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The Effects of Item Complexity and the Method Used to Present a Complex Item on the Face of a Financial Statement on Nonprofessional Investors` Judgments

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The Effects of Item Complexity and the Method Used to Present a Complex Item on the Face of a Financial Statement on Nonprofessional Investors' Judgments

by

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DEDICATIONS

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ABSTRACT

My study is motivated by standard setters interest in better understanding (and the gap in research as to) the effects of item complexity and disaggregation across a financial statement on users' decision processes (Bonner 2008; Glaum 2009; FASB 2010b). I examine whether complexity of an item and the method used to present the item on a financial statement influences nonprofessional investors' judgments. Specifically, I examine two issues raised concerning IAS 19 *Employee Benefits*. The first is to examine whether there are differences in nonprofessional investors' judgments when individual components of a complex item (defined pension cost) are disaggregated across a financial statement (the statement of comprehensive income) versus when individual components of a complex item are aggregated on the face of the same statement. Differences may arise since disaggregation across a statement provides information about how an item relates to different economic events and this information could help nonprofessional investors to better interpret and use the information in judgments. A second objective is to examine whether increasing the complexity of an already complex item affects the usefulness of information. I find that nonprofessional investors weigh higher levels of item complexity in certain judgments. Additionally, I find that when a complex item (defined pension cost) is disaggregated across a financial statement (the statement of comprehensive income) nonprofessional investors are able to acquire more information about the item and are able to more accurately understand the function of the item. This,

in turn, helps the nonprofessional investors decide whether the information is useful in certain judgments.

CHAPTER 1: INTRODUCTION

One of the most fundamental questions addressed in the financial reporting literature is whether the presentation method used to recognize an item in the body of a financial statement provides users with decision-useful information (Hopkins 1996). Prior accounting research (e.g., Hopkins 1996; Hirst and Hopkins 1998; Maines and McDaniel 2000; Bloomfield, Hodge, Hopkins, and Rennekamp 2010) shows that both professional and nonprofessional users can be influenced by whether specific items are presented in different financial statements, one section of a financial statement versus another section of the same financial statement, or a disaggregated form in one section of a financial statement. Research, however, has not investigated whether financial statement users' judgments are influenced by the disaggregation of a complex item across different sections of a financial statement.

In this study, I examine whether degree of item complexity and the method used to present a complex item on the face of a financial statement affects nonprofessional investors' judgments. As will be discussed in a later section, degree of item complexity is measured by whether a complex item is (not) highly volatile. The method used to present a complex item is measured by whether a complex item (components of defined pension costs) is aggregated in one section of a financial statement (statement of comprehensive income) or disaggregated across different sections of the same financial statement.

1.1 Motivation

A study on whether nonprofessional investors' judgments are influenced by degree of item complexity and the disaggregation of a complex item across different sections of a financial statement is important for three reasons. First, financial statements are becoming ever more complex. As a result the Financial Accounting Standard Board (FASB) and the International Accounting Standard Board (IASB) are strongly interested in better understanding how complex information affects nonprofessional investors' judgments (IASB 2010b). Second, there is a gap in accounting research as to whether disaggregating a complex item across a financial statement provides users with decision-useful information (Glaum 2009). Third, there is strong interest by standard setting bodies in understanding how disaggregation of items in a financial statement can provide users with transparent and useful information (FASB 2010b). The Financial Accounting Standards Board (FASB) and the International Accounting Standards Board (IASB) are currently working on joint projects to address guidance on presenting disaggregated items in financial statements.

In one project, the FASB and the IASB are working together on a staff draft amendment to IAS 1 *Financial Statement Presentation*. In the proposal, the boards identify disaggregation and cohesiveness as the two core principles of financial statement presentation. The standard setting boards recommend that firms should present items in their financial statements in a manner that provides users with information that is useful "in understanding an entity's financial position and performance and in predicting future cash flows" (FASB 2010b, p.75). For instance, disaggregating an item across a financial statement increases the locations where information is presented (i.e., classified) and this

increase in information may help users to better interpret and use the information in judgments. Specifically, disaggregation across a statement can provide users with information about how an item relates to different economic events and this can improve users' ability to understand and process information in judgments (Fairfield, Sweeney, and Yohn 1996; Hopkins 1996).

The FASB is also working collaboratively with the IASB on the recent amendment to IAS 19 *Employee Benefits* that suggests a new presentation approach to reporting changes in defined benefit cost.[1] The new presentation method disaggregates changes in the defined benefit obligation and the fair value of plan assets into three separate items on the statement of comprehensive income with each item reported in a different section of the statement. Defined benefit service cost is recognized in the operating section of the statement. Finance cost (i.e., net interest expense) related to the net defined benefit liability (asset) is included as part of the operating-finance section of the statement. Finally, remeasurement cost is recognized in the other comprehensive income section of the statement (IASB 2010b; IASB 2010d).[2]

Proponents of the amendment to IAS 19 *Employee Benefits* suggest that a disaggregated approach to recognizing defined benefit cost helps users understand how the components of the defined benefit cost affect a firm's financial performance and financial position, as well as how the cost may affect a firm's future cash flows. The idea

[1] Issued in June 2011, the amendment to IAS 19 is effective for fiscal years beginning on and after January, 2013.

[2] Under current U.S. GAAP, companies recognize net pension cost (i.e., service cost, interest cost, and actual return on plan assets) in net income while "actuarial gains and losses (and prior service cost) are recognized in accumulated other comprehensive income and amortized to income over remaining service lives" (Kieso, Weygandt, and Warfield 2010, p. 1080). Under existing International GAAP, companies recognize net pension cost (i.e., service cost, interest cost, and return on plan assets) in net income while "actuarial gains and losses are recognized immediately in income or amortized over the expected remaining working lives of employees" (Kieso, Weygandt, and Warfield 2010 p. 1080).

is that each defined benefit cost component contains different information about a firm's permanent earnings potential (Barth, Beaver, and Landsman 1992). By disaggregating the information according to the function of the cost components (e.g., operating cost, operating-finance cost, or other comprehensive income), investors are provided with meaningful information about characteristics of the cost and how the cost relates to different types of economic events. This should affect how investors interpret and use the information in judgments (Hopkins 1996; IASB 2010d).

Opponents of the amendment to IAS 19, however, argue that because of the complexity surrounding the volatile and interlocking nature of the assumptions used to measure defined benefit cost, disaggregating the cost components in different sections of the statement of comprehensive income may not provide beneficial information to users about the firm's performance, position, and/or likely amount and timing of future expected cash flows (Napier 2008). Opponents also believe that a new presentation approach may increase users' information processing cost because it may lack consistency with the presentation method used in other financial statements. That is, the recognition of defined benefits in the statement of comprehensive income may be disaggregated while the recognition of defined benefits in the statement of financial position may be aggregated as a net liability or net asset (IASB 2010d).

The motivation for the current study is to provide empirical evidence to inform the debate on whether degree of item complexity and disaggregating a complex item across a financial statement provides nonprofessional investors with decision-useful information. Due to the increasing complexity of items reported in financial statements, research is needed to add to our understanding of how users deal with degrees of

complexity in decision processes (Bonner 2008). Additionally, given the increasing interest being shown by standard setters it is important that researchers obtain a greater understanding of how disaggregated information is incorporated into decisions (Barth 2000; Bonner 2008).

1.2 Statement of Objective

The main objectives of this study are to examine two issues raised concerning IAS 19. The first is to examine whether there are differences in nonprofessional investors' judgments when individual components of a complex item are recognized across a financial statement versus when individual components of a complex item are aggregated on the face of the same statement. Differences may arise since aggregation forces investors to address any questions about the components of the item through an additional search (for example note disclosure). A second objective is to examine whether degree of item complexity affects the usefulness of information. [3]

Standard setting bodies suggest that disaggregating a complex item in a financial statement can help users better assess uncertainty related to how different components of a complex item respond to economic events. This, in turn, may influence how users predict a firm's performance, position, and/or expected future cash flows related to the different elements of that item. Disaggregating defined pension cost, for instance, can help users better assess how the different cost components tend to have different predictive implications (e.g., volatile financing cost may be perceived as an indicator of management effectiveness in financing pension obligations). Since, however, there are cognitive costs associated with users understanding and processing complex information,

[3] As will be discussed in a later section, volatility is used as a measure of complexity since it decreases predictability, which increases complexity and uncertainty.

a key issue becomes whether users will receive benefit from the disaggregation of a complex item across different sections of a financial statement relative to aggregation of the same item within one section of the same financial statement.

1.3 Overview of Research Method

To accomplish the objectives of the study, I develop hypotheses using the theory of cognitive load and components of Maines and McDaniel's (2000) framework on the effects of presentation format on investors' judgments. To test the hypotheses I collect experimental data to examine two factors. First, I collect data to examine whether degree of item complexity (defined pension cost with high volatility versus defined pension cost with low volatility) influences nonprofessional investors' decision processes. Second, I collect data to examine whether the method of presenting a complex item on the face of a financial statement (disaggregated across sections versus aggregated in one section) affects nonprofessional investors' judgments.[4] Then, I analyze whether disaggregation moderates the effect of degree of complexity on nonprofessional investors' judgments.

The experimental research design relies on the theory of cognitive load. The theory of cognitive load suggests that the degree of an item's complexity and the nonprofessional investors' lack of knowledge will impose a high degree of cognitive load, thereby affecting their ability to understand and process complex information. The theory, however, also suggests that disaggregating a complex item across sections of the statement of comprehensive income will reduce nonprofessional investors' cognitive load associated with learning and/or having to split their attention to search other sources to try and understand the uncertainty related to the complex item. That is, disaggregation

[4] A nonprofessional investor is defined as a person who does not invest in financial markets as part of their profession (Pinsker and Wheeler 2009).

will help free space in the users' working memory to better assess the importance of the complex item in judgments (Sweller 1988; Chandler and Sweller 1991).

I focus on nonprofessional investors for three reasons. First, nonprofessional investors form a large portion of the investor group in the stock market (Arnold, Bedard, Phillips, and Sutton 2010). As of 2002, it is estimated that over 34 million nonprofessional investors directly invest in the stock market and own approximately 34 percent of all outstanding shares (Koonce, Williamson, and Winchel 2010). Second, survey research shows that nonprofessional investors use unfiltered financial statement data when making investing decisions (Elliott, Hodge, and Jackson 2008). Third, regulators and standard setting bodies have expressed strong interest in understanding how nonprofessional investors (who have a limited understanding of financial information) are affected by financial reporting standards (SEC 2010; Maines and McDaniel 2000).

Graduate students are used as proxies for nonprofessional investors in a 2 x 2 between-participants experiment that examines whether degree of complexity and the presentation method used to account for the complex item in a financial statement influences nonprofessional investors' judgments. The independent variables are the extent of volatility in the defined pension cost and the presentation method used to recognize defined pension cost in the statement of comprehensive income. I vary the extent of volatility at two levels: high volatility versus low volatility. I also vary presentation method at two levels: aggregated in the operating section of the statement of comprehensive income versus disaggregated across the operating section, operating-finance section, and other comprehensive income section of the statement of

comprehensive income.[5] The dependent variables are participants' (1) evaluation of a firm's performance based on an analysis of the firm's Management Discussion and Analysis (MD&A) and selected financial statements and notes, (2) recommendations to invest in the firm based on an analysis of the information presented in the MD&A and selected financial statements and notes, and (3) identification of key factors from the information that influenced their judgments.

1.4 Contributions

It is an empirical question whether degree of item complexity and/or disaggregating a complex item across the face of a financial statement influence nonprofessional investors' judgments. Examining this question is important for three reasons.

First, there is relatively little authoritative guidance and empirical research available for managers who are trying to decide the extent to which they should disaggregate a complex item in a financial statement. The current study can shed light on whether disaggregating complex account information across different sections of a financial statement provides useful information to nonprofessional investors. On the one hand, disaggregating a complex item across different sections of a financial statement may reduce nonprofessional investors' cognitive load since they will not have to split their attention by searching different sources (e.g., searching notes) to try and understand the presented information. This may free capacity in their working memory to assess the item and its components. On the other hand, because users have a limited working memory, it is possible that regardless of the degree of complexity and/or how a complex

[5] In all experimental conditions, a disaggregation of the defined benefit cost will be presented in a note disclosure.

item is presented (e.g., disaggregated or aggregated) in a financial statement, they may not be able to understand and/or process the information in judgments.

Second, this study aims to provide standard setting bodies with information on the possible effects of disaggregating complex item(s) across different sections of a financial statement. In particular, this study can provide the IASB with timely information related to the amendment change to IAS 19 *Employee Benefits* that suggests a new presentation approach to reporting changes in defined benefit cost. Specifically, if the hypotheses are supported, this could indicate that disaggregating defined pension cost across a financial statement helps nonprofessional investors understand the information. This, in turn, could help nonprofessional investors decide whether the information is important in assessing a firm's future performance. If my hypotheses are not supported, this could indicate that disaggregation of defined pension cost on the face of the financial statement does not help nonprofessional investors assess the uncertainties of a firm's permanent earnings potential because the cognitive cost outweighs the benefits of exerting the effort needed to overcome the cost to understand and/or process the disaggregated information. As IASB and FASB acknowledge, there seems to be a fine line in presenting too little disaggregated information and too much disaggregated information (FASB 2010b).

Third, the current research answers a call from the financial accounting literature that suggests financial presentation issues are core to the accounting field and we need to learn more about how cognitive processing is affected by elements of item complexity and financial presentation (Libby, Bloomfield, Nelson 2002; Bonner 2008). Hence, I contribute to the financial reporting literature by introducing the factors of cognitive load. The theory of cognitive load suggests financial statement users have limited capacity in

working memory and factors such as information complexity, users' knowledge, and how information is presented can each have a significant influence on users' ability to understand and process information in working memory.

The dissertation proceeds as follows. In chapter 2, I present the institutional background surrounding item complexity, disaggregation, and disaggregating a complex item. In chapter 3, I provide a literature review and the hypotheses development. In Chapter 4, I discuss the research method and provide results from a pilot test. In chapter 5, I present the statistical analysis and research findings. In chapter 6, I conclude with a discussion of the results, limitations, and outlook for future research.

CHAPTER 2: INSTITUTIONAL BACKGROUND

As indicated in Chapter 1, the purposes of the current study are to investigate whether recognizing disaggregated defined pension cost across the statement of comprehensive income affects nonprofessional investors' judgments and whether increasing complexity of an already complex item affects the usefulness of the item's information. This investigation will allow us to gain a better understanding concerning degree of complexity and whether displaying a disaggregated complex item on the face of a financial statement can provide nonprofessional investors with decision-useful information.

In this chapter of the dissertation, I examine whether and to what extent standard setting bodies provide authoritative guidance on item complexity, disaggregation, and disaggregating a complex item. In particular, I examine how the Financial Accounting Standards Board (FASB) and the International Accounting Standards Board (IASB) weigh in on the debate about whether disaggregation across a financial statement is useful when an item is complex.

2.1 Concept Statements and Standards Related to Reporting a Complex Item

This section provides information on existing and proposed statements and standards related to recognizing a complex item in financial statements.

2.1.1 Existing Guidance on Reporting a Complex Item

The IASB and the FASB do not define a complex item. The standard setting boards do, however, suggest that complex items cannot be ignored in financial accounting and reporting. That is, in the *Conceptual Framework for Financial Reporting* (IASB 2010a) and in Statement of Financial Accounting Concepts No. 8 (SFAC 8) *Conceptual Framework for Financial Reporting—Chapter 1, The Objective of General Purpose Financial Reporting,* and *Chapter 3, Qualitative Characteristics of Useful Financial Information* (FASB 2010a), the standard setting boards state that while some items are inherently complex, financial reports should contain information about complex items because financial reports would be incomplete and/or misleading without the information. Furthermore, in the IASB's discussion paper *Reducing Complexity in Reporting Financial Instruments,* arguments are also made that while accounting for financial instruments is complex in part because the measurement requirements introduce volatility, financial reports should contain this information because volatility is a real economic phenomenon that should not be ignored (IASB 2010c). As will be discussed in Chapter 3, the degree of volatility introduced increases the complexity of the item, seemingly adding to the need for disaggregation according to the argument presented by the discussion paper.

The IASB and the FASB also indirectly address the topic of how to present a complex item in a financial statement by providing reporting guidance for items considered complex. For example, the IASB and the FASB provide reporting guidance for employee benefits (IAS 19 *Employee Benefits),* financial instruments (IFRS 9 *Financial Instruments*), and leases (IAS 17 *Leases*)—all of which are considered to be

complex in the sense that the items require lengthy standards that are viewed by many to be contentious (Weidman and Wier 2004).

2.1.2 Proposed Guidance on Reporting a Complex Item

The FASB and the IASB propose a common set of accounting standards that apply a principle-based approach to financial reporting. A principle-based approach gives firm managers latitude in determining the level of detail in information provided to investors and creditors. For instance, in IAS 1 *Financial Statement Presentation*, the boards propose firm managers should disaggregate information in financial statements when doing so will help users assess a firm's position and performance, and predict a firm's future cash flows (FASB 2010b). That is, managers determine the level of detail for items presented. Based on IAS 1, the degree of complexity associated with an item would indicate a greater need for disaggregation so that users could better assess performance and predict future cash flows.

In regard to presenting a complex item in a financial statement, however, the FASB and the IASB seem to contradict the proposed principle-based approach to financial reporting by suggesting that firms follow a more prescriptive-based approach to reporting complex information. For example, in the amendment to IAS 19 *Employee Benefits*, the FASB and the IASB suggest that firm managers should separately report changes in defined benefit obligations and fair value of plan assets on the statement of comprehensive income. The idea behind the reporting approach is that pension cost component contains different information about a firm's permanent earnings potential (Barth, Beaver, and Landsman 1992). By recognizing cost component information, rather than relegating cost component information to a note disclosure, the boards believe

decision makers will find the information more useful in judgments and decisions (IASB 2010d).

2.2 Concept Statements and Standards Related to Disaggregation

This section provides information on existing and proposed statements and standards related to the disaggregation of financial statement items.

2.2.1 Existing Guidance on Disaggregation

Standard setting bodies have few requirements and provide little guidance on the format for presenting financial statements. The format guidance provided addresses the level of disaggregation in one IASB standard and one FASB concept statement—International Accounting Standard (IAS 1) *Financial Statement Presentation* (IASB 2007), and Statement of Financial Accounting Concepts No. 5 (SFAC 5) *Recognition and Measurement in Financial Statements of Business Enterprises* (FASB 1984).

In IAS 1, the IASB (2007) suggests that an entity should present separately groups of similar items and/or dissimilar items that are material in nature. In SFAC 5, the FASB (1984) suggests that while financial statements present simplified, condensed, and aggregated data, firm managers should avoid focusing exclusively on providing "bottom-line" amounts because financial statement users may find value in more detailed information.

2.2.2 Proposed and Recently Adopted Guidance on Disaggregation

With an increasing demand from creditors and investors for more useful accounting information, the FASB and the IASB are showing strong interest in how disaggregation of an item in a financial statement can help users make more informed

judgments and decisions. For example, the FASB and the IASB are working on joint projects amending IAS 1 *Financial Statement Presentation* and IAS 19 *Employee Benefits* that specifically address the disaggregation of information in financial statements (IASB 2010b; IASB 2010d).[6]

In the proposed amendment to IAS 1, the FASB and the IASB recommend significant changes in the way financial statements are presented. Among the proposed changes to the presentation format, the boards stress that disaggregation and cohesiveness are the core principles of financial reporting and firms should disaggregate information in financial statements when doing so will provide users with "information that is useful in understanding the activities of an entity and in assessing the amount, timing, and uncertainty of a firm's future cash flows" (IASB 2010b, p 28).[7] An implication of the proposed changes is that the boards are moving away from putting all disaggregated information about an item only in the notes.

Further, the boards also state that disaggregation should be based on the attributes of function, nature, and measurement basis. Function refers to disaggregating based on the primary activities (e.g., selling goods or providing services) of a firm. Nature refers to disaggregating based on the economic characteristics and/or attributes (e.g., fixed-

[6] The IASB also mentions aggregation in the first phase of its joint project with the FASB to improve the *Conceptual Framework* for Financial Reporting. In *The Improved Conceptual Framework for Financial Reporting: Chapter 1: The Objective of Financial Reporting* and *Chapter 2: Qualitative Characteristics and Constraints of Decision Useful Financial Reporting Information* the board states the presentation of an item in a financial statement may represent an aggregate of items. That is, the board suggests firms may use a single item (e.g., plant and equipment) to represent an aggregate of a firm's similar items. The framework, however, does not provide any specific guidance on disaggregation of an item in a financial statement (IASB 2010a).

[7] The disaggregation principle suggests a firm should present information in its financial statements in a manner that clearly shows the firm's activities, the firm's cash flows, and the relationships between the elements across the financial statements. The cohesiveness principle suggests a firm should consistently present items in the same sections across financial statements so the relationship among items is clear to users (IASB 2010b).

income investments or equity investments) of an item. Finally, for measurement basis, the boards recommend that items should be disaggregated based on method or basis (e.g., historical cost or fair value) used to measure the items (FASB 2010b).

In addition to the work being done to revise the financial statement presentation format, the FASB is also working collaboratively with the IASB on the recent amendment to IAS 19 *Employee Benefits* that suggests a new presentation approach to reporting changes in defined benefit cost. The presentation method disaggregates changes in the defined benefit obligation and the fair value of plan assets into three functional cost items on the statement of comprehensive income, with each cost reported in a different section of the statement. Defined benefit service cost is reported in the operating section of the statement. Finance cost (i.e., net interest cost) related to the net defined benefit liability (asset) is recognized as part of the operating-finance section of the statement and remeasurement cost is included in the other comprehensive income section of the statement (IASB 2010d).[8] The idea of a new presentation method is that since financial statements provide structured classifications of information that can help users to interpret and utilize information, disaggregating defined pension cost across a statement should facilitate the ability of users to learn, understand, and/or interpret how defined pension cost relates to different types of economic events. And, this should enhance users' ability to predict a firm's future performance (Hopkins 1996).

[8] Service cost includes the increase (or change) in the present value of the future pension obligation from employee services rendered in the current period (or in prior periods resulting from changes to the long-term benefits). Finance cost (i.e., net interest cost) includes interest costs, effects of changes in interest rates, and the actual return on plan assets. Remeasurement cost includes actuarial gains and losses (other than those from changes in interest rates) (Glaum 2009; IASB 2010d).

2.3 Summary

The FASB and the IASB suggest financial reports should contain information about complex items because financial reports would be incomplete and/or misleading without the information. Presently, however, the FASB and the IASB provide little guidance on the extent to which complex items should be presented (e.g., disaggregated) on the face of a financial statement, as a result information on most complex items is only provided in the notes to the financial statements. However, with the demand from financial statement users for more useful information, the FASB and the IASB are recommending significant changes to how accounting information is presented in financial statements. Among the proposed changes, the FASB and the IASB are stressing that disaggregation is a core principle to financial reporting and firm managers should disaggregate items (according to function, nature, and/or measurement basis) in financial statements when doing so provides users with decision-useful information.

With regard to disaggregating a complex item (e.g., defined pension cost) in financial reports, the standard setting boards are beginning to provide specific guidance. For instance, the FASB and the IASB suggest that firms should disaggregate pension cost across the operating, operating-finance, and the other comprehensive income section of the statement of comprehensive income because the boards believe this will enhance the decision-usefulness of the information (IASB 2010b; IASB 2010d).

In essence, standard setting bodies have taken a position in the debate on the usefulness of reporting complex information and whether disaggregating a complex item (e.g., defined pension cost) across different sections of a financial statement can provide investors and creditors with useful information. That is, the IASB's and the FASB's

guidance on disaggregation in IAS 19 suggests that the disaggregation of a complex item across applicable sections of a financial statement will provide decision makers with useful information.

