on the result of the study. The other two assumptions are often specified as requirements for reliable hypothesis tests. However, the multivariate techniques used in the study appear to be fairly robust to violations in those assumptions<sup>143</sup>. Even if the assumptions are violated, test results may be highly accurate in situations where the sample sizes are approximately equal, and the assumed population distributions have approximately the same shape<sup>144</sup>. Accuracy also increases as sample size increases, and results are least affected when the range of each variable is bounded (above and below), rather than infinite<sup>145</sup>. Thus, no material distortions are expected in the data analysis.

### 3.6. CHAPTER SUMMARY

This chapter has outlined the methodology and specific procedures used in the study. Among the general factors consid-

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<sup>143</sup> See, for example, C. A. Boneau, "The Effects of Violations of Assumptions Underlying the t-Test" in B. Liberman (ed.), Contemporary Problems in Statistics: A Book of Readings for the Behavioral Sciences, (New York: Oxford University Press Inc., 1971), pp. 357-370.

<sup>144</sup> Ibid.

<sup>145</sup> Dillon and Goldstein, op. cit., 1984, p. 381.

ered in selecting the procedures are a need for internal and external validity, availability of resources for implementing the procedures, and a need for parsimony in examining the research issues. Specific reasons and justification were also presented for each of the procedures utilized. In summary, this chapter focused on the areas outlined below.

1. Definition of terms: the key terms used in the study were defined, including the dependent variables - perceptions of financial statement items - and the explanatory variables - size and ownership structure, complexity and behavioral response repertoire.
2. Research questions and hypotheses: three research questions derived from the discussion in Chapters I and II were presented. Five hypotheses based on Exhibit 2.5 were specified. Hypotheses were stated in the null form.
3. Population and sample: a nationwide sample of 1500 bankers was selected from Polk's Bank Directory (Fall 1985 Edition). Only banks having total assets of more than \$100 million were presented in the sample.
4. Measurement methods and questionnaire development: procedures used to measure perceptions, behavioral response repertoire and organizational complexity were described. The section also detailed procedures used in developing the instrument, including a discussion of the pretest.

Perceptions measured were importance, likelihood of use, adequacy, and impact of omitting. A short case was used to serve as a consistent frame of reference in responding to the survey. Scale properties were also examined and it was assumed that the scales used in Parts A and B of the instrument (see Appendix A) and other similar scales used in the study were interval (or approximately interval). Thus they are assumed to be suitable for data analysis using sophisticated statistical procedures that require interval or ratio scales.

In order to measure professional orientation, five attitudinal-type indexes were constructed based on an adaptation of an instrument by Berger and Grimes. The five indexes are (a) originality in the work ethic; (b) institutional work ethic; (c) risk of work ethic; (d) loyalty to the profession; and (e) reference group orientation. The discriminant validity of the scales used in measuring the construct was examined using factor analysis, and internal consistency reliability was assessed based on the alpha coefficient.

5. Data Analysis: data analysis procedures included manipulation checks, descriptive analysis of the data generated in Part A of the instrument and multivariate analysis techniques to test the hypotheses of interest in the

study. The multivariate techniques included MANOVA, and canonical correlation analysis.

From the procedures described in this chapter, results were generated to explore the specific hypotheses of interest. The following chapter presents the results.

## CHAPTER IV

### RESULTS AND ANALYSIS

This chapter presents and analyzes the results of the study. The chapter is divided into five sections. The first section summarizes the characteristics of respondents. The second section describes the results of manipulation checks on the key constructs used in the study. Results of non-response bias checks are also presented in this section. The third section provides a descriptive overview of the perceived need for the 16 financial statement items examined in the study. The fourth section presents the analyses undertaken to test the research hypotheses. The fifth section summarizes the results.

#### 4.1. CHARACTERISTICS OF RESPONDENTS

A summary of the characteristics of respondents to the survey is presented in Exhibit 4.1. The summary indicates that a total of 315 usable responses (out of a mailing of 1,500 questionnaires) were received. Thus the response rate is 21%.

Of the usable responses, 214 were received before the second request was mailed. The second request, therefore, generated approximately 101 responses. The usable responses were made



up of 152 subjects in the large treatment group and 163 subjects in the small one. Respondents represent bankers from throughout the United States, except for the Commonwealth of Virginia. Other characteristics of respondents are listed in Exhibit 4.1.

Overall, the two treatment groups are almost equally represented in the sample of 315 respondents. Respondents are from a wide cross-section of banks that appears to be fairly consistent with the environment of the banking industry. In addition, all respondents are highly experienced commercial loan officers and have some formal education in accounting.

#### 4.2. MANIPULATION CHECKS

This section describes the results of manipulation checks used to assess the validity and reliability of the data. The procedures and checks included: (a) tests for non-response bias; (b) validity and reliability checks on the professional orientation scales; (c) cluster analysis and related validation tests to classify banks into groups that reflect the extent of their organizational complexity; and (d) assessment of cue utilization in responding to Part A of the questionnaire.

Exhibit 4.1  
Characteristics of Respondents

1. No. of loan officers describing their banks as:

(a) Small	100
(b) Medium	188
(c) Large	27

2. Self Reported Assets and Deposits

	AVERAGE	MEDIAN
	-----	-----
(a) Total assets (million)	\$1,119	\$292
(b) Total deposits (million)	843	240

3. Experience

(a) Average no. of years of experience in commercial lending	9.5
(b) Average no. of years of experience in financial statement analysis	11
(c) Average no. of commercial loans evaluated by each respondent in the past 2 years	8

4. Education and Professional Background

(a) No. with at least one year of college level accounting courses	87%
(b) No. with a college degree in Business	73%
(c) No. who are members of a professional organization of bankers	71%

5. Response Rates

	NO.	PERCENTAGE
	---	-----
(a) First Request	214	14%
(b) Second Request	101	7%
(c) Overall Response Rates	315	21%

6. Treatment Groups Represented

Small Company	163
Large Company	152
	---
Total Responses	315
	---

#### 4.2.1. Non-response Bias

Tests of non-response bias were designed to examine whether non-respondents are likely to be different from persons who responded to the questionnaire and to assess the likelihood that responses from the former category would cause the results to be different. These tests were undertaken by assuming that late respondents have characteristics that are similar to non-respondents and by comparing responses received before (early respondents) and after (late respondents) the second request was mailed<sup>146</sup>. Systematic differences in the responses of early and late respondents would be evidence of some degree of non-response bias in the survey.

Specific tests used in the assessment of non-response bias are described in Appendix B.1. The results of these tests indicate no systematic differences in the responses of early and late respondents.

Assuming that late respondents are good surrogates for non-respondents, the tests provide no indication of systematic

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<sup>146</sup> J. S. Armstrong and T.S. Overton, "Estimating Non-response Bias in Mail Surveys," in R. Faber (ed.), Readings in Survey Research, (American Marketing Association, 1978), pp. 382-396.

differences between respondents and non-respondents. This diminishes the likelihood that the results of this research would be significantly different if a higher response rate were obtained<sup>147</sup>.

#### 4.2.2. Professional Orientation

Validity and reliability (internal consistency) checks were done on the professional orientation scales using factor analysis and Cronbach's coefficient alpha, respectively. As indicated in Chapter III, if the discriminant validity is high, each item in the instrument will be uniquely or substantially loaded on an a priori factor.

In this analysis, the five components of the professional orientation construct are the a priori factors. These five components are originality in the work ethic, risk of work ethic, loyalty to the profession, and reference group orientation. Thus, a factor analysis of the 18 items (see Exhibit 4.2) that are used to measure the construct should yield five factors that are consistent with the definitions of the five components of the professional orientation construct (see Section 3.4.2).

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<sup>147</sup> Of course, an increased sample size could have an effect on statistical tests that are highly sensitive to large sample sizes.

Exhibit 4.2  
Discriminant Validity of Professional Orientation  
Rotated Factor Structure

ITEMS	FACTOR 1 (Risk)	FACTOR 2 (Origin.)	FACTOR 3 (Loyalty)	FACTOR 4 (Refer.)	FACTOR 5 (Instit.)	COMMUN. EST.
Origin. 4	-.029	.345**	-.167	.089	.135	.174
Origin. 5	.473++	.401**	-.224	.056	-.020	.439
Origin. 6	.021	.540**	.271	-.027	.120	.380
Origin. 7	.079	.526**	-.159	.011	.183	.342
Instit. 2	.511++	.005	-.202	-.037	.001&&	.303
Instit. 11	.064	.206	-.112	-.072	.413**	.235
Instit. 16	.097	.100	-.133	.065	.442**	.237
Instit. 18	.053	.418	.052	.033	.481**	.413
Risk 9	.548**	.113	.221	-.095	.093	.371
Risk 12	.301**	-.019	.093	-.021	-.004	.100
Risk 14	.556**	.026	.221	-.095	.093	.376
Risk 15	.594**	.038	.143	.051	.235	.433
Loyalty 3	.118	-.061	.276**	.015	-.060	.098
Loyalty 10	.085	-.027	.483**	.072	-.077	.252
Loyalty 17	.223	.093	.396**	-.067	.290	.303
Refer. 1	.107	.035	.117	.662**	-.026	.465
Refer. 8	.227	.025	.410++	.227**	-.022	.273
Refer. 13	.233	-.028	-.087	-.654**	-.049	-.049

NOTE:

"ITEMS" refers to the item numbers in Part B of the questionnaire (See Appendix A).

\*\* items that are uniquely (or substantially) loaded on their a priori factor (17 out of 18 items).

++ items that have substantial loadings on a factor other than their a priori factor (4 items).

&& items that are insignificantly loaded on their a priori factor.  
(one item, Instit. 2)

The principal factor method of factor analysis with a varimax rotation<sup>148</sup> was used to assess the validity of professional orientation in the study. Based on Cattell's scree-test<sup>149</sup> (which retains factors on the basis of an evaluation of a plot of the eigenvalues), five factors were retained in the analysis. The five factors accounted for 32% of the total variance and are presented in Exhibit 4.2.

Overall, the results of the factor analysis are fairly consistent with a priori expectations about the factor structure described in Section 3.4.2. Thus, all five factors are interpretable in a manner that is consistent with Berger and Grimes' (1973) empirical formulation of the construct. The relatively high degree of consistency between the empirical factor pattern and a priori expectations, based on Berger and Grimes formulation of the construct, suggests an adequate level of discriminant validity in the construct as modified for use in this research.

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<sup>148</sup> H. Kaiser "The Varimax Criterion for Analytic Relation in Factor Analysis", Psychometrika, Vol. 23 (1958), pp. 187 - 200.

<sup>149</sup> R. B. Cattell "Factor Analysis: an Introduction to Essentials (I) the Purpose and Underlying Models, (II) the Role of Factor Analysis in Research", Biometrics, Vol. 21 (1965), pp. 190 - 215, 405 - 436.

Coefficient alpha for the five multi-item scales used to operationalize the professional orientation construct is presented in Exhibit 4.3. Although the coefficients are modest and generally lower than those reported by Berger and Grimes, they are within the acceptable range for exploratory research<sup>150</sup>.

#### 4.2.3. Organizational Complexity

This section describes the methods used to (1) group banks into clusters with similar levels of organizational complexity; and (2) test the validity of the clusters. The Fastclus procedure available on SAS was used to group banks into clusters with similar levels of organizational complexity. This procedure clusters the data on the basis of euclidian distances computed from one or more quantitative variables. It is considered appropriate because it divides observations into clusters such that each observation belongs to only one cluster and euclidian distances between a particular observation and the cluster mean is minimized.

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<sup>150</sup> Peter, op. cit., 1979, p. 15; Nunnally, op. cit., 1967, p. 226.

Exhibit 4.3  
Reliability Checks on Professional Orientation

COMPONENTS	AVERAGE CORR.	NO. of ITEMS IN SCALE	COEFF. ALPHA	COEFF. ALPHA PER BERGER & GRIMES
Originality in the work ethic	.23	4	.55	.80 (4)
Institutional work ethic	.17	4	.45	.77 (9)
Risk of work ethic	.29	4	.62	.65 (6)
Loyalty to the Profession	.14	3	.34	.75 (3)
Reference group Orientation	.29	3	.55	.65 (5)

NOTE:

Numbers in parentheses are the number of items used  
in the Berger & Grimes instrument.



Based on the discussion in Chapter III, the following indicators of organizational complexity are included in the analysis:

1. education and experience required for entry level commercial loan officer positions, and number of divisions within the bank;
2. number of officers designated vice-president;
3. number of offices operated by each bank.

The cluster analysis resulted in the selection of three bank groups that were validated by comparisons with bank size (subjective) and total deposits (self-reported). Exhibit 4.4(a) describes the average total assets and deposits of these three bank groups. If the clusters adequately reflect observations with varying degrees of complexity, there should be a significant relationship between them and the size of a respondent's bank. This relationship derives from the empirical literature on the association between organizational size and complexity<sup>151</sup>.

Data on the validation of the clusters are presented in Exhibits 4.4(b) and 4.4(c). A chi-square test of independence

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<sup>151</sup> See, for example, Child, op. cit., 1971; and Hall, op. cit., 1982.

indicates that both self-reported total assets and perceived bank size are strongly associated with the clusters. The chi-square coefficient for both tables is significant at a level of .01%. The contingency coefficients are .683 for the relationship between clusters and bank asset size, and .331 for the relationship between clusters and subjective assessment of bank size. Both coefficients are consistent with the hypothesis of a moderate to strong relationship between size and complexity level. Thus, it is concluded that the clusters provide a valid representation of three bank groups with different levels of complexity. Banks in Group 1 (see Exhibit 4.4(a) and (b)) are the least complex while those in Group 3 are the most complex. Banks in Group 2 have an intermediate degree of complexity compared with those in the other two groups. These empirical groups are used in the MANOVA to test hypothesis H02.

#### 4.2.4. Evidence of Cue Utilization

Two questions in Part A of the questionnaire were used to assess whether bankers perceived the two treatments differently. The first of the two questions, Question No. 5, assessed cue utilization by asking respondents the extent to which they would emphasize financial statement analysis in evaluating the loan requests. Both treatment groups reported that they would place very major emphasis on financial

Exhibit 4.4 (a).  
Assets and Deposits of Bank Groups

Group Description	Average Total Assets (millions)	Average Total Deposits (millions)
Least complex bank group (Group 1)	\$ 271 (210)	\$ 220 (166)
Intermediate (Group 2)	634 (1,950)	493 (1,399)
Most complex bank group (Group 3)	3,095 (5,594)	2,359 (4,077)

Note: Standard deviations are in parentheses.

EXhibit 4 4 (b)  
Complexity Validation  
Table of Clusters by Asset Size

Clusters	Complexity Level	BANK ASSET SIZE (in millions)					TOTAL
		Under \$250	\$250 to under \$750	\$750 to under \$1500	\$1500 to under \$3000	Over \$3000	
Bank group 1	Least complex	80	43	3	0	0	126
Bank group 2	Intermediate	72	26	7	3	3	111
Bank group 3	Most Complex	6	17	20	19	16	78
TOTAL		158	86	30	22	19	315

Chi-Square = 147.025      DF = 8      p-value = .0001

Contingency Coefficient = .683

EXhibit 4 4 (c)  
Complexity Validation  
Table of Clusters by Self Reported Size

Clusters	Complexity Level	Self Reported Bank Size			
		SMALL	MEDIUM	LARGE	TOTAL
Bank group 1	Least complex	43	79	4	126
Bank group 2	Intermediate	50	55	6	111
Bank group 3	Most complex	7	55	16	78
TOTAL		100	188	26	315

Chi-Square = 38.665      DF = 4      p-value = .0001

Contingency Coefficient = .331

statement analysis. The degree of consensus within and between the groups, measured by the standard deviation of responses, was also very high. Mean responses for the small and large treatment groups were 6.31 and 6.58 on a seven-point scale, respectively. Standard deviations for the two groups were 0.80 and 0.71, respectively. A t-test of differences between the mean responses of the two groups was highly significant (P-value = .002). Thus, the evidence strongly indicates that in responding to the question on the extent to which they would emphasize financial statement analysis, bankers consensually distinguished between the two loan application treatments.

Similar results were obtained with regard to the second question (Question 6, Part A), which sought to assess the likelihood that the loan would be approved. Mean responses for the small and large treatment groups were 4.93 and 4.33 on a seven-point scale, respectively. This implies that, on average, there was a fair chance that both groups would approve the loan application based on the preliminary information provided in the instrument. There were relatively wide dispersions in the responses of both treatment groups, however. The standard deviations of responses were 1.53 and 1.68 for the small and large group, respectively. A t-test for differences between the means of the two treatment groups was highly significant (P-value = .001). This indicates that

subjects distinguished between the two treatments in responding to both questions 5 and 6 in Part A of the instrument.

The above discussion suggests that bankers used the contextual information in responding to the last two questions in Part A of the instrument. By extrapolating these results to the other four questions in Part A, it is assumed that commercial loan officers focused on the contextual information describing the small and large loan applicants in responding to all of Part A.

#### 4.3. PERCEPTIONS OF FINANCIAL STATEMENT ITEMS

This section provides a descriptive overview of the perceptions of the loan officers surveyed. The responses for the two treatment groups are first described and then broken down to reflect the perceptions of loan officers within the various categories of banks included in the survey.

Perceptions were measured at four levels -- perceived importance, likelihood of use, perceived adequacy, and impact of omitting the item. Perceived importance, likelihood of use, and perceived adequacy were measured on a 7-point semantic differential-type scale. The scales for likelihood of use were inverted such that "1" represented "very unlikely" and

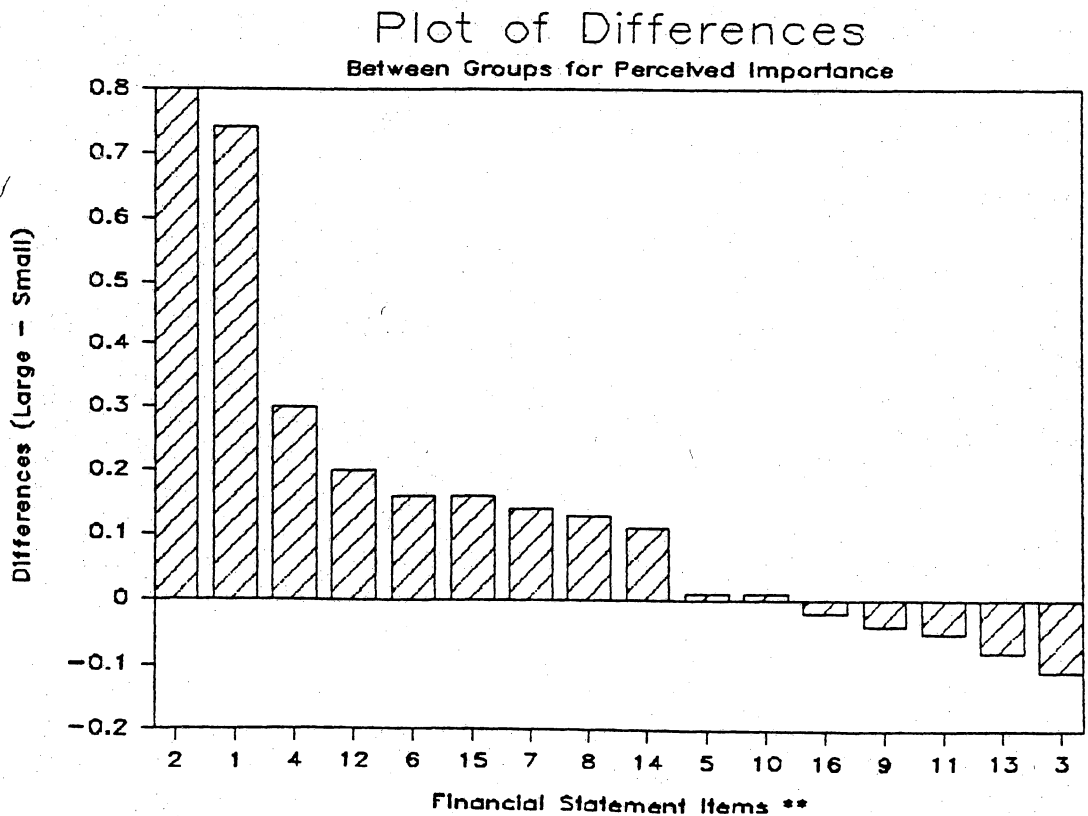
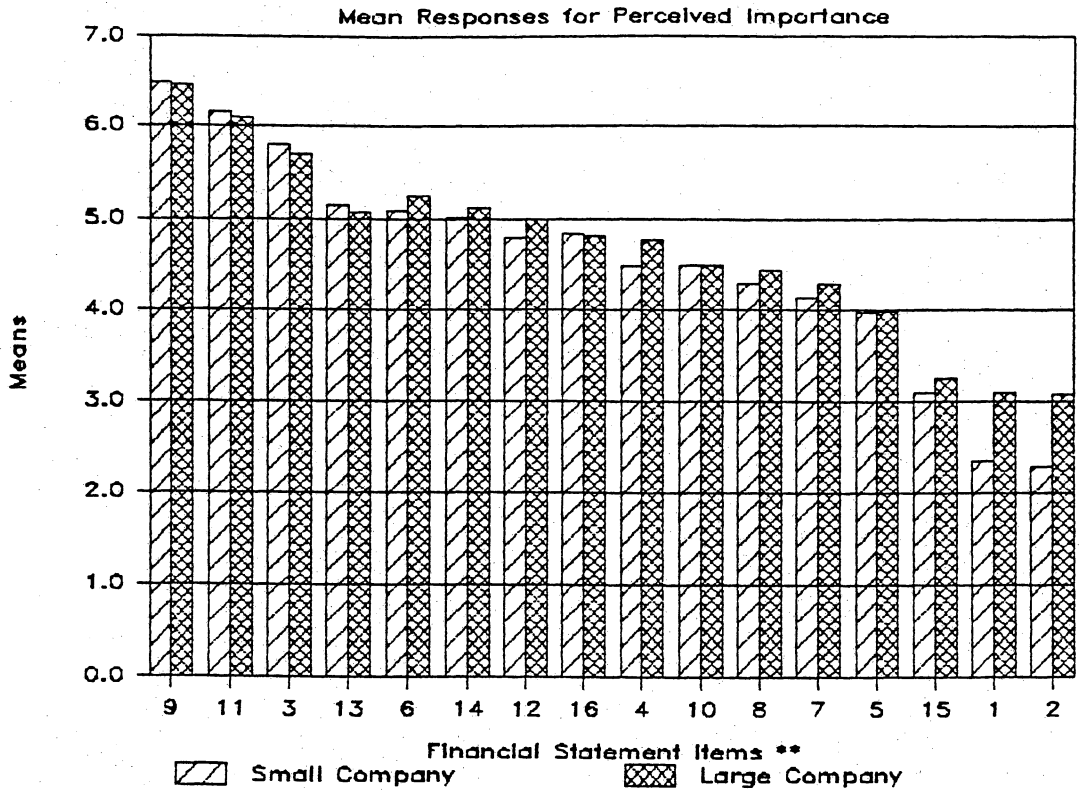
"7" represented "very likely". This was required in order to have a consistent set of scales that are interpretable in a similar manner. Impact of omitting was measured on a 6-point scale with pre-defined categories.