CHAPTER 3: HYPOTHESES DEVELOPMENT

In this chapter of the dissertation, I define a complex item and discuss degree of item complexity. Then, I review financial reporting literature related to the relevance of the different elements of a complex item. Next, I discuss cognitive load theory and the effect of presenting complex information on individuals' limited working memory. I then incorporate disaggregation literature with a focus on the effect of disaggregation on users' judgments. Finally, I integrate the research on item complexity, cognitive load theory, financial statement presentation format, and disaggregation. I end the chapter with hypotheses related to degree of item complexity and the effects of disaggregating a complex item across a financial statement on nonprofessional investors' judgments.

3.1 Item Complexity

While there is no clear definition of a complex item, The Merriam-Webster Dictionary (2010) defines complex as "a whole made up of complicated or interrelated parts" with complicated being referred to as "difficult to analyze, understand, or explain."

Accounting research also provides examples as to what is considered to be a complex item. For instance, Weidman and Wier (2004) suggest a complex item is an item that requires lengthy standards that are viewed by many to be contentious. Coronado and Sharpe (2003), Jin, Merton, and Bodie (2006), Picconi (2006), and Napier (2008) claim pension accounting is considered to be a complex item because it has created contention

between standard setting bodies and market players for over 30 years. They also argue that reporting pension cost is complex because of the uncertainties surrounding the volatile and interlocking nature of the information used by management in forming the assumptions used to measure and report the liabilities, periodic cost, and plan assets.

3.1.2 Degree of Item Complexity

While not directly related to the effects of degree of item complexity on nonprofessional investors' judgments, there is ample judgment and decision theory and research to suggest that as information complexity increases decision-makers use of the information decreases (e.g., Earley 1985; Iselin 1988; Paquetter and Kida 1988; Plumlee 2003). For example, from a research perspective, Plumlee (2003) examines the relation between information with varying degrees of complexity and financial analysts' use of that information in forecasts. She rank orders six tax law changes ratified by the Tax Reform Act of 1986 by complexity and then observes analysts' forecasts of effective tax rates around those changes. She finds that complexity reduces analysts' use of information in that analysts impound less complex tax law changes to a greater extent in their forecasts than they impound more complex information in their forecasts.

Plumlee (2003) goes on to suggest that her study demonstrates the importance of researchers considering information attributes, such as degree of complexity, when investigating whether and/or how complex information affects decision-makers judgments and decisions. It may be that the complex information is not irrelevant in judgments and decisions but it may be (or at some level become) too complex for decision-makers to understand and/or process.

Wood (1986), from a theoretical perspective, goes beyond simply suggesting complex information at some point becomes too complex for decision-makers to impound in judgments and decisions. He suggests that as information complexity increases task performance may decrease. For instance, he suggests when information cues in a complex task become unstable (i.e., volatile) over time the task becomes increasingly dynamic and complex and this can lead to cognitive overload and lower task performance.

A purpose of the current study is to contribute to judgment and decision research by examining whether degree of item complexity on the face of a financial statement influences nonprofessional investors' judgments. As Wood (1986) suggests, one factor that makes for a complicated item is the volatility surrounding the item. Volatility makes an item more difficult to analyze, understand and explain. That is, volatility, in and of itself, increases the complexity of an item. Therefore, I extend prior research by examining whether ratcheting up an already complex item (defined pension cost) with more complexity (volatility) influences nonprofessional investors' judgments. This analysis will allow us to better understand the information attribute of degree of complexity on judgments.

3.1.3 Different Components of a Complex Item

Related to the issue of whether decision makers' judgments are influenced by the components of a complex item, prior accounting research finds that the disclosed components of a complex item provide useful information to decision makers. Daley (1984) and Coronado and Sharpe (2003), for instance, show that while pension cost information tends to be complex, the information is relevant in stock price valuations.

When assessing market value of equity, market participants assign different weights to the disclosed components of net pension cost including service cost, interest cost, actual return on plan assets, deferred return on plan assets, and amortization of the effects of transition assets (Barth, Beaver, and Landsman 1992; Kiosse, Lubberink, and Peasnell 2007). Other research also shows that market participants tend to fixate on the persistence of the disclosed pension-induced earnings components (e.g., service cost, interest cost, return on plan assets) in investment judgments and decisions (Hann, Heflin, and Subramanyam 2007; Coronado, Mitchell, Sharpe, and Besbitt 2008; Glaum 2009).[9]

While prior research clearly shows decision makers find value in disclosed components of a complex item, it is unclear from prior research whether recognizing the components on the face of a financial statement rather than in note disclosures affects users' understanding and processing of information when making judgments. Therefore, I extend prior research on item complexity by investigating whether recognizing the components of a complex item on the face of a financial statement affects nonprofessional investors' judgments.

3.2 Cognitive Load Theory

While not specifically related to the topics of item complexity and presenting a complex item on a financial statement, educational psychology research provides theory to support the idea that the degree of an item's complexity and the method for presenting complex information can have a significant effect on an individual's judgments and decisions. The theory of cognitive load, in particular, emerged as a theoretical foundation

[9] Accounting research also finds that information on defined benefit assets and liabilities is value-relevant in market valuations (Dhailiwal 1986; Landsman 1986; Barth 1991; Amir 1993; Barth, Beaver, and Landsman 1993; Jin, Merton, and Bodie 2006; Amir, Guan, Oswald 2009; Glaum 2009).

for designing instructional materials in a way that enhances learning (Sweller 1988, 1989; Pass, Renkl, and Sweller 2003; Chong 2005; Van Merrienboer and Sweller 2005). The theory suggests individuals have limited working memory capacity and the manner in which complex information is presented can have an influence on their ability to comprehend and process information (Chandler and Sweller 1991; Paas, Renkl, and Sweller 2003; Chong 2005; Ginns 2006).

The theory makes a distinction between three types of cognitive load that affect an individual's working memory: intrinsic load, extraneous load, and germane load. Intrinsic load relates to the complexity of the material that an individual intends to understand. This load is dependent on the nature (e.g., degree of complexity) of the materials and the individual's knowledge of the materials (Chong 2005). Intrinsic load can only be reduced (increased) through low (high) complexity of materials and/or an individual's (lack of) knowledge (Van Merrienboer and Sweller 2005; Ginns 2006).

Extraneous load relates to the manner in which information is presented to individuals. This load is dependent on whether the information is presented in a manner that helps users understand the information; as a result it can only be reduced (increased) through format design. Extraneous load, for instance, can be imposed by the requirement that individuals search different sources of materials for help in completing a performance task (Mousavi, Low, and Sweller 1995; Van Merrienboer and Sweller 2005; Chong 2005; Ginns 2006). Since individuals have limited space in working memory, using cognitive resources to manage extraneous load tends to reduce the cognitive capacity available for individuals to process information. Thus, when extraneous load is

relatively high (low) individuals will typically have more (less) difficulty understanding and processing complex information (Paas, Renkl, and Sweller, 2003).

Finally, germane load is the free capacity in working memory that is used for knowledge acquisition (Sweller, Van Merrienboer, and Paas 1998; Chong 2005; Van Merrienboer and Sweller 2005; Ginns 2006). The load is dependent on the demands placed on working memory; it can be reduced by intrinsic load, extraneous load, lack of effort, and/or lack of motivation (Chong 2005). For most financial statement users, germane load is the load left over in short-term memory for knowledge acquisition (i.e., processing, constructing, and automating schemas) after intrinsic load and extraneous load are generated.

A model of the effects of cognitive load on an individual's judgments and decisions is depicted in Figure 3.1.

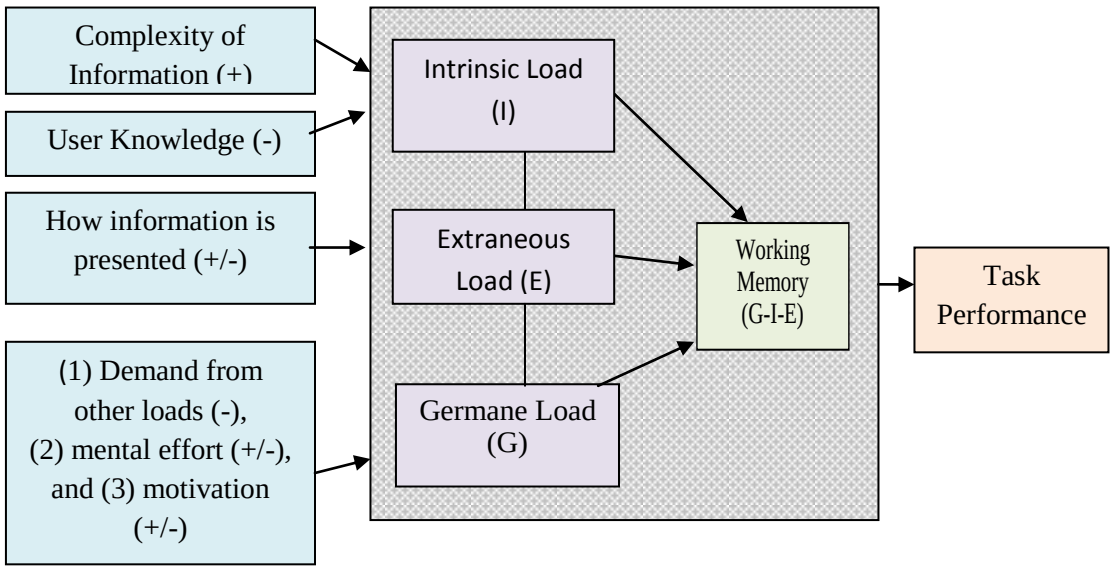

Figure 3.1

Cognitive Load Theory

Applying the tenets of cognitive load theory to the current study, I argue that when dealing with a complex item (defined pension cost) with varying degrees of complexity (high volatility versus low volatility), a nonprofessional investor (with limited knowledge) will automatically have a higher range of intrinsic load in working memory. So, when the nonprofessional investor is presented with information about the complex item in a fashion that reduces cognitive load, the investor should have more capacity in working memory to understand and process information. For example, by providing a nonprofessional investor with disaggregated defined pension cost information across sections of the statement of comprehensive income, the investor should have less extraneous load and intrinsic load associated with understanding the complex information because disaggregation teaches while it presents. That is, disaggregation reduces extraneous load by presenting defined pension cost in a fashion that helps users learn and/or understand information about the characteristics of the pension cost, such as its volatility and primary cost driver (hereafter referred to as the predominate function) without having to search other sources (e.g., financial statement notes) to try and understand the item. Additionally, disaggregation reduces intrinsic load by helping users learn how the cost components influence different economic events. This should leave more room in the investors' working memory (i.e., germane cognitive load) to process the information.

3.3 Effect of Financial Statement Presentation on Users' Judgments

Although cognitive load theory suggests the method of presenting complex information can affect an individual's ability to understand and process information, the financial accounting literature provides evidence on how different elements of financial

statement reporting (e.g., presentation method, disaggregation, and disaggregating a complex item) can influence users' judgments and decisions.

For instance, while not specifically related to the topic of disaggregating a complex item across a financial statement, prior financial accounting literature on presentation format provides a rich body of research that suggests financial statement presentation method can have a significant influence on users' judgments and decisions. Hopkins (1996), for instance, examines whether professional users are influenced by how information is classified within a financial statement. Specifically, he examines whether the balance sheet presentation (i.e., classification) of mandatorily redeemable preferred stock as a liability, owners' equity, or mezzanine influences buy-side analysts' judgments. He finds that experienced analysts predict significantly higher stock prices when mandatorily redeemable preferred stock is classified as a liability. He speculates that analysts rely on the location of information in financial statements to activate their knowledge of the economic significance of the information when making judgments and decisions. This supports the idea that the way in which information is presented on a financial statement can reduce users' cognitive load (i.e., extraneous load) and free capacity in their working memory for knowledge acquisition (i.e., germane load).

In a slightly different vein, Hirst and Hopkins (1998) and Maines and McDaniel (2000) add to our knowledge of whether presentation format can have an influence on users' judgments and decisions. They examine whether professional and nonprofessional users are affected by whether specific information is presented in one financial statement versus another financial statement. Hirst and Hopkins (1998) examine whether the recognition of comprehensive income in the income statement allows analysts to better

detect when managers manage earnings than when the income is reported in a less prominent financial statement. Consistent with their expectations, they find that analysts' pricing judgments are affected by reporting format and the statement of income provides users with more transparent information.

Maines and McDaniel (2000) examine whether the recognition of comprehensive income in alternative financial statements affects nonprofessional investors' judgments. They develop a framework to examine whether and how different presentation formats affect nonprofessional users' processing of comprehensive income information. The framework is depicted in Figure 3.2.

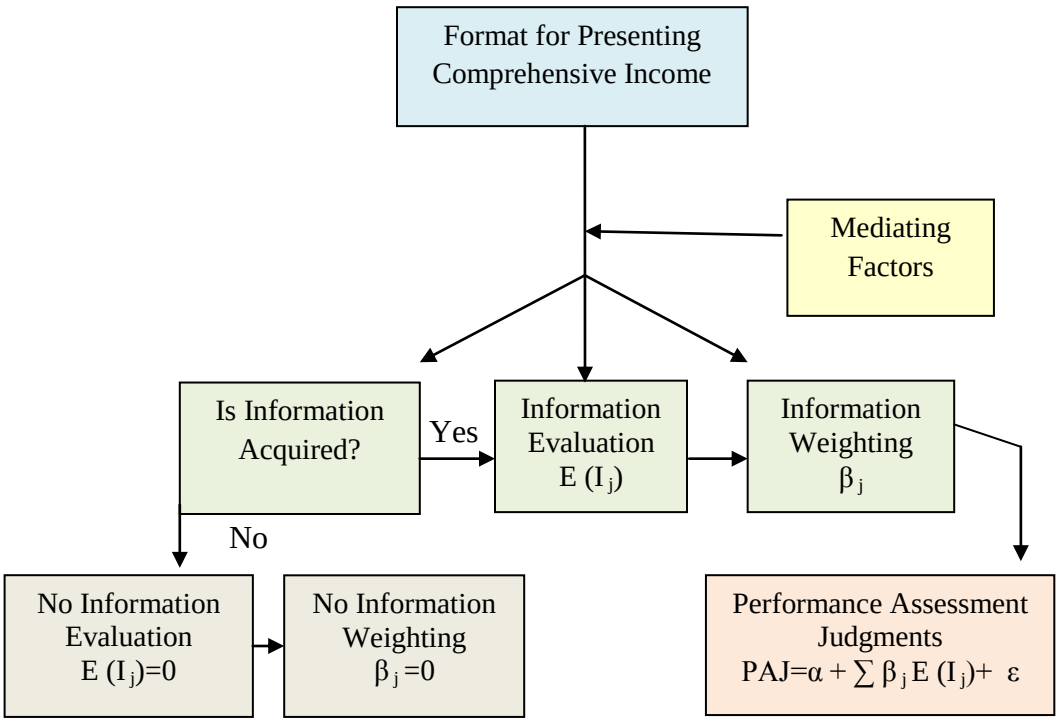

Figure 3.2

Framework for the Effects of Comprehensive Income Presentation Format on Investors' Performance Assessment Judgments (Maines and McDaniel 2000, pg. 184)

As shown in Figure 3.2, Maines and McDaniel's (2000) framework models decision makers' "performance assessment judgments (PAJ) as a weighted linear combination of cues ($PAJ= \alpha + \sum \beta_j E(I_j) + \varepsilon$). Cues ($E(I_j)$) are an individual's evaluation (E) of specific financial-statement information (I_j) and are outputs of the information acquisition and evaluation processes" (Maines and McDaniel 2000, p.183). Acquisition is defined as the decision maker's ability to recall where an item appeared in a viewed financial statement. Information evaluation refers to a decision maker's assessment of a financial statement item's characteristics. Weight (β_j) is an estimate of how much value a decision maker places on an evaluated item's characteristics in judgments.

The results of Maines and McDaniel (2000) indicate that regardless of format, users are able to acquire and evaluate comprehensive income information. They tend to weight the information more heavily, however, if it is presented in a format that clearly helps them understand the relevance of the information. This supports the idea that financial statement users have more free capacity (i.e., germane load) in working memory to weight information in judgments and decisions when the cognitive load associated with understanding and processing the information is reduced.

In summary, prior financial accounting research (e.g., Hopkins 1996; Hirst and Hopkins 1998; Maines and McDaniel 2000) finds that both nonprofessional and professional financial statement users can be influenced by whether a specific financial statement item is presented in one section of a financial statement versus another section of the same statement or presented in different financial statements.

A goal of the current study is to extend prior research by examining whether the manner (an extraneous load factor) in which complex information (an intrinsic load factor) is presented in a financial statement affects users' ability to understand and process information in their limited working memory (i.e., germane load). Specifically, I examine whether presenting defined pension cost information (a complex item) across different sections of the statement of comprehensive income (disaggregation of a complex item) reduces the effect of item complexity on users' judgments.

3.4 Disaggregating Financial Statement Information

While not directly related to the topic of disaggregating a complex item across a financial statement, there is plentiful support from standard setting bodies and financial accounting research suggesting disaggregation can be useful to decision makers. Standard setting boards, for instance, stress that disaggregation is a core principle of financial reporting and that managers should place more of an emphasis on disaggregating information in financial reports when doing so will provide users with decision-useful information (Hopkins, Bradshaw, Callahan, Ciesielski, Gordon, Kohlbeck, Hodder, Laux, McVay, Stober, Stocken and Yohn 2009; FASB 2010b; IASB 2010b).

The financial accounting literature, in general, supports the boards' suggestion that disaggregation can provide financial statement users with decision-useful information. Bernhardth and Copeland (1970) and Beaver and Demski (1979), for instance, discuss that if aggregated financial data do not completely describe the function

and/or nature of the information provided there may be a loss of data and an increase in information processing cost to financial statement users.[10]

In a slightly different vein, Ortman (1975) and Harvey, Rhode, and Merchant (1979) argue that disaggregation can signal quality of information to users. They find that in some situations (e.g., stock price judgments and evaluation of investment quality) financial analysts prefer disaggregated financial statement information because they believe it provides them with more useful information. Abdel-Khalik (1973) examines the effects of varying the level of accounting data aggregation on the quality of the loan decision of 207 bank loan officers. He finds that loan officers who use disaggregated data tend to perform better in analyzing defaulted firms. That is, when firms' performance is marginal, the disaggregation of financial reports provides users with better risk indicators. It can be inferred from the findings that disaggregation can reduce users' extraneous load leaving more room in their working memory for knowledge acquisition.

From a market return perspective, Lipe (1986) also provides an analysis of the information value provided by disaggregation. He examines whether disaggregating earnings into six components (gross profit; general, selling and administration; depreciation expense; interest expense; tax expense; and other items) influences market participants' investment decisions. He finds that the decomposition of earnings information provides a small but statistically significant amount of economically useful information to users that would be lost with aggregated information. That is, he finds

[10] While outside of the scope of this study, Beaver and Demski (1979) suggest that in certain situations an essentially costless reporting alternative to aggregating/disaggregating income numbers is to provide additional information in the financial disclosures.

earnings components tend to explain more variation in stock returns than aggregated earnings alone.

Fairfield, Sweeney, and Yohn (1996) and Apergis and Sorros (2009) also show that disaggregation of earnings into operating income and non-operating income is associated with decision-useful information. That is, they find that disaggregation of income into operating and non-operating activities provides users with information about different types of economic events and this improves their ability to predict a firm's future profits and to predict a firm's market price, respectively.

Related, Esplin, Hewitt, Plumlee, and Yohn (2010) examine whether the FASB's assertions that the disaggregation of financial statements into operating and financing activities will improve users' earnings forecasting abilities and enable more accurate forecasts of future earnings than the disaggregation into unusual and/or infrequent items in the income statement. They find mixed results on whether disaggregation improves users' forecasting abilities. In particular, they find that disaggregating financial statement items into operating and financing activities does not seem to improve users' ability to forecast earnings relative to when the statements are disaggregated into unusual and/or infrequent items. The authors conjecture that even though operating and financing activities may have different implications related to a firm's future profits, unusual and/or infrequent items provide investors with more useful information about earnings persistence. The conjecture supports the idea that certain presentation methods can reduce the cognitive load on users' working memory and free capacity for knowledge acquisition.

Most recently, Bloomfield, Hodge, Hopkins, and Rennekamp (2010) investigate whether enhancing levels of disaggregation within sections of a financial statement and cohesive classification of information across financial statements can influence analysts' ability to identity firms' operating structures.[11] Overall, they find that analysts are better able to recognize firms' operating structure when financial statement information is disaggregated and cohesively classified in financial statements. It should be noted that disaggregating information related to operating structure is not the same as disaggregating a single complex financial statement item such as defined pension cost.

3.5 Disaggregating a Complex Item

Standard setting boards suggest that disaggregation can help financial statement users better assess how different components of an item respond uniquely to economic events. Since, however, some items (such as defined pension cost) are complex in the sense of the volatile and the interlocking nature of the information used in the assumptions to measure and report the cost, disaggregation may make it more difficult for users to understand the value of the information. The issue therefore becomes whether there is a net benefit to disaggregating a complex item across different sections of a financial statement relative to aggregating the same complex item within one section of a financial statement.

The accounting literature related to volatility (an identified factor of complexity) suggests disaggregating volatile information in financial reports can provide users with

[11]Bloomfield, Hodge, Hopkins, and Rennekamp (2010) examine the usefulness of disaggregating cost of goods sold into materials, freight and transportation, labor, depreciation, handling, other overhead, and decrease in fair value of cash flow hedges in the operating section of the income statement. They also aggregate/disaggregate selling expense, general and administrative expenses, and other income (expense) items.

decision-useful information. Lev (1968; 1970), for instance, discusses that if the main objective of financial statement reporting is to provide information that will help users predict a firm's future cash flows, then firm managers should supply disaggregated information about unstable (e.g., volatile) items. Specifically, he argues that because it is difficult to make predictions with an aggregated variable whose time series is volatile, disaggregation may help decision makers raise more questions and draw more inferences as to the function, nature, and/or cause of the unstable variable. Disaggregation, for example, may reduce a smoothing (or additive) effect of perceived volatility and allow users to better understand how and why a variable is unstable.

Accounting research studies seem to support this idea. Barton and Waymire (2004), for example, investigate whether higher quality financial reporting measured as income statement and balance sheet transparency (i.e., disaggregation of data), accounting conservatism, and the purchase of an external auditor reduces investor loss during a period such as a stock market crash. They measure disaggregated income statement data as separate disclosures of sales, cost of goods sold, depreciation expense, tax expense, and other operating expenses. Among their findings, they show disaggregation allows financial statement users to detect the underlying economic factors associated with changes in net income and net assets more accurately. They also find that firms with higher-quality financial reporting encounter smaller stock price declines during volatile periods.

Collectively, prior accounting research suggests disaggregating complex (as measured by pension cost and volatile pension cost) information can provide financial

statement users with decision-useful information.[12] Since there are cognitive costs associated with understanding complex information, the key question examined in the current study is whether users receive relative benefit from the disaggregation of a complex item across different sections of a financial statement relative to aggregation of the same complex item within one section of a financial statement. Specifically, the question is when users are trying to understand complex information (an increase in intrinsic cognitive load), will the manner in which the information is presented (a possible decrease in extraneous load) provide nonprofessional investors with more working memory space (i.e., germane load) to properly acquire, evaluate, and/or weight the information in their judgments? This question has not been answered by prior accounting research since the research has not directly examined the effects of cognitive load factors on judgments. That is, financial statement users have limited capacity in working memory and factors such as the degree of a item's complexity (intrinsic load), users' knowledge (intrinsic load), the manner in which the information is presented (extraneous load), and free capacity in working memory (a germane load) can each have a significance influence on users' ability to understand and process information in working memory. Additionally, research has not considered whether disaggregating a complex item on the face of a financial statement can help free space in a nonprofessional investor's working memory to understand and weigh information in judgments.