Exhibit 4.5 (a), (b), (c) and (d) present mean responses between the small and large treatment groups. Although there are noticeable differences in mean responses between the two groups, a fair amount of similarity can be observed. These similarities and differences are discussed for each of the indexes used in the survey.

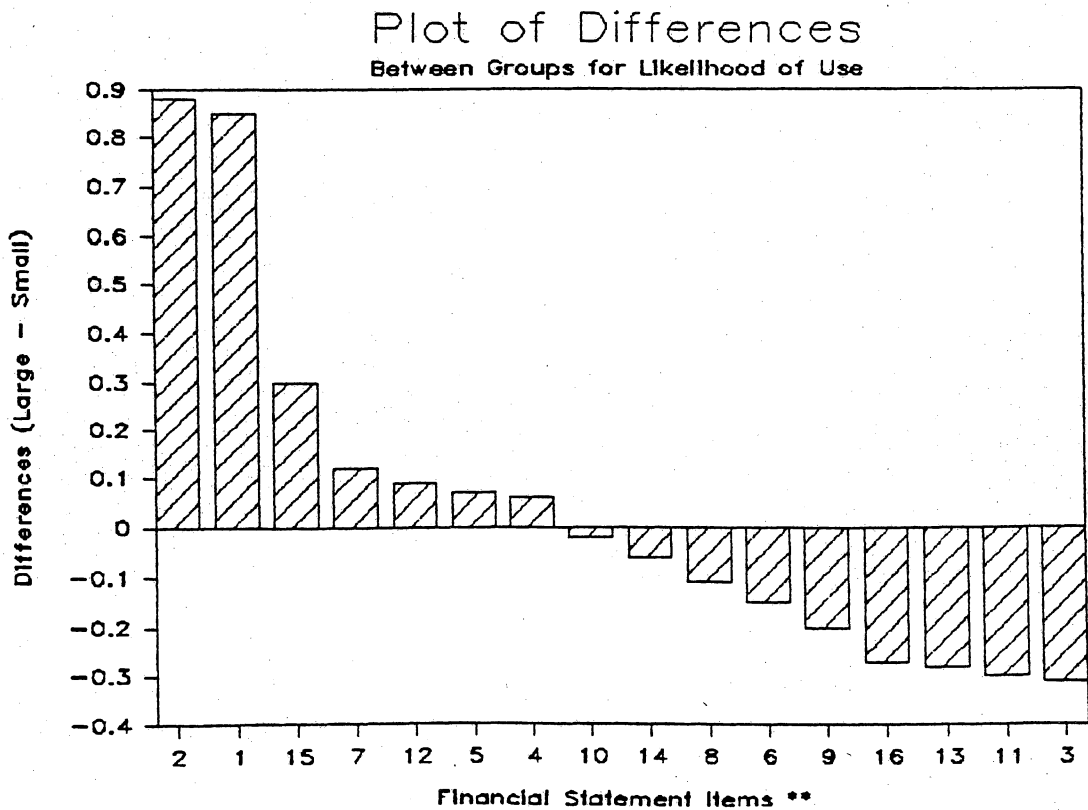
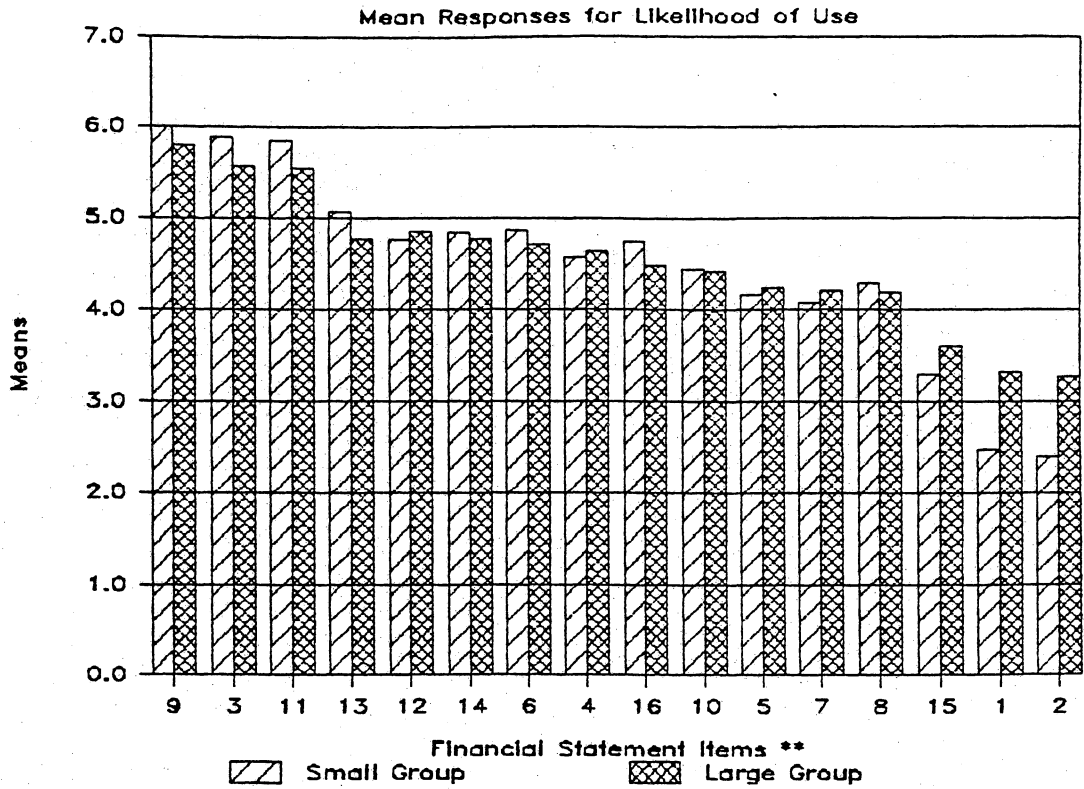
**Perceived Importance:** Exhibit 4.5(a) depicts the average importance ratings that loan officers assigned to the financial statement items for the two companies in the survey. From this exhibit it is observed that PEPS (No. 1), FDEPS (No. 2), and compensated absences (No. 15) are viewed as less important than any of the other items in the loan evaluation process for both the small and large companies. On the other hand, the four control items -- cost of goods sold (No. 3), income from continuing operations (No. 9), the SCFP (NO. 11), and fixed asset composition (No. 13) -- are the most highly rated disclosures in the loan evaluation process involving both companies in the survey (see Exhibit 4.5(a)).



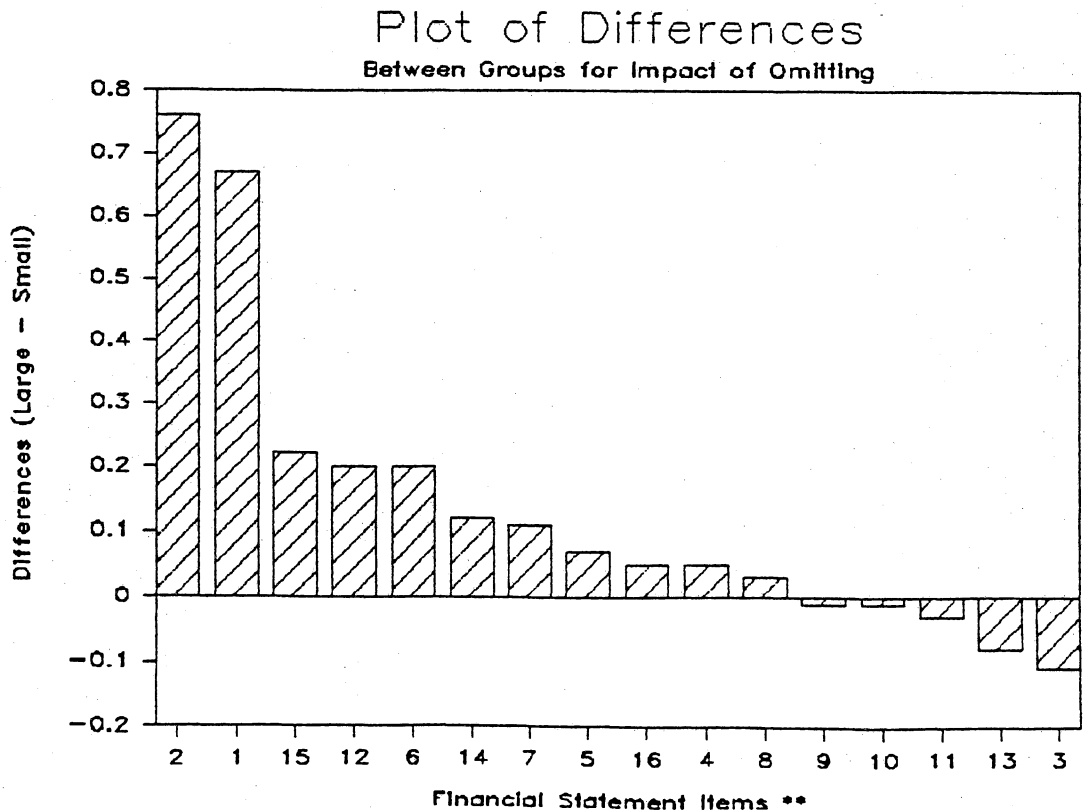
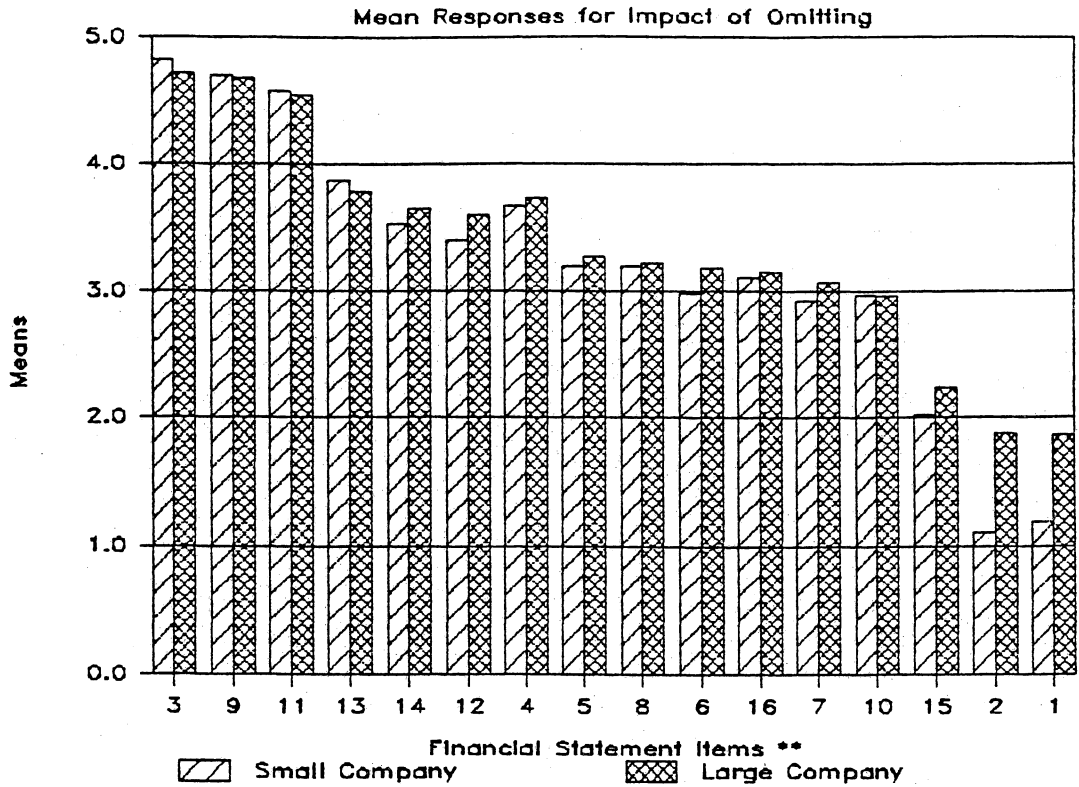
# Exhibit 4.5 (a).



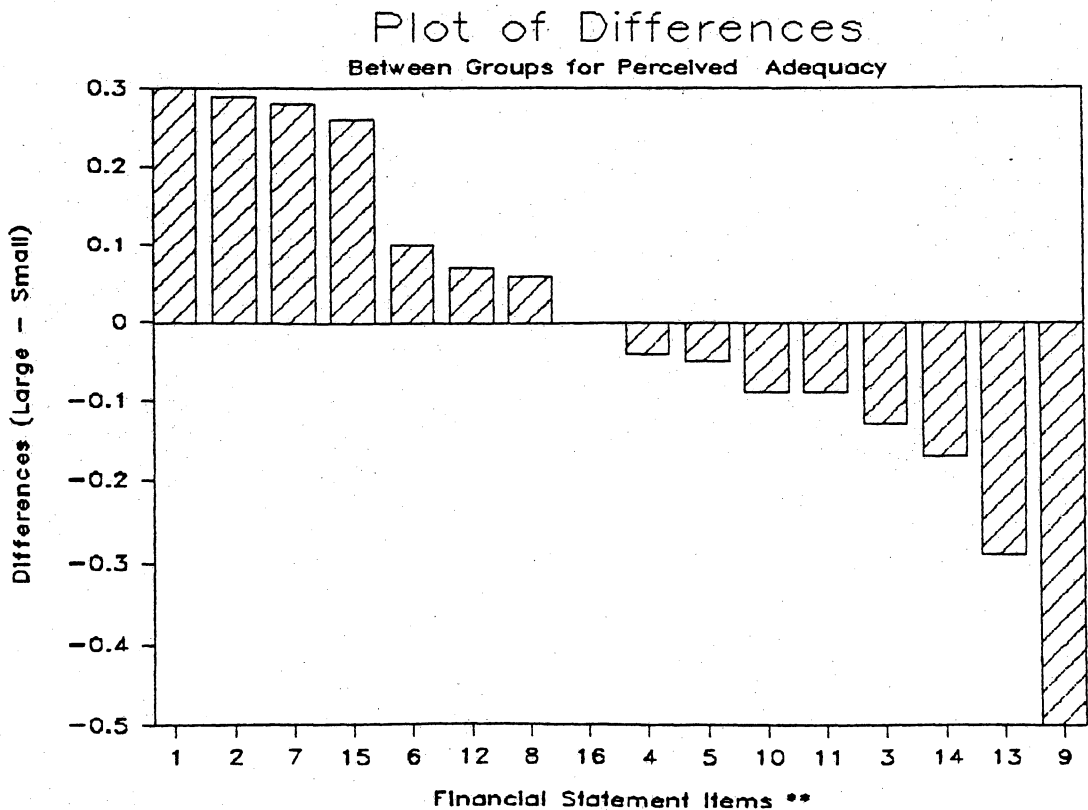
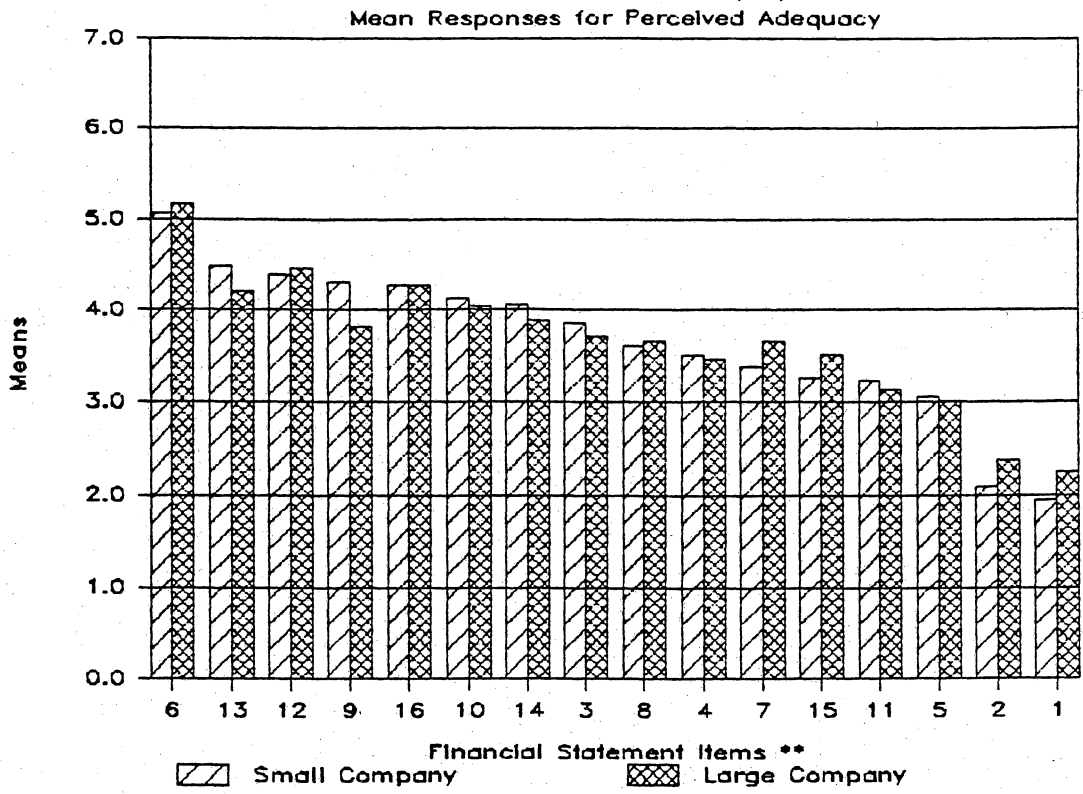
# Exhibit 4.5 (b).



# Exhibit 4.5 (c).



## Exhibit 4.5 (d).



Between the three less important items and the four control items are eight items that appear to make up a grey area in the perceptions of the loan officers. Three of the items within this area -- changing prices (No. 6), segment data (No. 12) and loss contingencies (No. 14) -- are rated as important; the other 5 items are considered to be moderately important. It is of interest that two of these financial items (6 and 12) are not currently required by GAAP for small, privately-held corporations; yet they are both perceived to be important for the small company.

There are a number of noticeable differences in the perception of the items among the small and large company treatment groups. Mean responses for the large company exceed those for the small company among most of the "key items". The most noticeable of these differences occur among PEPS, FDEPS, and capitalized leases. Each of these three differences is statistically significant at the 5% level.

While loan officers perceive the key items to be more important for a large company than for a small one, they perceive the opposite with regard to the control items (see Exhibit 4.5(a)). That is, the control items are perceived to be more important for the small than for the large company. None of these differences is, however, significant at the 5% level.

This evidence suggests that loan officers emphasize the importance of some basic financial items for all companies, regardless of size and ownership. Thus, they perceive no major differences in the importance of these items when dealing with a small versus a large company. The other items are regarded as relatively less important than the control items. Differences in the perceived importance of this latter group of items are highly noticeable.

**Likelihood of Use:** The pattern of responses relating to the likelihood of using the financial items also reflects (1) relatively high ratings for the control items, (2) a grey area made up of 9 items that are considered to be moderately useful, and (3) three items that are perceived to be of relatively minor use in the loan evaluation process (see Exhibit 4.5(b)). Items comprising the third category are PEPS (1), FDEPS (2), and compensated absences (15). Segment data (12), loss contingencies (14) and changing prices (6) (in that order) are at the higher end of the grey area while deferred taxes (5), capitalized interest (7) and pensions (8) are at the lower end. Thus, there is a relatively high degree of consistency between the mean responses on the perceived importance and likelihood of use scales.

Differences in the mean responses for the small and large companies are also highlighted in Exhibit 4.5(b). Among the

key items, differences between mean responses for the large versus the small company are mostly positive, whereas the differences are negative among the control items. This indicates that loan officers are likely to place greater emphasis on the key items in evaluating a large company than in evaluating a small one. On the other hand, they are likely to place less emphasis on the control items in evaluating a large company than in evaluating a small company. Nevertheless, these differences (between the responses for the small and large companies) are statistically significant (at the 5% level) for only three of the financial items - PEPS (1) and FDEPS (2) and compensated absences (15).

**Impact of Omitting:** The same general pattern described above is depicted in Exhibit 4.5(c). That is, (1) the control items are relatively highly rated, (2) there is a grey area made up of 9 key items that are perceived to have a moderate effect on the loan evaluation process, and (3) there are three items -- PEPS (No. 1), FDEPS (No. 2), and compensated absences (No. 15) -- that are regarded as having an insignificant impact on the loan evaluation process.

The second part of Exhibit 4.5(c) depicts the differences between mean responses for the small and large companies. This exhibit also indicates that loan officers tend to perceive the key items as being more relevant in the financial

statements of a large company than a small one. This is highlighted by the positive differences in Exhibit 4.5(c). The negative differences in Exhibit 4.5(c) indicate, however, that the control items are perceived to be slightly more useful for a small company than a large one. Only three of these differences (PEPS (No. 1), FDEPS (No. 2), and segment data (No. 12)) are statistically significant at the 5% level.

The data support the same conclusions that are evident with regard to the importance and likelihood of use ratings. That is, loan officers tend to emphasize certain basic financial items in the loan evaluation process regardless of company size and ownership characteristics. Other items are rated as relatively less useful. Perceptions of these latter items appear to be affected by differences in size and ownership characteristics of the loan applicant.

**Perceived Adequacy:** Respondents appear to be very similar in their views with regard to the perceived adequacy of the financial statement items (see Exhibit 4.5(d)). Exhibit 4.5(d) indicates that they perceived relatively little need for additional information for 9 of the 16 financial statement items (items 1, 2, 3, 4, 5, 7, 8, 11 and 15) for both the small and large treatment groups. Respondents indicated, however, that they are more likely to seek additional information about the impact of changing prices (item 6) than any



of the other items included in the survey. Thus, even if companies are not required to disclose information on changing prices, there still appears to be a demand for such information.

The loan officers surveyed had mixed feelings about the adequacy of the four financial items - (PEPS (No. 1), FDEPS (No. 2), segment data (No. 12), and changing prices (No. 6) - that are not currently required by GAAP in the financial statements of nonpublic companies. PEPS and FDEPS disclosures are of little concern to loan officers (see Exhibit 4.5 (d)). Thus, they indicate that it is highly unlikely that they would attempt to obtain additional information about either of these items. With regard to changing prices (No. 6) and segment data (No. 12), the results suggest that loan officers would attempt to supplement financial statement disclosures (see Exhibit 4.5(d)). This suggests that loan officers view information on changing prices and segment data as useful items in the loan evaluation process for both a small and a large company.

**Complexity:** Analyses of mean responses taking into account variations in bank complexity, are presented in Exhibits 4.6 (a), (b), (c) and (d). The same general pattern discussed in the previous paragraphs is observed in the data. The control items tend to have higher means than the key items. PEPS,

Exhibit 4.6 (a)  
Mean Responses -- Perceived Importance

Items	Small Group			Large Group		
	Bank 1	Bank 2	Bank 3	Bank 1	Bank 2	Bank 3
Primary EPS	2.65	2.29	1.94	3.39	3.32	2.42
Diluted EPS	2.62	2.17	1.92	3.37	3.38	2.32
Cost of Goods	5.69	5.82	6.00	5.66	5.56	5.90
Capital Lease	4.75	4.05	4.74	4.74	4.77	4.83
Deferred Tax	4.18	3.76	4.03	4.10	3.98	3.85
Changing Prices	5.08	5.12	5.03	5.50	5.10	5.03
Cap. Interest	4.25	3.95	4.33	4.51	4.33	3.93
Pension Liab.	4.28	4.17	4.57	4.42	4.44	4.44
Income	6.42	6.52	6.51	6.42	6.33	6.61
L-T Payables	4.62	4.37	4.49	4.76	4.58	4.00
SCFP	6.11	6.09	6.34	6.02	5.98	6.36
Segment Data	4.81	4.52	5.26	4.84	4.83	5.44
Fixed Assets	5.31	4.98	5.17	5.26	4.83	5.05
Loss Conting.	5.11	4.80	5.19	5.15	5.00	5.22
Comp. Absences	3.22	2.84	3.36	2.84	3.64	2.83
L-T Receivables	5.12	4.61	4.67	5.02	4.94	4.83

Exhibit 4.6 (b)  
Mean Responses -- Likelihood of Use

Items	Small Group			Large Group		
	Bank 1	Bank 2	Bank 3	Bank 1	Bank 2	Bank 3
Primary EPS	2.71	2.47	2.06	3.60	3.34	2.90
Diluted EPS	2.63	2.21	2.26	3.56	3.30	2.78
Cost of Goods	5.95	5.84	5.86	5.44	5.52	5.85
Capital Lease	4.74	4.26	4.82	4.63	4.60	4.68
Deferred Tax	4.42	4.00	4.00	4.40	4.10	4.14
Changing Prices	4.74	4.85	5.11	4.79	4.83	4.44
Cap. Interest	4.28	3.85	4.12	4.38	4.41	3.66
Pension Liab.	4.45	4.19	4.20	4.13	4.31	4.15
Income	6.11	5.92	6.00	5.58	5.77	6.20
L-T Payables	4.60	4.72	3.63	4.51	4.46	4.24
SCFP	5.88	5.76	5.94	5.40	5.40	5.95
Segment Data	4.74	4.52	5.23	4.65	4.58	5.46
Fixed Assets	5.30	4.89	4.98	4.82	4.65	4.88
Loss Conting.	5.06	4.59	4.80	4.84	4.63	4.85
Comp. Absences	3.55	3.06	3.25	3.77	3.92	2.98
L-T Receivables	5.00	4.76	4.31	4.63	4.48	4.22

Exhibit 4.6 (c)  
Mean Responses -- Impact of Omitting

Items	Small Group			Large Group		
	Bank 1	Bank 2	Bank 3	Bank 1	Bank 2	Bank 3
Primary EPS	1.35	1.15	0.97	2.05	1.73	1.73
Diluted EPS	1.29	1.03	0.91	2.05	1.88	1.61
Cost of Goods	4.78	4.84	4.86	4.67	4.77	4.70
Capital Lease	3.69	3.56	3.83	3.67	3.75	3.80
Deferred Tax	3.25	3.16	3.17	3.37	3.19	3.21
Changing Prices	3.09	2.95	2.86	3.28	3.21	3.00
Cap. Interest	3.13	2.68	3.17	3.13	3.25	2.76
Pension Liab.	3.20	3.11	3.33	3.21	3.15	3.36
Income	4.65	4.69	4.75	4.69	4.65	4.73
L-T Payables	3.14	2.92	2.83	3.21	2.85	2.78
SCFP	4.60	4.50	4.64	4.51	4.50	4.65
Segment Data	3.49	3.26	3.49	3.48	3.50	3.90
Fixed Assets	3.74	3.65	3.57	3.64	3.58	3.53
Loss Conting.	3.57	3.43	3.63	3.64	3.67	3.65
Comp. Absences	2.13	1.97	1.89	2.25	2.38	2.03
L-T Receivables	3.42	3.02	2.71	3.48	3.08	2.78

Exhibit 4.6 (d)  
Mean Responses -- Perceived Adequacy

Items	Small Group			Large Group		
	Bank 1	Bank 2	Bank 3	Bank 1	Bank 2	Bank 3
Primary EPS	2.27	1.76	1.74	2.12	2.69	1.98
Diluted EPS	2.45	1.82	1.89	2.24	2.81	2.07
Cost of Goods	3.42	3.74	4.83	3.56	3.98	3.66
Capital Lease	3.25	3.27	4.37	3.57	3.56	3.12
Deferred Tax	2.98	2.81	3.64	3.24	3.19	2.49
Changing Prices	4.99	5.08	5.23	5.61	4.87	4.88
Cap. Interest	3.40	2.93	4.09	3.88	3.75	3.20
Pension Liab.	3.69	3.21	4.11	3.95	3.63	3.27
Income	4.14	4.12	5.00	3.71	4.08	3.71
L-T Payables	4.06	4.06	4.38	4.58	3.66	3.71
SCFP	3.14	3.00	3.75	2.76	3.70	3.00
Segment Data	4.37	3.98	5.21	4.48	4.17	4.83
Fixed Assets	4.34	4.29	5.14	4.44	4.23	3.85
Loss Conting.	4.11	3.54	4.89	3.97	4.00	3.63
Comp. Absences	3.42	2.98	3.49	3.80	3.56	3.07
L-T Receivables	4.32	4.27	4.19	4.92	3.96	3.75

FDEPS and compensated absences have the lowest ratings, and a grey area between these three items and the four control items is also evident. In addition, mean responses for the small company are generally higher (but not significantly different at the 5% level) than those for the large company among the control items. The data also confirm that loan officers viewed the key items to be generally more useful for the large company than the small one.

Differences between the three bank groups are also evident in Exhibits 4.6 (a), (b), (c) and (d). Noticeable differences exist between the bank groups with respect to primary and fully diluted earnings per share, capitalized interest, segment data, and accrued liabilities for compensated absences. Although these differences occur within both the small and large treatment groups, the differences are not always in the same direction.

#### 4.4. TESTS OF HYPOTHESES

The previous section presented an overview of the perceptions of loan officers and highlighted univariate differences between the two treatment groups. This section uses multivariate statistical techniques to explore the degree and sources of separation between the two treatment groups used in the study. These techniques are necessary because they

take into consideration the interrelationships between the variables of interest and provide results that relate to the overall experiment. The section is divided into two parts. The first part reports an analysis of hypotheses H01 and H02 using MANOVA. The second part extends the analysis and explores hypotheses H03, H04 and H05. Canonical correlation analysis is used in the second part.

#### 4.4.1. MANOVA Results

The following hypotheses are explored in this section:

- H01: Size and ownership characteristics of a reporting entity have no impact on the accounting information needs of loan officers.
- H02: Organizational complexity of a bank is not associated with the perceived information needs of its commercial loan officers.

These hypotheses are tested using a two-way Multivariate Analysis of Variance (MANOVA) model with interaction between the two factors of interest. The objectives of the tests are to examine whether:

- a. a difference exists between the centroids of the small and large treatment groups for the sixteen financial statement items included in the survey;
- b. a difference exists between the centroids of the three bank groups (complexity levels) for the sixteen financial statement items;
- c. treatment group and bank group (complexity level) have a joint effect on the perceptions of commercial loan officers.

These three objectives are referred to as tests for (a) a treatment main effect, (b) a bank group (complexity) main effect, and (c) an interaction effect, respectively. Tests were conducted for each of the four perception variables -- importance, likelihood of use, adequacy, and impact of omitting. Results are presented in Exhibit 4.7.

Exhibit 4.7 indicates that, overall, the treatment main effect is statistically significant at the 5% level for perceived importance, likelihood of use, and impact of omitting. The treatment main effect for perceived adequacy is not significant at the 5% level. These results suggest that, overall, the size and ownership characteristics of a company have a statistically significant impact on the perceived need for accounting information.

The complexity main effect is not consistent across the four indexes used in the measurement of perceived need. This main effect is highly significant at the 5% level for the perceived importance scale ( $P\text{-value} = .009$ ) but it is moderately significant at the 10% level for the likelihood of use scale ( $P\text{-value} = .080$ ). It is not, however, statistically significant for either the impact of omitting or perceived adequacy ( $P\text{-value} > .10$ ). Thus, the results suggest that the organizational complexity of a bank affects the degree of impor-



Exhibit 4.7  
Two-Way MANOVA Results ✓

Items Tested/ Results	Interaction Effect	Size Effect	Complexity Effect
<u>1. PERCEIVED IMPORTANCE</u>			
Wilk's Lamda	0.920	0.889	0.830
F Statistic	0.740	2.200	1.710
Degrees of Freedom	(32/560)	(16/280)	(32/560)
P-value	.845	.005	.009
<u>2. LIKELIHOOD OF USE</u>			
Wilk's Lamda	0.887	0.911	0.861
F Statistic	1.090	1.730	1.380
Degrees of Freedom	(32/568)	(16/284)	(32/568)
P-value	.335	.040	.080
<u>3. PERCEIVED ADEQUACY</u>			
Wilk's Lamda	0.856	0.948	0.872
F Statistic	1.090	1.730	1.380
Degrees of Freedom	(32/548)	(16/274)	(32/548)
P-value	.080	.517	.198
<u>4. IMPACT OF OMITTING</u>			
Wilk' Lamda	0.934	0.906	0.885
F Statistic	0.620	1.860	1.130
Degrees of Freedom	(32/570)	(16/285)	(32/285)
P-value	.949	.024	.293

tance and usefulness that its loan officers will attach to financial accounting information.

Exhibit 4.7 also indicates that the interaction effect is not significant for any of the indexes used in the study (P-value > .10). Thus, the hypotheses of no joint effect of bank group and treatment group on perceived needs cannot be rejected on the basis of the results presented in this section.

This section has examined the treatment and complexity effects in isolation of the other factors that are included in the research model developed in Chapter II (see Exhibit 2.5). Further analysis is still needed to (1) examine whether results could be replicated within the context of the research model, and (2) identify the financial statement items that contribute to the relationships. The next section uses canonical correlation analysis to achieve these objectives.

#### 4.4.2. Results of Canonical Correlation Analysis

This section investigates further the MANOVA results presented in the preceding discussion and explores the following hypotheses:

**H03:** There is no association between perceived need for accounting information and the experience of commercial loan officers.

- H04: There is no association between the perceived need for accounting information and the educational background of commercial loan officers.
- H05: There is no association between the perceived need for accounting information and the professional orientation of commercial loan officers.

As indicated in Chapter III, a total of twelve explanatory variables are included in the analysis. These variables and the hypotheses to which they relate are listed in Exhibit 4.8. The 16 financial statement items are used in the analysis as the dependent variables.

Canonical correlation analysis is analogous to multiple regression, but instead of having one dependent variable, as in regression, there may be several dependent variables. The objective of the analysis is to find a linear combination of the dependent variables that is maximally correlated with a linear combination of explanatory variables. These linear combinations are called canonical variates<sup>152</sup>.

In analyzing the canonical correlations, the primary factors of interest in this study are (1) the magnitude of the correlations between the dependent and explanatory canonical variates (canonical correlations), (2) the statistical significance of these correlations, (3) the structure of the

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<sup>152</sup> Dillon and Goldstein, op. cit., 1984, p. 20.

Exhibit 4.8  
List of Explanatory Variables  
Used in Canonical Correlation Analysis

Description	Abbreviation	Relates to	Remarks
1. Bank asset size	Asset	HO2	Used as a surrogate for organizational complexity.
2. Small or large company treatment	Treat.	HO1	Coded as a (0, 1) dummy variable.
3. Originality in the work ethic	Origin.	HO5	Component of professional orientation.
4. Institutional work ethic	Instit.	HO5	Component of professional orientation.
5. Risk of work ethic	Risk	HO5	Component of professional orientation.
6. Loyalty to the profession	Loyal.	HO5	Component of professional orientation.
7. Reference group	Refer.	HO5	Component of professional orientation.
8. Membership in an organization of professional bankers	Member.	HO5	Coded as a (0, 1) dummy variable.
9. Experience as a loan officer	Expl.	HO3	Question 8, Part C in Appendix A.
10. Experience in financial statement analysis	Expl.	HO3	Question 8, Part C in Appendix A.
11. College Degree (in Business)	Degree.	HO4	Coded as a (0, 1) dummy variable. Question 10, Part C in Appendix A.
12. College Accounting	Cacctg.	HO4	Question 11, Part C in Appendix A.

canonical variates, and (4) the amount of variance in the dependent variables that is explained by the explanatory canonical variate. Based on the discussion in Section 3.5, only variables with loadings<sup>153</sup> of at least  $|.30|$  are considered important in defining a particular relationship.

The results of the analysis, which are presented below, highlight both the univariate pairwise correlations between the dependent and explanatory variables, and their canonical structure. The analysis emphasizes the canonical variates rather than the univariate correlations because the former incorporate the interactions among all of the variables in the model. Results are presented for each of the four indexes used in the study.

#### 4.4.2.1. Perceived importance

A table containing the univariate pairwise correlations between the perceived importance of the financial statement items and the independent variables is presented in Exhibit 4.9.

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<sup>153</sup> That is, the correlation between a variable in the set of dependent (or explanatory) variables and the canonical variate representing the dependent (or explanatory) variable.

Exhibit 4.9  
Univariate Correlations  
Between Perceived Importance Items  
and Explanatory Variables

Item	Asset	Treat	Refer	Instit	Loyal	Origin	Risk	Expl	Exp2	Member	Degree	Caactg
1. PEPS	-.14	.22	.02	.12	.02	.00	.11	.03	-.02	-.06	-.03	-.02
2. FDEPS	-.15	.24	.00	.13	.05	.06	.09	.06	.01	-.08	-.01	.01
3. COGS	.05	-.08	.04	.04	.01	.12	-.01	.10	.06	-.06	.07	.11
4. Leases	.04	.09	-.03	.12	.03	.09	.06	.05	.03	-.01	.07	.05
5. Taxes	.05	-.01	-.06	.04	.07	.10	-.00	.04	.01	-.02	.06	.00
6. Changing prices	-.23	.03	-.05	-.02	-.03	-.03	.11	-.06	-.10	-.02	.04	-.06
7. Cap. Interest	-.11	.04	-.05	.16	.03	.19	.08	-.08	-.03	-.05	.03	.01
8. Pensions	.07	.05	-.10	.16	-.01	.09	.02	.04	.06	-.01	.07	.05
9. Income	.02	-.02	.01	.03	.01	.03	.01	.00	-.00	-.11	.01	.06
10. Payables	-.02	.03	-.11	.14	-.05	.13	.08	-.07	-.07	-.07	-.08	.04
11. SCFP	-.03	-.10	-.07	.07	-.02	.02	.08	.11	.11	.07	-.07	.04
12. Segment Data	.05	.08	.02	.12	.09	.15	.11	-.06	-.09	-.04	.01	.08
13. Fixed Assets	-.02	-.05	-.12	.12	-.04	.11	-.00	.02	-.05	-.13	.13	.03
14. Contingencies	-.01	.03	-.10	.06	-.04	.09	.09	-.01	.01	-.07	-.00	.09
15. Comp. Absences	-.04	.04	-.09	.10	-.08	.12	.06	.07	.07	-.06	.03	-.13
16. Receivables	.02	-.00	-.10	.02	.03	.08	.10	-.10	-.08	-.04	.02	.02

n = 268.

P-value is less than .05 for r > .10.

The univariate correlations between treatment group and perceived importance appear to confirm the general pattern presented in Exhibit 4.5(a). That is, loan officers perceive the key items to be more important when dealing with a large company than a small one. Another interesting relationship borne out by the univariate correlations is that loan officers at smaller banks tend to rate the importance of the financial items higher than their counterparts at larger banks.

Other interesting univariate relationships occur among institutional work ethic, originality in the work ethic, and risk of the work ethic. There appears to be a positive association between perceived importance and these explanatory variables. This suggests that the higher the degree of commitment to the specialized work ethic of the banking profession, the greater is the perceived need for the financial items.

Although there are other significant univariate correlations, it must be noted that interpretation of individual correlations is inefficient, and attempts to cluster the correlations from a univariate correlation matrix (e.g., Exhibit 4.9) produce results that are at best very tentative. The primary reason is that the pairwise correlations do not incorporate the inter-relationships that could exist between

✓ three or more variables. Canonical correlation analysis re-  
solves this problem.

Results of the canonical analysis are presented in Exhibit 4.10. The canonical correlations between the first and second canonical variate pairs are .458 and .443, respectively. Both correlations are highly significant at the 5% level. The remaining canonical correlations were not significant at conventional significance levels, such as the 5%, 10% or 15% levels and are, therefore, not considered in this analysis.

The general interpretation of the first canonical variate pair is that the perceived importance of four of the key items in the standards overload debate - PEPS, FDEPS, impact of changing prices, and capitalized interest costs - are associated with a combination of three factors. These factors are bank size, treatment group, and, to a lesser degree, institutional work ethic.

The first canonical variate representing the financial statement items (the dependent canonical variate) is a linear combination of PEPS, FDEPS, impact of changing prices, and capitalized interest cost. PEPS and FDEPS (which have loadings of .65 and .70, respectively), dominate the relationship implied by the first dependent canonical variate.