Using the theory of cognitive load and components of the Maines and McDaniel (2000) framework on presentation format, I extend the disaggregation literature by

[12] Defined pension cost represents one high level of information complexity and volatile defined pension cost represents a second higher level of information complexity.

investigating whether the method of presenting defined pension cost in the statement of comprehensive income affects users' cognitive load and ability to evaluate and weight the information in their judgments (e.g., predicting a firm's future performance). The research will allow a better understanding of whether financial statement users receive benefit from the disaggregation of a complex item across a financial statement.

3.6 Hypotheses

Integrating the research on item complexity, cognitive load theory, financial statement presentation format, and disaggregation, I develop hypotheses related to whether degree of item complexity and/or disaggregating a complex item (defined pension cost) across the face of a financial statement (the statement of comprehensive income) affects nonprofessional investors' judgments.

As indicated earlier, cognitive load theory suggests financial statement users have limited working memory and factors such as the users' knowledge (intrinsic load), the degree of information complexity (intrinsic load), and the manner in which the information is presented (extraneous load) can each influence users' ability to understand and process the information in working memory (Sweller 1988, 1989). Maines and McDaniel's (2000) framework on the effects of presentation format on investors' judgments and decisions adds to cognitive load theory by providing a basis for evaluating whether and how disaggregation (an extraneous load factor) affects users' judgments and decisions.

A combined framework for the effects of cognitive load factors and presentation method on nonprofessional investors' judgments is depicted in Figure 3.3. While the framework represents inputs of all cognitive load factors on judgments, I am interested in

testing specific relationships in the framework. As will be discussed in the following sections, the hypotheses depicted in the figure examine the effects of degree of item complexity and disaggregating a complex item across the face of a financial statement on nonprofessional investors' judgments. Other factors presented in the model are controlled in my experiment.

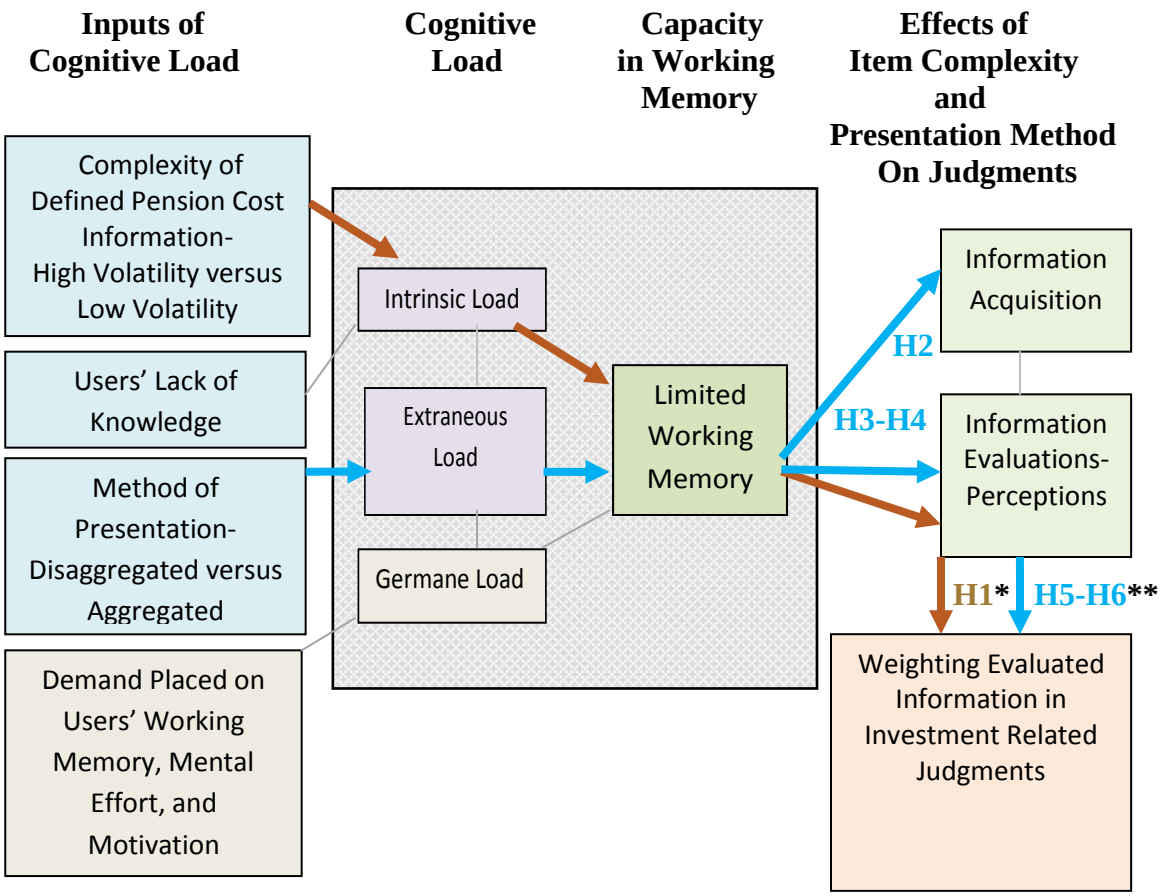

Figure 3.3

Framework for the Effects of Item Complexity and Method of Presenting a Complex Item on a Financial Statement on Nonprofessional Investors' Judgments

Notes:
* H1 represents an interaction between an input of cognitive load (i.e., complexity of defined pension cost information-high volatility versus low volatility) in limiting working memory and information evaluations-perceptions of volatility.
**H5 represents an interaction between an input of cognitive load (i.e., method of presentation-disaggregated versus aggregated) in limiting working memory and information evaluations-perceptions of volatility (predominate function). H6 represents a three-way interaction between inputs of cognitive load (i.e., complexity of defined pension cost information-high volatility versus low volatility and method of presentation-disaggregated versus aggregated) and information evaluations-perceptions of volatility.

In the following sections, I present hypotheses that state that although nonprofessional investors can acquire and evaluate defined pension cost information regardless of its degree of complexity, as the degree of complexity increases, intrinsic load associated with assessing the information will increase and this will lead to more perceived uncertainty (as measured by risk assessment) in judgments. I also posit that disaggregating defined pension cost across the statement of comprehensive income will reduce nonprofessional investors' cognitive load associated with learning and having to search other sources to better understand the complex information. This reduction in cognitive load will lead to improvements in the acquisition and evaluation of defined pension cost information as well as lead to less perceived uncertainty in judgments. Finally, I also posit that disaggregation will moderate the relationship between degree of complexity and users' judgments because disaggregation will help users better assess defined pension cost's degree of complexity and as a result will free up space in working memory (e.g., germane load) for understanding and processing information in judgments.

3.6.1 Hypothesis Related to Degree of Item Complexity on Weighting Defined Pension Cost Information in Judgments

Prior research suggests that nonprofessional financial statement users have less than a clear idea as to what financial statement information is important for financial analysis (Maines and McDaniel 2000). They, therefore, tend to read statements in a sequential fashion and as a result, are likely to acquire and evaluate information regardless of degree of complexity (Bouwman, Frishkoff, and Frishkoff 1987; Hunton and McEwen 1997; Hirst and Hopkins 1998 Maines and McDaniel 2000).

Cognitive load theory (e.g., Sweller 1988, 1989; Mousavi, Low, and Sweller 1995; Hirshliefer and Teoh 2003) argues, however, that as the degree of an item's complexity increases users have more intrinsic load on working memory and this leaves less capacity for knowledge acquisition (i.e., germane load). Prior archival and experimental research (Lipe 1986; Maines and McDaniels 2000) supports cognitive load theory by documenting, for example, that volatile income is associated with higher betas and investor risk premiums because volatility increases complexity (i.e., uncertainty in predicting a firm's future performance). As such, it is expected that investors' risk judgments will increase when volatility increases the complexity of an already complex component of net income.

Using the tenets of cognitive load theory and prior research, I posit that by definition defined pension cost is considered complex because of the uncertainties surrounding the interlocking nature of the information used by management in forming the assumptions used to measure and report the cost. As such, when the degree of the defined pension cost's complexity increases the nonprofessional investors' intrinsic cognitive load should further increase (see Figure 3.3) and this will reduce their ability to understand and/or process the complex information in judgments. That is, when more complexity (volatility) is added to the cost, the uncertainty associated with the cost should be even higher. As a result, perceptions of risk associated with the volatility in judgments will increase (see H1 on Figure 3.3). Stated differently, I predict a difference in nonprofessional investors' judgments when degree of defined pension cost complexity increases.

H1: Nonprofessional investors will place greater weight on perceived volatility of defined pension cost in judgments when the cost has high volatility relative to when the cost has low volatility.

Although prior research provides support for my directional hypothesis, some researchers argue that analysts and investors may completely discount defined pension cost information in their judgments because of the uncertainty related to the complexity and interlocking nature of assumptions used to measure and report the cost information (Landsman and Olson 1995; Picconi 2006). As such, it is possible that volatility in defined pension cost information displayed on a financial statement may not affect investors' judgments. If this is the case, an investigation on the effect of recognized volatile defined pension cost on users' judgments is warranted to determine whether, in fact, the hypothesized relationships hold. The hypothesized relationship between volatility (a proxy for degree of item complexity) and nonprofessional investors' judgments is depicted in Figure 3.3 above.

3.6.2 Hypotheses Related to Presentation Method on Acquiring, Evaluating, and Weighting Defined Pension Cost Information in Judgments

As previously stated, Maines and McDaniel (2000) argue that nonprofessional financial statement users tend to have less than a clear idea as to what financial statement information is important for financial analysis. They, therefore, tend to read statements in somewhat of a sequential fashion (Bouwman, Frishkoff, and Frishkoff, 1987; Hunton and McEwen 1997; Hirst and Hopkins 1998) and are likely to acquire and evaluate some information regardless of how it is presented (Maines and McDaniel 2000).

Since, however, degree of item complexity and users' (lack of) knowledge can affect a user's capacity for understanding and processing complex information, an issue becomes—does the manner in which a complex item is presented in a financial statement (e.g., disaggregated versus aggregated) affect the amount of complex information users acquire (see Figure 3.3)? Another issue is if nonprofessional investors use limited working memory capacity to acquire information about a complex item, does the manner in which the complex information is presented (e.g., disaggregated versus aggregated) also affect a users' ability to evaluate information?

Cognitive load theory (e.g., Sweller 1988, 1989; Mousavi, Low, and Sweller 1995; Hirshliefer and Teoh 2003) suggests it may be difficult for individuals to acquire useful information and/or evaluate information, especially when the information comes from various sources. Mousavi, Low, and Sweller (1995), for instance, find that when individuals have to mentally split their attention to integrate information from various sources it has a negative effect on their acquisition of information. This may be the case when complex information (e.g., defined pension cost information) is aggregated in a financial statement, requiring users to acquire information from other sources in determining the aggregate number's usefulness.[13] Users may not be able to acquire and/or correctly evaluate decision-relevant information from the aggregated item because of the cognitive cost involved in searching other sources (e.g., searching within the notes) to try and understand the information. In other words, aggregation may add extraneous load to a user's working memory causing less capacity for knowledge acquisition (i.e., germane load).

[13] In the context of this dissertation, sources include financial statements, notes to the financial statements, and management's discussion and analysis.

Applying the principles of cognitive load theory, I posit that even though nonprofessional investors will be able to acquire defined pension cost information regardless of how it is presented, they will be likely to acquire more information about the cost when it is presented in a fashion that reduces cognitive load and allows them to learn and/or better understand the cost. This is relative to when the cost is presented in a fashion that requires nonprofessional investors to search other information sources (e.g., examine notes that contain the disaggregated information) to gain a better understanding of the cost. Thus, I predict the following.

H2: Nonprofessional investors will acquire more information about defined pension cost when the cost is disaggregated across the statement of comprehensive income relative to when the cost is aggregated in the same statement.

Using the tenets of cognitive load theory, I also conjecture that while nonprofessional investors will be able to evaluate defined pension cost information regardless of how it is presented, they will be likely to evaluate characteristics of the item more accurately when the information about the item is presented in a manner that reduces cognitive load and facilitates the ability of users to learn, understand, and /or interpret the economic significance of the item. This is relative to when the information is presented in a manner that demands nonprofessional investors search other information sources (e.g., examine notes) to learn or gain a better understanding of the item. My conjectures result in the following hypotheses.

H3a: Nonprofessional investors will evaluate the volatility surrounding defined pension cost more accurately when the cost is disaggregated across the statement of comprehensive income relative to when the cost is aggregated in the same statement.

H3b: Nonprofessional investors will evaluate the predominate function of defined pension cost more accurately when the cost is disaggregated across the statement of comprehensive income relative to when the cost is aggregated in the same statement. [14]

Related, using the principles of cognitive load theory, I also conjecture that nonprofessional investors' perceptions of defined pension cost will differ between presentation methods (disaggregated across the statement of comprehensive income versus aggregated in the same statement). The difference will occur because disaggregation will reduce users' perceived uncertainty surrounding accuracy in evaluating information. My conjectures result in the following hypotheses.

H4a: Nonprofessional investors' perceptions of the volatility surrounding defined pension cost will differ between presentation methods (disaggregated across the face of the statement of comprehensive income versus aggregated in the same statement).

[14] I define predominate function as the activity that represents the primary driver of total cost.

H4b: Nonprofessional investors' perceptions of the predominate function of defined pension cost will differ between presentation methods (disaggregated across the face of the statement of comprehensive income versus aggregated in the same statement).

I also argue that the way the defined pension cost information is presented (e.g., disaggregated versus aggregated) in a financial statement will have a significant influence on how nonprofessional investors impound the evaluated information in their judgments. Disaggregation should enhance visibility of characteristics (e.g., volatility and/or the predominate function) of the defined pension cost information and as a result affect the weight nonprofessional users place on the information.

For instance, disaggregation should help nonprofessional investors better understand what aspect of the pension cost is volatile and whether this is important in their judgments. Whereas, aggregated information may be discounted by users because it can be a noisy measure that requires additional cognitive cost (e.g., searching within the notes) to understand. As a result, differences in judgments and decisions will develop from differences in how users weigh the information.

The weight differences can be attributed to the cognitive load nonprofessional users incur when trying to understand the economic significance of the defined pension cost information. When dealing with defined pension cost, a nonprofessional investor will automatically have a higher level of intrinsic load in working memory due to the information's degree of complexity and a lack of knowledge concerning the information. So, information about defined pension costs presented in a fashion that reduces some of

the cognitive load should provide the investor with more space in working memory to assess the importance of the information in judgments.

In essence, I expect that the disaggregation of defined pension cost in the statement of comprehensive income will reduce the cognitive load on nonprofessional investors' limited working memory and this will increase their weighting of defined pension cost information in judgments.[15] This will happen because disaggregation will facilitate the ability of nonprofessional investors to learn, understand, and/or interpret defined pension cost information. Specifically, disaggregation provides users with information about characteristics (e.g. volatility and predominate function) of the cost and it alters the location of where information is presented (i.e., classified), helping users understand how the cost relates to economic events. This is relative to when the defined pension cost is presented in an aggregated fashion that requires the nonprofessional investor to search other information sources (e.g., examine notes) to gain a better understanding of the usefulness of the information.

H5a: Nonprofessional investors will place greater weight on perceived volatility of defined pension cost in judgments when the cost is disaggregated across the face of the statement of comprehensive income relative to when the cost is aggregated in the same statement.

[15] I examine nonprofessional investors judgments related to: (1) whether investing in the company stock would be a risky endeavor, (2) whether they would be willing to invest their 401k retirement account in the company stock, (3) a stock valuation (a range estimate and point estimate), and (4) the likelihood that the pattern of pension cost will continue into the future.

H5b: Nonprofessional investors will place greater weight on perceived predominate function of defined pension cost in judgments when the cost is disaggregated across the face of the statement of comprehensive income relative to when the cost is aggregated in the same statement.

Finally, I also posit that disaggregation will moderate the effect of degree of item complexity on judgments because it helps nonprofessional investors to better assess what aspect of the pension cost is highly volatile and whether this is important in their judgments. Whereas, aggregated information may be discounted by users because it requires additional cognitive cost (e.g., searching within the notes) to understand degree of complexity. As a result, how users weigh high volatility disaggregated defined pension cost information in judgments will significantly differ from how users weigh high volatility aggregated defined pension cost information or low volatility disaggregated (aggregated) defined pension cost information in judgments.

H6: Nonprofessional investors will place the greatest weight on perceived volatility of defined pension cost in judgments when the cost has high volatility relative to low volatility and is disaggregated across the statement of comprehensive income relative to when the cost is aggregated in the same statement.

As stated earlier, even though I argue cognitive load theory and prior research provides ample support for the direction of my hypotheses, I do recognize that some researchers argue that individuals have a limited working memory and regardless of how complex information is presented, they may not be able to understand the intrinsic value

of the information in judgment and decision tasks (Sweller 1989, 1988; Hirshliefer and Teoh 2003). For instance, Corando and Sharpe (2003) question whether market participants completely understand and/or use pension accounting information when making judgments and decisions. It is, therefore, possible that providing disaggregated pension information may not help nonprofessional investors weigh the information in judgments. If this is the case, a study on disaggregation is warranted to ascertain whether in fact the hypothesized relationships hold. The hypothesized relationships between disaggregating defined pension cost across the statement of comprehensive income and nonprofessional investors' judgments are depicted in the previous Figure 3.3.

A summary of the hypotheses is presented below in Table 3.1.

Table 3.1

Summary of Hypotheses

Degree of Item Complexity	
Hypothesis 1	Nonprofessional investors will place greater weight on perceived volatility of defined pension cost in judgments when the cost has high volatility relative to when the cost has low volatility.
Presentation Method	
Hypothesis 2	Nonprofessional investors will acquire more information about defined pension cost when the cost is disaggregated across the statement of comprehensive income relative to when the cost is aggregated in the same statement.
Hypothesis 3	a: Nonprofessional investors will evaluate the volatility surrounding defined pension cost more accurately when the cost is disaggregated across the statement of comprehensive income relative to when the cost is aggregated in the same statement.
	b: Nonprofessional investors will evaluate the predominate function of defined pension cost more accurately when the cost is disaggregated across the statement of comprehensive income relative to when the cost is aggregated in the same statement.
Hypothesis 4	a: Nonprofessional investors' perceptions of the volatility surrounding defined pension cost will differ between presentation methods (disaggregated across the face of the statement of comprehensive income versus aggregated in the same statement).
	b: Nonprofessional investors' perceptions of the predominate function of defined pension cost will differ between presentation methods (disaggregated across the face of the statement of comprehensive income versus aggregated in the same statement).
Hypothesis 5	a. Nonprofessional investors will place greater weight on perceived volatility of defined pension cost in judgments when the cost is disaggregated across the face of the statement of comprehensive income relative to when the cost is aggregated in the same statement.
	b. Nonprofessional investors will place greater weight on perceived predominate function of defined pension cost in judgments when the cost is disaggregated across the face of the statement of comprehensive income relative to when the cost is aggregated in the same statement.
Degree of Item Complexity and Presentation Method (Interaction)	
Hypothesis 6	Nonprofessional investors will place the greatest weight on perceived volatility of defined pension cost in judgments when the cost has high volatility relative to low volatility and is disaggregated across the statement of comprehensive income relative to when the cost is aggregated in the same statement.

CHAPTER 4: METHOD

In this chapter of the dissertation, I describe the approach used to test the hypotheses that examine the effects of degree of item complexity and the method used to present a complex item on the face of a financial statement on nonprofessional investors' judgments. In the first part of this section, I focus on the experimental research design. I discuss the variables of interest and the choice of master's level business students as proxies for nonprofessional investors. I also include a discussion of the case materials and task procedures. In the second part of this section, I detail the planned statistical analyses.

4.1 Experimental Design

To test the hypotheses that investigate whether degree of item complexity and/or disaggregating a complex item (defined pension cost) across the face of a financial statement influences nonprofessional investors' judgments, I conduct an experiment using a full-factorial 2x2 between-participants design. The independent variables are volatility (high versus low) and presentation method (disaggregated versus aggregated). The dependent variables are nonprofessional investors' acquisition, evaluation, and weighing of defined pension cost information in performance related judgments.

4.2 Independent Variables

4.2.1 Manipulated Variables

The two manipulated factors in the 2x2 between-participants design are volatility

and presentation method. The first factor, volatility, relates to the complexity resulting from the variance in the defined pension cost. That is, the volatility factor allows the nonprofessional investor to assess a measured level of complexity associated with the defined pension cost. In the high volatility condition, the cost variance is large (variance > 94%) over the three year comparative period. This is intended to strongly suggest management is not effective in controlling the defined pension cost. In the low volatility condition, the defined pension cost variance is small (variance < 3%) over the three year comparative period. This is intended to suggest management is effective in controlling the cost.

The second factor, presentation method, relates to how defined pension cost information is presented in the statement of comprehensive income. The cost is either presented in a disaggregated manner (i.e., cost components are reported in the operating, operating-finance, and other comprehensive income sections of the statement) or an aggregated manner (i.e., the net cost is presented in the operating section of the statement). In the disaggregated condition, participants will be able to see on the face of the financial statement that the operating-finance component represents the predominant function (i.e., primary driver of the total cost). Therefore, these participants are able to easily assess that the pension plan is being insufficiently funded. In the aggregated condition, participants will not be able to see on the face of the financial statement what cost component accounts for the predominate portion of the total cost. Hence, these participants are not able to easily assess pension plan effectiveness because they have to

search other sources (e.g., the notes) to see that the pension plan is being insufficiently funded.[16]

4.2.2 Covariates

Covariates are included in the experimental design to account for factors (e.g., knowledge and experience) other than the manipulated variables that may influence nonprofessional investors' judgments.

I ask participants to self-report their—mental effort, motivation, risk preference, belief about pension complexity, belief about management effectiveness in regard to the task materials, and belief about factors affecting their cognitive load while completing the experimental task.

Additionally, questions are asked about the participant's level of education, the number of accounting and/or finance courses the participant has taken, whether the participant has completed or is currently enrolled in a financial analysis course, and whether the participant has investment experience. I ask participants to self-report their knowledge and experience related to pension accounting. Participants are also asked to answer some general pension questions to assess their knowledge related to pensions.

After initial analysis, those covariates found to be significant are retained in the models used to test the hypotheses.

4.3 Dependent Variables

Three dependent variables (acquire, evaluate, and weigh) are used to capture whether volatility (high versus low) and/or the presentation method (disaggregation versus aggregation) used to recognize a complex item on the face of a financial statement

[16] In all conditions, the disaggregated information is presented in the notes.

influences nonprofessional investors' acquisition, evaluation, and/or weighing of information in judgments.

The first dependent variable, acquire, reflects whether the presentation method used to recognize defined pension cost information across the statement of comprehensive income affects nonprofessional investors' ability to acquire defined pension cost information.

The second dependent variable, evaluate, is used to examine whether the method used to present defined pension cost information across the statement of comprehensive income has an influence on nonprofessional investors' evaluations (e.g., perceptions) of the defined pension cost information.

The third dependent variable, weigh, allows me to examine whether volatility and/or the presentation method used to recognize defined pension cost information affects the weight nonprofessional investors place on the evaluated defined pension cost information in their judgments. Judgments include investors' belief that investing in the company is risky, investors' willingness to invest 401k retirement funds in the company, investors' range and point estimate of the company's stock price, and investors' belief that the defined pension cost historical pattern will continue in the future.