Exhibit 4.10  
Results of Canonical Correlation Analysis  
Perceived Importance

Variables	Canonical Variate 1		Canonical Variate 2	
	Loadings	Cross-loadings	Loadings	Cross-loadings
<u>Financial Statement Items</u>				
1. Primary EPS	.65**	.30	-.05	-.02
2. Diluted EPS	.70**	.32	.09	.04
3. Cost of Goods	-.12	-.06	.41*	.18
4. Capital Leases	.21	.10	.28	.12
5. Deferred Taxes	-.02	-.01	.28	.12
6. Changing Prices	.32*	.15	-.43*	-.19
7. Capitalized Int.	.38*	.17	.11	.05
8. Pensions	.14	.06	.30*	.14
9. Income	.03	.01	.20	.09
10. Payables	.28	.13	.05	.02
11. SCFP	-.13	-.06	-.08	-.03
12. Segment Data	.26	.12	.35*	.16
13. Fixed Assets	.11	.05	.31*	.14
14. Contingencies	.17	.08	.09	.04
15. Comp. Absences	.14	.07	-.03	-.01
16. Receivables	.05	.03	.03	.01
<u>Explanatory Variables.</u>				
1. Bank Asset Size	-.54**	-.25	.48*	.21
2. Treatment Group	.65**	.30	.10	.04
3. Reference Group	.08	.04	.07	.03
4. Loyalty	.11	.05	.23	.10
5. Instit. Work ethic	.39*	.18	.35*	.16
6. Originality	.14	.06	.46*	.21
7. Risk of Work Ethic	.28	.13	-.19	-.08
8. Experience-1	-.15	-.07	.20	.09
9. Experience-2	-.23	-.11	.15	.07
10. Prof. Membership	-.20	-.09	-.19	-.08
11. College Degree	-.00	-.00	.23	.10
11. College Accounting	.06	.02	.42*	.19
Canonical Correlation	.458		.444	
Canonical R-Squared	.210		.197	
P-value	.000		.018	
Variance Explained	2%		1%	

\*\* very dominant loadings (loadings  $\geq$  .50)

\* high loadings (.50 < loadings  $\geq$  .30)

The explanatory canonical variate is made up of bank asset size, treatment group, and institutional work ethic. The two dominant variables in the explanatory canonical variate (treatment group and bank asset size) affect perceived importance in different directions. A positive association exists between perceived importance and treatment group. That is, the financial statement items are perceived to be more important for a large corporation than a small one. Bank size, however, is a suppressor variable and reduces the overall perceived importance of the financial statement items. This confirms the relationship suggested by the univariate correlations that loan officers at smaller banks perceive the financial statement items to be more important than do their counterparts at larger banks.

The institutional work ethic component of professional orientation enhances the relationship between company size and the perceived importance of financial statement items. Thus, loan officers who are more committed to the institutional work ethic of the banking profession tend to perceive the financial statements as more important than do their counterparts who are less committed.

The explanatory power of the first canonical correlation is relatively low. Although the canonical R-squared is .21, the proportion of variance in the perceived importance of the

financial statement items that is explained by the canonical explanatory variate is only 2%. Thus, the relationships indicated by the above results should be cautiously interpreted.

The second dependent canonical variate is made up of a linear combination of cost of goods sold, impact of changing prices, pension liabilities, segment data, and fixed assets composition. Thus, a combination of two control items and three key items are included in this variate. The three key items - impact of changing prices, pension liabilities, and segment data - are all fairly complex and are usually associated with large scale enterprises.

The second explanatory canonical variate is made up of bank asset size, institutional work ethic, originality in the work ethic, and level of accounting education. These variables are positively associated with their canonical variate and, therefore, affect the dependent variables in a consistent direction.

The canonical structure inherent in this second pair of variates suggests that bank asset size, and, to a lesser extent, institutional work ethic, originality in the work ethic, and level of accounting education are positively associated with the variables comprising the dependent

canonical variate. This implies that loan officers who are (1) employed by large banks, (2) have high levels of accounting education, and (3) are committed to the specialized work ethic of the banking profession are likely to perceive a high need for some of the financial statement items that are typically associated with large scale enterprise.

An interesting exception to the general positive relationship between the explanatory variables making up the second canonical variate and the dependent variate is the negative association between the explanatory variables and the impact of changing prices. It appears that loan officers at larger banks perceive this item to be less important than do their counterparts at smaller banks.

It should be noted that the relationship observed in the second pair of canonical variates should be interpreted cautiously. Although the canonical R-squared is reasonable (.197), the predictive power of the explanatory variables is quite low. The standardized redundancy coefficient is only 1%. This implies that only 1% of the standardized variance in the perceived importance of the financial statement items is explained by the canonical variate representing the explanatory variables.

#### 4.4.2.2. Likelihood of use

Pairwise univariate correlations between likelihood of use and the explanatory variables are presented in Exhibit 4.11. The relationships presented by this correlation matrix are generally similar to those presented in Exhibit 4.9. Size and ownership treatment is correlated relatively highly with PEPS and FDEPS. The correlations between these variables are positive (.23 and .25, respectively) and are among the highest pairwise correlations. Bank asset size is negatively associated with the perceived likelihood that PEPS, capitalized interest, and impact of changing prices will be used in the loan evaluation process. Originality in the work ethic has a significant positive correlation with seven of the 12 key financial statement items. These correlations, however, present only a limited view of the relationship between the dependent and explanatory variables. A more rigorous view of the relationship is presented by the canonical structure of the data.

The first canonical correlation between the two sets of variables is .42 (P-value = .195) (see Exhibit 4.12). Although this correlation is significant only at the 20% level, it is relatively high and there are a number of substantial loadings on both the dependent and explanatory canonical variates.

Exhibit 4.11  
Univariate Correlations  
Between Likelihood of Use Items  
and Explanatory Variables

Item	Asset	Treat	Refer	Instit	Loyal	Origin	Risk	Expl	Exp2	Member	Degree	Coactg
1. PEPS	-.12	.23	-.04	.03	-.02	.02	.02	.02	.01	.02	-.02	-.03
2. FDEPS	-.05	.25	-.04	.05	-.03	.05	.02	.02	-.01	.02	.00	-.03
3. COGS	.01	-.07	-.00	.06	-.04	.01	.01	.07	.06	.18	-.01	.03
4. Leases	-.01	.02	.01	.11	-.09	.12	.12	-.04	-.06	.02	.06	.02
5. Taxes	.03	.02	-.16	.10	-.04	.11	.03	.01	.03	.04	-.03	.03
6. Changing prices	-.18	-.02	-.06	-.02	.06	-.01	.09	.05	.05	.09	-.05	-.04
7. Cap. Interset	-.12	.04	-.02	.11	.01	.15	.05	-.03	-.01	.01	.07	.07
8. Pensions	.01	-.05	-.07	.09	.01	.13	.01	.05	.08	.07	-.00	.04
9. Income	.03	-.04	.02	.03	.01	.04	.02	.02	.01	-.11	-.01	.06
10. Payables	-.08	.04	-.08	.15	-.04	.16	.09	-.03	.01	.00	.04	-.00
11. SCFP	.02	-.07	-.07	.03	.00	-.02	-.01	.05	.06	.18	-.04	.05
12. Segment Data	-.01	.03	.00	.06	-.01	.14	.13	.01	.03	.10	-.10	.04
13. Fixed Assets	-.05	-.05	-.08	.11	.00	.08	.00	.06	.08	.10	.06	.06
14. Contingencies	-.05	.03	-.13	.07	-.03	.04	.09	.03	.06	.15	.01	.08
15. Comp. Absences	-.10	.12	-.14	.06	-.08	.12	-.05	.05	.04	-.01	-.03	-.04
16. Receivables	.03	-.01	-.09	.02	.03	.08	.11	-.10	-.07	-.06	.03	.03

n = 268.

P-value is less than .05 for  $r > .10$ .

Exhibit 4.12  
Results of Canonical Correlation Analysis  
Likelihood of Use

Variables	Canonical Variate 1	
	Loadings	Cross-loadings
<u>Financial Statement Items</u>		
1. Primary EPS	.50**	.21
2. Diluted EPS	.37*	.16
3. Cost of Goods	.01	.00
4. Capital Leases	.07	.03
5. Deferred Taxes	.20	.08
6. Changing Prices	.54**	.23
7. Capitalized Int.	.25	.10
8. Pensions	.05	.02
9. Income	-.14	-.06
10. Payables	.30*	.13
11. SCFP	.08	.03
12. Segment Data	.27	.11
13. Fixed Assets	.15	.06
14. Contingencies	.40*	.17
15. Comp. Absences	.40*	.17
16. Receivables	.07	.03
<u>Explanatory Variables.</u>		
1. Bank Asset Size	-.68**	-.29
2. Treatment Group	.43*	.18
3. Reference Group	-.28	-.12
4. Loyalty	.01	.00
5. Instit. Work Ethic	.01	.00
6. Originality	.03	.02
7. Risk of Work Ethic	.27	.11
8. Experience-1	.09	.04
9. Experience-2	.11	.04
10. Prof. Membership	.13	.05
11. College Degree	-.18	-.08
11. College Accounting	-.11	.05
Canonical Correlation	.423	
Canonical R-Squared	.178	
P-value	.195	
Variance Explained	1%	

\*\* very dominant loadings (loadings  $\geq$  .50)

\* high loadings (.50 < loadings  $\geq$  .30)

This canonical variate pair suggest that the perceived likelihood of using the financial statement items is jointly affected by bank asset size and the size of the treatment company. The larger the total assets of the bank, the lower the ratings assigned to the financial statement items. On the other hand, loan officers rate the likelihood of using the financial items much higher when dealing with the large company than with the small one. Overall, these relationships are consistent with those implied from the first canonical correlation involving perceived importance.

#### 4.4.2.3. Perceived adequacy

The pairwise univariate correlations between perceived adequacy of the financial statement items and the explanatory variables are relatively low (see Exhibit 4.13). The largest correlation is .21 between the perceived adequacy of the statement of changes in financial position and the loyalty component of professional orientation. There are four other significant positive correlations between loyalty and perceived adequacy. These correlations suggest that loan officers with greater loyalty to the banking profession are more likely to perceive a need for additional information about a financial item than their counterparts.



Exhibit 4.13  
Univariate Correlations  
Between Perceived Adequacy Items  
and Explanatory Variables

Item	Asset	Treat	Refer	Instit	Loyal	Origin	Risk	Expl	Exp2	Member	Degree	Coactg
1. PEPS	-.10	.08	.12	.02	.13	.09	.10	-.12	-.16	.01	.06	-.04
2. FDEFS	-.11	.06	.09	.06	.09	.04	.09	-.12	-.17	.03	.06	-.08
3. COGS	.19	-.05	.02	.04	.14	.02	.08	-.04	-.08	.04	-.05	.10
4. Leases	.04	.01	.05	.11	.07	.05	.19	-.12	-.11	.01	.01	.03
5. Taxes	.05	.02	.02	.13	.16	.02	.17	-.09	-.10	.04	-.02	.04
6. Changing prices	-.20	.01	-.01	-.00	-.03	-.02	.17	-.06	-.05	-.06	-.01	-.07
7. Cap. Interset	-.11	.07	-.01	.19	.03	.08	.10	-.05	-.06	.05	-.02	-.10
8. Pensions	-.11	-.03	-.04	.14	.04	-.07	.10	-.11	-.07	-.04	-.03	-.02
9. Income	.00	-.02	.02	.02	.04	.02	.01	-.02	-.03	-.13	.01	.05
10. Payables	-.03	-.04	.10	.02	-.01	.04	.15	-.15	-.14	.06	.02	-.03
11. SCFP	.09	-.03	.03	.02	.21	.04	.07	-.02	-.03	.08	-.10	.03
12. Segment Data	.13	-.01	.06	.13	.08	.09	.13	-.14	-.13	.02	-.08	.00
13. Fixed Assets	.06	-.09	-.05	-.07	.14	-.04	.05	-.08	-.09	.06	.05	-.01
14. Contingencies	.05	-.03	-.01	.09	.03	-.10	.09	-.15	-.15	.03	-.03	-.01
15. Comp. Absences	-.03	.06	.01	.11	.02	-.05	.10	-.11	-.14	.04	-.03	-.06
16. Receivables	-.04	-.01	-.06	.04	.05	.08	.11	-.11	-.10	-.03	.05	-.01

n = 260.

P-value is less than .05 for r > .10

The second largest coefficient is  $-.20$  between capitalized interest cost and bank asset size. The other univariate correlations between bank asset size and perceived adequacy are not in a consistent direction. Thus, the nature of the impact of organizational complexity on perceived adequacy of financial statement disclosures cannot be determined on the basis of the univariate correlations.

There is a consistent negative correlation between both measures of experience and perceived adequacy. Sixteen of the 32 correlations between these variables are significant at the 5% level. It appears that more experienced loan officers are less likely to perceive a need for additional information about an item than their less experienced counterparts.

Risk of work ethic, on the other hand, has a consistent positive correlation with perceived adequacy. Six of the 16 pairwise correlations between these variables are significantly different from zero at the 5% level. Thus, attitudes towards the risks involved in the work ethic of the banking profession appear to have a significant impact on the perceived adequacy of the financial items. It appears that the greater the concern for risks, the greater the perceived need for additional information about a particular financial statement item.

None of the univariate correlations between treatment group and perceived adequacy is significant at the 5% level. This suggests that the size and ownership characteristics of a company do not have a direct impact on the perceived need for additional information about a particular financial statement item.

As previously indicated, these relationships are severely limited and a more rigorous approach must be used to analyze the data. The canonical structure of the data allows a more complete and rigorous assessment of the relationships that are inherent in the data.

Results of the canonical correlation analysis are presented in Exhibit 4.14. Only the first canonical variate pair is significant at conventional levels ( $P\text{-value} \leq .10$ ). The canonical correlation between the two variates is .47 and is marginally significant at the 5% level. The canonical  $R^2$  is 23% but only 2% of the variance in the canonical variate representing perceived adequacy is explained by the explanatory variables. Thus, the relationships indicated by this canonical variate pair are relatively weak and should be interpreted cautiously.

The dependent canonical variate represents a linear combination between cost of goods sold, deferred taxes, impact of

Exhibit 4.14  
Results of Canonical Correlation Analysis  
Perceived Adequacy

Variables	Canonical Variate 1	
	Loadings	Cross-loadings
<u>Financial Statement Items</u>		
1. Primary EPS	.08	.04
2. Diluted EPS	.01	.00
3. Cost of Goods	.60**	.29
4. Capital Leases	.22	.10
5. Deferred Taxes	.31	.15
6. Changing Prices	-.41*	-.20
7. Capitalized Int.	-.14	-.06
8. Pensions	-.20	-.10
9. Income	.02	.01
10. Payables	.04	.02
11. SCFP	.43*	.20
12. Segment Data	.37*	.18
13. Fixed Assets	.30*	.14
14. Contingencies	.13	.06
15. Comp. Absences	.01	.01
16. Receivables	.01	.01
<u>Explanatory Variables.</u>		
1. Bank Asset Size	.73**	.35
2. Treatment Group	-.11	-.05
3. Reference Group	.11	.06
4. Loyalty	.43*	.21
5. Instit. Work Ethic	.02	.01
6. Originality	.12	.06
7. Risk of Work Ethic	.08	.04
8. Experience-1	-.15	-.07
9. Experience-2	-.27	-.13
10. Prof. Membership	.18	.08
11. College Degree	-.07	-.03
11. College Accounting	.26	.12
Canonical Correlation	.474	
Canonical R-Squared	.224	
P-value	.045	
Variance Explained	2%	

\*\* very dominant loadings (loadings  $\geq$  .50)

\* high loadings (.50 < loadings  $\geq$  .30)

changing prices, the SCFP, segment data, and fixed assets. Each of these items, except impact of changing prices, is positively loaded on their canonical variate. The most dominant item, however, is cost of goods sold, followed by the SCFP (see Exhibit 4.14). The explanatory canonical variate is comprised of bank asset size, and, to a lesser extent, the loyalty component of the professional orientation construct.

It is evident from these results that perceptions relating to the adequacy of the control items are not uniform across banks. While not affected by the size and ownership treatment, perceived adequacy of cost of goods sold and the statement of changes in financial position appear to be influenced by bank asset size, and to a lesser extent, by the loyalty component of professional orientation.

Bank asset size, in general, appears to have a strong positive impact on perceived adequacy. This implies that loan officers at larger banks may be more likely than their counterparts at smaller banks to indicate a need for additional information on a particular financial statement item. A noticeable exception relates to the perceived adequacy of information on the impact of changing prices. It appears that loan officers at smaller banks are more likely than their counterparts at larger banks to perceive a need for

additional information on the impact of changing prices in evaluating a loan.

#### **4.4.2.4. Perceived impact of omitting**

The pairwise univariate correlation coefficients representing the relationships between the explanatory variables and the perceived impact of omitting an item from the financial statements are presented in Exhibit 4.15. All the significant correlations between treatment group and the financial statement items are positive. This is consistent with the other results that indicate that loan officers perceive the need for some financial items to be greater when dealing with a large company than with a small one.

The correlation between loss contingencies and risk is .22 and there are five other positive correlations (between risk and the financial items) that are significant at the 5% level (see Exhibit 4.15). Similarly, all of the significant correlations between originality in the work ethic and institutional work ethic, and the financial items are positive. These correlations suggest that the greater the commitment to the specialized work ethic of the profession, the greater the perceived usefulness of the financial items.

Exhibit 4.15  
Univariate Correlations  
Between Impact of Omitting  
and Explanatory Variables

Item	Asset	Treat	Refer	Instit	Loyal	Origin	Risk	Expl	Exp2	Member	Degree	Cacctg
1. PEPS	-.08	.23	.02	.15	.04	.03	.06	.03	-.02	.00	-.08	.00
2. FDEPS	-.08	.27	.01	.14	.03	.03	.02	.05	-.03	.01	-.06	.01
3. COGS	-.04	-.12	.02	.05	.06	.10	-.02	.07	.02	.10	-.08	.05
4. Leases	.03	-.01	-.02	.10	.08	.10	.06	-.02	-.03	-.02	.13	.12
5. Taxes	-.03	.02	-.06	.08	.01	.13	-.01	.02	-.02	-.02	.08	.01
6. Changing prices	-.19	.07	-.04	.01	.07	.03	.16	.02	.04	-.01	-.03	-.03
7. Cap. Interest	-.10	.01	.05	.09	.10	.17	.17	-.07	-.06	-.05	-.03	-.01
8. Pensions	.05	-.02	-.08	.13	.06	.14	-.01	.10	.13	.06	-.07	.08
9. Income	.04	-.02	.01	.02	.01	.02	-.01	.01	.01	-.11	.00	.06
10. Payables	-.05	-.01	-.02	.11	-.02	.13	.14	-.07	-.07	-.08	.02	.00
11. SOFP	.02	-.10	.11	.01	.07	.08	-.01	.14	.07	.21	.01	.03
12. Segment Data	.03	.08	-.01	.03	.04	.12	.06	-.02	-.00	.03	.01	.13
13. Fixed Assets	-.06	-.05	-.10	.13	-.01	.17	.18	.03	-.03	-.14	.06	-.06
14. Contingencies	-.05	.06	-.02	.14	.04	.12	.22	-.03	-.03	.03	.02	.11
15. Comp. Absences	-.07	.07	-.04	.07	-.01	.10	.15	.08	.06	-.04	-.04	-.08
16. Receivables	.04	-.00	-.08	.02	.02	.06	.09	-.12	-.09	-.05	.02	.02

n = 268.

P-value is less than .05 for r > .10

Because the correlations give only a preliminary and incomplete view of the relationships, the remainder of the analysis focuses on the canonical structure of the data. Exhibit 4.16 presents the results of the canonical correlation analysis. Only the first two canonical variate pairs are significant at the 5% or 10% levels. Thus, the other canonical variates are omitted from the analysis.

The correlation between the first canonical variate pair is .423 and it is very highly significant at the 5% level ( $P$ -value = .002). Although the canonical  $R$ -squared is .18, only 2% of the variance in the financial statement items is explained by the canonical variate representing the explanatory variables. This suggests that the relationships indicated by the analysis should be cautiously interpreted.

The dominant relationship implied by this first canonical variate pair is that perceived usefulness of earnings per share data is related to the size and ownership characteristics of the reporting entity. Although positive, this relationship is suppressed by bank asset size and professional membership. The risk component of professional orientation, on the other hand, enhances the relationship. That is, loan officers who have strong feelings about risks in the professional work ethic perceive a greater impact of omitting EPS



Exhibit 4.16  
Results of Canonical Correlation Analysis  
Perceived Effect of Omitting

Variables	Canonical Variate 1		Canonical Variate 2	
	Loadings	Cross-loadings	Loadings	Cross-loadings
<u>Financial Statement Items</u>				
1. Primary EPS	.50**	.25	-.40*	-.17
2. Diluted EPS	.59**	.25	-.58**	-.24
3. Cost of Goods	-.26	-.11	-.09	-.03
4. Capital Leases	.08	.03	.01	.01
5. Deferred Taxes	.06	.02	-.04	-.02
6. Changing Prices	.45*	.19	.29	.12
7. Capitalized Int	.24	.10	.24	.10
8. Pensions	-.03	-.01	-.06	-.02
9. Income	.01	.00	.03	.01
10. Payables	.24	.10	.24	.10
11. SCFP	-.43*	-.18	-.24	-.10
12. Segment Data	.14	.06	-.08	-.03
13. Fixed Assets	.25	.11	.42*	.17
14. Contingencies	.41*	.17	.13	.05
15. Comp. Absences	.32*	.13	.20	.08
16. Receivables	.14	.06	.28	.12
<u>Explanatory Variables.</u>				
1. Bank Asset Size	-.36*	-.15	-.13	-.05
2. Treatment Group	.69**	.29	-.49*	-.20
3. Reference Group	-.12	-.05	-.15	-.06
4. Loyalty	.02	.01	.01	.01
5. Instit. Work Ethic	.28	.06	-.10	-.04
6. Originality	-.06	-.02	.13	.05
7. Risk of Work Ethic	.44*	.19	.54*	.22
8. Experience-1	-.18	-.08	-.26	-.10
9. Experience-2	-.17	-.07	-.07	-.02
10. Prof. Membership	-.33*	-.14	-.34*	-.14
11. College Degree	.01	.00	.18	.07
11. College Accounting	.02	.01	-.22	-.09
Canonical Correlation	.423		.406	
Canonical R-Squared	.179		.166	
P-value	.002		.021	
Variance Explained	2%		1%	

\*\* very dominant loadings (loadings  $\geq$  .50)

\* high loadings (.50 < loadings  $\geq$  .30)

data than do loan officers who feel less strongly about the risks of the professional work ethic.

In addition to perceptions of the impact of omitting EPS data, the variables comprising the explanatory canonical variate also affect perceived usefulness of the impact of changing prices, loss contingencies and compensated absences. Perceived usefulness of the SCFP, however, appears to be affected in the opposite direction. Apparently, in evaluating the loan application for the small treatment company, loan officers from larger banks perceive this item to be more useful than do their counterparts at smaller banks. The relationship between the explanatory variables and perceptions of the impact of omitting the SCFP seems to be strongest among loan officers who are members of a professional organization of bankers, and have strong feelings about the risks associated with the profession.

Other interesting relationships are also represented in the second canonical variate pair (see Exhibit 4.16). The canonical correlation between them is .408 and it is highly significant at the 5% level ( $P\text{-value} = .022$ ). The canonical R-squared is 17% but only a small proportion (1%) of the variance in the financial statement items is explained by the canonical variate representing the explanatory variables (see Exhibit 4.16).

Only three items make up the dependent canonical variate. They are fixed asset composition, PEPS, and FDEPS. Both EPS items are negatively correlated with this canonical variate. This implies that the combined effect of the explanatory variables increases the perceived impact of omitting information on the composition of fixed assets but reduces the perceived impact with regard to the other items.

The explanatory canonical variate incorporates the joint effect of treatment group, attitude toward risks in the work ethic, and to a lesser degree, professional membership. Treatment group and membership are negatively loaded on the canonical variate while risk of the work ethic is positively loaded.

The canonical variate pair suggests that the impact of omitting EPS data is perceived to be relatively greater among the large treatment group than among the small treatment group. Commercial loan officers with strong feelings toward the risks of the professional work ethic tend to downplay this relationship but emphasize the impact of omitting information on the composition of fixed assets.

#### 4.5. SUMMARY OF RESULTS

The foregoing analysis partially supports the research model examined in the study. The results indicate that the perceived need for accounting information is affected by the size and ownership characteristics of a commercial loan applicant. Prior studies have not found an association between size and ownership characteristics of a reporting entity and perceived need for accounting information.

Loan officers rate the need for financial items much higher when dealing with a large company than when dealing with a small one. The most dominant items in this relationship are PEPS and FDEPS. Other items that contribute to the relationship are capitalized interest, loss contingencies, impact of changing prices, and long term payables.

The results also suggest that the size and organizational complexity of a bank have a negative effect on the perceived need for accounting information. Thus, loan officers from larger and more complex banks tend to rate the need for the financial items lower than their counterparts from smaller and less complex banks. The items that contribute significantly to this relationship are cost of goods sold, PEPS and FDEPS, long-term payables and receivables, compensated ab-

sences, segment data, capitalized interest, pensions, and impact of changing prices.

This research found a relatively weak relationship between the behavior response repertoire of loan officers and their perceived needs for accounting information. With regard to professional orientation, only institutional work ethic, originality in the work ethic, and work ethic risks are significantly related to perceived need. This combination of factors suggests that commitment to the specialized work ethic of the banking profession has a significant impact on how bankers view financial accounting information. It appears that the lower the level of commitment to the specialized work ethic of the profession, the lower the ratings that are assigned to the need for the financial statement items. The accounting education background of a loan officer affects perceived need for accounting information in a similar manner.

The research also found that the principal factor affecting the perceived adequacy of the financial statement items is bank size and organizational complexity. The greater the size and organizational complexity of a bank, the greater the tendency to use sources other than the financial statements in evaluating a loan application. This tendency among larger banks to use sources other than the financial statements is

a possible reason for the negative impact of bank size and organizational complexity on the perceived need for accounting information.

In terms of the hypotheses outlined in Section 3.2, the results may be summarized as follows:

1. H01: Size and ownership characteristics have no impact on the accounting information needs of commercial loan officers.

Based on the results of the MANOVA and the canonical correlation analyses, this hypothesis should be rejected. Nevertheless, the analysis (in particular the canonical correlation analysis) lends only weak support to the alternative hypothesis. Thus, the decision to reject should be interpreted cautiously.

It appears that perceived need for the financial statement items is greater among commercial loan officers dealing with a large publicly held corporation than among commercial loan officers dealing with a small privately held corporation.

2. H02: Organizational complexity of a bank is not associated with the perceived needs of its commercial loan officers.

This hypothesis is rejected by both the MANOVA and the canonical correlation analyses. With regard to the canonical correlation analysis, bank size, used as a surrogate for organizational complexity, is negatively associated with perceived needs. These correlations are not in the direction anticipated a priori. Possible reasons for this situation are discussed in the next chapter.

3. H03: There is no association between perceived need for accounting information and the experience of commercial loan officers.

This hypothesis is not rejected by the analysis. That is, the data provide no indication of an association between experience and perceived need for accounting information. It is of interest, however, that 16 of the 32 univariate correlations between perceived adequacy and loan officer experience are significant at the 5% level. All 32 correlations are negative. This relationship is not replicated when the effect of experience is examined within the context of the research model.

4. H04: There is no association between perceived need for accounting information and the educational background of commercial loan officers.

Although the evidence is weak, the analysis indicates that this hypothesis should be rejected. In particular it was found that the level of college accounting educa-

tion is positively associated with perceived needs for some of the more complex financial statement items such as information on the impact of changing prices, and pension liabilities.

5. H05: There is no association between perceived need for accounting information and the professional orientation of commercial loan officers.

This hypothesis is rejected for some of the components of the professional orientation construct. Risk of work ethic, institutional work ethic, and originality in the work ethic are significantly associated with perceived need for the financial statement items included in the survey. Loyalty and reference group orientation are not, however, significantly associated with perceived need.

#### 4.6. CHAPTER SUMMARY

This chapter has presented and analyzed the results of the survey. The response rate was 21% (315 of 1500) and was almost equally divided between the two treatment groups. Tests for non-response bias are generally satisfactory and there is no evidence of a non-response bias.

The first part of the analysis involves manipulation and validation checks on the constructs used in the study. Overall, those checks reveal an adequate level of validity and



reliability in the operationalization of the major constructs used in the study.

The research partially supports the model examined in the study. Size and ownership characteristics of a commercial loan applicant and the organizational complexity of a bank have a statistically significant impact on the accounting information needs of a commercial loan officer.

Size and ownership characteristics of a commercial loan applicant are positively associated with perceived information needs but the organizational complexity of a bank acts as a suppressor variable in this relationship. That is, relative to their counterparts from less complex banks, loan officers from more complex banks tend to downplay the need for financial statement items in a given loan application.

Some elements of behavior response repertoire also affect perceived need for accounting information. They include risk of work ethic, institutional work ethic, and originality in the work ethic. This combination of variables suggests that the degree to which loan officers are committed to the specialized work ethic of the banking profession is significantly related to their perceived need for accounting information. Another element of behavior response repertoire that is significantly related to the perceived need for ac-

counting information is the degree to which loan officers have been formally exposed to accounting education. None of the other elements of behavior response repertoire are significant in the research.

A discussion of the above results, including their implications for accounting policy and future research, and their limitations, is presented in the next chapter.

## CHAPTER V

### DISCUSSION OF RESEARCH FINDINGS

This chapter summarizes the purpose of the research and discusses the findings in relation to the major hypotheses formulated. Limitations of the research are also discussed.

The chapter is divided into four sections. The first section summarizes the purpose of the study; the second section discusses the results in relation to the research model; the third section discusses the 16 financial statement items included in the survey. Limitations are discussed in the fourth section.

#### 5.1. PURPOSE OF RESEARCH

This research was designed to examine whether user needs for accounting information are affected by the size and ownership characteristics of a reporting entity. In an effort to achieve this objective, the study used bankers as the target group and focused on perceptions of sixteen financial statement items. Because the perception formation process in organizations is affected by a multiplicity of factors, a model of the perception formation process was adapted from the or-

ganizational behavior literature and utilized in undertaking the research.

A quasi-experimental design with two treatment groups was used in the study. One group received an instrument describing the environment of a large company loan application while a second group received an instrument that described the environment of a small company loan application. The use of two independent groups from the same population minimized the potential for an effect due to the subjective norm of respondents. Because only two groups were used effects due to size and effects due to ownership characteristics could not be separated. The research, therefore, focused on the joint effect of differences in size and ownership characteristics of a reporting entity.

## **5.2. DISCUSSION OF THE RESEARCH MODEL**

The study provides some insight into the relationship between size and ownership characteristics of a commercial loan applicant and perceived need for accounting information. Although the explanatory power of the research model is weak, the evidence indicates a positive association between size and ownership characteristics and perceived need for the financial statement items. This is intuitively appealing because the larger an organization, the more complex the nature

of its business. As an enterprise becomes more complex, the number of factors affecting its business tends to increase, and decision makers tend to be faced with greater uncertainty concerning the results of their actions. Thus, they would seek more information and use more sophisticated tools to evaluate choices. Consequently, they would perceive a need for greater amounts of information when dealing with a large company than when dealing with a small one.

It is also possible to interpret this result as evidence that loan officers perceive themselves as relying on different sources of information in evaluating loan requests for companies of different sizes. That is, loan officers might rely on the financial statements in dealing with a large company but might use other sources of information in dealing with a small company. The research results do not support this interpretation. On the contrary, the results indicate that loan officers felt that a high level of reliance would be placed on the financial statements in evaluating the loan request for both the small and large treatment companies. Moreover, differences in the size and ownership characteristics of the treatment companies had no effect on the perceived need to use sources other than the financial statements to obtain additional information about the items included in the survey.

Although differences in size and ownership characteristics of commercial loan applicants affect the perceived need for accounting information, the results indicate that loan officers perceive only a marginal need for most of the key items included in the survey. By contrast, they perceive a substantial need for the control items (cost of goods sold, income from continuing operations, the SCFP, and composition of fixed assets). This suggests that bankers may be more concerned with concrete indicators of ability to repay a loan than with complex details about the financial statements. Thus, items such as cost of goods sold and income from continuing operations, which are relatively good indicators of ability to generate funds internally, are perceived as relatively more important than deferred income taxes, capitalized leases, capitalized interest costs, and earnings per share data. Similarly, the SCFP, which reports financing and investing activities of a corporation, is viewed as relatively more important than any of the key items in the survey.

This study also provides insight into the impact of bank size and organizational complexity on perceived needs for accounting information among commercial loan officers. Notwithstanding the low explanatory power of the research model, the data analysis indicates a statistically significant relationship between organizational complexity and

perceived need for accounting information. This relationship was not, however, in the direction anticipated a priori.

Because more complex organizations are likely to have more standardization in their procedures and greater emphasis on documentation<sup>154</sup>, it was posited that loan officers at more complex banks would indicate a greater need for accounting information than their counterparts in less complex environments. The analysis, however, suggests the opposite. That is, in general, loan officers from larger and more complex banks perceive the need for most of the financial statement items to be lower than their counterparts from smaller and less complex banks.

A possible reason for the unexpected direction in the relationship between bank complexity and perceived need is that the loan application amount specified for a given treatment company may have been perceived as exerting different levels of pressure on loanable funds across banks of different sizes. Given the close relationship between bank size and aggregate loanable funds, it is possible that loan officers perceived an inverse relationship between the extent of pressure on loanable funds (arising from a given loan application) and the size of their bank. Thus, a loan officer from

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<sup>154</sup> J. Child, op. cit., 1971; M. W. Myer, op. cit., 1968.

a small bank might perceive a very significant amount of pressure on loanable funds from the small company loan application, while a loan officer from a larger bank might perceive the small company loan application as relatively insignificant. This suggests that the degree of standardization and documentation applied to the same loan across banks with different levels of complexity may be inversely related to the size of the bank.

The model of the perception formation process developed in Chapter II indicates that behavior response repertoire, which comprises professional orientation, experience and education, should also have an impact on perceptions (see Exhibit 2.5). Nevertheless, only partial support is indicated for including this factor in the research model.

Of the five components of professional orientation, three are found to be associated with perceived need. The three components are attitudes toward the institutional work ethic, originality, and risks of the work ethic. This suggests that the perceived need for accounting information items is affected by the level of loan officers' commitment to professional work ethic, but not by loyalty and reference group orientation.



Loan officers who are highly committed to their specialized role skills are more likely to be objective in their evaluations. Implicitly, therefore, it appears that the degree of objectivity involved in the lending decision exerts a major influence on the perceived need for financial accounting information. The greater the level of objectivity in the lending decision, the more likely it appears that loan officers would perceive a need for accounting information.

Because more complex organizations are likely to be more bureaucratic in their operations, there is generally more scope for the use of specialized knowledge and expertise in evaluating decision problems. This means that there should be strong interactions between the organizational complexity of a bank and the degree to which loan officers are committed to their specialized role skills. These interactions are evident in the research results and their presence has a significant positive effect on the perceived need for some of the financial statement items included in the survey. An exception, however, is the negative effect of this interaction on the perceived importance of information on the impact of changing prices. It appears that loan officers who are highly committed to their specialized role skills perceive the item to be less important than their counterparts.

There are at least two possible reasons for this result. One is that more technically oriented loan officers downplay the importance of current disclosures on changing prices because they may not be significant in their decision models. This explanation is plausible because inflation has not been a major issue in the recent past. The other explanation is that current disclosures on the impact of changing prices are not perceived to be adequate. Thus, loan officers who are strongly committed to their specialized role skills simply discount the importance of supplementary disclosures on the impact of changing prices<sup>155</sup>. This latter explanation seems more plausible because, in general, loan officers indicate a strong need for data from sources other than the financial statements to obtain information on the impact of changing prices.

The significance of the three components of professional orientation indicates that the research model developed in Chapter II may have some substance and that further research is necessary to refine and improve it.

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<sup>155</sup> SFAS No. 89 has made supplementary disclosures on the effect of changing prices optional. This statement is effective for financial statements issued after December 2, 1986.

Another element of behavior response repertoire found to be associated with perceived need is the level of accounting education indicated by a commercial loan officer. Level of college accounting is positively associated with perceived importance. This factor does not, however, contribute to the explanatory power of the research model with respect to likelihood of using an item and impact of omitting data from the financial statements.

The relationship between perceived need and level of accounting education occurs only within the context of bank size and commitment to specialized role skills. Because these factors are typically associated with innovators, the results suggest that an underlying factor associated with the perceived importance of some of the financial statement items may be the propensity for the respondents to be innovative. While some loan officers may tend to redefine the environment, and ignore some financial statement items, more innovative loan officers are expected to be more objective in their assessment of the financial statement items and ignore only those items that do not contribute to the effectiveness of their decisions. Thus, it seems logical that the financial statement items found to be associated with level of accounting education and other characteristics of innovators should include control items, as well as some of the more

complex financial items (such as information on impact of changing prices, pensions and segment data).

The dummy variable representing whether or not a respondent had a college degree in business did not help to explain any of the variations in perceived need. Similarly, the level of experience indicated by a loan officer is not a significant factor in explaining variations in perceived need for the financial statement items included in the study. This result may be due to the high level of on-the-job training that characterizes the banking profession. Thus, the manifest roles<sup>156</sup> of bankers may be fairly homogeneous. The only factors found to intrude on those manifest roles are commitment to specialized role skills and the extent to which they have been exposed to accounting.

In general, the evidence partially supports the research model. Factors contributing to variations in the perceived need for the financial statement items are size and ownership characteristics of a company, organizational complexity, and some of the elements of behavior response repertoire. Only a relatively low level of the variation in perceived need is, however, explained by the model. Hence, the results of this study must be interpreted cautiously.

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<sup>156</sup> Gouldner, op. cit., 1957, 1958.

### **5.3. Financial Statement Items**

This part of the chapter focuses on the findings in relation to the 16 financial statement items included in the survey. Factors found to be associated with the perceived need for each of the financial statement items are discussed and the results are compared with other similar studies. The final section of this part summarizes the discussion.

#### **5.3.1. Earnings Per Share**

Primary and fully diluted earnings per share are the items that are most significantly affected by differences in the size and ownership characteristics of the treatment companies in the survey. Loan officers who evaluated the large treatment company perceived a greater need for EPS information than their counterparts who evaluated the small treatment company. In spite of these differences, it was observed that the perceived need for EPS data is relatively low among both groups.

This result is somewhat consistent with Campbell's finding that loan officers do not perceive EPS data to be useful in evaluating a loan decision involving a small firm<sup>157</sup>. The

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<sup>157</sup> Campbell, op. cit., 1983.

result, however, extends Campbell's findings in that it shows that loan officers also feel that EPS data are unlikely to be relevant for loan decisions involving a large company. This suggests that size may not be a significant factor in Campbell's research findings. That is, her protocols may have been the same whether she evaluated the loan decision involving a small or a large company.

Another factor that has a major impact on perceived need for EPS data is bank asset size. Although, on average, loan officers from all three bank groups perceive a relatively low need for EPS data in the loan evaluation process, the results indicate a negative association between bank size and perceived need for EPS data. Thus, loan officers from a large bank are less likely than their counterparts from smaller banks to indicate a need for EPS data in the loan evaluation process.

#### **5.3.2. Cost of Goods Sold**

Relative to the key items, respondents perceive a high need for cost of goods sold in the loan evaluation process. Bank size and commitment to specialized role skills are the major factors related to the perceived importance of cost of goods sold.

Individually, bank size does not have a significant impact on the perceived need for cost of goods sold; but combined with commitment to specialized role skills, bank size has a significant positive impact on the perceived importance of cost of goods sold. Thus, as bank size increases, loan officers who are strongly committed to the specialized skills of the profession perceive an increased need for cost of goods sold in the loan evaluation process.

Perceived need for this item is not affected by differences in the size and ownership characteristics of the treatment companies.

### **5.3.3. Capital Leases**

Accounting for capital leases has been one of the controversial areas in the standards overload debate<sup>158</sup>. Practitioners have expressed concern that accounting for this item is complex and also less relevant to the needs of users of financial statements of small privately held companies than to the needs of users of large publicly held companies<sup>159</sup>.

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<sup>158</sup> See FASB Special Report, pp. 20 - 26.

<sup>159</sup> Ibid.

Loan officers in this study rated the perceived need for capitalization of leases to be relatively moderate (compared to the perceived need for the control items) for both the small and large treatment companies. This result sheds light on the findings by Abdel-khalik et. al that bankers feel there is a need to continue requiring capitalization of leases among private companies<sup>160</sup> . As indicated in Chapter II, however, these authors cautioned that their results "only indicate leanings rather than precise evaluations of attitudes and perceptions". The current study, which provides a more precise evaluation of perceptions, clarifies the issue of the extent of the need for capitalized lease information. This research does not support the belief of many practitioners that there is a relationship between the perceived need for capitalized lease information and size and ownership characteristics of reporting entities. Capitalized lease information is perceived to be moderately important in the loan evaluation process for both small and large companies.

#### 5.3.4. Deferred Taxes

Deferred taxes represent another key item in this study. Professional accountants have, in general, been more satisfied with reporting this item for public companies than for

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<sup>160</sup> Abdel-khalik et al., op. cit., 1983, p. 88



private companies<sup>161</sup> and at least one research study has indicated that the item may not be useful to loan officers in the process of evaluating a loan for a small company<sup>162</sup>.

This study found that commercial loan officers perceive a moderate need for reporting deferred income taxes for both the small and large experimental companies. This result is somewhat consistent with the finding by Abdel-khalik et al., which suggests that bankers are in favor of continuing GAAP requirements for deferred income taxes for private companies<sup>163</sup>.

Similar evidence in support of a perceived need for deferred taxes is reported by Siebel and Dennis. Their results indicate that bankers are strongly opposed to changes in the method of accounting for deferred taxes for a small closely-held business<sup>164</sup>. Their operational definition of a small business, however, is one with less than \$20 million in total sales, which is much wider in scope than the definitions used in this and other similar studies.

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<sup>161</sup> Abdel-khalik et al., op. cit., 1983, p. 60; FASB Special Report, op. cit., pp. 24, 25.

<sup>162</sup> See Campbell, op. cit., 1984, p. 338.

<sup>163</sup> Abdel-khalik et al., op. cit., p. 83, 88.

<sup>164</sup> Siebel and Dennis, op. cit., 1983, p. 27.

The results are also fairly consistent with the report by Stanga and Tiller<sup>165</sup> that, on average, deferred tax information is perceived to be very important in the loan evaluation process involving large as well as small enterprises. The results, however, contradict Campbell's conclusion that information on deferred taxes is not useful in the loan evaluation process involving a small company<sup>166</sup>. As discussed in Chapter II, Campbell used only four subjects in the experiment; thus, the external validity of her results is questionable. The current study is, therefore, interpreted as providing new evidence in support of a moderate perceived need for information on deferred income taxes that appears to be unaffected by differences in size and ownership characteristics.

#### 5.3.5. Changing Prices

This study found that, on average, loan officers perceive information on changing prices to be relatively important for both a small and large commercial loan applicant. Although a marginal likelihood of using the financial statement disclosures is indicated, loan officers perceive a relatively strong likelihood that sources other than the audited finan-

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<sup>165</sup> Stanga and Tiller, op. cit., 1983.

<sup>166</sup> Campbell, op. cit., 1984.

cial statements would be used in order to obtain additional information about this item. Thus, there may be a substantial need for information on the impact of changing prices but it appears that loan officers do not perceive the disclosures in existing financial statements to be adequate relative to their needs. This is an interesting finding that warrants further research because the FASB has now cancelled its five year experiment that required certain companies to disclose supplementary information on the impact of changing prices<sup>167</sup>.