4.3.1 Dependent Variable Related to the Effects of Degree of Complexity on Weighing Defined Pension Cost Information in Judgments

The dependent variable weigh is used to examine the relationship between volatility (a proxy for degree of item complexity) and the weighing of defined pension cost information in judgments (hypothesis 1). I predict nonprofessional investors will place greater weight on perceived volatility of defined pension cost in judgments when

defined pension cost has high volatility relative to when the cost has low volatility. The variable, weigh, is captured using a two stage process. In the first stage of the process, I ask participants to make several judgments. For instance, I ask participants to indicate the degree to which they believe investing in the company's stock is risky on a 10-point scale with 1 indicating "no risk" and 10 indicating "extreme risk." I also ask participants to provide a stock value (i.e., a range estimate and a point estimate) they would place on the company's market price per share. I expect those in the highly volatile condition to provide a lower value and a wider range estimate (greater uncertainty) than those in the low volatility condition. Additionally, I ask participants to indicate the degree to which they believe the historical pattern of the defined pension cost will continue three years into the future on a 10-point scale with 1 indicating "not likely" and 10 indicating "extremely likely." I expect those in the high volatility condition to provide a lower likelihood of pattern continuing than those in the low volatility condition.

In the second stage of the process, I use participants' evaluation as to whether they perceive that the defined pension cost is volatile on a 10-point scale with 1 indicating "no volatility" and 10 indicating "extreme volatility." I examine the different weights of perceived volatility on the performance measures from the first stage by regressing the performance judgments on the interaction of perceived volatility and the manipulated variable volatility. Participants in the high volatility condition should see that defined pension cost variance is high over the three year comparative period. The high volatility condition along with perception of volatility should result in participants judging performance as less effective in controlling the pension cost. As such, risk judgment measures will increase with the volatility of the cost.

4.3.2 Dependent Variables Related to the Effects of Presentation Method on Acquiring, Evaluating, and Weighing Defined Pension Cost Information in Judgments

This section provides information on the how the dependent variables (acquire, evaluate, and weigh) are measured and used to examine the relationship between presentation method and the acquisition, evaluation, and weighing of defined pension cost information in judgments.

4.3.2.1 The Effects of Presentation Method on Acquiring Defined Pension Cost Information

The dependent variable, acquire, is used to test hypothesis 2, which predicts nonprofessional investors will acquire more information about defined pension cost when the cost is disaggregated across the statement of comprehensive income relative to when the cost is aggregated in same statement. The variable acquire is measured two ways. The first is a sum measure of the total pieces of information participants accurately recall about pension cost information, appearing in the statement of comprehensive income. A second measure is coded 0-7 based on participants' accurate response to the following seven questions about the defined pension cost information.[17]

First, participants are asked to indicate the number of locations they recall that defined pension cost information appeared in the statement of comprehensive income. This variable is coded 1 if participants correctly identify the number of locations and 0 otherwise. Second, participants are asked to identify the location(s) they recall defined

[17] Accounting literature (e.g., Maines and McDaniel 2000; Hodge, Kennedy, Maines 2004) suggest that information acquisition occurs when individuals are able to identify specific pieces of information sufficiently enough to recall that information from memory.

pension cost information being shown in the statement of comprehensive income. The variable is coded 0-1 based on participants correctly identifying the location(s). Third, participants are asked whether they believe pension cost is volatile on a 10-point scale with 1 indicating "no volatility" and 10 indicating "extreme volatility." This variable is coded 1 if participants in the high (low) volatility condition explain volatility as greater (equal to or less) than 5 on the 10-point scale and 0 otherwise. Fourth, participants are asked why the pension cost seems to have high or low volatility. This variable is coded 1 if participants explain high (low) volatility at the financing the defined pension plan level (no level) and 0 otherwise. Fifth, participants are asked to indicate the item they recall representing the largest portion of total pension cost. This variable is coded 1 if participants identify financing the pension plan and 0 otherwise. Sixth, participants are also asked to indicate how much of the total pension cost the item they recall as best explaining the cost represents on a 10-point scale with 1 indicating "no explanation" and 10 indicating "full explanation." This variable is coded 0-1 based on the accuracy in recalling the degree to which the item best explains total pension cost. Seventh, participants are asked to recall the reason for any changes in the pension cost. The variable is coded 1 if participants believe changes are a result of management assumptions and investment decisions and 0 otherwise.

Depending on the experimental condition, the defined pension cost information is presented in the operating section of the statement of comprehensive income (aggregate) or in the operating, operating-finance, and other comprehensive income sections of the statement (disaggregate). In all conditions, a net defined pension obligation is presented

in the balance sheet and full disclosure about the defined pension cost information is presented in the notes to the financial statements.

4.3.2.2 The Effects of Presentation Method on Evaluating Defined Pension Cost Information

The dependent variable evaluate is used to test hypotheses 3 and 4. Hypothesis 3a predicts that nonprofessional investors will evaluate the volatility surrounding defined pension cost more accurately when the cost is disaggregated across the statement of comprehensive income relative to when the cost is aggregated in the same statement. For this hypothesis, evaluate, is a summed measure of participants' accurate response to two questions. First, participants are asked whether they believe defined pension cost is volatile on a 10-point scale with 1 indicating "no volatility" and 10 indicating "extreme volatility." This variable is coded 1 if participants in the high (low) volatility condition explain volatility as greater (equal to or less) than 5 on the 10-point scale and 0 otherwise. Second, participants are asked why defined pension cost seems to have high or low volatility. This variable is coded 1 if participants explain high (low) volatility at the financing the defined pension plan level (no level) and 0 otherwise.

Hypothesis 3b predicts that nonprofessional investors will evaluate the predominate function of defined pension cost more accurately when the cost is disaggregated across the statement of comprehensive income relative to when the cost is aggregated in the same statement. For this hypothesis, evaluate, is also a summed measure of participants' accurate response to two questions. First, participants are asked to recall what item represents the largest portion of total defined pension cost. This variable is coded 1 if participants identify financing the defined pension plan and 0

otherwise. Second, participants are also asked to indicate how much of the total defined pension cost the item they recalled as best explaining the cost represents on a 10-point scale with 1 indicating "no explanation" and 10 indicating "full explanation." This variable is coded 0-1 based on the accuracy in recalling the degree to which the item best explains total pension cost.

Hypothesis 4a predicts that nonprofessional investors' perceptions of the volatility surrounding defined pension cost will differ between presentation methods (disaggregated across the face of the statement of comprehensive income versus aggregated in the same statement). For this hypothesis, evaluate, is a measure of participants' response to one question. Participants are asked whether they believe defined pension cost is volatile on a 10-point scale with 1 indicating "no volatility" and 10 indicating "extreme volatility."

Hypothesis 4b predicts that nonprofessional investors' perceptions of the predominate function of defined pension cost will differ between presentation methods (disaggregated across the face of the statement of comprehensive income versus aggregated in the same statement). For this hypothesis, evaluate is a measure of participants' response to one question. Participants are asked to indicate how much of the total defined pension cost the item they recalled as best explaining the cost represents on a 10-point scale with 1 indicating "no explanation" and 10 indicating "full explanation."

4.3.2.3 The Effects of Presentation Method on Weighting Defined Pension Cost Information in Judgments

The dependent variable weigh is used to test hypotheses 5 and 6. Hypothesis 5a predicts that nonprofessional investors will place greater weight on perceived volatility of

defined pension cost in judgments when the cost is disaggregated rather than aggregated on the face of the statement of comprehensive income. Hypothesis 5b predicts that nonprofessional investors will place greater weight on perceived predominate function of defined pension cost in judgments when the cost is disaggregated rather than aggregated on the face of the statement of comprehensive income. And, hypothesis 6 predicts that nonprofessional investors will place the greatest weight on the perceived volatility of the defined pension cost in judgments when the cost has high volatility rather than low volatility and is disaggregated rather than aggregated across the statement of comprehensive income.

I measure the weigh variable using a two stage process. The first stage is the same as was described and used to assess weigh for hypothesis 1 (see Section 4.3.1.2). In this stage, I analyze participants' judgments. In the next stage of the process, I directly examine the different weights of perceived volatility (predominate function) on the performance measures from stage one by regressing performance judgments on three different interactions. For hypothesis 5a, the interaction is between perceived volatility and presentation method (disaggregated versus aggregated). For hypothesis 5b, the interaction is between perceived predominate function and presentation method (disaggregated versus aggregated). For hypothesis 6, the interaction is between perceived volatility, volatility (high versus low), and presentation method (disaggregated versus aggregated). A description of the dependent variables as well as the independent variables is provided in Table 4.1.

Table 4.1

Description of Variables

Name of Variables	Description
Dependent Variables	
Acquire Info	A: Open ended question that asks participant to list all pieces of information they recall about pension cost information appearing in the statement of comprehensive income. *(Hypothesis 2)* B: Total pieces of information participant recalls (from memory) about pension cost information. Coded 0-7 based on accuracy of response to 7 specific questions. (*Hypothesis 2*) (1) Recall the number of locations where pension cost information appeared in the statement of comprehensive income. This variable is coded 1 if participants correctly identify the number of locations and 0 otherwise. (2) Recall the location(s) where pension cost information is shown in the statement of comprehensive income. The variable is coded 0-1 based on participants correctly identifying the location(s). (3) Recall whether pension cost is volatile on a 10-point scale with 1 indicating "no volatility" and 10 indicating "extreme volatility." This variable is coded 1 if participants in the high (low) volatility condition explain volatility as greater (equal to or less) than 5 on the 10-point scale and 0 otherwise. (4) Recall why the pension cost seems to have high or low volatility. This variable is coded 1 if participants explain high (low) volatility at the financing the defined pension plan level (no level) and 0 otherwise. (5) Recall the item representing the largest portion of total pension cost. This variable is coded 1 if participants identify financing the pension plan and 0 otherwise. (6) Recall how much of the total pension cost does the item best explaining the cost represents on a 10-point scale with 1 indicating "no explanation" and 10 indicating "full explanation." This variable is coded 0-1 based on the accuracy in recalling the degree to which the item best explains total pension cost. (7) Recall the reason for changes in the pension cost. The variable is coded 1 if participants believe any changes are a result of management assumptions and investment decisions and 0 otherwise.

Table 4.1, Continued

Description of Variables

Name of Variables	Description
Dependent Variables	
Evaluate	(1) Evaluate Volatility - A summed measure of participants' accurate response to two questions. First, participants are asked whether they believe defined pension cost is volatile on a 10-point scale with 1 indicating "no volatility" and 10 indicating "extreme volatility." This variable is coded 1 if participants in the high (low) volatility condition explain volatility as greater (equal to or less) than 5 on the 10-point scale and 0 otherwise. Second, participants are asked why defined pension cost seems to have high or low volatility. This variable is coded 1 if participants explain high (low) volatility at the financing the defined pension plan level (no level) and 0 otherwise. *(Hypothesis 3a)* (2) Evaluate Predominate Function - A summed measure of participants' accurate response to two questions. First, participants are asked to recall what item represents the largest portion of total defined pension cost. This variable is coded 1 if participants identify financing the defined pension plan and 0 otherwise. Second, participants are also asked to indicate how much of the total defined pension cost the item they recalled as best explaining the cost represents on a 10-point scale with 1 indicating "no explanation" and 10 indicating "full explanation." This variable is coded 0-1 based on the accuracy in recalling the degree to which the cost best explains total pension cost. (*Hypothesis 3b*) (3) Perceived Volatility - Degree to which participant believes (from memory) that defined pension cost is volatile on a 10-point scale with 1 indicating "no volatility" and 10 indicating "extreme volatility*."(Hypothesis 4a)* (4) Perceived Predominate Function - Degree to which participants believe the item they identified as representing the predominant function of the defined pension cost best explains the cost. The belief is measured on a 10-point scale with 1 indicating "no explanation" and 10 indicating "full explanation." (*Hypothesis 4b*)

Table 4.1, Continued

Description of Variables

Name of Variables	Description
Dependent Variables	
Weigh	Judgments (1) Risky - Degree to which participant believes investing in the company's stock is risky on a 10-point scale with 1 indicating "no risk" and 10 indicating "extreme risk." (*Hypotheses 1 and 5-6*) (2) Invest 401k - Degree to which participants would invest their 401k retirement plan assets in the company's stock on a percentage scale with 0% indicating "no investment" and 100% indicating "full investment." (*Hypotheses 1 and 5-6)* (3) Range and Price - A low-high range estimate the participant would place on the company's market price per share on a 7-point scale from $1.00 to $7.00 and an average market price per share value the participant would place on the company's stock for the year end. (*Hypotheses1 and 5-6)* (4) Pattern - Degree to which participants believe the historical pattern of the pension cost will continue three years in the future on a 10-point scale with 1 indicating "not likely" and 10 indicating "extreme likely." *(Hypotheses1 and 5-6)*
Independent Variables	
Manipulated Variables	
Volatility	Coded 1 if defined pension cost is volatile over the three year comparative period; 0 otherwise.
Presentation Method	Coded 1 if defined pension cost is disaggregated across sections of the statement of comprehensive income; 0 otherwise.
Potential Covariates	
Participants' Effort, Motivation, and Risk Preference	
Mental Effort	Degree of mental effort participant believes s/he exerted while performing the experimental task on a 10-point scale with 1 indicating "no effort" and 10 indicating "extreme effort."
Motivation	Degree of motivation to answer all questions to the best of ability on a 10-point scale with 1 indicating "not motivated" and 10 indicating "extremely motivated."

Table 4.1, Continued

Description of Variables

Name of Variables	Description
Risk Preference	Indicator of the participant's risk preference using a risk preference scale. Coded 1 if highly risk loving, 2 if very risk loving, 3 if risk loving, 4 if risk neutral, 5 if slightly risk averse, 6 if risk averse, 7 if very risk averse, 8 if highly risk averse, and 9-10 if other (Holt and Laury 2002).
Participants' Perceptions about Pension Complexity	
Pension Complex	Degree to which participant believes pensions are complex on a 10-point scale with 1 indicating "not complex" and 10 indicating "extremely complex."
Volatility Influenced	Degree to which participant believes the pension volatility (or lack of volatility) influenced judgments on a 10-point scale with 1 indicating "did not influence" and 10 indicating "strongly influenced."
Persistent	Degree to which participant believes the total pension cost is persistent (i.e., reoccurring in nature) on a 10-point scale with 1 indicating "not persistent" and 10 indicating "persistent."
Classified	Degree to which participant believes the way pension cost is presented on the statement of comprehensive income was useful in judgments on a 10-point scale with 1 indicating "not helpful" and 10 indicating "extremely helpful."
Weigh Pension	Degree to which participant believes s/he weighed the defined pension cost information differently in judgments because of where the information was located in the statement of comprehensive income on a 10-point scale with 1 indicating "did not effect" and 10 indicating "strongly effected."
Participants' Perceptions about Management Effectiveness	
Manage—Operations, Continuous Operations, Performance, and Pension	Degree to which participant believes management is effective at managing—operations, continuous operations, performance, and pensions. Each belief is measured on a 10-point scale with 1 indicating "not effective" and 10 indicating "extremely effective."

Table 4.1, Continued

Description of Variables

Name of Variables	Description
Participants' Perceptions about Cognitive Load Factors	
Volatility	
Increased Complexity	Degree to which participant believes the (lack of) pension volatility increases the complexity of the cost measured on a 10-point scale with 1 indicating "does not increase the complexity" and 10 indicating "increases the complexity."
Presentation Method	
Understand	Degree to which participant believes it was easy to understand the financial performance of the company given the way the information was presented on a 10-point scale with 1 indicating "not easy" and 10 indicating "extremely easy."
Identify	Degree to which participant believes it was easy for them to locate key pieces of information important for their assessments on a 10-point scale with 1 indicating "extremely difficult to locate" and 10 indicating "extremely easy to locate."
Evaluate	Degree to which participant believes it was easy to identify and evaluate the most important piece of information that led to their belief that investing in the company's stock is (not) risky on a 10-point scale with 1 indicating "not easy" and 10 indicating "extremely easy."
Task Complex	Degree to which participant believes the experimental task was complex on a 10-point scale with 1 indicating "not complex" and 10 indicating "extremely complex."
Demographics	
MBA	Coded 1 if the graduate level business student is an MBA student; 0 otherwise.
Year MBA	Indicator of whether the participant is a first year or second year master's level business student. Coded 2 if the participant is a second year M.B.A student, 1 if the participant is a first year M.B.A. student, 0 if other.
Age	The participant's age in years.
Number of Accounting Courses	The number of accounting and/or finance courses taken.

Table 4.1, Continued

Description of Variables

Name of Variables	Description
Financial Analysis Course	Indicator of whether the participant has taken a financial analysis course. Code 1 if the participant has taken a financial analysis course or is currently enrolled in a financial analysis course, 0 if other.
Work Experience	Indicator of whether participant has accounting and/or finance work experience. Coded 1 if yes, 0 if otherwise.
Work Experience in Months	The number of months of accounting and/or finance work experience.
Pension Work Experience	Indicator of whether participant has work experience in pension accounting. Coded 1 if yes, 0 if otherwise.
Pension Work Experience in Months	The number of months of experience in pension accounting.
Pension Knowledge	Indicator of the participant's general pension knowledge. Coded 5 if strong, 4 if semi-strong, 3 if basic, 2 if semi-weak, 1 if weak, and 0 otherwise.
Investment Experience	Indicator of whether participant has experience investing in the stock market. Coded 1 if yes, 0 if otherwise.
Invest Experience in Months	The number of months investing in the stock market.

4.4 Participants

Master's level business students are asked to participate in the study as proxies for nonprofessional investors. I use master's level business students for two reasons. First, prior research (Elliott, Hodge, Kennedy, and Ponk 2007) suggests master's level business students who have completed (or are enrolled in) a financial statement analysis course can be good proxies for nonprofessional investors in completing financial analysis tasks that are relatively high in integrative complexity. Integrative complexity is defined as

"the complexity of connections involved in making a judgment and decision" (Elliott, Hodge, Kennedy, and Ponk 2007, p. 141).[18] Second, prior literature (Libby, Bloomfield, and Nelson 2002) also suggests researchers should match the goals of their experiment with participants needed to achieve the goals of the experiment without unnecessarily using more professional participants than needed. *Ex ante*, I believe participants with basic knowledge and understanding of accounting and finance are sufficient to be representative of the nonprofessional investor.

Participants receive class participation points or nominal compensation for their time and energy. Demographic statistics are shown in table 5.1. The statistics show that all the participants can be assumed to fill the role of a nonprofessional investor. The average, median, and range numbers of accounting and finance classes taken by the participants are reported as well as the numbers for participants' age, major, and work experience (i.e., experience related to accounting and pensions). Additional data are collected and reported on the participants' investment experience.

4.5 Case Materials

The experimental materials consist of three parts. The first part contains the general instructions and a set of glossary terms that investors commonly use.[19] The second part provides the financial report—a Management Discussion and Analysis (MD&A), a three year comparative statement of comprehensive income, a three year

[18] Complexity of connections is a function of evaluating characteristics of information and assimilating various pieces of information to arrive at a judgment and/or decision (Elliott, Hodge, Kennedy, and Ponk 2007).

[19] The glossary of terms includes definitions for accumulated other comprehensive income, comprehensive income, financial performance measures, fluctuation, income from continuing operations, intangible assets, management discussion and analysis, other comprehensive income, defined pension plans, persistent, unrealized gain or loss, and volatility.

comparative balance sheet, and supplemental notes. The third part consists of a two set questionnaire.

4.5.1 General Instructions

For all versions of the experimental materials, the general instructions are the same. The participants are to assume the role of an investor who is considering investing in RBC Corporation (a fictitious manufacturer of fruit juices). In the role of potential investor, the participants are asked to read excerpted materials from the company's financial report and make several judgments based on descriptive information regarding the company.

4.5.2 Financial Report

4.5.2.1 Management Discussion and Analysis (MD&A)

For all versions of the materials, the Management Discussion and Analysis (MD&A) is the same. The MD&A is intended to help the potential investor understand the RBC Company, its operations, and its present business environment. The MD&A is provided as a supplement to the company's financial statements and accompanying notes.

For purposes of the current study, in the MD&A section of the report, RBC's management stresses that the global credit crisis no longer seems to be a major threat to the company's performance. Furthermore, in the MD&A, management states that any fluctuations related to the intangible asset and pension plan figures are the result of management assumptions and investment decisions. The purpose of this statement is to try and minimize the perception that external factors that are beyond management's control are driving the fluctuations in the manipulated numbers.

4.5.2.2 Financial Statements

For all versions of the financial statements, the line item accounts (and related financial amounts) listed on the statement of comprehensive income, the comparative balance sheet, and supplemental notes are held constant across all conditions except for any differences due to the manipulated defined pension expense information on the statement of comprehensive income. The defined pension expense has high volatility or low volatility and is aggregated in the operating section of the statement of comprehensive income or disaggregated in the operating, operating-finance, and other comprehensive income section of the same statement.

Additionally, since I report three years of financial data, it is impossible to avoid having noticeable trend patterns in the volatile data. As such, I randomly assign the order of volatility at two levels (high, low, medium and medium, low, high) to control for the possibility that participants are reacting to the trend pattern instead of the volatility in judgment.

Table 4.2 provides a summary of the manipulated defined pension expense information (with the high, low, and medium trend pattern) on the statement of comprehensive income.

Table 4.2

Manipulation of Defined Pension Cost Information on the Statement of Comprehensive Income

		High Volatility						Low Volatility					
	Year	*2010*	*% Change*	*2009*	*% Change*	*2008*	*Total*	*2010*	*% Change*	*2009*	*% Change*	*2008*	*Total*
Disaggregated	Operating Activity	$131	<1%	$130	-2%	$132	$393	$131	<1%	$130	-2%	$132	$393
	Operating-Finance Activity	**$269**	**356%**	**$59**	**-78%**	**$263**	**$591**	**$198**	**1%**	**$196**	**-1%**	**$197**	**$591**
	Other Comprehensive Income-Loss	$35	0%	$35	3%	34	$104	$35	0%	$35	3%	$34	$104
Aggregated	Net Defined Pension Expense	*$435*	*94%*	*$224*	*-48%*	*$429*	$1,088	$364	1%	$361	-1%	$363	$1,088
Total Expense for Three Years		$1,088						$1,088					

To clarify the differences between each of the conditions, in condition one (the high volatility and disaggregated condition) the statement of comprehensive income reports a net defined pension expense amount of $435 million, $224 million, and $429 million, respectively, over the periods of 2010, 2009, and 2008. The volatile operating-finance component is reported at $269 million, $59 million, and $263 million, respectively, over the same three year period. The high volatility $269 million defined pension expense in 2010 represents a 356% change from the 2009 expense; the $59 million defined pension expense in 2009 represents a -78% change from 2008.

In condition two (the low volatility and disaggregated condition), the statement of comprehensive income reports a net defined pension expense amount of $364 million, $361 million, and $363 million, respectively, over the three year period of 2010, 2009, and 2008. The low volatility operating-finance component is reported as $198 million, $196 million and $197 million, respectively, over the same time period. The $198 million defined pension expense in 2010 represents less than a 2% change from the 2009 expense; the $196 million defined pension expense in 2009 represents a -1% change from 2008.

In condition three (the high volatility and aggregated condition) the statement of comprehensive income reports a net defined pension expense of $435 million, $224 million, and $429 million, respectively, over the three year period of 2010, 2009, and 2008. The $435 million defined pension expense in 2010 represents a 94% net change from the 2009 expense and the $224 million defined pension expense in 2009 represents a net -48% change from 2008.

In condition four (the low volatility and aggregated condition) the statement of comprehensive income reports a net defined pension expense of $364 million, $361 million, and $363 million dollars, respectively, over the three year period of 2010, 2009, and 2008. The $364 million defined pension expense in 2010 represents a 1% net change from the 2009 expense and the $361 million defined pension expense in 2009 represents a -1% net change from 2008.