The need for information on changing prices is not uniform across loan officers. The results of this study suggest that bank size and organizational complexity are negatively associated with perceived needs for information on changing prices. That is, loan officers from larger banks may be less likely than their counterparts from smaller banks to perceive a need for information on this item. Size and ownership characteristics of a reporting entity, on the other hand, appear to be positively associated with the perceived need for this item. That is, among loan officers from a given bank group, the larger the size of a reporting entity (loan applicant), the greater is the perceived need for information on the impact of changing prices.

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<sup>167</sup> See SFAS No. 89

Other factors having an impact on perceptions about the need for information on changing prices include attitudes toward the work ethic, membership in a professional organization of bankers, and level of accounting education. Respondents who are most familiar with the item (i.e., those who indicated a high level of accounting education) were less likely to perceive a need for the item than their counterparts with a lower level of accounting education. On the other hand, respondents with strong concerns about the risks of the work ethic were more likely than their counterparts to perceive a need for the item in the loan evaluation process. This finding is intuitively appealing because it suggests that attitude toward risks is a driving factor in the amount of information that loan officers will seek in evaluating a loan, but their accounting background acts as a moderating factor on the demand for accounting information. In other words, concerns for professional risk increase the amount of information considered important but exposure to accounting education appears to induce selectivity.

This study extends Campbell's results with regard to the perceived need for information on changing prices<sup>168</sup>. Campbell was unable to draw a conclusion about the usefulness of this item in the loan evaluation process. The current

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<sup>168</sup> See Campbell, op. cit., 1984.

study, on the other hand, indicates that respondents who have relatively high levels of accounting education and are highly committed to the work ethic of the banking profession (i.e., respondents who should be familiar with the item) tend to downplay the importance of information about the item in favor of information on cost of goods sold, segment data, and fixed asset compositions. Nevertheless, loan officers indicate a substantial need for information on the impact of changing prices for both the small and large companies (see Exhibit 4.7 (a), (b) and (c)).

The study sheds additional light on Campbell's findings. It shows that, although information on the impact of changing prices is perceived to be important, loan officers may not perceive the SFAS 33 supplementary data on the impact of changing prices to be relevant in their decision models. Rather than using SFAS 33 data, they apparently attempt to obtain information on the impact of changing prices from non-financial statement sources. Thus, they indicate a strong need for sources other than the audited financial statements to obtain additional information on the impact of changing prices for both the small and large treatment companies. This interpretation is consistent with protocols from Campbell's study that indicate at least two of her four subjects thought that sources other than the financial statements would be used to obtain information on the impact of changing prices.

### 5.3.6. Capitalized Interest

Capitalization of interest costs is an accounting requirement that has been widely criticized by both practicing accountants and managers of small corporations<sup>169</sup>. Both of these groups have contended that the requirement is more relevant to decisions involving large public companies than decisions involving small private companies. If these contentions are accurate, there should be differences in the perceived need for capitalized interest costs for a loan decision involving a large company and one involving a small company.

The results indicate some support for the contention that information on capitalized interest costs is less relevant for a small company than for a large one. This item is perceived to have a relatively insignificant effect on the loan evaluation process involving the small treatment company. On the other hand, loan officers perceive a moderate need for the item in the loan evaluation process involving a large company (see Exhibit 4.7(c)).

The perceived importance of information on capitalized interest costs is also affected by differences in the organ-

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<sup>169</sup> See, for example, FASB Special Report, op. cit., 1983, and Abdel-khalik et al., op. cit., 1983.

izational complexity of a bank. Loan officers from smaller banks perceive capitalized interest to be more important in the loan evaluation process than their counterparts from larger banks. Thus, in evaluating the loan application of the large treatment company, loan officers from smaller banks tend to emphasize the need for information on capitalized interest costs. This tendency to emphasize information on capitalized interest costs appears to be a general technique used by bankers from smaller banks to cope with the complexity of the decision involving a relatively large company<sup>170</sup>. The general negative association between bank size and the canonical variates representing the financial statement items supports this interpretation.

#### 5.3.7. Pensions

The results of this study indicate that commercial loan officers perceive a moderate need for financial information on pension liabilities for both the small and large treatment companies. Bank size, along with some of the elements of behavior response repertoire, are the principal factors affecting the perceived importance of pension information. Significant elements of the behavior response repertoire of

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<sup>170</sup> It may also represent a technique used to cope with the complexity of the financial statements.

a loan officer that are related to the perceived importance of pension information are attitudes to the institutional work ethic, originality in the work ethic, and level of accounting education. This suggests that loan officers from larger banks who are strongly committed to the work ethic of the banking profession are more likely than their counterparts to perceive a need for information on pension liabilities.

The factors found to be associated with perceived need for information on pension liabilities are typically associated with innovators<sup>171</sup>. Individuals who are highly committed to their specialized skills and are employed in large organizations tend to be more innovative than their counterparts who are less committed to professional skills and employed by smaller organizations<sup>172</sup>. This is interesting because there were major changes in the recognition of pension liabilities just prior to the period that the survey was mailed. In particular, SFAS No. 87, issued in December 1985, requires that a company recognize an unfunded accumulated pension benefit as a liability in the balance sheet. Prior to SFAS No.87, a liability was recognized only if a company had a

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<sup>171</sup> See, for example, Rogers and Shoemaker (1971) for a review of that literature.

<sup>172</sup> Ibid.



legal obligation for pension costs in excess of amounts paid or accrued. Thus, it seems possible that loan officers with a high propensity to be innovative are more likely to perceive a need for information on pension liabilities than loan officers with low propensities to be innovative.

#### 5.3.8. Income

The results indicate that the need for information on income from continuing operations is highly recognized among both the small and large treatment companies. The need for this item is the most highly rated in this survey. This result is similar to those of Stanga and Tiller, who reported income information as the most highly rated items in their survey<sup>173</sup>.

None of the explanatory variables in the research model contributed to the variation in perceived need for income from continuing operations.

#### 5.3.9. Long Term Payables Stated at their Present Values

The perceived need for this information is marginal among both treatment companies. Respondents indicate that omission

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<sup>173</sup> Stanga and Tiller, op. cit., 1983, p. 99

of the item from the financial statements would have no significant impact on the loan evaluation process. Similarly, they indicate that the perceived importance of the item and the likelihood of using it in the loan evaluation process are marginal.

The results provide partial support for the contention among practitioners that the item is not relevant to external users of financial statements of small companies. The results are also consistent with the findings by Abdel-khalik et al. of a relatively low level of support among bankers for requiring standards for discounting accounts payable among private companies<sup>174</sup>.

The perceived need for long term payables stated at their present values is affected by both the organizational complexity of a bank and differences in the size and ownership characteristics of a commercial loan applicant. Organizational complexity has a negative impact on the likelihood of using the item, while differences in size and ownership characteristics of a commercial loan applicant have a positive impact. Thus, when dealing with a large company, loan officers from smaller banks perceive a greater need to have

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<sup>174</sup> See, for example, Abdel-khalik et al., op. cit., p. 61, 88.

long-term payables stated at their present values than do their counterparts at larger and more complex banks. This finding is consistent with the interpretation that loan officers from small banks tend to place strong emphasis on financial statements as a general technique in dealing with relatively large companies.

#### 5.3.10. Statement of Changes in Financial Position

The perceived need for the SCFP is very highly rated for both the small and large treatment companies in the study. This result is consistent with the findings of prior researchers such as Abdel-khalik et al., who report that bankers strongly agree that the SCFP should be required for private companies<sup>175</sup>. Similarly, Stanga and Tiller<sup>176</sup> report that bankers perceive the SCFP to be just as important for large companies as for small ones.

The results also indicate that, individually, size and ownership characteristics of a reporting entity and the organizational complexity of a bank do not affect the perceived need for the SCFP. When the behavior response repertoire of loan officers is taken into consideration, however, the

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<sup>175</sup> Abdel-khalik et al., op. cit., 1983, p. 88.

<sup>176</sup> Stanga and Tiller, op. cit., 1983, p. 99.

interaction of bank asset size, size and ownership characteristics of a commercial loan applicant, membership in a professional organization of bankers, and attitudes toward work ethic risks has a negative effect on perceived impact of omitting the SCFP.

The results suggest that in evaluating the loan application for a small company, loan officers from larger banks perceive the SCFP to be more useful than do their counterparts at smaller banks. Similarly, when evaluating the loan application for a large company, loan officers from smaller banks perceive the SCFP to be less useful than do their counterparts at larger banks. These relationships occur within the context of the behavior response repertoire of a loan officer.

#### **5.3.11. Operations by Business Segments**

Relative to the control items, loan officers perceive a moderate need for information about segment operations for both the small and large treatment company in the survey. The item is, however, highly rated relative to the other key items. Bank size and complexity is the dominant factor in explaining variations in the perceived need for segment data. Loan officers employed by more complex banks perceive a greater need for information on segment operations than their

counterparts at less complex banks. Nonetheless, this relationship occurs only within the context of attitudes toward the institutional work ethic, attitudes towards originality, and the level of accounting education to which loan officers have been exposed. Thus, loan officers who are most committed to their specialized role skills are most likely to perceive a need for this item.

Differences in the size and ownership characteristics of the two treatment companies had no impact on the perceived need for segment data. Thus, commercial loan officers would require segment data in the loan evaluation process regardless of the size and ownership characteristics of the applicant.

#### **5.3.12. Composition of Fixed Assets**

Composition of fixed assets represents another of the control items included in the survey. As expected, loan officers rate the perceived need for this item very highly. This high rating is consistent with the study by Stanga and Tiller<sup>177</sup> that reported similar high ratings for both small and large companies.

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<sup>177</sup> Stanga and Tiller, op. cit., 1983.

Relative to the other factors in the research model, the most important variable in explaining variations in perceived need for this item is bank size. When combined with the other factors in the model, bank size is positively associated with perceived need for this item. Loan officers with strong commitment to their specialized role skill also appear to favor fixed assets composition. A possible reason for such preference is the recent trend towards asset-based lending among more innovative banks. The asset-based lending decision emphasizes the composition and liquidity values of assets, and the earning power of a firm rather than its financial structure<sup>178</sup>.

### 5.3.13. Loss Contingencies

The perceived need for information on loss contingencies is highly rated by respondents in this study. Loan officers consistently rank the item second among the key items. This high relative rating suggests that loan officers correctly perceive a loss contingency as an indication of a probable future outflow of resources from an enterprise. Because such an outflow could make a difference in the ability of a cor-

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<sup>178</sup> See for example, R. L. Stacey, "Asset-based Loans in Leveraged Buyouts", The Journal of Commercial Bank Lending, May 1983, pp. 50 - 58.

poration to repay a loan, bankers perceive a relatively strong need for information on loss contingencies.

Bank size and the size and ownership characteristics of a commercial loan applicant are the principal factors that affected perceived need for this item. Loan officers perceive a greater need for information on loss contingencies when dealing with a large loan applicant than when dealing with a small one. Further, a loan officer from a small bank evaluating a small company appears to be less concerned about information on loss contingencies than a loan officer from a small bank evaluating a large company. Similarly, a loan officer from a large bank evaluating a large company appears to be less concerned about information on loss contingencies than a loan officer from a small bank evaluating a large company. Thus, the capacity of a bank to absorb the risks associated with a loan to a particular customer appears to be a major determinant of the extent to which emphasis will be placed on financial statements in the loan evaluation process.

#### **5.3.14. Compensated Absences**

Next to earnings per share, accrued liability for compensated absences is the lowest rated item in the study. Like the Abdel-khalik et al. study, this research indicates that loan

officers perceive accrued liability for compensated absences to be relatively less relevant to the lending decision than the other items included in the survey. The results suggest that its omission from the financial statements would have an insignificant impact on the loan evaluation process (see Exhibit 4.5(a)). These perceptions complement Siebel and Dennis' finding that on average bankers are in favor of changes in the current requirements for accounting for compensated absences for a small, closely-held business<sup>179</sup>.

Bank size, and the size and ownership characteristics of a commercial loan applicant are the principal factors that affect perceptions of this item. Other factors that contribute toward explaining variations in perceptions among loan officers are membership in a professional association of bankers and attitudes toward work ethic risks.

The results suggest that the perceived need for information on the accrued liability for compensated absences decreases as bank size increases. Perceived need for the item, however, is rated higher for a large commercial loan applicant than for a small one. Thus, although loan officers perceive information on compensated absences to be relatively unimportant in the lending decision, variations in bank size and

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<sup>179</sup> Siebel and Dennis, op. cit., 1983.



differences in the size and ownership characteristics of the treatment companies exert significant influence on the perceived need for the item.

#### 5.3.15. Long-term Receivables

Loan officers, on average, perceived a marginal need for this item for both treatment companies in the survey. This result is consistent with prior findings by Abdel-khalik et al.<sup>180</sup>. Moreover, none of the factors in the research model is related to the perceived need for this item.

#### 5.3.16. Summary

A summary of the above discussion is presented in Exhibit 5.1. On average, bankers perceive a very high need for indicators of ability to repay a loan, such as cost of goods sold, income from continuing operations, and information from the statement of changes in financial position. In addition, information on the composition of fixed assets, which is of primary importance in assessing the liquidity of collateral, as well as capacity for future profitability, is rated highly in the loan evaluation process. The perceived need for these

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<sup>180</sup> Abdel-khalik et al., op. cit., 1983.

Exhibit 5.1  
Summary of Factors Related to Perceived Need  
for Financial Statement Items.

ITEMS	Combination of Factors in Research Model Affecting the Item.	REMARKS
Primary and fully diluted EPS	Bank size (Complexity) Treatment size Institutional work ethic Risk of work ethic Membership	Very low perceived need for both companies. Relatively lower for small company.
Cost of goods sold	Bank size (Complexity) Origin. in the work ethic Institutional work ethic Level of acct. education	Very high perceived need for both companies.
Capitalized leases	None of the factors in the research model.	Moderate perceived need for both companies.
Deferred taxes	None of the factors in the research model.	Moderate perceived need for both companies.
Changing prices	Bank size (Complexity) Treatment size Institutional work ethic Origin. in the work ethic Membership Level of acct. education	Moderate to high perceived need for both companies. Present disclosures are perceived to be highly inadequate.
Capitalized interest	Bank size (Complexity) Treatment size Institutional work ethic	Moderate need for large company but relatively low need for small company.
Pensions	Bank size (Complexity) Institutional work ethic Origin. in the work ethic Level of acct. education	Moderate perceived need for both companies.

Exhibit 5.1 (continued)

ITEMS	Combination of Factors in Research Model Affecting the Item.	REMARKS
Income	None of the factors in the research model.	Very high perceived need for both companies.
Long-term payables	Bank size (Complexity) Treatment size	Low to moderate perceived need for both companies.
SCFP	Bank size (Complexity) Risk of work ethic Membership	Very high perceived need for both companies.
Segment data	Bank size (Complexity) Institutional work ethic Origin. in the work ethic Level of acct. education	Moderate to high perceived need for both companies.
Fixed assets composition	Bank size (Complexity) Institutional work ethic Origin. in the work ethic Level of acct. education	Very high perceived need for both companies.
Contingencies	Bank size (Complexity) Treatment size	Moderate to high perceived need for both companies.
Compensated absences	Bank size (Complexity) Treatment size	Very low perceived need for both companies. Relatively lower for small company
Long-term receivables	None of the factors in the research model.	Moderate perceived need for both companies.

items is unaffected by differences in the size and ownership characteristics of the treatment companies.

In contrast to items like cost of goods sold, fixed assets composition, income from operations, and the SCEP (control items), the need for the key items in the survey is low to moderate, and is, to some extent, affected by differences in size and ownership characteristics of a reporting entity. Notable exceptions are deferred taxes, capitalized leases, and long-term receivables stated at their present values; none of the factors in the research model has a significant impact on perceived need for these three items.

Although the size and ownership characteristics of a commercial loan applicant are statistically related to several of the key financial statement items, this relationship is most observable among primary and fully diluted EPS. These items are, however, perceived to be relatively less important than any of the other items for both the small and large loan applicant. The impact of differences in size and ownership characteristics on the perceived need for information on capitalized interest is not as observable, but represents the only case in which the need for an item is perceived to be insignificant for the small company but moderate for the large company (see Exhibit 4.5(c)).

When the financial statement items are examined on a group basis, two observations are made. First, bankers who perceive a financial statement item as unimportant in the loan evaluation process involving the small company also perceive the item as unimportant in the loan evaluation process involving the large company. The second observation is that bankers perceive the more general items in the survey to be more important than the more specific financial statement items. The more general items are cost of goods sold, impact of changing prices, income from continuing operations, the SCEP, segment data, fixed assets composition, and loss contingencies. These items are consistently ranked in the top 7 in terms of perceived need, whereas the more specific items are ranked in the bottom 9.

This finding could be explained within the context of a hypothesized structure of loan officers' use of financial statements which involves:

1. determination of information adequacy;
2. quick review of many items; and
3. extended analysis of selected items<sup>181</sup>.

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<sup>181</sup> Campbell, op. cit., 1984, p. 338.

Loan officers apparently include all of the financial statement items in step 2 above, with the exception of PEPS, FDEPS, and accrued liability for compensated absences. The extended analysis apparently involves only the more general financial statement items. No distinction appears to be made between small and large companies in undertaking the extended analysis. Nevertheless, there appears to be some distinction in the quick review of the financial statement items.

The results also indicate a general tendency among loan officers from smaller banks to emphasize the need for the financial statement items. One factor that could explain this result is the capacity to absorb the specific risks associated with a particular loan. In other words, the loan amount specified for a given treatment company would impose a greater amount of pressure on the loanable funds and assets of a small bank than on a large bank. As a result, loan officers from smaller banks may feel a greater need to emphasize the use of the financial statements in order to minimize the specific risks perceived to be associated with a given loan application.

Another possible explanation is that loan officers from smaller banks may have been overwhelmed by the size of the loan and the complexity of the financial statement items. They, therefore, rated the financial statement items in the

survey very highly as a method of dealing with the complexity associated with each treatment company. This interpretation is consistent with one of the approaches that organizational participants may use as a method of dealing with environmental complexity<sup>182</sup>.

#### **5.4. LIMITATIONS OF STUDY**

Although this research provides some insight into the relationship between size and ownership characteristics of a reporting entity and the needs of commercial loan officers, a number of limitations affect the ability to generalize from the results. For discussion purposes, these limitations are grouped into two categories: (1) limitations arising from the choice of research method; and (2) limitations arising from issues relating to the research model.

##### **5.4.1. Choice of Research Method**

A mail questionnaire survey was used to gather the data for this study. Typical limitations of survey research include unscientific and unrepresentative sample sizes, non-response bias, imperfections in questionnaire design, response bias arising from poorly designed questions, bias arising from

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<sup>182</sup> Downey and Slocum, op. cit., 1975.

loss of control over the respondent to the instrument, and bias arising from selection of an unrepresentative survey date. It must be acknowledged that while specific steps were taken to minimize the incidence of most of these problems, this research suffers from the impact of some of those limitations.

The sample size was not randomly selected from the population. Nonetheless, respondents were from a wide cross-section that appeared to be fairly representative of the population of banks with total assets of at least \$100 million. Thus, conclusions pertaining to this population may be reasonable.

The response rate for this study was 21%. This means that non-response bias is a major concern, even though detailed tests for non-response bias indicated no evidence suggesting that a problem exists. The tests were based on the assumption that late respondents are similar to non-respondents. Thus, the effectiveness of the tests rests upon the validity of this assumption.

Loss of control over who completed a questionnaire and under what conditions the questionnaire was completed is another limitation that could affect the validity of this study. Although all questionnaires were addressed to a senior officer



at a commercial bank, there is the possibility that a less suitable individual actually completed the instrument. Because the results indicated that, in general, respondents were highly experienced commercial loan officers, this problem was not considered a major concern in this study.

A more serious concern is the possibility that respondents were not conscientious in completing the instrument. This problem could determine whether data collected indicate perceptions of loan officers or meaningless responses. Two factors indicated that respondents may have been conscientious in completing the instrument. First, the data analysis strongly suggests that the cues provided in Part A of the instrument were utilized in responding to the questionnaire; second, there was a relatively high degree of consistency between loan officers in responding to the instrument. Furthermore, it is assumed that, given a relatively low response rate, the act of completing and returning a questionnaire is an indication of conscientiousness.

Perhaps the most severe limitation of the survey method is that it is static and cannot provide information about some of the more complex forms of interaction that occur within organizations. The loan evaluation process in a bank is a dynamic process that is characterized by a high degree of conflict. It sometimes involves several groups of individuals

with different interests in the loan. The objective of the process is to bring about an acceptable convergence in the interests of these parties. Once an acceptable convergence of interests is reached, the loan is approved and the customer becomes eligible to draw down on the loan. It appears, therefore, that the survey method may not be ideal for studying phenomena about this process.

There are, however, definite advantages in utilizing the survey method. Some of the advantages that motivated the use of the survey method in this study include access to a wider and more representative sample, relatively low cost per questionnaire, and no interviewer or observer biases in gathering the data. Moreover, the study did not attempt to examine interactions in the loan evaluation process. Rather, the study utilized a static approach that focused on a priori feelings (perceptions) about selected financial statement items. With the use of multivariate statistical analysis techniques like those employed in this study, the survey method is capable of providing reliable information on interactions involved in static phenomena<sup>183</sup>.