Given that the defined pension cost differed annually between the two volatility conditions, the total income and total comprehensive income amounts also differed during the three year period. In the high volatility disaggregated (aggregate) condition, the 2010, 2009, and 2008 net income is $61 ($26) million, $194 ($159) million, and $62 ($28) million, respectively, while the total comprehensive income is $1 million, $133 million, and $3 million, respectively. In the low volatility disaggregated (aggregated) condition, the 2010, 2009, and 2008, total income is $104 ($69) million, $109 ($74) million, and $ 105 ($71) million while the total comprehensive income is $44 million, $48 million, and $46 million, respectively.

Additionally, for all versions of the defined pension note, the note disclosure is held constant across all conditions except for differences due to changes in the defined pension expense and/or defined pension obligation as a result of the difference in the volatility manipulation (high volatility versus low volatility).

4.6 Task Procedures

When participants arrive for the experiment, they are randomly assigned to an experimental condition. Once all packets are distributed, I ask all participants to assume the role of potential investor in RBC Corporation.

In the role of potential investors, participants are asked to open their packets and analyze the previously discussed materials from RBC Corporation's annual report.[20] Appendix A illustrates the financial statement information provided to all participants.

Following the financial analysis, participants are asked to respond to a questionnaire with two question sets. In the first set of questions, participants make several evaluations and judgments. Specifically, they answer questions about whether they believe the firm's management is effective at managing the firm's operations and performance, the degree to which they believe investing in the company seems risky, and market price estimates they would place on the company's price per share.

In the second set of questions, participants answer questions without being able to refer back to any of the experimental materials or responses from the first set of questions. As part of the question set, participants indicate the type of information they acquired about defined pension cost in the financial report and evaluate characteristics (volatility and predominate function) of the defined pension cost information. In addition to these questions being used to assess whether participants located and evaluated pension cost information, some of these questions will be used for manipulation check purposes.

In the second set of questions, I ask participants additional questions about whether they believe the company's management is effective at managing pension cost and the degree to which they believe the historical pattern of volatile (non-volatile) pension costs will continue three years in the future.

[20] I modeled the company's financial information after a large publicly-traded beverage company. I, however, altered the company's non-financial information so that potential investors will only focus on the reported information instead of factors such as the company's reputation. I also modified the financial numbers and made simple cosmetic changes to the financial account and note information.

Finally, I ask participants various questions about the degree to which they perceive the experimental task and pensions to be complex and I collect demographic data previously described.

4.7 Statistical Analysis

Before I test the hypotheses, I will analyze participants' responses to two manipulation check questions, the amount of time each participant spends on attending to the task, and the data set for violations of assumptions. This evaluation will allow me to determine the strength of the manipulations and rule out some possible alternative explanations to my findings.

4.7.1 Manipulation Checks and Time Attending to Task

For the first manipulation check question, I ask participants to identify whether the defined pension cost information appeared in one or more locations in the statement of comprehensive income. If participants cannot recall whether the information appeared in one or more locations, it may be that they did not fully understand and/or attend to the task. As such, I plan to examine the data set with (and without) those participants' responses.

For the second manipulation check question, I ask participants to identify whether they believe defined pension cost is volatile. If participants in the low (high) volatility condition indicate defined pension cost is extremely volatile (not volatile), it may also tell me that they did not fully understand and/or attend to the task. Thus, I plan to analyze the data set with (and without) those participants' responses.

I also evaluate the amount of time it takes each participant to complete the task. It takes a fast reader approximately 15 minutes to read all of the materials. So, if a

participant takes less than 15 minutes to read all of the materials and complete the questionnaire set, it can be reasonably assumed that they have not put forth a minimum amount of effort to complete the task. Hence, I plan to examine the data set with (and without) their responses.

4.7.2 Assumptions

After examining the data set with (and without) participant responses that failed manipulation check questions and/or spent less than a sufficient amount of time attending to the task, I will analyze the data for violations of assumptions. I will examine normality of the dependent variables and equal and constant variance of the residuals by using a visual analysis of scatter plot diagrams and stem and leaf plots, statistical tests include the Shapiro-Wilk's test for normality and White's test for heteroscedasticity (Sincich and Mendenhall 2003).

4.7.3 Hypotheses Testing

4.7.3.1 Hypothesis Testing Related to Degree of Item Complexity on the Weighing of Defined Pension Cost Information

Hypothesis 1 predicts that nonprofessional investors will place a greater weight on perceived volatility of defined pension cost in judgments when the cost has high volatility relative to when the cost has low volatility. I estimate the following model for hypothesis 1:

Judgment = α + Perceived Volatility + Volatility + (Perceived Volatility * Volatility) + Covariates

4.7.3.2 Hypotheses Testing Related to Presentation Method on the Acquisition, Evaluation, and Weighing of Defined Pension Cost Information

Hypothesis 2 predicts nonprofessional investors will acquire more defined pension cost information when the cost is disaggregated across the statement of comprehensive income relative to when the cost is aggregated in same statement. To test this hypothesis, I examine the effect of presentation method (disaggregation versus aggregation) on the total number of pieces of information that participants accurately recall about defined pension cost. In particular, while controlling for the effects of significant covariates, I estimate the model:

$$\text{Acquire} = \alpha + \text{Presentation Method} + \text{Covariates}$$

Hypotheses 3a predicts that nonprofessional investors will evaluate the volatility surrounding defined pension cost more accurately when the cost is disaggregated across the statement of comprehensive income relative to when the cost is aggregated in the same statement. While controlling for the effects of significant covariates, I estimate the model:

$$\text{Evaluate Volatility} = \alpha + \text{Presentation Method} + \text{Covariates}$$

Hypotheses 3b predicts that nonprofessional investors will evaluate the predominate function of defined pension cost more accurately when the cost is disaggregated across the statement of comprehensive income relative to when the cost is aggregated in the same statement. To evaluate the effect of accurate evaluation on presentation method (disaggregated versus aggregated), while controlling for the effects

of significant covariates, I estimate the model:

Evaluate Predominate Function = α + Presentation Method + Covariates

Hypotheses 4a predicts that nonprofessional investors' perceptions of the volatility surrounding defined pension cost will differ between presentation methods (disaggregated across the face of the statement of comprehensive income versus aggregated in the same statement). To test this hypothesis, while controlling for the effects of significant covariates, I estimate the model:

Perceived Volatility = α + Presentation Method + Covariates

Hypotheses 4b predicts that nonprofessional investors' perceptions of the predominate function of defined pension cost will differ between presentation methods (disaggregated across the face of the statement of comprehensive income versus aggregated in the same statement). I examine the effect of presentation method on predominate function, while controlling for the effects of significant covariates, using the model:

Perceived Predominate Function = α + Presentation Method + Covariates

Hypothesis 5a predicts that nonprofessional investors will place greater weight on perceived volatility of defined pension cost in judgments when the cost is disaggregated rather than aggregated on the face of the statement of comprehensive income. To test this hypothesis, I estimate the model:

Judgment = α + Perceived Volatility + Presentation Method
+ (Perceived Volatility * Presentation Method) + Covariates

The interaction is between perceived volatility and presentation method (disaggregated or aggregated), which is the main variable of interest in this model.

Hypothesis 5b predicts that nonprofessional investors will place greater weight on perceived predominate function of defined pension cost in judgments when the cost is disaggregated rather than aggregated on the face of the statement of comprehensive income. To examine the differential weighting of perceived predominate function by presentation method (disaggregated versus aggregated) on judgments, while controlling for the effects of significant covariates, I estimate the model:

$$\text{Judgment} = \alpha + \text{Perceived Predominate Function} + \text{Presentation Method} + (\text{Perceived Predominate Function} * \text{Presentation Method}) + \text{Covariates}$$

The interaction is between perceived predominate function and presentation method (disaggregated or aggregated), which is the main variable of interest in this model.

Finally, Hypothesis 6 predicts that nonprofessional investors will place the greatest weight on the perceived volatility of the defined pension cost in judgments when the cost has high volatility rather than low volatility and is disaggregated rather than aggregated across the statement of comprehensive income. While controlling for the effects of significant covariates, I estimate the model:

$$\text{Judgment} = \alpha + \text{Perceived Volatility} + \text{Volatility} + \text{Presentation Method} + (\text{Perceived Volatility} * \text{Volatility}) + (\text{Perceived Volatility} * \text{Presentation Method}) + (\text{Volatility} * \text{Presentation Method}) + (\text{Perceived Volatility} * \text{Volatility} * \text{Presentation Method}) + \text{Covariates}$$

The three-way interaction between perceived volatility, volatility (high versus low), and presentation method (disaggregated versus aggregated) is the main variable of interest in this model.

4.7.4 Post Hoc Analysis

After testing the hypotheses, I conduct a post hoc analysis to examine whether there are any interesting findings that are not formally stated in the hypotheses.

4.8 Pilot Studies

I conducted two pilot studies to examine the internal validity of my experimental instrument and to identify possible weaknesses in my research design. Pilot study one was used to assess whether the experimental materials were complete and understandable. Pilot study two was used to evaluate whether the manipulations had their intended effects on the dependent variables.

4.8.1 Experimental Design Used in the Pilot Studies

In the two pilot studies, I use the 2 x 2 between-participants design as discussed in Section 4.1 of the Experimental Design. The design tests whether volatility, a proxy for item complexity, and disaggregating a complex item across the face of a financial statement influences nonprofessional investors' judgments.

4.8.2 Participants Used in the Pilot Studies

Twenty fifth year and MAcc accounting students at a large southeastern university participated in the first pilot study. One hundred-one accounting students (fourth year and MAcc) and MBA students at the same university participated in the second pilot study. All students participated in a study in exchange for class research

participation credit in an accounting course in which they were enrolled. Demographic and descriptive statistics are reported in Table 4.3.

Table 4.3

Pilot Studies
Demographic & Descriptive Statistics

Panel A: First Pilot Study (n=20) (Fifth year and MAcc accounting students)	Mean	Median	Standard Deviation	Range	
				Low	High
MBAs (yes=1; no=0)	0.050	0.000	0.224	0.000	1.000
Number of accounting courses taken	12.700	12.000	4.911	1.000	21.000
Completed /currently taking a financial analysis course (yes=1; no=0)	0.600	1.000	0.503	0.000	1.000
Work experience in accounting (yes=1; no=0)	0.650	1.000	0.489	0.000	1.000
Work experience in accounting (in months)	8.150	3.000	12.089	0.000	48.000
Accounting for pension work experience (yes=1; no=0)	0.000	0.000	0.000	0.000	0.000
Pension knowledge (coded 1-5 with 5 representing strong knowledge)	4.050	4.000	0.826	2.000	5.000
Investment experience (in months)	1.200	0.000	5.367	0.000	24.000
Percentage passed volatility manipulation check question	0.550	1.000	0.510	0.000	1.000
Percentage passed disaggregation manipulation check question	0.550	1.000	0.511	0.000	1.000
Percentage passed both manipulation check questions	0.350	0.000	0.490	0.000	1.000

Table 4.3, Continued

Pilot Studies
Demographic & Descriptive Statistics

Panel B: Second Pilot Study (n=101) (Fourth year and MAcc accounting students, and MBA students)	Mean	Median	Standard Deviation	Range	
				Low	High
MBAs (yes=1; no=0)	0.168	0.000	0.376	0.000	1.000
Number of accounting courses taken	7.119	7.000	3.803	1.000	21.000
Completed / currently taking a financial analysis course (yes=1; no=0)	0.277	0.000	0.450	0.000	1.000
Work experience in accounting (yes=1; no=0)	0.376	0.000	0.487	0.000	1.000
Work experience in accounting (in months)	15.832	0.000	44.383	0.000	348.000
Accounting for pension work experience (yes=1; no=0)	0.000	0.000	0.000	0.000	0.000
Pension knowledge (coded 1-5 with 5 representing strong knowledge)	2.822	3.000	1.126	0.000	5.000
Investment experience (in months)	30.386	0.000	63.801	0.000	300.000
Percentage passed volatility manipulation check question	0.594	1.000	0.494	0.000	1.000
Percentage passed disaggregation manipulation check question	0.465	0.000	0.501	0.000	1.000
Percentage passed both manipulation check questions	0.353	0.000	0.455	0.000	1.000

Table 4.3, Continued

Pilot Studies
Demographic & Descriptive Statistics

Panel C: Reduced Sample from Second Pilot Study (n=39) (only MAcc students and MBA students)	Mean	Median	Standard Deviation	Range	
				Low	High
MBAs (yes=1; no=0)	0.231	0.000	0.427	0.000	1.000
Number of accounting courses taken	8.256	10.000	5.646	1.000	21.000
Completed / currently taking a financial analysis course (yes=1; no=0)	0.359	0.000	0.486	0.000	1.000
Work experience in accounting (yes=1; no=0)	0.436	0.000	0.502	0.000	1.000
Work experience in accounting (in months)	13.026	0.000	24.996	0.000	120.000
Accounting for pension work experience (yes=1; no=0)	0.000	0.000	0.000	0.000	0.000
Pension knowledge (coded 1-5 with 5 representing strong knowledge)	2.513	2.000	1.254	0.000	5.000
Investment experience (in months)	36.615	0.000	67.056	0.000	300.000
Percentage passed volatility manipulation check question	0.667	1.000	0.478	0.000	1.000
Percentage passed disaggregation manipulation check question	0.462	0.000	0.486	0.000	1.000

As shown in Table 4.3, participants in pilot one have taken, on average, 12 accounting courses. Over half the participants have taken a financial analysis course. Also, they have approximately 8 months of accounting work experience. They, however, do not have accounting work experience related to pensions. Yet, they do tend to have a semi-strong general knowledge of accounting for pensions. Participants have approximately 1.2 months of investment experience.

Participants in pilot two have taken, on average, 7 accounting courses. Twenty-eight percent of the participants have taken a financial analysis course. Also, they have approximately 15 months of accounting work experience. As with pilot one, participants do not have accounting work experience related to pensions. Unlike, pilot one, which

used accounting students, pilot two subjects tend to have less than a semi-strong general knowledge of accounting for pensions. They do, however, have approximately 30.39 months of investment experience.

The Macc students and MBA students from pilot two have taken, on average, 8 accounting courses. Over one-third of the students have taken a financial analysis course. Also, they have approximately 13 months of accounting work experience. As with the other participant groups this subgroup of pilot two does not have accounting work experience related to pensions. It also tends to have less than a semi-strong general knowledge of accounting for pensions. Participants do, however, have approximately 36.62 months of investment experience.

4.8.3 Discussion of Pilot Study Results

4.8.3.1 Pilot Study One Results

The main purpose of the first pilot study was to assess whether the experimental materials were complete and understandable. Results from this study provided two main insights as to whether the objectives of the study were accomplished.

First, statistical analyses and a post experimental discussion with participants suggested that the experimental materials were complete and not too complex for participants to understand. On a 10 point scale with 1 indicating "not complex' and 10 indicating "extremely complex," participants believed that the task was only moderately complex (mean=6.49).

Second, while only 35 percent of the participants correctly answered both of the manipulation check questions, statistical results show that participants did attend to the manipulations. Specifically, the means for the manipulated variables are moving in the

expected direction for seven (H1, H2, H4a, H4b, H5a, and H5b) of the nine hypothesized relationships.

Based on the insights of this study, I made two modifications to the experimental instrument. Since only 35 percent of the participants correctly answered both of the manipulation check questions, I made the manipulations more salient. I ratcheted up the volatility condition from greater than 59 percent to greater than 94 percent. I also made the method of presenting the defined pension cost more transparent by reducing the total number of line items on the statement of comprehensive income.

4.8.3.2 Pilot Study Two Results

The main purpose of the second pilot study was to evaluate whether the manipulations had their intended effects on the dependent variables. Results from the second pilot study, using only the MAcc and MBA students, provided approximately the same insights as pilot one. That is, while only 35 percent of the participants correctly answered both of the manipulation check questions, statistical results suggest that participants understand and attend to the manipulations. Specifically, the results show that the means for the manipulated variables are moving in the expected direction for seven (H1, H2, H3a, H4a, H5a, H5b, and H6) of the nine hypotheses with statistical significance for four (H1, H5a, H5b, and H6) of the nine hypotheses.

Based on the insights from this study, only minor changes were made to the final instrument despite the problems with low accuracy on the manipulation checks. I changed the wording of the manipulation check questions to try to make the questions more salient. I increased the number of supplemental notes to the financial statements to provide users with a more realistic financial report. I also added an open ended question

about the acquisition of defined pension cost information to try and capture all possible information participants acquired about the cost. Appendix A provides the final instrument.

CHAPTER 5: RESULTS

In this chapter of the dissertation, I present the results of my experiment examining the effects of degree of item complexity and method used to present a complex item on nonprofessional investors' judgments. In the first part of this chapter, I provide demographic and descriptive statistics. I discuss the manipulation checks employed to ascertain the salience of the manipulated variables. In the second part of this chapter, I present a correlation matrix. I discuss assumptions underlying the statistical analysis and hypotheses are tested. Finally, the results of the data analysis are discussed.

5.1 Demographic Statistics

One hundred graduate level business students from a large southeast university participated in the experiment**.** As shown below in Table 5.1, Demographic Statistics, 78 percent of the students are MBA students who have completed their first year in the MBA program. The students have taken, on average, three accounting courses. Approximately 49 percent of the participants have completed or are currently taking a financial analysis course. One-third of the participants have 12 months of accounting work experience. They, however, do not have accounting work experience related to pensions. Yet, they do tend to have a basic knowledge of accounting for pensions. Additionally, on average, 49 percent of the participants invest in the stock market and have 38 months of investment experience.

Table 5.1

Demographic Statistics
(Participants n=100)

Demographic Statistics	Mean	Standard Deviation	Median	Range	
				Low	High
MBA (yes=1; no=other graduate level business major)	0.780	0.416	1.000	0.000	1.000
Year in MBA program	1.040	0.595	1.000	0.000	2.000
Age	28.560	4.885	28.000	22.000	44.000
Number of accounting courses taken	2.820	2.115	3.000	0.000	10.000
Completed or currently taking a financial analysis course (yes=1; no=0)	0.490	0.502	0.000	0.000	1.000
Work experience in accounting (yes=1; no=0)	0.330	0.473	0.000	0.000	1.000
Work experience in accounting (in months)	12.720	26.068	0.000	0.000	156.000
Pension work experience (yes=1; no=0)	0.000	0.000	0.000	0.000	0.000
Pension work experience (in months)	0.000	0.000	0.000	0.000	0.000
Pension knowledge (Indicator of the participant's general pension knowledge. Coded 5 if strong, 4 if semi-strong, 3 if basic, 2 if semi-weak, 1 if weak, and 0 otherwise)	2.778	1.016	3.000	1.000	5.000
Investment experience (yes=1; no=0)	0.490	0.502	0.000	0.000	1.000
Investment experience (in months)	37.970	55.247	0.000	0.000	240.000

5.2 Descriptive Statistics

In addition to collecting demographic data, I collected data on participants— effort, motivation, risk preference, belief about pension complexity, belief about management effectiveness in regard to the task materials, and belief about factors

affecting their cognitive load while completing the experimental task. The descriptive information provided is for all experimental conditions, as such, it is difficult to provide interpretations relative to the individual experimental conditions.

5.2.1 Participant Effort, Motivation, and Risk Preference

As reported below in Table 5.2 Panel A, Descriptive Statistics, participants indicate on a 10-point scale with 1 indicating "no effort" and 10 indicating "extreme effort" that they exerted high effort (mean=6.61) while completing the experimental task. Participants also specify on a 10-point scale with 1 indicating "not motivated" and 10 indicating "extremely motivated" that they were motivated (mean=7.65) to answer the experimental questionnaire to the best of their ability. Participants further indicate that their average preference for risk is 5.67 on a 10-point scale with 1 indicating "risk loving" and 10 indicating "completely risk averse."

5.2.2 Participants' Perceptions about Pension Complexity

As shown below in Table 5.2 Panel B, Descriptive Statistics, participants indicate that they believe pensions are complex. On a 10-point scale with 1 indicating "not complex" and 10 indicating "extremely complex," participants' mean response is 7.44. Participants also report that they believe pension volatility (or lack of volatility) influenced their judgments in the task. On a 10-point scale with 1 indicating "did not influence" and 10 indicating "strongly influenced," their average response is 6.22. Participants indicate that they believe, on average, pensions tend to be persistent in nature. On a 10-point scale with 1 indicating "not persistent" and 10 indicating "persistent," the average response is 6.23. Participants also reveal that they believe the way the pension cost was presented on the statement of comprehensive income was

somewhat helpful in their judgments. On a 10-point scale with 1 indicating "not helpful" and 10 indicating "extremely helpful," the average response is 5.25. Finally, participants report that they weighted the pension cost information somewhat differently in judgments because of the section of the statement of comprehensive income where pension costs were located. On a 10-point scale with 1 indicating "did not affect" and 10 indicating "strongly affected," the mean response is 5.24.

5.2.3 Participants' Perceptions about Management Effectiveness

As displayed below in Table 5.2 Panel C, Descriptive Statistics, participants indicate that they believe management (in the case presented) is least effective in managing continuous operations. On 10-point scales with 1 indicating "not effective" and 10 indicating "extremely effective," participants' mean perception of management effectiveness is 5.73 for managing operations, 4.97 for managing continuous operations, 5.43 for managing performance, and 5.20 for managing pension cost.

5.2.4 Participants' Perceptions about Cognitive Load

As reported below in Table 5.2 Panel D, Descriptive Statistics, participants provide several beliefs about possible factors affecting their cognitive load while completing the experimental task. On a 10-point scale with 1 indicating "did not increase the complexity" and 10 indicating "increased the complexity," the participants on average believe volatility increased complexity of pension cost (mean response=6.02). On 10-point scales with 1 indicating "not easy" and 10 indicating "extremely easy," the participants believe that it was slightly easy to understand the financial performance of the company by the way the information was presented (mean response=5.34). Participants believe that it was very easy to locate key pieces of information important for

assessing the company (mean response=6.43). And, participants believe that it was easy to evaluate the most important piece of information that led to the belief that investing in the company's stock is (not) risky (mean response=6.02). Finally, on a 10-point scale with 1 indicating "not complex" and 10 indicating "extremely complex," participants' report that they believe the experimental task was slightly complex (mean response=6.23).

The fact that several of the descriptive results are relatively close to the center point of the evaluation scale is probably a reflection of the manipulations involved. The manipulations should result in opposite scorings for several of the perceptions measured.

Table 5.2

Descriptive Statistics
(Participants n=100)

Descriptive Statistics	Mean	Standard Deviation	Median	Range Low	Range High
Panel A: Participant Effort, Motivation, and Risk Preference					
Mental effort (degree of mental effort participant believes s/he exerted while performing the experimental task on a 10-point scale with 1 indicating "no effort" and 10 indicating "extreme effort")	6.606	1.658	7.000	2.000	10.000
Motivation (degree to which participant believes s/he was motivated to answer all questions in the experimental questionnaire to the best of ability on a 10-point scale with 1 indicating "not motivated" and 10 indicating "extremely motivated")	7.648	1.908	8.000	1.000	10.000
Risk preference (10-point scale with 1 indicating "risk loving" and 10 indicating "completely risk averse")	5.670	1.706	5.000	1.000	10.000
Panel B: Participants' Perceptions about Pension Complexity					
Pension complex (degree to which participant believes the pensions are complex on a 10-point scale with 1 indicating "not complex" and 10 indicating "extremely complex")	7.442	1.744	7.600	1.400	10.000
Volatility influenced (degree to which participant believes the pension volatility (or lack of volatility) influenced judgments on a 10-point scale with 1 indicating "did not influence" and 10 indicating "strongly influenced")	6.222	2.270	6.950	1.000	10.000
Persistent (degree to which participant believes the defined pension cost is persistent or transitory on a 10-point scale with 1 indicating "transitory" and 10 indicating "persistent")	6.227	2.066	6.600	2.000	10.000

Table 5.2, Continued

Descriptive Statistics
(Participants n=100)

Descriptive Statistics	Mean	Standard Deviation	Median	Range Low	Range High
Classified (degree to which participant believes the way the pension cost was presented on the statement of comprehensive income was useful in judgments measured on a 10-point scale with 1 indicating "not helpful " and 10 indicating "extremely helpful")	5.251	2.171	5.400	1.000	9.000
Weigh pension (degree to which participant believes s/he weighed the pension cost information differently in judgments because of the section of the statement of comprehensive income where pension costs were located (measured on a 10-point scale with 1 indicating "did not affect " and 10 indicating "strongly affected")	5.235	2.385	5.400	1.000	9.600
Panel C: Participants' Perceptions about Management Effectiveness					
Manages operations (degree to which participant believes management is effective at managing operations measured on a 10-point scale with 1 indicating "not effective " and 10 indicating "extremely effective")	5.730	1.879	6.000	1.000	10.000
Manages continuous operations (degree to which participant believes management is effective at managing continuous operations measured on a 10-point scale with 1 indicating "not effective " and 10 indicating "extremely effective")	4.973	1.945	4.700	1.000	10.000
Manages performance (degree to which participant believes management is effective at managing overall performance measured on a 10-point scale with 1 indicating "not effective" and 10 indicating "extremely effective")	5.430	1.782	5.400	1.500	9.000

Table 5.2, Continued

Descriptive Statistics
(Participants n=100)

Descriptive Statistics	Mean	Standard Deviation	Median	Range Low	Range High
Manages pension (degree to which participant believes management is effective at managing the pension cost measured on a 10-point scale with 1 indicating "not effective " and 10 indicating "extremely effective")	5.198	2.138	5.000	1.000	9.500
Panel D: Participants' Perceptions about Cognitive Load Factors					
Volatility					
Increased Complexity (degree to which participant believes the (lack of) pension volatility increases the complexity of the cost measured on a 10-point scale with 1 indicating "does not increase the complexity" and 10 indicating "increases the complexity")	6.020	2.082	6.400	1.900	10.000
Presentation Method					
1. Understand (degree to which participant believes it was easy to understand the financial performance of the company by the way the information was presented (measured on a 10-point scale with 1 indicating "not extremely easy" and 10 indicating "extremely easy")	5.344	2.065	5.3000	1.200	10.000
2. Identify Info. (degree to which participant believes it was easy to locate key pieces of information important for assessing the company measured on a 10-point scale with 1 indicating "extremely difficult to locate" and 10 indicating "extremely easy to locate")	6.431	1.851	7.000	2.000	10.000

Table 5.2, Continued

Descriptive Statistics
(Participants n=100)

Descriptive Statistics	Mean	Standard Deviation	Median	Range Low	Range High
3. Evaluate Info. (degree to which participant believes it was easy to identify and evaluate the most important piece of information that led to belief that investing in the company's stock is (not) risky measured on a 10-point scale with 1 indicating "not easy " and 10 indicating "extremely easy")	6.016	1.972	6.400	1.000	9.400
4. Task Complex (degree to which participant believes the overall experimental task was complex on a 10-point scale with 1 indicating "not complex" and 10 indicating "extremely complex")	6.299	2.157	6.900	1.000	10.000

5.3 Manipulation Checks and Time Attending to Task

In this section, I discuss the manipulation checks employed to ascertain the salience of the manipulated variables. For the first manipulation check question, I ask participants to indicate the number of locations defined pension cost appeared on the statement of comprehensive income. Fifty-eight percent of the participants correctly responded to this manipulation check question. Although this suggests participants may not recall all locations the information appeared it does not mean they did not use the information in the task. Therefore, I examine the data set with (and without) those participant responses.

For the second manipulation check question, I ask participants to indicate whether defined pension cost on the statement of comprehensive income was volatile. Sixty-seven percent of the participants responded correctly to this manipulation check question. This suggests that not all participants understood the manipulation check question and/or they interpreted the term volatility differently, since they did not make a comparison to a benchmark. Statistical analysis does reveal, however, that the mean difference between the treatment groups is statistically significant ($p<0.001$). The mean perception of volatility in the highly volatile condition was 6.74 on a 10-point scale with 1 indicating "no volatility" and 10 indicating "extreme volatility." The mean perception of volatility in the low volatility condition was 4.94 using the same 10-point scale.

Univariate and multivariate statistical analyses also reveal that, as expected, there is a significant association between perceived volatility and the manipulated volatile variable. That is, participants' perceive defined pension cost to be more complex when the cost has high volatility relative to when the cost has low volatility ($p<0.001$). When I delete observations for participants who failed the volatility manipulation check question, the test results (not tabulated) stay substantially the same. Hence, I examine the data set with (and without) responses from those who failed this manipulation check question.

I also assessed the amount of time each participant took to complete the experiment. On average, each participant took 45 minutes to read all the materials and complete the questionnaire. Based on a preliminary assessment that suggests it takes a fast reader about 15 minutes to read all the materials, it is assumed that participants in the study put forth effort in reading the materials and completing the task.

5.4 Correlation Matrix

Prior to addressing statistical assumptions, I evaluate the correlations among the variables used to test the hypotheses. Table 5.3 displays the Spearman's Correlation Coefficient Report used to test for correlated relationships. A description of the variables is presented in Table 4.1.

Table 5.3

Spearman's Correlation Coefficients Report

	Acquire Info. (Open Ended Question)	Acquire Info. (Seven Specific Questions)	Evaluate Volatility	Evaluate Predominate Function	Perceived Volatility	Perceived Predomi-nate Function
Acquire Info. (Open Ended Question)	1.000					
Acquire Info. (Seven Specific Questions)	0.203*	1.000				
Evaluate Volatility	0.086	0.597*	1.000			
Evaluate Predominate Function	0.243*	0.488*	0.114	1.000		
Perceived Volatility	0.004	0.148	0.131	0.027	1.000	
Perceived Predominate Function	0.057	0.369*	0.119	0.201*	0.039	1.000
Risky	-0.074	-0.115	-0.203*	-0.098	0.127	-0.059
Invest 401k	0.218*	0.031	-0.193	0.172	-0.066	0.111
Range	0.029	-0.011	-0.061	-0.033	0.109	-0.099
Price	0.005	0.144	0.222*	0.157	0.005	0.052
Pattern	-0.090	-0.103	-0.137	-0.063	-0.261*	0.145
Volatility	0.019	0.221*	0.329*	0.006	0.384*	0.072
Presentation Method	0.198*	-0.042	0.066	0.191**	0.074	-0.155
Mental Effort	-0.160	0.133	-0.100	0.093	-0.021	0.163
Motivation	0.047	0.226*	0.001	0.038	0.108	0.257*
Risk Preference	-0.049	0.061	0.041	-0.068	0.051	-0.170**
Task Complex	-0.036	-0.039	-0.092	0.064	0.063	-0.008
Pension Complex	-0.046	-0.056	-0.064	-0.079	0.091	-0.104
Volatility Influenced	0.146	0.246*	0.289*	0.040	0.415*	0.283*
Persistent	0.113	0.004	0.045	0.092	-0.227*	0.115
Manage Operations	0.123	0.121	-0.050	0.053	-0.076	0.089

* indicates significant at $p<0.05$
** indicates significant at $p<0.10$

Table 5.3, Continued

Spearman's Correlation Coefficient Report

	Acquire Info. (Open Ended Question)	Acquire Info. (Seven Specific Questions)	Evaluate Volatility	Evaluate Predominate Function	Perceived Volatility	Perceived Predominate Function
Manage Continuous Operations	0.162	0.174**	0.010	0.169**	-0.162	0.235*
Manage Performance	0.155	0.173**	0.009	0.052	-0.057	0.073
Manage Pension	0.132	0.083	-0.068	0.154	-0.421*	0.271*
Increased Complexity	0.041	0.071	0.178**	-0.030	0.463*	0.057
Understand	0.118	0.101	0.090	-0.047	0.083	0.126
Identify	0.056	0.105	0.036	-0.046	0.044	0.232*
Evaluate	-0.015	-0.086	-0.150	-0.128	-0.039	0.092
Classified	0.121	0.167**	0.111	0.033	-0.208*	0.289*
Weigh Pension	0.078	-0.065	0.074	-0.012	0.068	0.087
MBA	-0.053	0.048	0.164	-0.058	0.077	0.061
Year MBA	-0.063	-0.015	0.074	-0.114	0.096	0.010
Age	-0.050	-0.049	0.081	-0.080	-0.182**	0.089
Number of Accounting Courses	-0.084	0.026	-0.031	-0.078	0.222*	0.015
Financial Analysis Course	0.149	-0.020	-0.118	-0.013	0.065	0.065
Work Experience	0.190*	0.164	-0.037	0.133	0.198*	0.024
Work Experience in Months	0.215*	0.164	-0.036	0.167**	0.195**	0.008
Pension Knowledge	0.039	0.065	-0.082	-0.053	0.254*	0.045
Investment Experience	0.044	-0.036	0.013	0.061	-0.112	0.030
Investment Experience in Months	0.081	-0.059	0.046	0.012	-0.161	0.050

* indicates significant at $p<0.05$
** indicates significant at $p<0.10$

Table 5.3, Continued

Spearman's Correlation Coefficients Report

	Risky	Invest 401k	Range	Price	Pattern	Volatility
Risky	1.000					
Invest 401k	-0.202*	1.000				
Range	-0.009	0.031	1.000			
Price	-0.498*	0.224	-0.019	1.000		
Pattern	-0.049	0.020	-0.050	-0.014	1.000	
Volatility	0.174**	0.003	0.190	0.005	-0.367*	1.000
Presentation Method	-0.006	0.207*	0.077	-0.019	-0.072	-0.020
Mental Effort	0.205*	0.114	-0.061	0.034	0.086	-0.030
Motivation	0.028	0.013	-0.113	-0.022	0.072	0.068
Risk Preference	-0.058	-0.089	0.054	-0.028	-0.054	-0.024
Task Complex	0.278*	-0.052	0.048	-0.069	-0.131	-0.032
Pension Complex	0.050	-0.066	0.110	0.198*	-0.156	-0.067
Volatility Influenced	-0.055	0.028	-0.046	-0.052	0.011	0.180**
Persistent	-0.004	-0.068	-0.232	0.036	0.432*	-0.359*
Manage Operations	-0.124	0.151	-0.275*	0.107	0.143	-0.142
Manage Continuous Operations	-0.314*	0.348*	-0.028	0.295*	0.275*	-0.220*
Manage Performance	-0.355*	0.318*	0.024	0.317*	0.106	-0.023
Manage Pension	-0.275*	0.274*	-0.134	0.224*	0.266*	-0.193**
Increased Complexity	0.208*	-0.016	0.110	-0.072	-0.127	0.394**
Understand	-0.087	0.279*	-0.158	0.086	0.226*	0.049
Identify	-0.012	0.191**	-0.134	0.071	0.159	0.071
Evaluate	0.109	0.182**	-0.079	0.036	0.327*	0.024
Classified	-0.164	0.217*	-0.281*	-0.008	0.292*	-0.081
Weigh Pension	-0.011	0.102	0.101	0.137	0.064	0.080
MBA	0.049	-0.214*	-0.049	-0.088	0.190**	0.107
Year MBA	0.109	-0.160	0.124	-0.102	0.089	0.173
Age	-0.003	-0.125	-0.167	-0.017	0.167**	0.063
Number of Accounting Courses	0.190*	-0.077	0.210*	-0.235*	-0.097	0.137
Financial Analysis Course	-0.178	0.091	0.062	0.004	-0.035	0.001
Work Experience	0.057	-0.066	0.020	-0.144	0.004	0.050
Work Experience in Months	0.031	-0.096	0.019	-0.156	-0.012	0.028
Pension Knowledge	0.025	-0.057	0.063	-0.041	0.106	-0.089
Investment Experience	-0.015	-0.064	-0.156	0.030	0.002	-0.080
Investment Experience in Months	0.043	-0.193**	-0.161	-0.0311	0.083	-0.082

* indicates significant at $p<0.05$
** indicates significant at $p<0.10$

Table 5.3, Continued

Spearman's Correlation Coefficients Report

	Presenta-tion Method	Mental Effort	Motiva-tion	Risk Prefer-ence	Task Complex	Pensions Complex	Volatility Influenced
Presentation Method	1.000						
Mental Effort	0.077	1.000					
Motivation	0.022	0.257*	1.000				
Risk Preference	-0.098	-0.103	-0.093	1.000			
Task Complex	-0.205*	0.433*	-0.138	-0.082	1.000		
Pension Complex	0.082	0.117	0.145	-0.097	0.205	1.000	
Volatility Influenced	0.060	0.139	0.236*	-0.017	0.139	-0.068	1.000
Persistent	-0.093	0.079	0.180**	-0.262*	0.008	0.065	0.022
Manage Operations	0.161	0.071	0.158	-0.064	-0.122	0.015	0.062
Manage Continuous Operations	-0.066	-0.032	0.070	0.013	-0.130	-0.019	0.039
Manage Performance	0.031	-0.070	0.222*	0.025	-0.171**	0.052	-0.004
Manage Pension	-0.037	0.096	0.154	-0.157	-0.046	-0.060	0.049
Increased Complexity	0.178**	0.095	0.063	-0.145	-0.005	0.212*	0.324*
Understand	-0.006	0.065	0.340*	-0.021	-0.277*	-0.178**	0.106
Identify Information	-0.093	0.028	0.362*	0.053	-0.197*	-0.105	-0.038
Evaluate Info.	-0.150	0.125	0.219*	-0.078	0.016	-0.042	-0.016
Classified	0.123	0.190**	0.278*	-0.096	-0.149	-0.089	0.235*
Weigh Pension	0.214*	-0.041	0.064	0.106	0.046	0.024	0.242*
MBA	-0.097	-0.150	0.058	0.057	-0.132	0.058	0.132
Year MBA	-0.116	-0.156	0.093	0.112	-0.120	0.062	0.109

* indicates significant at $p<0.05$
** indicates significant at $p<0.10$

Table 5.3, Continued

Spearman's Correlation Coefficients Report

	Presenta-tion Method	Mental Effort	Motiva-tion	Risk Preference	Task Complex	Pensions Complex	Volatility Influenced
Age	-0.122	-0.014	-0.027	0.101	-0.164	-0.183**	0.041
Number of Accounting Courses	-0.016	0.040	0.168**	-0.049	-0.108	0.060	0.056
Financial Analysis Course	-0.060	-0.241*	0.028	0.105	-0.085	0.136	0.011
Work Experience	-0.064	0.001	0.254*	-0.008	-0.077	-0.038	0.082
Work Experience in Months	-0.043	-0.060	0.222*	-0.005	-0.086	-0.021	0.092
Pension Knowledge	-0.095	-0.050	0.052	0.049	-0.007	0.048	0.115
Investment Experience	-0.140	-0.244*	0.003	0.133	-0.106	-0.067	0.012
Investment Experience in Months	-0.152	-0.259*	0.007	0.103	-0.113	-0.096	0.005

* indicates significant at $p<0.05$
** indicates significant at $p<0.10$

Table 5.3, Continued

Spearman's Correlation Coefficients Report

	Persistent	Manage Opera-tions	Manage Continuous Operations	Manage Perfor-mance	Manage Pension	Increased Complex-ity	Under-stand
Persistent	1.000						
Manage Operations	0.102	1.000					
Manage Continuous Operations	0.103	0.414*	1.000				
Manage Performance	0.002	0.537*	0.648*	1.000			
Manage Pensions	0.329*	0.311*	0.444*	0.276*	1.000		
Increased Complexity	-0.218*	-0.111	-0.045	-0.004	-0.237*	1.000	
Understand	0.037	0.180**	0.227*	0.180**	0.205*	0.041	1.000
Identify	0.120	0.097	0.176**	0.202*	0.184	-0.129	0.579*
Evaluate	0.109	0.036	0.097	0.065	0.176**	0.064	0.495*
Classified	0.216*	0.100	0.264*	0.056	0.391*	-0.071	0.408*
Weigh Pension	0.004	0.146	0.101	0.100	0.168**	0.141	0.094
MBA	0.079	0.052	0.052	-0.012	-0.158	0.041	-0.034
Year MBA	-0.042	-0.027	0.056	0.055	-0.224*	0.177**	-0.028
Age	0.140	-0.063	-0.052	0.016	0.009	-0.027	0.075
Number-Accounting Courses	-0.145	0.048	-0.059	-0.028	-0.228*	0.157	0.056
Financial Analysis Course	-0.088	0.159	0.200*	0.188**	-0.028	-0.040	0.047
Work Experience	-0.002	0.028	0.040	0.003	-0.106	0.027	0.123
Work Experience in Months	0.014	-0.013	0.000	-0.050	-0.117	0.043	0.071
Pension Knowledge	0.061	0.018	-0.027	-0.007	-0.085	-0.040	0.023
Investment Experience	0.214*	-0.094	0.085	-0.036	0.068	-0.116	-0.058
Investment Experience in Months	0.274*	-0.085	0.006	-0.067	0.036	-0.097	-0.030

* indicates significant at $p<0.05$
** indicates significant at $p<0.10$

Table 5.3, Continued

Spearman's Correlation Coefficients Report

	Identify	Evaluate	Classified	Weigh Pension	MBA	Year MBA	Age
Understand							
Identify Information	1.000						
Evaluate Information	0.469*	1.000					
Classified	0.284*	0.312*	1.000				
Weigh Pension	-0.111	-0.001	0.128	1.000			
MBA	0.099	0.026	-0.142	-0.003	1.000		
Year MBA	0.082	0.048	-0.192**	0.119	0.787*	1.000	
Age	0.111	0.054	0.024	0.082	0.447*	0.354*	1.000
Number of Accounting Courses	0.004	0.050	-0.063	0.056	0.271*	0.406*	-0.065
Financial Analysis Course	-0.003	0.016	-0.007	0.064	0.327*	0.258*	0.133
Work Experience	0.142	0.103	0.041	-0.066	-0.038	-0.103	-0.063
Work Experience in Months	0.093	0.078	-0.001	-0.055	0.009	-0.048	-0.011
Pension Knowledge	-0.017	0.044	0.040	0.010	0.123	0.012	-0.038
Investment Experience	0.112	-0.031	0.058	0.009	0.183**	0.173**	0.348*
Investment Experience in Months	0.100	0.035	0.035	-0.003	0.221*	0.196**	0.442*

* indicates significant at $p<0.05$
** indicates significant at $p<0.10$

Table 5.3, Continued

Spearman's Correlation Coefficients Report

	Number of Acctng Courses	Financial Analysis Course	Work Experi-ence	Work Experi-ence in Months	Pension Knowl-edge	Invest Experi-ence	Invest Experience in Months
Number of Accounting Courses	1.000						
Financial Analysis Course	0.270*	1.000					
Work Experience	0.253*	0.206*	1.000				
Work Experience in Months	0.246*	0.209*	0.964*	1.000			
Pension Knowledge	0.162	0.285*	0.149	0.169**	1.000		
Investment Experience	0.024	0.280*	0.120	0.131	0.072	1.000	
Investment Experience in Months	-0.035	0.281*	0.111	0.142	0.091	0.932*	1.000
* indicates significant at p<0.05 ** indicates significant at p<0.10							

5.4.1 Correlation among Manipulated Variables and the Dependent Variables

It appears from table 5.3, the Spearman's Correlation Coefficient Report, that there are no correlations of 0.50 or greater among the manipulated variables and the dependent variables. For instance, the strength of the relationship between volatility (high versus low) and perceived volatility is moderate at 0.38 (Cohen 1988).[21] This moderate relationship is important since it suggests volatility and perceived volatility are capturing somewhat different pieces of information.

[21] Cohen (1988) suggests a moderate correlation is between 0.30 and 0.50.

5.4.2 Correlation among Potential Covariates and the Dependent Variables

It appears from table 5.3, the Spearman's Correlation Coefficients Report, that although there are significant correlations there are no strong correlations (0.50 or greater) among potential covariates and the dependent variables (Cohen 1988).

Hence, the only covariates included in the final models are those resulting from the following three-step process. First, I look at the correlated relationship between the potential covariates and the dependent variables. I include only the covariates found to be significantly correlated ($p<0.10$) with the dependent variables in preliminary models used to test the hypotheses. Second, I examine the correlated relationships among the covariates and manipulated variables. I only include in the preliminary models covariates found not to be highly correlated (0.50 or greater; $p<0.10$) with other independent variables. Third, the covariates found to be significant ($p<0.10$) in the preliminary models are then included in the final models. Table 5.4, Final Model used to Test Hypotheses, illustrates the final models. A description of each variable is presented in Table 4.1.

Table 5.4

Final Models used to Test Hypotheses [22]

Hypotheses	Models used to Test Hypotheses
Hypothesis 1	Risky = α + Perceived Volatility + Volatility + (Perceived Volatility * Volatility) + Manage Performance + Task Complex+ Number of Accounting Courses
	Invest 401k = α +. Perceived Volatility + Volatility + (Perceived Volatility * Volatility) + Understand + Invest in Months
	Range = α + Perceived Volatility + Volatility + (Perceived Volatility * Volatility) + Classified + Manage Operations + Number of Accounting Courses
	Pattern = α + Perceived Volatility + Volatility + (Perceived Volatility * Volatility) + Persistent + Classified +MBA
Hypothesis 2	Acquire (Open Ended Question)= α + Presentation Method + Accounting Work Experience
Hypothesis 3	(a) Evaluate Volatility = α + Presentation Method
	(b) Evaluate Predominate Function = α + Presentation Method + Manage Continuous Operations
Hypothesis 4	(a) Perceived Volatility = α + Presentation Method + Manage Pension + Age + Pension Knowledge
	(b) Perceived Predominate Function = α + Presentation Method + Risk Preference + Volatility Influence + Classified + Manage Pension
Hypothesis 5a	Risky = α + Perceived Volatility + Presentation Method + (Perceived Volatility * Presentation Method) + Manage Performance + Task Complex + Number of Accounting Courses
	Invest 401k = α + Perceived Volatility + Presentation Method + (Perceived Volatility * Presentation Method) + Manage Pension + Understand + Invest in Months
	Range = α + Perceived Volatility + Presentation Method + (Perceived Volatility * Presentation Method) + Classified + Manage Operations + Number of Accounting Courses
	Pattern = α + Perceived Volatility + Presentation Method + (Perceived Volatility * Presentation Method) + Persistent + MBA

[22] In the interest of parsimony, I opted to drop the price model from analysis for H1 and H5-H6. Prior research suggests nonprofessional investors have difficulty making a price judgment because they rarely estimate a stock price (Maines and McDaniel 2000). And, in preliminary test, I find no effects of degree of item complexity and/or method used to present a complex item on the average market price per share value the nonprofessional investor would place on the company's stock for the year end.

Table 5.4, Continued

Final Models used to Test Hypotheses

Hypotheses	Models used to Test Hypotheses
Hypothesis 5b	Risky = α + Perceived Predominate Function + Presentation Method + (Perceived Predominate Function * Presentation Method) + Effort + Manage Performance + Manage Pension
	Invest 401k = α + Perceived Predominate Function + Presentation Method + (Perceived Predominate Function * Presentation Method) + Manage Performance + Manage Pension + Invest in Months
	Range = α + Perceived Predominate Function + Presentation Method + (Perceived Predominate Function * Presentation Method)+ Classified + Manage Operations + Number of Accounting Courses
	Pattern = α + Perceived Predominate Function + Presentation Method + (Perceived Predominate Function * Presentation Method) + Persistent + Manage Pension + MBA
Hypothesis 6	Risky = α + Perceived Volatility + Volatility + Presentation Method + (Perceived Volatility * Volatility) + (Perceived Volatility* Presentation Method) + (Volatility * Presentation Method) + (Perceived Volatility * Volatility * Presentation Method) + Manage Continuous Operations + Task Complex + Number of Accounting Courses
	Invest 401k = α + Perceived Volatility + Volatility + Presentation Method + (Perceived Volatility * Volatility) + (Perceived Volatility * Presentation Method) + (Volatility * Presentation Method) + (Perceived Volatility * Volatility * Presentation Method) + Manage Continuous Operations + Understand
	Range = α + Perceived Volatility + Volatility + Presentation Method + (Perceived Volatility * Volatility) + (Perceived Volatility * Presentation Method) + (Volatility * Presentation Method) + (Perceived Volatility * Volatility * Presentation Method) + Classified + Manage Operations + Number of Accounting Courses
	Pattern = α + Perceived Volatility + Volatility + Presentation Method + (Perceived Volatility * Volatility) + (Perceived Volatility * Presentation Method) + (Volatility * Presentation Method) + (Perceived Volatility * Volatility * Presentation Method) + Persistent + MBA
Note: A description of each variable is presented in Table 4.1	

5.5 Assumptions Underlying the Statistical Analysis

Prior to testing the hypotheses, I examine the data to make sure there are no violations of the assumptions underlying the statistical analysis. Specifically, I examine the data to make sure the observations are independent, the dependent variables follow a normal distribution, and the variances between the groups are equal (Mendenhall and Sincich 2003).