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<sup>183</sup> N.K. Denzin, The Research Act: A Theoretical Introduction to Sociological Methods (New York: McGraw Hill Book Co., 1978).

#### 5.4.2. Issues Relating to the Research Model

The research model used in this study was exploratory and, as a result, interpretation of some of the results is relatively difficult. A further limitation of the model is that it required the use of large amounts of data in order to examine the interactions involved in the perception formation process. Therefore, a trade-off had to be made between the need for complete model specification in the research design and the need for parsimony in conducting the research<sup>184</sup>. It was decided, therefore, to limit the number of treatment companies to two - that is, a small privately held company, and a large publicly held company. This meant that the impact of size and ownership characteristics on perceived need had to be studied jointly. Thus, separate statements about the effect of size and the effect of ownership characteristics were not possible, given the research design.

Because only two treatment companies were included in the model, the loan type had to be fixed. Thus, only one loan type - an unsecured line of credit - was examined. Note that loan type is one of the factors that has been reported to affect

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<sup>184</sup> Such trade-offs are often necessary in quasi-experimental designs. See, for example, T. D. Cook and D. T. Campbell, Quasi-Experimental Design and Analysis: Issues for Field Settings, (Chicago: Rand McNally College Publishing Co., 1979).

banker needs for accounting information<sup>185</sup>. This implies that the conclusions of this study are restricted to the type of loan included in the contextual factors describing the two treatments.

Another limitation involving the trade-off between the research model specifications and the need for parsimony relates to the choice and number of financial statement items included in the survey. A set of 16 financial statement items was used in order to have a reasonably representative<sup>186</sup> number of financial statement items that would not overwhelm respondents. This meant that the choice of the number of financial statement items included in the survey was largely subjective.

A final limitation of the study is that the explanatory power of the research model is low. The explanatory variables in the model explained only a small amount of the variation in perceived need for the financial statement items. Hence, the results are relatively weak and the findings must be interpreted cautiously.

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<sup>185</sup> See, for example, Diamond and Arnold, op. cit., 1981

<sup>186</sup> Representative in terms of the standards overload debate.

## **5.5. CHAPTER SUMMARY**

This chapter has discussed the findings of the research. The findings were discussed from the perspective of the research model, and in relation to the 16 financial statement items included in the study.

Limitations of the study were also identified. These limitations relate to the use of the survey method and the nature of the research model.

## CHAPTER VI

### IMPLICATIONS AND CONCLUSIONS

This chapter discusses the implications of the research and presents conclusions. Recommendations for future research are also presented.

#### 6.1. IMPLICATIONS

This research has implications for both financial accounting policy and accounting research. Results from this research suggest that both areas have ignored important factors that relate to the issue of differentiation in financial reporting on the basis of size and ownership characteristics of a reporting entity. Each of these areas is discussed in this section of the chapter.

##### 6.1.1. Accounting Policy

From an accounting standpoint, the primary issue is whether differentiation in financial accounting is justified when user needs are taken into consideration. To justify such differentiation and resolve the conflict between managers of small privately-held companies, bankers, practicing CPAs, and

regulators of financial accounting, it must be demonstrated empirically that user needs are affected by size and ownership characteristics of a reporting entity.

Unlike previous studies, this research found that the perceived need for financial statement items is affected by differences in the size and ownership characteristics of a reporting entity. These differences were, however, most observable among items that were perceived as less important in the loan evaluation process. This finding supports a need for further consideration of differentiation in financial reporting on the basis of size and ownership characteristics.

Items such as deferred taxes, capitalized leases, pensions, segment data, and long term receivables stated at their present values are not among the major items that contributed to the significant impact of differences in size and ownership characteristics on the perceived needs of loan officers. Yet, these items are among the most controversial in the standards overload debate. The consensus among loan officers appears to be that these items are of moderate importance in the loan evaluation process for small as well as large companies and that their omission from the financial statements

of a company would have some effect on the loan evaluation process<sup>187</sup>.

One would expect some differences in perceived need among loan officers for the items for which differentiation has been formally implemented. These items include primary and fully diluted EPS, disclosures on the impact of changing prices, and segment data. Only the first three items contribute to the statistically significant impact of differences in size and ownership characteristics on bankers' needs. The most dominant contributors are, however, primary and fully diluted EPS. The contribution of data on the impact of changing prices is marginal. The perceived need for segment data is not affected by differences in size and ownership characteristics of the reporting entity. It was also observed that the perceived need for EPS data is relatively low for both companies whereas the need for the other two items is relatively moderate for both companies. This suggests a need for reconsideration of the standards relating to segment data and to the impact of changing prices.

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<sup>187</sup> Loan officers may have been aware that SFAS 33 disclosures are not required for privately held corporations and, accordingly, indicated that omitting information on the impact of changing prices would have an insignificant effect on the loan evaluation process involving a small company.



The evidence in the study extends the conclusion by Abdel-khalik et al. that, relative to a small company, financial statement items could be placed on a continuum ranging from more relevant to less relevant for a particular user group<sup>188</sup>. The current research suggests that bankers perceive the more general financial statement items to be more important for their needs than the more specific and complex items.<sup>189</sup>. This applies to both small and large companies

Practicing CPAs are probably correct in their observations that some financial statement items are not relevant to users of the financial statements of a small company. They presume that these financial statement items are relevant (or more relevant) to the needs of users of the financial statements of a large company. Failure to recognize that the key items in the standards overload debate are not necessarily relevant to the needs of users of large companies may be one of the major fallacies in the "big-GAAP"/"little-GAAP" controversy. Based on the findings of this study, "little-GAAP" may be just as relevant for a loan decision involving a large company as it is for a small company.

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<sup>188</sup> Abdel-khalik et al., op. cit., 1983, p. 9.

<sup>189</sup> This finding lends empirical support to a recent article by Richardson and Wright (1986) which recommends mandatory disclosure for more general financial items and voluntary disclosure for more specific and complex items.

The findings of this research suggest, for purposes of satisfying the needs of loan officers, financial statements should include a mandatory core of disclosures and a set of optional disclosures for all companies. The core should include the more general disclosures that can be used as indicators of ability to repay a loan and as indicators of the liquidity values of assets. Highly specific and detailed disclosures should be optional for all companies. Because loan officers represent only one group of financial statement users, further research is necessary to determine whether these conclusions are applicable to other user groups.

#### 6.1.2. Accounting Research

A major implication of this study is that when bankers are used as subjects in accounting research, the researcher should consider the fact that bankers do not represent a homogeneous group. Their heterogeneity is an important source of variation in perceptions. Although researchers may attempt to minimize the effect of heterogeneity on their results by increasing between-group homogeneity, failure to control for within-group heterogeneity could mask important relationships that exist in the data.

This study demonstrated that at least three factors should be considered. These are: (1) bank size and organizational

complexity, (2) level of accounting education, and (3) commitment to specialized role skills. Although this research assigned loan officers into groups randomly and, therefore, enhanced between-group homogeneity, these three factors were significant contributors to variations in perceived need.

## **6.2. RECOMMENDATIONS FOR FUTURE RESEARCH**

Three basic recommendations for future research are discussed in this section. These recommendations involve replication of the study, re-examination of bank size and organizational complexity, and the specification of the research model. Each of these areas is discussed in this section.

### **6.2.1. Replication**

This study examined the perceptions of one user group - commercial loan officers. Although this group represents major users of financial statements of both small and large companies, and is, therefore, a natural target group for this research, there are other user groups that must be studied if the results are to be generalized. Thus the study should be replicated with other user groups.

One of the limitations of this study is that it utilized only two treatment groups and did not disaggregate effects due to

size from those due to ownership characteristics. Since the standards overload debate focuses on both size and ownership characteristics, future researchers should include additional treatments to assess effects due to size and those due to ownership characteristics.

As discussed in Chapter V, a major concern in this study was the appropriateness of the survey method and the potential for non-response bias that is usually associated with it. Since these weaknesses may reduce the validity of conclusions based on survey research methodologies, replication of this research using alternative methodologies is recommended.

Finally, the explanatory power of the research model was relatively low. This means that the findings of this study are not conclusive. As a result, additional research is needed to resolve the conflicts evident in the standards overload debate.

#### **6.2.2. Bank Size and Organizational Complexity**

The a priori expectation in relation to the impact of organizational complexity was that loan officers from more complex banks would perceive a greater need for financial accounting information than their counterparts from less complex banks. This expectation was based on the theory that complexity in-

creases the extent of bureaucratic control that exists in organizations<sup>190</sup>. Increased complexity leads to greater formalization in order to control and coordinate activities. Consequently, procedures become more formalized and the demand for documentation increases. As a result, one expects a greater perceived need for GAAP among more complex banks.

The results of this study were not consistent with this theory. A negative association was found between the organizational complexity of a bank and perceived need. It was suggested, therefore, that a possible reason for the findings in this study is that the degree of pressure on the loanable funds of a bank may have a significant effect on the perceived need for accounting information. Thus, further research is needed to test the effect of pressure on the loanable funds of a bank on the perceived need for financial statements. The effect of organizational complexity would then be examined after controlling for the degree of pressure on loanable funds.

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<sup>190</sup> For a discussion of this theory, see R. Hall, op. cit., 1982.

### 6.2.3. Model Specification

The model of the perception formation process was not rigidly specified in this research. This was necessary in order to achieve parsimony in the size of the instrument, in the number of variables examined, and in costs. One of the factors in the model of the perception formation process that was not included in this research is the cognitive processes of individuals. This factor relates to the capacity of individuals to respond to environmental complexity. Because financial statements represent a complex source of information and the complexity of a company's environment may itself induce complications in the lending decision, future studies should include the individual's cognitive processes in the research model.

### 6.3. FINAL SUMMARY AND CONCLUSIONS

In summary, this research found that:

1. differences in company size and ownership characteristics are related to the perceived need for certain financial statement items;
2. the organizational complexity of a bank and the degree to which its commercial loan officers are committed to the work ethic of the banking profession are related to

the perceived need for the financial statement items included in the study;

3. commercial loan officers perceive a relatively high need for the more general items in the study but tend to downplay the importance of the more specific and detailed items; and
4. the capacity of a bank to absorb the risks associated with a particular customer appears to be a determinant of the extent to which emphasis will be placed on the financial statements in the loan evaluation process.

Overall, this study has extended prior research in the area and provided significant insight into the relationship between size and ownership characteristics of a reporting entity and the perceived information needs of bankers. From a methodological standpoint, the study demonstrates that the need for accounting information can be considered within the context of the perception formation process in organizations.

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## APPENDIX A. QUESTIONNAIRE

The questionnaire and cover letter that accompanied it are presented in this appendix.

### Cover letter

Dear :

I am attempting to learn more about the information needs of commercial lenders as part of my dissertation research. Commercial lenders were chosen as my study group because they are primary users of accounting information and have a major interest in the contents of financial statements.

You are one of a small number of bankers that I am asking to participate in this study. Your response is very important because the success of the study depends on receiving completed questionnaires from a representative sample of commercial lenders. The questionnaire takes about 25 minutes and all responses will be anonymous.

The study specifically seeks information on how bankers view certain financial statement items when making a commercial lending decision. Such studies are useful in determining the degree to which financial statements are relevant to the needs of bankers and other users. Results of this survey will be made available to members of the banking and accounting professions. You can receive a summary of the results by checking "summary of results requested" on the blue card that is enclosed.

If you do not feel qualified to respond to the questionnaire, you may refer it to an officer at your bank who is directly involved in commercial lending<sup>191</sup>.

Thank you for your assistance. Please feel free to contact me if you have any questions.

Sincerely,

Thomas G. Calderon  
Ph. D. Candidate.

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<sup>191</sup> This paragraph was included only when a senior loan officer was not specifically identified in the directory.

## GENERAL INSTRUCTIONS

This questionnaire has three parts.

- Part A contains 16 financial statement items for you to evaluate using a specific lending situation as your frame of reference. There are NO right or wrong answers.
- Part B contains questions about your feelings toward the banking profession.
- Part C contains questions about your bank.

After you have completed this questionnaire, please complete the blue card and mail it separately. This will ensure that:

- your response remains anonymous; and that
- you receive a summary of the results.

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May 27, 1986.

## PART A

Please use the following case as your frame of reference in responding to the questions on the 16 financial statement items that I need you to evaluate in this part.

**CASE:** General Detergents Inc. (GDI), a manufacturer of detergents and specialty cleaning products (SIC code 284), has applied to your bank for a \$10 million unsecured LINE OF CREDIT. The following preliminary information is available and, as part of the evaluation process, you have decided to analyze GDI's audited financial statements:

### Preliminary Information on GDI

- Summary financial data for the years ended March 31, 1986 and 1985 are as follows:

#### Summary Balance Sheet Data (in \$ thousands)

Assets	1986	1985	Liabilities & Net Worth	1986	1985
Cash & Receivables	\$109,050	\$105,750	Current Liabilities	\$122,250	\$116,400
Inventory	77,850	71,475	Non-current Liabilities	48,450	47,850
Other Current Assets	5,850	4,875	Deferred Taxes	1,950	1,950
Fixed Assets	79,950	75,375	Net Worth	127,350	115,050
Other Assets	27,300	23,775			
Total	<u>\$300,000</u>	<u>\$281,250</u>	Total	<u>\$300,000</u>	<u>\$281,250</u>

#### Summary Operating Data (in \$ thousands)

	1986	1985
Net Sales	\$502,500	\$525,000
Gross Profit	183,900	194,775
Operating Expenses	159,825	165,375
Operating Income	<u>\$24,075</u>	<u>\$29,400</u>

- GDI is a public corporation and its securities are traded on a major stock exchange.
- GDI will be doing business with your bank for the first time.
- GDI needs immediate funding for a major promotion campaign.
- GDI is in good standing with its long-term creditors.
- GDI's management has a reputation for honest and forthright business practices.
- GDI's audit reports for both 1986 and 1985 were unqualified.

## PART A

Please use the following case as your frame of reference in responding to the questions on the 16 financial statement items that I need you to evaluate in this part.

**CASE:** General Detergents Inc. (GDI), a manufacturer of detergents and specialty cleaning products (SIC code 284), has applied to your bank for a \$134,000 unsecured LINE OF CREDIT. The following preliminary information is available and, as part of the evaluation process, you have decided to analyze GDI's audited financial statements:

### Preliminary Information on GDI

- Summary financial data for the years ended March 31, 1986 and 1985 are as follows:

#### Summary Balance Sheet Data (in \$ thousands)

<u>Assets</u>	<u>1986</u>	<u>1985</u>	<u>Liabilities &amp; Net Worth</u>	<u>1986</u>	<u>1985</u>
Cash & Receivables	\$1,454	\$1,410	Current Liabilities	\$1,630	\$1,552
Inventory	1,038	953	Non-current Liabilities	646	638
Other Current Assets	78	65	Deferred Taxes	26	26
Fixed Assets	1,066	1,005	Net Worth	1,698	1,534
Other Assets	364	317			
Total	<u>\$4,000</u>	<u>\$3,750</u>	Total	<u>\$4,000</u>	<u>\$3,750</u>

#### Summary Operating Data (in \$ thousands)

	<u>1986</u>	<u>1985</u>
Net Sales	\$6,700	\$7,000
Gross Profit	2,452	2,597
Operating Expenses	2,131	2,205
Operating Income	<u>\$ 321</u>	<u>\$ 392</u>

- GDI is a privately held corporation and its securities are not publicly traded.
- GDI will be doing business with your bank for the first time.
- GDI needs immediate funding for a major promotion campaign.
- GDI is in good standing with its long-term creditors.
- GDI's management has a reputation for honest and forthright business practices.
- GDI's audit reports for both 1986 and 1985 were unqualified.

1. For each item, circle the number that best indicates the degree of *importance* you are likely to attach to it in evaluating GDI's application. The numbers range from (1) MINIMUM IMPORTANCE to (7) MAXIMUM IMPORTANCE.

Primary Earnings Per Share	Minimum 1.....2.....3.....4.....5.....6.....7 Maximum
Fully Diluted Earnings Per Share	Minimum 1.....2.....3.....4.....5.....6.....7 Maximum
Cost of Goods Sold	Minimum 1.....2.....3.....4.....5.....6.....7 Maximum
Capital Leases Reported as Assets and Liabilities	Minimum 1.....2.....3.....4.....5.....6.....7 Maximum
Deferred Tax Credits	Minimum 1.....2.....3.....4.....5.....6.....7 Maximum
Impact of Changing Prices	Minimum 1.....2.....3.....4.....5.....6.....7 Maximum
Interest Capitalized on Construction of Long-term Assets	Minimum 1.....2.....3.....4.....5.....6.....7 Maximum
Pension Liabilities	Minimum 1.....2.....3.....4.....5.....6.....7 Maximum
Income from Continuing Operations	Minimum 1.....2.....3.....4.....5.....6.....7 Maximum
Long-term Payables Valued at their Present Values	Minimum 1.....2.....3.....4.....5.....6.....7 Maximum
Statement of Changes in Financial Position	Minimum 1.....2.....3.....4.....5.....6.....7 Maximum
Disaggregation of Operations by Business Segments	Minimum 1.....2.....3.....4.....5.....6.....7 Maximum
Composition of Fixed Assets	Minimum 1.....2.....3.....4.....5.....6.....7 Maximum
Loss Contingencies	Minimum 1.....2.....3.....4.....5.....6.....7 Maximum
Accrued Liability for Compensated Absences	Minimum 1.....2.....3.....4.....5.....6.....7 Maximum
Long-term Receivables Valued at their Present Values	Minimum 1.....2.....3.....4.....5.....6.....7 Maximum

2. For each item, circle the number that best indicates the likelihood that you would *use* it in analyzing GDI's financial statements. The numbers range from (1) VERY LIKELY to (7) VERY UNLIKELY.

Primary Earnings Per Share	Very likely 1.....2.....3.....4.....5.....6.....7 Very unlikely
Fully Diluted Earnings Per Share	Very likely 1.....2.....3.....4.....5.....6.....7 Very unlikely
Cost of Goods Sold	Very likely 1.....2.....3.....4.....5.....6.....7 Very unlikely
Capital Leases Reported as Assets and Liabilities	Very likely 1.....2.....3.....4.....5.....6.....7 Very unlikely
Deferred Tax Credits	Very likely 1.....2.....3.....4.....5.....6.....7 Very unlikely
Impact of Changing Prices	Very likely 1.....2.....3.....4.....5.....6.....7 Very unlikely
Interest Capitalized on Construction of Long-term Assets	Very likely 1.....2.....3.....4.....5.....6.....7 Very unlikely
Pension Liabilities	Very likely 1.....2.....3.....4.....5.....6.....7 Very unlikely
Income from Continuing Operations	Very likely 1.....2.....3.....4.....5.....6.....7 Very unlikely
Long-term Payables Valued at their Present Values	Very likely 1.....2.....3.....4.....5.....6.....7 Very unlikely
Statement of Changes in Financial Position	Very likely 1.....2.....3.....4.....5.....6.....7 Very unlikely
Disaggregation of Operations by Business Segments	Very likely 1.....2.....3.....4.....5.....6.....7 Very unlikely
Composition of Fixed Assets	Very likely 1.....2.....3.....4.....5.....6.....7 Very unlikely
Loss Contingencies	Very likely 1.....2.....3.....4.....5.....6.....7 Very unlikely
Accrued Liability for Compensated Absences	Very likely 1.....2.....3.....4.....5.....6.....7 Very unlikely
Long-term Receivables Valued at their Present Values	Very likely 1.....2.....3.....4.....5.....6.....7 Very unlikely



3. Based on your past experience with (and/or feelings about) companies of this size, how likely is it that you would need sources other than the audited financial statements to obtain *additional information* about each item in evaluating GDI's application? Circle the number that best indicates your feelings. The numbers range from (1) VERY UNLIKELY to (7) VERY LIKELY.

Primary Earnings Per Share	Very unlikely 1.....2.....3.....4.....5.....6.....7 Very likely
Fully Diluted Earnings Per Share	Very unlikely 1.....2.....3.....4.....5.....6.....7 Very likely
Cost of Goods Sold	Very unlikely 1.....2.....3.....4.....5.....6.....7 Very likely
Capital Leases Reported as Assets and Liabilities	Very unlikely 1.....2.....3.....4.....5.....6.....7 Very likely
Deferred Tax Credits	Very unlikely 1.....2.....3.....4.....5.....6.....7 Very likely
Impact of Changing Prices	Very unlikely 1.....2.....3.....4.....5.....6.....7 Very likely
Interest Capitalized on Construction of Long-term Assets	Very unlikely 1.....2.....3.....4.....5.....6.....7 Very likely
Pension Liabilities	Very unlikely 1.....2.....3.....4.....5.....6.....7 Very likely
Income from Continuing Operations	Very unlikely 1.....2.....3.....4.....5.....6.....7 Very likely
Long-term Payables Valued at their Present Values	Very unlikely 1.....2.....3.....4.....5.....6.....7 Very likely
Statement of Changes in Financial Position	Very unlikely 1.....2.....3.....4.....5.....6.....7 Very likely
Disaggregation of Operations by Business Segments	Very unlikely 1.....2.....3.....4.....5.....6.....7 Very likely
Composition of Fixed Assets	Very unlikely 1.....2.....3.....4.....5.....6.....7 Very likely
Loss Contingencies	Very unlikely 1.....2.....3.....4.....5.....6.....7 Very likely
Accrued Liability for Compensated Absences	Very unlikely 1.....2.....3.....4.....5.....6.....7 Very likely
Long-term Receivables Valued at their Present Values	Very unlikely 1.....2.....3.....4.....5.....6.....7 Very likely

4. To what extent would the outcome of *your evaluation* of GDI's application be affected if an item from the following list is *not reported* in the financial statements? In each box, write the number from the following scale that best describes your feelings.