5.5.1 Independent Observations

Participants in this study were randomly assigned to one treatment group. Participants worked independently in the experiment and they participated in only one experiment. Therefore, it is assumed that any random errors are independent.

5.5.2 Normal Distribution

Regression analysis relies on an assumption of normality of the dependent variables (Mendenhall and Sincich 2003). To test for normality, I use the Shapiro-Wilk's and Kolmogrorov-Smirnov statistical tests. I also evaluate the assumption of normality by visually analyzing normal probability plots for each dependent variable across treatment groups.

According to the Kolmogrorov-Smirnov statistical test, the variables Acquire (open-ended question), Evaluate Volatility, Evaluate Predominant Function, Invest, and Range are non-normal. These tests are very sensitive, however, to slight departures from normality (Mendenhall and Sincich 1996). As a result, I did a visual inspection of the results using normal probability plots. The plots indicate that the data were quite normally distributed. Given that regression is robust to departures from normality I did not transform the data.

5.5.3 Variance between Groups

To test for heteroscedasticity, I visually analyzed scatter plot diagrams. I also evaluated the assumption of equal variance between groups, using White's test for heteroscedasticity. All the residuals in the regression models except for the model testing hypothesis 6 (Invest) indicate no heteroscedasticiy at an alpha of 0.10. Therefore, only for the model testing hypothesis 6 (Invest) did I run tests with White's corrected t-stats.

5.5.4 Testing for Multicollinearity and Outliers

In evaluating the data for muliticollinearity, outliers, and other possible influential factors, a Spearman Correlation Coefficient Report, a variance inflation factor (VIF) analysis, and a Studentized Residuals Factor analysis are all examined.

As displayed above in table 5.3, the Spearman Correlation Coefficients Report shows that the models used to test the hypotheses do not include any independent variables that are highly correlated. A variance inflation factor (VIF) analysis further validates that main effect models do not have significant problems with multicollinearity, since no VIF was greater than 8.41 (Mendenhall and Sincich 2003).

In examining the models for extreme values (outliers) and influential factors, I review the studentized residuals for each observation in each model. A general rule of thumb for residuals is to control for observations that fall outside of three standard deviations of the mean square error (Mendenhall and Sincich 2003). In a review of the statistical measurements the invest models (for H1, H5-H6) have one extreme outlier, and the perceived predominate function model (for H5b) has one extreme outlier. In further analysis, however, the two outliers do not have a substantial influence on the model parameter estimates. As such, the observations are not removed from the sample.

5.6 Hypotheses Testing

In this section, I test hypotheses related to degree of item complexity and method of presenting a complex item.

5.6.1 Hypothesis Testing Related to Degree of Item Complexity

Hypothesis 1 predicts that nonprofessional investors will place greater weight on perceived volatility of defined pension cost in judgments when the cost has high volatility relative to when the cost has low volatility. To test this hypothesis I use regression to examine the differential weighting of perceived volatility by volatility (high versus low) on nonprofessional investors' judgments (i.e., investors' belief that investing in the company is risky, investors' willingness to invest 401k retirement funds in the company, investors' range estimate of the company's stock price, and investors' belief that the defined pension cost historical pattern will continue in the future).[23]

Prior to testing hypothesis 1, I conduct additional analysis on the relationship between perceived volatility and the manipulated variable volatility. Given that the correlation between perceived volatility and volatility is only moderate (0.38) and given that the complex nature of pension cost can lead to perceptions of volatility when participants have to make a base for their evaluations, additional analysis is warranted to determine whether perceived volatility and volatility should be treated as one or two constructs in hypotheses tests.

[23] As previously stated, in the interest of parsimony, I opted to drop the price model from analysis for H1 and H5-H6. Prior research suggests nonprofessional investors have difficulty making a price judgment because they rarely estimate a stock price (Maines and McDaniel 2000). And, in preliminary test, I find no effects of degree of item complexity and/or method used to present a complex item on the average market price per share value the nonprofessional investor would place on the company's stock for the year end.

As shown below in Table 5.5, Panel A, while participants in the high volatility condition (mean=6.74) perceive the pension cost to be more volatile than participants in the low volatility condition (mean 4.94; $p<0.01$), participants in the low volatility condition (where volatility is almost non-existent) perceive volatility as medium (almost 5 on a 10-point scale with 1 indicating "no volatility" and 10 indicating "extreme volatility") rather than low. These results, in accordance with Wood (1986), suggest that due to the dynamically complex nature of pensions, the cost are perceived as volatile and this perception is exacerbated when additional volatility is introduced. Hence, I examine perceived volatility and volatility as two separate constructs when testing perceived volatility in judgments.

Table 5.5, Panel B displays descriptive statistics for judgments based on volatility (high versus low). As shown, the means are significantly different in the risky, range, and pattern judgments based on volatility (high versus low). Participants in the high volatility condition (mean=6.18) perceive investing in the company to be riskier ($p<0.08$) than participants in the low volatility condition (mean=5.48). Participants in the high volatility condition (mean=1.29) place a wider price range on the company's stock ($p<0.06$) than participants in the low volatility condition (mean=1.06). And, participants in the low volatility condition (mean=6.91) expect the pattern of the pension costs to be more continuous ($p<0.01$) than participants in the high volatility condition (mean=5.18).

Table 5.5, Panel C reports the test results. While controlling for the effects of significant covariates, there is evidence to partially support hypothesis 1. I find that for two of the four judgments (investors' willingness to invest 401k retirement funds in the company ($p<0.01$) and investors' belief that the defined pension cost historical pattern

($p<0.09$) will continue in the future) there is significant differential weighting of perceived volatility by volatility (high versus low).

When, however, I delete observations where participants did not correctly answer the volatility manipulation check question, the tests results (not tabulated) show there is only significant ($p<0.07$) differential weighting of perceived volatility by volatility for one of the four judgments (investors' willingness to invest 401k retirement funds in the company).

Also, I find some un-hypothesized interactions for the risky judgments. While the signs on the main effects are as expected, the interaction between perceived volatility and volatility (high versus low) is opposite what is predicted. This would indicate that participants actually decrease risk perceptions when volatility and perception of volatility are high.

I find all covariates used in the models are significant ($p<0.10$). The direction of association between the covariates and the dependent variables is as expected in all instances where a direction was posited.

Table 5.5

Judgments Based on the Interaction between Perceived Volatility and Volatility

Panel A: Means (Standard Deviations) of Perceived Volatility based on Volatility (High versus Low) [1, 6]

High Volatility	Low Volatility	Difference (High-Low)
6.744 (2.232) n=50	4.939 (2.176) n=49	1.805 p<0.001

Table 5.5, Continued

Judgments Based on the Interaction between Perceived Volatility and Volatility

Panel B: Means (Standard Deviations) of Judgments Based on Volatility (High versus Low) [1]

	Risky [2]	**Invest 401k** [3]	**Range** [4]	**Pattern** [5]
High Volatility	6.182 (1.941) n=51	0.259 (0.210) n=51	1.290 (0.653) n=49	5.180 (2.388) n=51
Low Volatility	5.478 (1.924) n=49	0.253 (0.194) n=49	1.065 (0.488) n=48	6.914 (2.169) n=49
Difference (High-Low)	**0.704** **p=0.071**	0.006 p=0.872	**0.225** **p=0.058**	**-1.734** **p=0.001**

Panel C: Regression of Judgments Based on the Interaction between Perceived Volatility and Volatility (High versus Low) [1, 6]

Models: Coefficient Estimate (t-stats) p-value Predicted Sign	**Risky** [2] **n=99**	**Invest 401k** [3] **n=98**	**Range** [4] **n=96**	**Pattern**[5] **n=99**
Intercept	4.828 (4.69) p<0.001	0.113 (1.47) p=0.146	1.641 (5.32) p<0.001	1.344 (1.08) p=0.283
Perceived Volatility [6]	0.145 (1.26) p=0.105 +	-0.001 (-0.04) p=0.484 -	0.011 (0.29) p=0.394 +	0.104 (0.79) p=0.431 ?
Volatility [1]	2.348 (2.41) p=0.009 +	0.273 (2.80) p=0.003 -	0.523 (1.71) p=0.046 +	0.614 (0.53) p=0.595 ?
Interaction between Perceived Volatility and Volatility	-0.288 (-1.85) p=0.034 **+**	**-0.043** **(-2.75)** **p=0.004** **-**	-0.060 (-1.24) p=0.109 +	**-0.326** **(-1.77)** **p=0.081** **?**

Table 5.5, Continued

Judgments Based on the Interaction between Perceived Volatility and Volatility

Panel C: Regression of Judgments Based on the Interaction between Perceived Volatility and Volatility (High versus Low) [1, 6]

Models: Coefficient Estimate (t-stats) p-value Predicted Sign	**Risky [2]** **n=99**	**Invest 401k [3]** **n=98**	**Range [4]** **n=96**	**Pattern[5]** **n=99**
Control Variables: Persistent[7]	----- ----- ----- -----	----- ----- ----- -----	----- ----- ----- -----	0.330 (3.06) p=0.002 +
Classified [8]	----- ----- ----- -----	----- ----- ----- -----	-0.059 (-2.21) p=0.030 ?	0.293 (3.03) p=0.003 ?
Manage Operations [9]	----- ----- ----- -----	----- ----- ----- -----	-0.076 (-2.50) p=0.007 -	----- ----- ----- -----
Manage Performance [10]	-0.341 (-3.39) p=0.001 -	----- ----- ----- -----	----- ----- ----- -----	----- ----- ----- -----
Understand [11]	----- ----- ----- -----	0.034 (3.94) p=0.001 ?	----- ----- ----- -----	----- ----- ----- -----
Task Complex [12]	0.216 (2.53) p=0.007 +	----- ----- ----- -----	----- ----- ----- -----	----- ----- ----- -----
MBA [13]	----- ----- ----- -----	----- ----- ----- -----	----- ----- ----- -----	1.605 (3.11) p=0.003 ?
Number of Accounting Courses [14]	0.154 (1.76) p=0.082 ?	----- ----- ----- -----	0.055 (2.07) p=0.041 ?	----- ----- ----- -----

Table 5.5, Continued

Judgments Based on the Interaction between Perceived Volatility and Volatility

Panel C: Regression of Judgments Based on the Interaction between Perceived Volatility and Volatility (High versus Low) [1, 6]

Models:	Risky [2] n=99	Invest 401k [3] n=98	Range [4] n=96	Pattern [5] n=99
Invest in Months [15]	-----	-0.001 (-2.35) p=0.021 ?	-----	-----
Adjusted R-Square	**0.213** **p<0.001**	**0.239** **p<0.001**	**0.145** **p=0.003**	**0.341** **p<0.001**

Description of Variables Used in the Models:

[1] Volatility is a manipulated variable coded 1 if defined pension cost is volatile over the three year comparative period; 0 otherwise.

[2] Risky is measured by degree to which the participant believes investing in the company's stock is risky on a 10-point scale with 1 indicating "no risk" and 10 indicating "extreme risk."

[3] Willingness to invest their 401k retirement plan is measured by the degree to which participants would invest their 401k retirement plan assets in the company's stock on a percentage scale with 0% indicating "no investment" and 100% indicating "full investment."

[4] Stock price range estimate is measured by a low-high range estimate the participant would place on the company's market price per share on a 7-point scale from $1.00 to $7.00.

[5] The defined pension cost historical pattern is measured by the degree to which the participant believes the historical pattern of the pension cost will continue three years in the future on a 10-point scale with 1 indicating "not likely" and 10 indicating "extreme likely."

[6] Perceived volatility is the degree to which participant believes (from memory) that defined pension cost is volatile on a 10-point scale with 1 indicating "no volatility" and 10 indicating "extreme volatility."

[7] Persistent is the degree to which participant believes the defined pension cost is persistent on a 10-point scale with 1 indicating "not persistent" and 10 indicating "persistent."

[8] Classified is the degree to which participant believes how defined pension cost is classified on the statement of comprehensive income was useful in judgments on a 10-point scale with 1 indicating "not helpful" and 10 indicating "extremely helpful."

[9] Manage operations is the degree to which participant believes management is effective in managing operations on a 10-point scale with 1 indicating "not effective" and 10 indicating "extremely effective."

[10] Manage performance is the degree to which participant believes management is effective in managing performance on a 10-point scale with 1 indicating "not effective" and 10 indicating "extremely effective."

[11] Understand is the degree to which participant believes it was easy to understand the performance of the company given the way the information was presented on a 10-point scale with 1 indicating "not easy" and 10 indicating "extremely easy."

[12] Task complex is the degree to which participant believes the overall experimental task was complex on a 10-point scale with 1 indicating "not complex" and 10 indicating "extremely complex."

[13] MBA is coded 1 if the graduate level business student is an MBA student; 0 otherwise.

[14] Number of accounting courses is the number of accounting courses the participant has taken.

[15] Invest in months is the number of months investing in the stock market.

5.6.2 Hypotheses Testing Related to Method of Presenting a Complex Item

Hypothesis 2 predicts that nonprofessional investors will acquire more information about defined pension cost when the cost is disaggregated across the statement of comprehensive income relative to when the cost is aggregated in the same statement. To test this hypothesis, I use regression to evaluate the effect of presentation method (disaggregation versus aggregation) on the acquisition of defined pension cost information from the statement of comprehensive income.

Table 5.6, Panel A provides descriptive statistics for the mean (standard deviations) differences on acquiring more information based on presentation method. As shown, participants in the disaggregated condition recall more information (mean=1.64) than participants in the aggregated condition (mean=1.20; $p<0.04$).

Table 5.6, Panel B reports the test results. While controlling for the effects of significant covariates, there is evidence to support hypothesis 2. I find that nonprofessional investors recall more information about defined pension cost on the statement of comprehensive income when the cost is disaggregated relative to when the cost is aggregated ($p<0.02$). Additionally, when I delete observations for participants who failed the manipulation check question for presentation method, the results (not tabulated) for the acquisition test remains substantially the same.[24]

[24] I also measured acquiring more defined pension cost information by asking participants to answer seven specific questions about information they recall about the defined pension cost across the statement of comprehensive income. I do not, however, report the test results for this measure because of its high correlation with the evaluate volatility dependent variable (H3a). Preliminary tests do suggest, however, that there is no significant ($p=0.23$) association between acquisition of information as measured by the accurate response to seven specific questions and presentation method. The results seem to imply that how the acquisition information was gathered is relatively important. It may be that there is no difference when participants are provided with a list due to prompts helping with recall, or it could be that prompts are causing the participants to believe they should have seen the information and this may lead them to inappropriately checking answers to questions.

Related to significant covariates, I find that participants' accounting work experience significantly ($p<0.03$) increases acquisition of defined pension cost information.

Table 5.6

Acquiring More Defined Pension Cost Information Based on Presentation Method

Panel A: Means (Standard Deviations) of Acquire More Information Based on Presentation Method [1, 2]

Recall Information	Disaggregated	Aggregated	Difference (Disaggregated-Aggregated)
Open Ended Recall Question [1]	1.640 (1.102) n=50	1.200 (0.990) n=50	0.440 **(p=0.038)**

Panel B: Regression Results of Acquiring More Information Based on Presentation Method [1, 2]

Open Ended Recall Question [1] **n=100**	**Predicted Sign**	**Parameter Estimate**	**t-Value**	**P-Value**
Intercept		1.040	6.27	<0.001
Presentation Method [2]	**+**	0.467	2.26	**0.013**
Control Variable: Accounting Work Experience [3]	+	0.445	2.03	0.023
Adjusted R-Square = 0.063				**0.016**

Description of Variables Used in the Model:
[1] Acquire is an open ended question that asks participant to list all pieces of information they recall about pension cost information appearing in the statement of comprehensive income.
[2] Presentation method is a manipulated variable coded 1 if defined pension cost is disaggregated across sections of the statement of comprehensive income; 0 otherwise
[3] Accounting work experience in months.

Hypothesis 3a predicts that nonprofessional investors will evaluate the volatility surrounding defined pension cost more accurately when the cost is disaggregated across the statement of comprehensive income relative to when the cost is aggregated in the same statement. To examine this hypothesis, I use regression to evaluate the effect of

presentation method (disaggregation and aggregation) on evaluating volatility surrounding defined pension cost.

Table 5.7, Panel A displays descriptive statistics on the mean (standard deviations) differences between evaluating volatility more accurately based on presentation method. As shown, there appears to be no significant difference in participants' accuracy in evaluating defined pension cost volatility between the disaggregated condition (mean=1.06) and the aggregated condition (mean=0.96; p=0.52).

Table 5.7, Panel B presents the test results. There is no evidence to support hypothesis 3a. I find no differences in participants' accuracy in evaluating defined pension cost volatility based on presentation method (p=0.26), and the model is not significant. Additionally, when I delete observations for participants who failed the manipulation check question for presentation method, the test results (not tabulated) stay substantially the same.

Table 5.7

Evaluate Defined Pension Cost Volatility More Accurately Based on Presentation Method

Panel A: Means (Standard Deviations) of Evaluating Volatility More Accurately Based on Presentation Method (Disaggregated versus Aggregated) [1, 2]

Disaggregated n=50	Aggregated n=48	Difference (Disaggregated-Aggregated)
1.060	0.958	0.102
(0.818)	(0.743)	p=0.522

Table 5.7, Continued

Evaluate Defined Pension Cost Volatility More Accurately Based on Presentation Method

Panel B: Regression Results of Evaluating Volatility More Accurately Based on Presentation Method (Disaggregated versus Aggregated) [1, 2]

Regression	**Predicted Sign**	**Parameter Estimate**	**t-Value**	**P-Value**
Intercept		0.958	8.49	<0.001
Presentation Method [2]	+	0.102	0.64	0.261
Adjusted R-Square = -0.006				0.522

Description of Variables Used in the Model:
[1] Evaluating volatility more accurately is a summed measure of participants' accurate response to two questions. First, participants are asked whether they believe defined pension cost is volatile on a 10-point scale with 1 indicating "no volatility" and 10 indicating "extreme volatility." This variable is coded 1 if participants in the high (low) volatility condition explain volatility as greater (equal to or less) than 5 on the 10-point scale and 0 otherwise. Second, participants are asked why defined pension cost seems to have high or low volatility. This variable is coded 1 if participants explain high (low) volatility at the financing the defined pension plan level (no level) and 0 otherwise.
[2] Presentation method is a manipulated variable coded 1 if defined pension cost is disaggregated across sections of the statement of comprehensive income; 0 otherwise.

Hypothesis 3b predicts that nonprofessional investors will evaluate the predominate function of defined pension cost more accurately when the cost is disaggregated across the statement of comprehensive income relative to when the cost is aggregated in the same statement. To examine this hypothesis, I use regression to evaluate the effect of presentation method (disaggregation versus aggregation) on evaluating predominate function of defined pension cost more accurately.

Table 5.8, Panel A provides descriptive statistics on the means (standard deviations) for evaluating predominate function more accurately based on presentation method (disaggregated versus aggregated). As shown, participants in the disaggregated condition evaluate defined pension cost function more accurately (mean=1.17) than participants in the aggregated condition (mean=0.84; $p<0.08$).

Table 5.8, Panel B provides the test results. While controlling for the effects of significant covariates, there is evidence to support hypothesis 3b. I find that participants' evaluate the defined pension cost function more accurately in the disaggregated condition than in the aggregated condition ($p<0.03$). Further, when I delete observations for participants who did not pass the manipulation check question for presentation method, the test results (not tabulated) are substantially the same.

Related to significant covariates, I find that participants' belief that management is effective in managing continuous operations is positively associated with evaluating the defined pension cost more accurately ($p<0.03$).

Table 5.8

Evaluate Defined Pension Cost Function More Accurately Based on Presentation Method

Panel A: Means (Standard Deviations) of Evaluating Defined Pension Cost Function More Accurately Based on Presentation Method (Disaggregated versus Aggregated) [1,2]

Disaggregated	Aggregated	Difference (Disaggregated-Aggregated)
1.174 (0.895) n=50	0.843 (0.924) n=50	0.331 **p=0.071**

Panel B: Regression of Evaluating Defined Pension Cost Function More Accurately Based on Presentation Method (Disaggregated versus Aggregated) [1, 2]

Regression n=100	Predicted Sign	Parameter Estimate	t-Value	P-Value
Intercept		0.293	1.10	0.272
Presentation Method [2]	+	0.358	2.01	**0.024**
Control Variable: Manage Continuous Operations [3]	?	0.108	2.34	0.021
Adjusted R-Square = 0.066				**0.014**

Table 5.8, Continued

Evaluate Defined Pension Cost Function More Accurately Based on Presentation Method

Description of Variables Used in the Model:
[1] Evaluated defined pension cost function more accurately is coded 0-2. It is a cumulative measure of whether the participant is able to accurately recall which item (service cost, financing cost, remeasurement cost, or other) best explains the defined pension cost and by whether the participant is able to indicate the degree to which the financing cost best explains the total pension cost.
[2] Presentation method is a manipulated variable coded 1 if defined pension cost is disaggregated across sections of the statement of comprehensive income; 0 otherwise.
[3] Manage continuous operations is the degree to which the participant believes management is effective in managing continuous operations measured on a 10-point scale with 1 indicating "not effective" and 10 indicating "extremely effective."

Hypothesis 4a predicts that nonprofessional investors' perceptions of the volatility surrounding defined pension cost will differ between presentation methods (disaggregated across the face of the statement of comprehensive income versus aggregated in the same statement). To test this hypothesis, I use regression to examine the effect of differences between presentation method (disaggregated and aggregated) on perceived volatility.

Table 5.9, Panel A provides descriptive statistics on the mean (standard deviations) differences between perceived volatility based on presentation method. There appears to be no difference in perceived volatility between participants in the disaggregated condition (mean=6.08) and the aggregated condition (mean=5.62; p=0.34).

Panel B provides the test results. While controlling for the effects of significant covariates, there is no evidence to support hypothesis 4a. Contrary to expectations, I find participants in the disaggregated condition do not perceive the defined pension cost to be more volatile than the participants in the aggregated condition (p=0.20). Further, when I delete observations for participants who failed the manipulation check question for presentation method, the test results (not tabulated) remain substantially the same.

Results do indicate, however, that several covariates are associated with perceived volatility. Participants' perceptions of management effectively managing pension cost ($p<0.01$) and age ($p<0.04$) are negatively associated with participants' perception of volatility surrounding defined pension cost. As participants' pension knowledge increases their perception of volatility surrounding defined pension cost significantly ($p<0.01$) increases.