- 0 = No effect  
1 = A very insignificant effect  
2 = An insignificant effect  
3 = Some effect  
4 = A significant effect  
5 = A very significant effect

<input type="text"/> Primary Earnings Per Share	<input type="text"/> Income From Continuing Operations
<input type="text"/> Fully Diluted Earnings Per Share	<input type="text"/> Present Value of Long-term Payables
<input type="text"/> Cost of Goods Sold	<input type="text"/> Statement of Changes in Financial Position
<input type="text"/> Capital Leases	<input type="text"/> Operations by Business Segments
<input type="text"/> Deferred Tax Credits	<input type="text"/> Composition of Fixed Assets
<input type="text"/> Impact of Changing Prices	<input type="text"/> Loss Contingencies
<input type="text"/> Capitalized Interest	<input type="text"/> Liability for Compensated Absences
<input type="text"/> Pension Liabilities	<input type="text"/> Present Value of Long-Term Receivables

5. To what extent would you emphasize financial statement analysis in evaluating GDI's application? Circle the number that best indicates your feelings.

Very minor emphasis 1.....2.....3.....4.....5.....6.....7 Very major emphasis

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6. Based on the PRELIMINARY information provided, how LIKELY is it that GDI's application would be approved by your bank? Circle the number that best indicates your feelings.

Very unlikely 1.....2.....3.....4.....5.....6.....7 Very likely

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## PART B

This part seeks to gather information about: (a) the sources of your professional ideas; (b) the things you look at when you evaluate your own work or your own ideas; and (c) your feelings toward the banking profession.

Please circle the number that best indicates the extent to which you agree (or disagree) with each item in this part. The numbers range from (1) STRONGLY DISAGREE (SD) to (7) STRONGLY AGREE (SA).

1. I get most of my professional ideas from associates outside this bank. SD 1.....2.....3.....4.....5.....6.....7 SA
2. Tacit or explicit approval of my colleagues is extremely important in evaluating my professional ideas. SD 1.....2.....3.....4.....5.....6.....7 SA
3. I feel little loyalty to the banking profession. SD 1.....2.....3.....4.....5.....6.....7 SA
4. If I had no opportunity to be creative in carrying out my duties at this bank, I would find my job less satisfying. SD 1.....2.....3.....4.....5.....6.....7 SA
5. My standing within the banking profession in general is extremely important in formulating my professional ideas. SD 1.....2.....3.....4.....5.....6.....7 SA
6. I always attempt to be original in formulating my professional ideas. SD 1.....2.....3.....4.....5.....6.....7 SA
7. I am willing to exert a great deal of effort beyond that normally expected in order to contribute toward the advancement of the banking profession. SD 1.....2.....3.....4.....5.....6.....7 SA
8. There are very few people in this bank with whom I can share my professional interests. SD 1.....2.....3.....4.....5.....6.....7 SA
9. I generally evaluate my professional ideas in terms of the contribution they make towards my promotion at this bank. SD 1.....2.....3.....4.....5.....6.....7 SA
10. I often find it difficult to agree with the banking profession on matters of major professional interest. SD 1.....2.....3.....4.....5.....6.....7 SA
11. I always evaluate my work in terms of the contribution that I make towards achieving the goals of this bank. SD 1.....2.....3.....4.....5.....6.....7 SA

12. The risks associated with spending too much time on a particular assignment is a major influence on the methods that I use in carrying out my duties at this bank. SD 1.....2.....3.....4.....5.....6.....7 SA
13. I get most of my professional ideas from my colleagues and co-workers at this bank. SD 1.....2.....3.....4.....5.....6.....7 SA
14. The risk that an idea will not bear observable benefits is extremely important in evaluating my professional ideas. SD 1.....2.....3.....4.....5.....6.....7 SA
15. The opportunity to enhance my personal reputation in my field of specialization is extremely important in evaluating my professional ideas. SD 1.....2.....3.....4.....5.....6.....7 SA
16. In carrying out my duties, I always attempt to improve the reputation of this bank in the eyes of the general public. SD 1.....2.....3.....4.....5.....6.....7 SA
17. My professional values are very similar to those of most bankers that I know. SD 1.....2.....3.....4.....5.....6.....7 SA
18. I always seek to introduce new methods and procedures in carrying out my duties at this bank. SD 1.....2.....3.....4.....5.....6.....7 SA

### PART C

Instructions: Please respond to the following questions.

1. How would you describe the aggregated operations of your bank compared with all banks nationally?  
☐ Small                      ☐ Medium                      ☐ Large
2. Please provide data about the structure of your bank, including the number of officers in each of the positions identified:
 

_____ Number of "Senior Executive Vice Presidents"	_____ Number of "Executive Vice Presidents"
_____ Number of "Senior Vice Presidents"	_____ Number of "First Vice Presidents"
_____ Number of "Vice Presidents"	_____ Number of "Assistant Vice Presidents"
_____ Number of Other Senior Officers	
_____ Number of Divisions	_____ Number of offices
_____ Total Deposits (in millions)	_____ Total Assets (in millions)
_____ Approximate years of college education required for entry level commercial loan officer positions.	
_____ Approximate years of banking experience required for entry level commercial loan officer positions.	

3. Is your bank:
- ☐ An Independent Bank?
- ☐ Part of a One-bank Holding Company?
- ☐ Part of a Multi-bank Holding Company?
4. Check *one item* that best describes the location(s) in which your bank has offices:
- ☐ A rural community ☐ An urban community
- ☐ Several counties but not statewide ☐ Statewide
- ☐ Interstate but not national ☐ National
- ☐ International ☐ Other, specify:
- 
5. Who would approve a line of credit application like the one described in Part A?
- ☐ A commercial loan officer ☐ A committee of senior officers
- ☐ A committee of board members ☐ Other, specify:
- 
6. Check the total sales and total assets of your primary commercial loan customers?
- Sales (\$ millions) Under 2 ☐ 2 - 9.99 ☐ 10 - 25.99 ☐ 26 - 49.99 ☐ Over 50 ☐
- Assets (\$ millions) Under 2 ☐ 2 - 9.99 ☐ 10 - 25.99 ☐ 26 - 49.99 ☐ Over 50 ☐
7. Approximately how often in the past 2 years have you analyzed the financial statements of a commercial loan applicant?
- 0 ☐ 1 - 2 times ☐ 3 - 5 times ☐ 6 - 8 times ☐ Over 8 times ☐
8. Approximately how long (in years) have you been:
- \_\_\_\_\_ a commercial loan officer?
- \_\_\_\_\_ directly involved in analysing financial statements?
9. Are YOU a member of a professional banking association?
- Yes ☐ No ☐ If yes, specify:
- 
10. Check the item that reflects your highest college degree:
- ☐ Graduate Degree in Business ☐ Other Graduate Degree
- ☐ Undergraduate Degree in Business ☐ Other Undergraduate Degree
- ☐ Other
- 
11. Indicate your college accounting education in years:
- ☐ None ☐ Under 1 year ☐ 1 - 2 years ☐ over 2 - 3 years ☐ over 3 years
12. What other accounting education or experience do you have?
- 

**THANKS FOR YOUR HELP!**

*Remember you will receive a summary of the results of this study if you check "summary of results requested" on the blue card.*

## APPENDIX B. NON RESPONSE BIAS TESTS

Tests of non-response bias were designed to examine whether non-respondents are likely to be different from persons who responded to the questionnaire and to assess the likelihood that responses from the former would cause the results to be different. These tests were undertaken by assuming that late respondents have characteristics that are similar to non-respondents and by comparing responses received before (early respondents) and after the second request (late respondents) was mailed<sup>192</sup>. Systematic differences in the responses of early and late respondents would be evidence of some degree of non-response bias in the survey.

Multiple t-tests were used to evaluate differences in responses between early and late respondents. Of the 64 pairs of comparisons, only two are significant at the 5% level. They are:

1. likelihood of using income from continuing operations;  
and

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<sup>192</sup> J. S. Armstrong and T.S. Overton, "Estimating Non-response Bias in Mail Surveys," in R. Faber (ed.), Readings in Survey Research, (American Marketing Association, 1978), pp. 382-396.

2. likelihood of using the statement of changes in financial position.

Given a total of 64 comparisons, one expects 3 to 4 of them ( $.05 \times 64$ ) to be significant at the 5% level purely as a result of chance. Because only two comparisons are significant, it was concluded that there is no evidence of systematic differences in the perceptions of financial statement items between early and late respondents.

Mean responses on the financial statement items are plotted in Exhibits B1.1 (a), (b), (c) and (d) in order to assess the degree of homogeneity in the perceptions of early and late respondents. If the groups are homogeneous in terms of the attribute measured, the points plotted will form a long narrow ellipse in the vicinity of a 45 degree line drawn from the origin, and the mean scores for both groups will be very highly correlated<sup>193</sup>. Each of the four plots of the data presented in Exhibits B1.1 (a), (b), (c), and (d) take the shape of a long narrow ellipse. In addition, the correlation coefficient between the mean scores of early and late respondents are all very high ( $r > .95$ ). It is therefore con-

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<sup>193</sup> Steven J. Oserlind, Test Item Bias, (Beverly Hills, California: Sage Publications, 1983) p. 22.

cluded that early and late respondents are homogeneous in terms of their perceptions of the financial statement items.

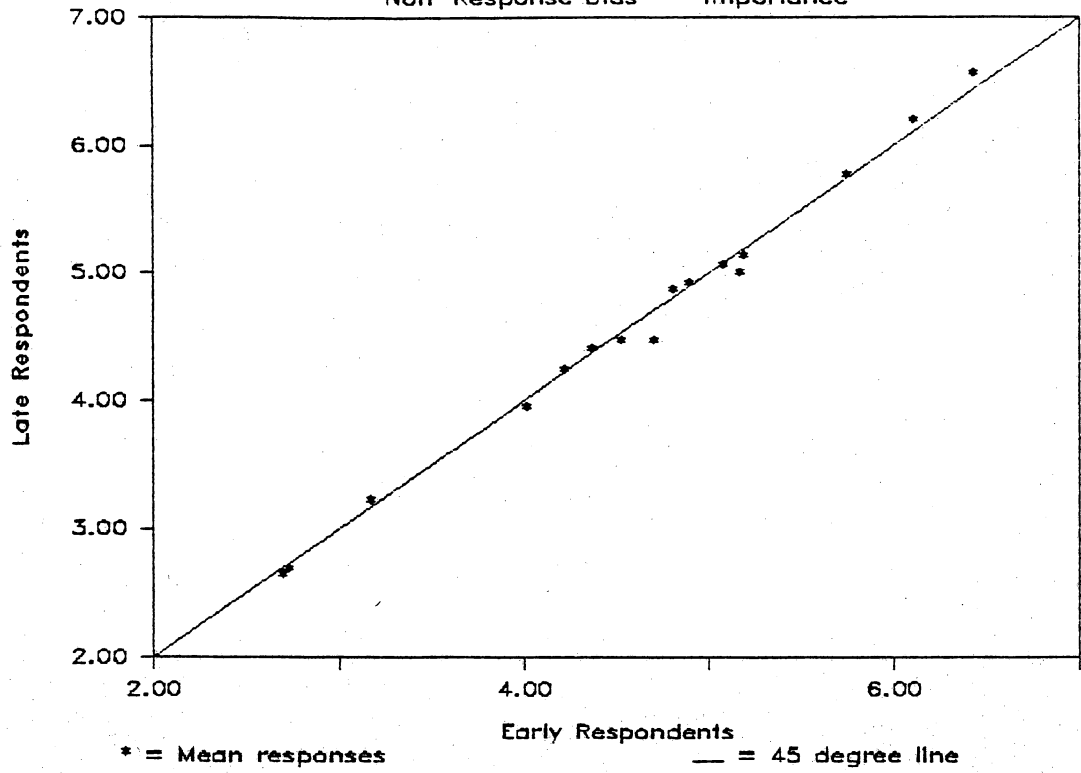
Similar tests were conducted with each treatment being held constant. The results were stable relative to the above results and pointed to the same degree of homogeneity between early and late respondents.

Tests were also conducted to see if early and late respondents are similar in terms of their professional orientation and banking environment. Mean scores on the five professional orientation indices, respondents' experience, and total bank assets and deposits were compared for that purpose. None of the means was significantly different across the two groups at either the 5% or 10% levels. A chi-square test of homogeneity between early and late respondents was also conducted after grouping the banks into clusters based on their degree of organizational complexity. The results were not significant at the 10% level and provide strong evidence attesting to the similarity between early and late respondents.

Assuming that late respondents are good surrogates for non-respondents, the tests provide no indication of systematic differences between respondents and non-respondents. This diminishes the likelihood that the results of this research

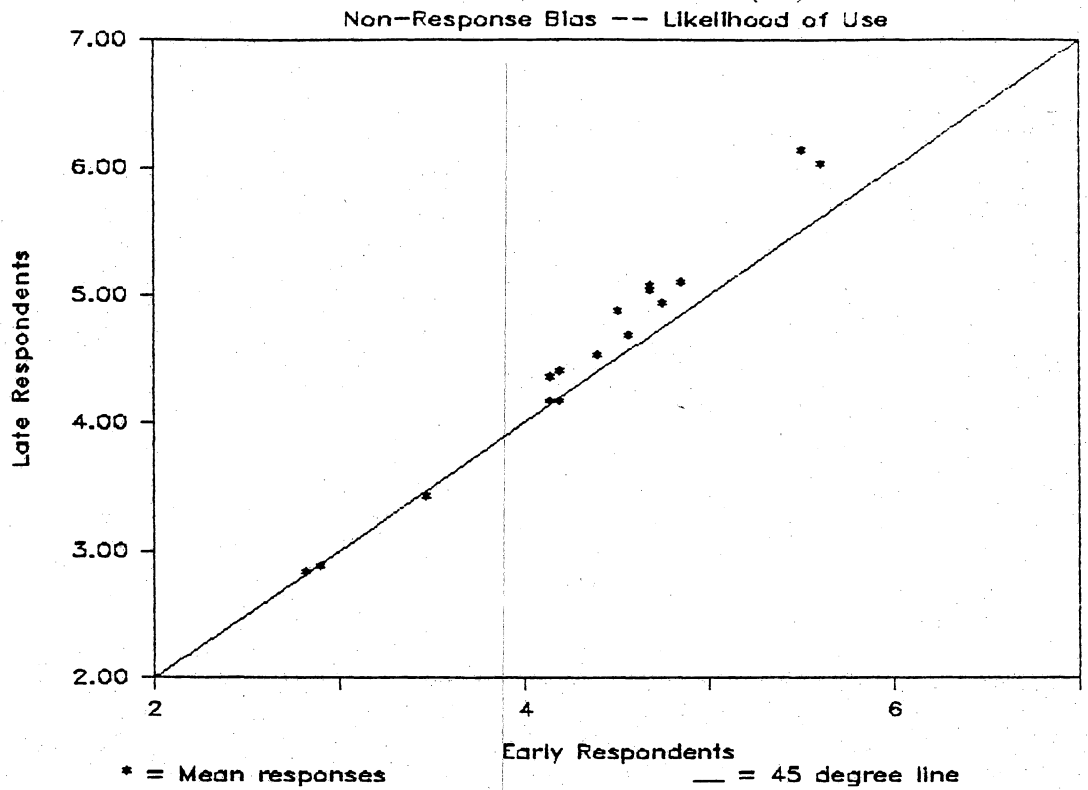
# Exhibit B 1.1 (a).

Non-Response Bias -- Importance

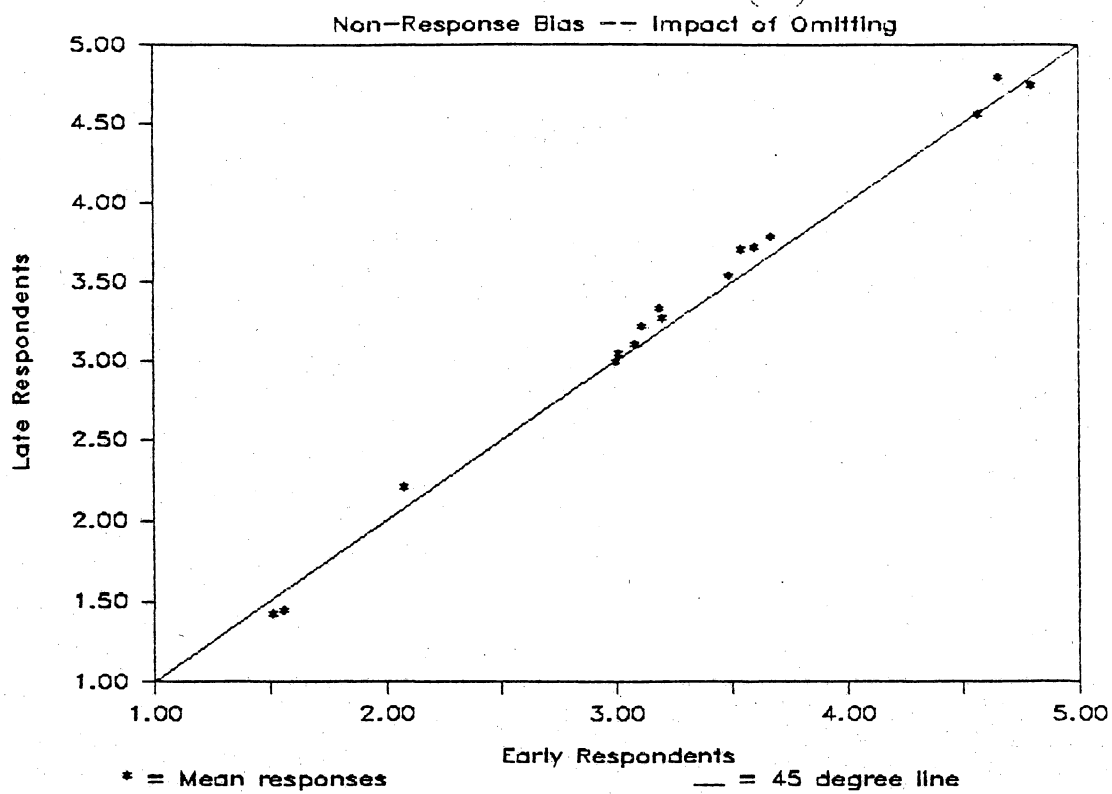




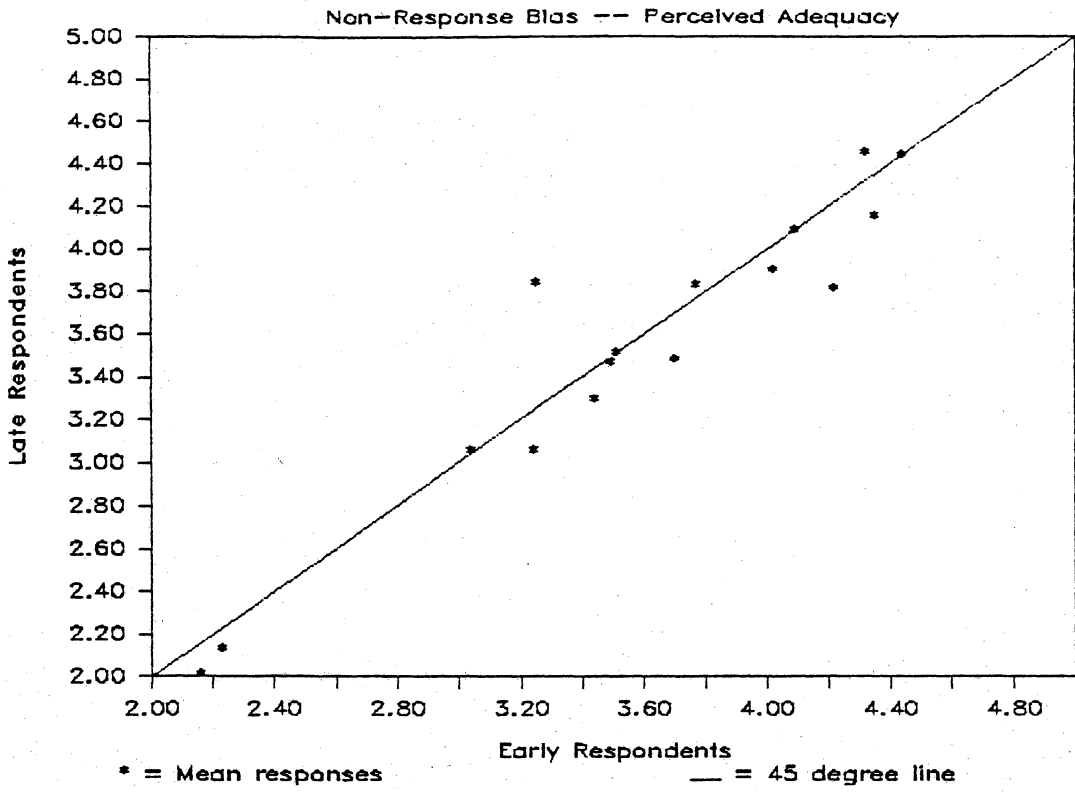
# Exhibit B 1.1 (b).



# Exhibit B 1.1 (c).



# Exhibit B1.1 (d).



would be significantly different if a higher response rate were obtained<sup>194</sup>.

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<sup>194</sup> Of course, an increased sample size could have an effect on statistical tests that are highly sensitive to large sample sizes.

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