Table 5.9

Perceived Volatility Based on Presentation Method

Panel A: Means (Standard Deviations) of Perceived Volatility Based on Presentation Method (Disaggregated versus Aggregated) [1, 2]

Disaggregated	**Aggregated**	**Difference (Disaggregated- Aggregated)**
n=6.076 (2.300) n=50	5.620 (2.448) n=49	0.456 p=0.342

Panel B: Regression of Perceived Volatility Based on Presentation Method (Disaggregated versus Aggregated) [1, 2]

Regression n=99	**Predicted Sign**	**Parameter Estimate**	**t-Value**	**P-Value**
Intercept		8.963	5.74	<0.001
Presentation Method [2]	+	0.359	0.85	0.198
Control Variables: Manage Pension [3]	?	-0.458	-4.72	<0.001
Age [4]	?	-0.09	-2.05	0.043
Pension Knowledge [5]	?	0.571	2.72	0.008
Adjusted R-Square = 0.260				**<0.001**

Table 5.9, Continued

Perceived Volatility Based on Presentation Method

Description of Variables Used in the Model:
[1] Perceived volatility is the degree to which participant believes (from memory) that defined pension cost is volatile on a 10-point scale with 1 indicating "no volatility" and 10 indicating "extreme volatility."
[2] Presentation method is a manipulated variables coded 1 if defined pension cost is disaggregated across sections of the statement of comprehensive income; 0 otherwise.
[3] Manage pension is the degree to which participant believes management is effective in managing pension cost on a 10-point scale with 1 indicating "not effective" and 10 indicating "extremely effective."
[4] Age is the participant's age in years.
[5] Pension knowledge is an indicator of the participant's general pension knowledge. Coded 5 if strong, 4 if semi-strong, 3 if basic, 2 if semi-weak, 1 if weak, and 0 otherwise.

Hypothesis 4b predicts that nonprofessional investors' perceptions of predominate function of defined pension cost will differ between presentation methods (disaggregated across the face of the statement of comprehensive income versus aggregated in the same statement). To test this hypothesis, I use regression to examine the effect of differences between presentation method (disaggregated versus aggregated) on perceived predominate function.

Table 5.10, Panel A provides descriptive statistics on the means (standard deviations) for perceived predominate function based on presentation method (disaggregated versus aggregated). As shown, participants in the aggregated condition (mean=5.54) do not perceive the predominate function of defined pension cost differently (p=0.13) than participants in the disaggregated condition (mean=4.90).

Panel B provides the test results. Contrary to the Panel A results, when controlling for the effects of significant covariates, there is evidence to support hypothesis 4b. I find that participants' perception of predominate function of defined pension cost is negatively associated with presentation method (p-value<0.01). The results suggest participants' belief that the item they identified as representing the predominant function

of the defined pension cost best explains the cost decreases when the cost is disaggregated. Further, when I delete observations for participants who failed the manipulation check question for presentation method, the test results (not tabulated) stay substantially the same.

Related to significant covariates, I find that participants' risk preference ($p<0.08$) is negatively associated with participants' perception of predominate function. Participants' perceptions that pension volatility influenced their judgments ($p<0.01$), management is effective in managing pension cost ($p<0.07$), and how the defined pension cost is classified on the statement of comprehensive income is useful in judgments ($p<0.02$) are all positively associated with participants' perception of predominate function.

Table 5.10

Perceived Predominate Function Based on Presentation Method

Panel A: Means (Standard Deviations) of Perceived Predominate Function Based on Presentation Method (Disaggregated versus Aggregated) [1, 2]

Disaggregated Condition	Aggregated Condition	Difference (Disaggregated-Aggregated)
n=4.904 (2.016) n=50	5.535 (2.097) n=49	-0.631 p=0.130

Table 5.10, Continued

Perceived Predominate Function Based on Presentation Method

Panel B: Regression of Perceived Predominate Function based on Presentation Method (Disaggregated versus Aggregated) [1, 2,]

Regression n=96	Predicted Sign	Parameter Estimate	t-Value	P-Value
Intercept		3.414	3.30	0.001
Presentation Method [2]	?	-0.994	-2.73	**0.007**
Control variables:				
Risk Preference [3]	?	-0.194	-1.81	0.074
Volatility Influence [4]	?	0.224	2.67	0.009
Classified [5]	+	0.216	2.25	0.014
Manage Pension[6]	?	0.176	1.90	0.060
Adjusted R-Square = 0.2608				**<0.001**

Description of Variables Used in the Model:

[1] Perceived predominate function is the degree to which participant believes the item they identified as representing the predominant function of the defined pension cost best explains the cost. The belief is measured on a 10-point scale with 1 indicating "no explanation" and 10 indicating "full explanation."

[2] Presentation method is a manipulated variable coded 1 if defined pension cost is disaggregated across sections of the statement of comprehensive income; 0 otherwise.

[3] Risk preference is an indicator of the participant's risk preference using a risk preference scale. Coded 1 if highly risk loving, 2 if very risk loving, 3 if risk loving, 4 if risk neutral, 5 if slightly risk averse, 6 if risk averse, 7 if very risk averse, 8 if highly risk averse, and 9-10 if other (Holt and Laury 2002).

[4] Volatility influence is the degree to which participant believes the pension volatility (or lack of volatility) influenced judgments on a 10-point scale with 1 indicating "did not influence" and 10 indicating "strongly influenced."

[5] Classified is the degree to which participant believes how defined pension cost is classified on the statement of comprehensive income was useful in judgments on a 10-point scale with 1 indicating "not helpful" and 10 indicating "extremely helpful."

[6] Manage pension is the degree to which participant believes management is effective in managing pension cost on a 10-point scale with 1 indicating "not effective" and 10 indicating "extremely effective."

Hypothesis 5a predicts that nonprofessional investors will place greater weight on perceived volatility of defined pension cost in judgments when the cost is disaggregated across the face of the statement of comprehensive income relative to when the cost is aggregated in the same statement. To test this hypothesis, I use regression to examine the

differential weighting of perceived volatility by presentation method on four judgments (i.e., risky investment, willing to invest in 401k, stock price range estimate judgment, and defined pension cost historical pattern judgment).

Table 5.11, Panel A displays descriptive statistics for mean differences in judgments based on presentation method (disaggregated versus aggregated). As shown, Invest 401k is the only judgment with statistical differences between presentation methods ($p<0.07$). Participants in the disaggregated condition (mean=29.34%) indicate that they would be willing to invest a greater percentage of their 401k retirement plan assets in the company's stock than participants in the aggregated condition (mean=21.90%).

Table 5.11, Panel B provides the test results. Controlling for the effects of significant covariates, there is minimal evidence to support hypothesis 5a. I find that the interaction between perceived volatility and presentation method is only significant ($p<0.06$) in the risky judgment. When, however, I delete observations where participants did not correctly answer the presentation method manipulation check question, there is no evidence to support hypothesis 5a. That is, there is no significant differential weighting of perceived volatility by presentation method (aggregated versus disaggregated) in any of the judgments.

I find that all covariates used in the models are significant ($p<0.10$). The direction of association between the covariates and the dependent variables is as expected in all instances where a direction was posited.

Table 5.11

Judgments Based on the Interaction between Perceived Volatility and Presentation Method

Panel A: Means (Standard Deviations) of Judgments Based on Presentation Method (Disaggregated versus Aggregated) [1]

Judgment	Risky [2]	Invest 401k [3]	Range [4]	Pattern [5]
Disaggregated	5.836 (1.9408) n=50	0.293 (0.212) n=50	1.183 (0.4991) n=49	5.870 (2.448) n=50
Aggregated	5.838 (1.990) n=50	0.219 (0.185) n=50	1.174 (0.664) n=48	6.190 (2.432) n=50
Difference (Aggregated-Disaggregated)	-0.002 p=0.996	0.074 p=0.065	0.009 p=0.934	-0.320 p=0.514

Table 5.11, Continued

Judgments Based on the Interaction between Perceived Volatility and Presentation Method

Panel B: Regression of Judgments Based on Interaction between Perceived Volatility and Presentation Method (Disaggregated versus Aggregated) [1, 6]

Models: Coefficient Estimate (t-stats) p-value Predicted Sign	**Risky [2] n=99**	**Invest 401k [3] n=97**	**Range [4] n=96**	**Pattern[5] n=99**
Intercept	5.683 (5.54) p<0.001	-0.026 (-0.26) p=0.794	1.803 (5.73) p<0.001	3.126 (2.60) p=0.011
Perceived Volatility [6]	-0.102 (-0.94) p=0.176 +	-0.003 (-0.24) p=0.404 -	-0.003 (-0.07) p=0.471 +	-0.157 (-1.21) p=0.229 ?
Presentation Method [1]	-1.395 (-1.49) p=0.139 ?	0.134 (1.50) p=0.137 ?	0.216 (0.75) p=0.458 ?	0.344 (0.31) p=0.760 ?
Interaction between Perceived Volatility& Presentation Method	**0.295 (1.95) p=0.054 ?**	-0.013 (-0.970) p=0.335 ?	-0.016 (-0.35) p=0.724 ?	-0.046 (-0.26) p=0.797 ?
Control Variables: Persistent [7]	-----	-----	-----	0.483 (4.40) p<0.001 +
Classified [8]	-----	-----	-0.062 (-2.31) p=0.012 -	-----
Manage Operations [9]	-----	-----	-0.088 (-2.87) p=0.003 -	-----

Table 5.11, Continued

Judgments Based on the Interaction between Perceived Volatility and Presentation Method

Panel B: Regression of Judgments Based on Interaction between Perceived Volatility and Presentation Method (Disaggregated versus Aggregated) [1, 6]

Models: Coefficient Estimate (t-stats) p-value Predicted Sign	**Risky[2]** **n=99**	**Invest 401k [3]** **n=97**	**Range[4]** **n=96**	**Pattern[5]** **n=99**
Manage Performance [10]	-0.315 (-3.05) p=0.002 -	-----	-----	-----
Manage Pension [11]	-----	0.029 (3.16) p=0.001 +	-----	-----
Understand [12]	-----	0.027 (3.15) p=0.001 ?	-----	----
Task Complex [13]	0.279 (3.08) p=0.001 +	-----	-----	-----
MBA [14]				0.954 (1.82) p=0.073 ?
Number of Accounting Courses [15]	0.175 (1.97) p=0.052 ?	-----	0.057 (2.11) p=0.037 ?	-----
Invest In Months [16]	-----	-0.001 (-2.35) p=0.021 ?	-----	-----

Table 5.11, Continued

Judgments Based on the Interaction between Perceived Volatility and Presentation Method

Panel B: Regression of Judgments Based on Interaction between Perceived Volatility and Presentation Method (Disaggregated versus Aggregated) [1, 6]

Models: Coefficient Estimate (t-stats) p-value Predicted Sign	**Risky [2] n=99**	**Invest 401k[3] n=97**	**Range [4] n=96**	**Pattern [5] n=99**
Adjusted R-Square	**0.195 p<0.001**	**0.269 p<0.0001**	**0.123 p=0.007**	**0.222 p<0.001**

Description of Variables Used in the Models:

[1] Presentation method is a manipulated variable coded 1 if defined pension cost is disaggregated across sections of the statement of comprehensive income; 0 otherwise.

[2] Risky is measured by degree to which the participant believes investing in the company's stock is risky on a 10-point scale with 1 indicating "no risk" and 10 indicating "extreme risk."

[3] Willingness to invest their 401k retirement plan is measured by the degree to which participants would invest their 401k retirement plan assets in the company's stock on a percentage scale with 0% indicating "no investment" and 100% indicating "full investment."

[4] Stock price range estimate is measured by a low-high range estimate the participant would place on the company's market price per share on a 7-point scale from $1.00 to $7.00.

[5] The defined pension cost historical pattern is measured by the degree to which the participant believes the historical pattern of the defined pension cost will continue three years in the future on a 10-point scale with 1 indicating "not likely" and 10 indicating "extreme likely."

[6] Perceived volatility is the degree to which participant believes (from memory) that defined pension cost is volatile on a 10-point scale with 1 indicating "no volatility" and 10 indicating "extreme volatility."

[7] Persistent is the degree to which participant believes the defined pension cost is persistent on a 10-point scale with 1 indicating "not persistent" and 10 indicating "persistent."

[8] Classified is the degree to which participant believes how defined pension cost is classified on the statement of comprehensive income was useful in judgments on a 10-point scale with 1 indicating "not helpful" and 10 indicating "extremely helpful."

[9] Manage operations is the degree to which participant believes management is effective in managing operations on a 10-point scale with 1 indicating "not effective" and 10 indicating "extremely effective."

[10] Manage performance is the degree to which participant believes management is effective in managing performance on a 10-point scale with 1 indicating "not effective" and 10 indicating "extremely effective."

[11] Manage pension is the degree to which participant believes management is effective in managing pension cost on a 10-point scale with 1 indicating "not effective" and 10 indicating "extremely effective."

[12] Understand is the degree to which participant believes it was easy to understand the performance of the company given the way the information was presented on a 10-point scale with 1 indicating "not easy" and 10 indicating "extremely easy."

[13] Task complex is the degree to which participant believes the overall experimental task was complex on a 10-point scale with 1 indicating "not complex" and 10 indicating "extremely complex."

[14] MBA is coded 1 if the graduate level business student is an MBA student; 0 otherwise.

[15] Number of accounting courses is the number of accounting courses the participant has taken.

[16] Invest in months is the number of months investing in the stock market.

Hypothesis 5b predicts that nonprofessional investors will place greater weight on perceived predominate function of defined pension cost in judgments when the cost is disaggregated across the face of the statement of comprehensive income relative to when the cost is aggregated in the same statement. To test this hypothesis, I use regression to examine the differential weighting of perceived predominate function of defined pension cost by presentation method on judgments (i.e., risky investment, willing to invest 401k, stock price range estimate, and defined pension cost historical pattern judgment).

Table 5.12, Panel A provides the test results. While controlling for the effects of significant covariates, I find evidence to partially support hypothesis 5b. For two of the five judgments (investors' belief that investing in the company is risky ($p<0.04$) and investors' belief that the defined pension cost historical pattern will continue in the future ($p<0.02$)), there is significant differential weighting of perceived predominate function by presentation method (aggregated versus disaggregated), indicating participants do place greater weight on perceived predominate function when the information is disaggregated versus aggregated. Furthermore, when I delete observations where participants did not correctly answer the manipulation check question for presentation method, there is further evidence to support hypothesis 5b. That is, in addition to the significant differential weighting of perceived predominate function by presentation method for the risky and pattern judgments, the differential weighting of perceived predominate function by presentation method for the willingness to invest 401k judgment also becomes significant ($p<0.03$).

Related to covariates used in the models, I do find some significant posited relationships (all at $p<0.05$). I find that effort is positively associated with risky

judgment. Not unexpectedly, manage performance and manage pension decrease beliefs about risk associated with investment, while they increase willingness to invest in 401k. Also as expected manage operations is negatively associated with range judgment, and persistent is positively associated with pattern judgment.

Table 5.12

Judgments Based on the Interaction between Perceived Predominate Function and Presentation Method

Panel A: Regression of Judgments Based on the Interaction between Perceived Predominate Function and Presentation Method (Disaggregated versus Aggregated) [1,2]

Models: Coefficient Estimate (t-stats) p-value Predicted Sign	**Risky [3] n=99**	**Invest 401k [4] n=98**	**Range [5] n=96**	**Pattern [6] n=99**
Intercept	7.423 (6.89) p<0.001	-0.076 (-0.90) p=0.370	1.819 (6.90) p<0.001	2.430 (2.26) p=0.026
Perceived Predominate Function [1]	-0.130 (-1.10) p=0.274 ?	0.012 (1.08) p=0.284 ?	0.001 (0.01) p=0.994 ?	-0.122 (-0.89) p=0.374 ?
Presentation Method [2]	-1.698 (-1.93) p=0.057 ?	0.039 (0.46) p=0.644 ?	-0.081 (-0.30) p=0.764 ?	-2.353 (-2.31) p=0.023 ?
Interaction between Perceived Predominate Function & Presentation Method	**0.340 (2.16) p=0.033 ?**	0.005 (0.30) p=0.765 ?	0.037 (0.77) p=0.444 ?	**0.454 (2.47) p=0.015 ?**
Control Variables:				
Effort [7]	0.256 (2.25) p=0.027 ?	-----	-----	-----

Table 5.12, Continued

Judgments Based on the Interaction between Perceived Predominate Function and Presentation Method

Panel A: Regression of Judgments Based on the Interaction between Perceived Predominate Function and Presentation Method (Disaggregated versus Aggregated) [1, 2]

Models: Coefficient Estimate (t-stats) p-value Predicted Sign	**Risky**[3] **n=99**	**Invest 401k** [4] **n=98**	**Range** [5] **n=96**	**Pattern** [6] **n=99**
Persistent[8]	-----	-----	-----	0.388 (3.47) p=0.001 +
Classified [9]	-----	-----	-0.074 (-2.60) p=0.011 ?	-----
Manage Operations [10]	-----	-----	-0.078 (-2.56) p=0.006 -	-----
Manage Performance [11]	-0.281 (-2.62) p=0.005 -	0.021 (2.01) p=0.024 +	-----	-----
Manage Pension [12]	-0.201 (-2.18) p=0.016 -	0.028 (3.15) p=0.001 +	-----	0.177 (1.58) p=0.117 ?
MBA [13]	-----	-----	-----	1.311 (2.47) p=0.016 ?
Number of Accounting Courses [14]	-----	-----	0.057 (2.17) p=0.033 ?	-----

Table 5.12, Continued

Judgments Based on the Interaction between Perceived Predominate Function and Presentation Method

Panel A: Regression of Judgments Based on the Interaction between Perceived Predominate Function and Presentation Method (Disaggregated versus Aggregated) [1, 2]

Models: Coefficient Estimate (t-stats) p-value Predicted Sign	**Risky[3] n=99**	**Invest 401k [4] n=98**	**Range [5] n=96**	**Pattern [6] n=99**
Invest in Months [15]	-----	-0.001 (-2.15) p=0.034 ?	-----	-----
Adjusted R-Square	**0.174 p=0.001**	**0.236 p<0.001**	**0.131 p=0.005**	**0.242 p<0.001**

Description of Variables Used in the Models:

[1] Perceived predominate function is the degree to which participant believes the item they identified as representing the predominant function of the defined pension cost best explains the cost. The belief is measured on a 10-point scale with 1 indicating "no explanation" and 10 indicating "full explanation."

[2] Presentation method is a manipulated variable coded 1 if defined pension cost is disaggregated across sections of the statement of comprehensive income; 0 otherwise.

[3] Risky investment is measured by degree to which the participant believes investing in the company's stock is risky on a 10-point scale with 1 indicating "no risk" and 10 indicating "extreme risk."

[4] Willingness to invest their 401k retirement plan is measured by the degree to which participant would invest his/her 401k retirement plan assets in the company's stock on a percentage scale with 0% indicating "no investment" and 100% indicating "full investment."

[5] Stock price range estimate is measured by a low-high range estimate the participant would place on the company's market price per share on a 7-point scale from $1.00 to $7.00.

[6] The defined pension cost historical pattern is measured by the degree to which the participant believes the historical pattern of the pension cost will continue three years in the future on a 10-point scale with 1 indicating "not likely" and 10 indicating "extreme likely."

[7] Effort is degree of mental effort participant believes s/he exerted while performing the experimental task on a 10-point scale with 1 indicating "no effort" and 10 indicating "extreme effort."

[8] Persistent is the degree to which the participant believes the defined pension cost is persistent or transitory on a 10-point scale with 1 indicating "transitory" and 10 indicating "persistent."

[9] Classified is the degree to which the participant believes how defined pension cost is classified on the statement of comprehensive income was useful in judgments on a 10-point scale with 1 indicating "not helpful" and 10 indicating "extremely helpful."

[10] Manage operations is the degree to which the participant believes management is effective in managing operations on a 10-point scale with 1 indicating "not effective" and 10 indicating "extremely effective."

[11] Manage performance is the degree to which the participant believes management is effective in managing performance on a 10-point scale with 1 indicating "not effective" and 10 indicating "extremely effective."

Table 5.12, Continued

Judgments Based on the Interaction between Perceived Predominate Function and Presentation Method

Description of Variables Used in the Models, Continued

[12] Manage pension is the degree to which the participant believes management is effective in managing pension cost on a 10-point scale with 1 indicating "not effective" and 10 indicating "extremely effective."
[13] MBA is coded 1 if the graduate level business student is an MBA student; 0 otherwise.
[14] Number of accounting courses taken is the number of accounting courses the participant has taken.
[15] Invest in months is the number of months investing in the stock market.

Finally, hypothesis 6 predicts that nonprofessional investors will place the greatest weight on perceived volatility of defined pension cost in judgments when the cost has high volatility relative to low volatility and is disaggregated across the statement of comprehensive income relative to when the cost is aggregated in the same statement.

To test this hypothesis, I use regression to examine whether disaggregation moderates the effect of volatility (a proxy for degree of complexity) on perceived volatility in judgments (i.e., investors' belief that investing in the company is risky, investors' willingness to invest 401k retirement funds in the company, investors' range estimate of the company's stock price, and investors' belief that the defined pension cost historical pattern will continue in the future).

Table 5.13, Panel A provides descriptive statistics for the mean differences in judgments based on the interaction between volatility (high versus low) and presentation method (disaggregated versus aggregated). As reported, the only judgments with statistical differences based on the interaction between volatility (high versus low) and presentation method (disaggregated versus aggregated) are risky and pattern. For the risky judgment, there is a significant difference between the disaggregated and high

volatility condition (mean=6.55) and the disaggregated and low volatility condition (mean=5.12; $p<0.01$). For the pattern judgment, there is significant difference between the aggregated and high volatility condition (mean=5.18) and the aggregated and low volatility condition (mean=7.31; $p<0.001$). And, there is significant difference between the disaggregated and high volatility condition (mean=5.20) and the disaggregated and low volatility condition (mean=6.54; $p<0.06$).

Panel B in Table 5.13 provides the test results. While controlling for the effects of significant covariates, I find no evidence to support hypothesis 6. For each of the four judgments there is no significant differential weighting of the interaction between perceived volatility, volatility (high versus low) and presentation method (disaggregated versus aggregated). The only interactions of significance are the positive interaction between perceived volatility and presentation method ($p<0.10$) for the risky model and the negative interaction between perceived volatility and volatility ($p<0.01$) for the invest 401k model. For the risky model, the significant interaction seems to indicate that for the disaggregated condition, the perception of risk increases the belief that the investment is risky. For the invest 401k model, the significant interaction seems to imply that for the volatility condition, increased risk perception causes a greater decrease in investment in 401k. When I delete observations for participants who failed the manipulation check questions, the test results stay substantially the same

I find all covariates used in the models are significant ($p<0.10$). The association and direction between the covariates and the dependent variables is as predicted in all instances where a direction was posited.

Table 5.13

Judgments Based on the Interaction between Perceived Volatility, Volatility and Presentation Method

Panel A: Means (Standard Deviations) of Judgments Based on the Interaction between Volatility (High versus Low) and Presentation Method (Disaggregated versus Aggregated) [1,2]

Risky [4]			
	Disaggregated	**Aggregated**	Difference (Disaggregated versus Aggregated)
High Volatility	6.548 (1.749) n=25	5.831 (2.083) n=26	0.717 p=0.190
Low Volatility	5.124 (1.891) n=25	5.846 (1.929) n=24	-0.722 p=0.192
Difference (High-Low)	1.424 p=0.008	-0.015 p=0.979	
Invest 401k [5]			
	Disaggregated	**Aggregated**	Difference (Disaggregated versus Aggregated)
High Volatility	0.292 (0.221) n=25	0.229 (0.199) n=26	0.063 p=0.289
Low Volatility	0.295 (0.208) n=25	0.209 (0.177) n=24	0.086 p=0.120
Difference (High-Low)	-0.003 p=0.953	0.020 p=0.711	

Table 5.13, Continued

Judgments Based on the Interaction between Perceived Volatility, Volatility and Presentation Method

Panel A: Means (Standard Deviations) for Judgments Based on the Interaction between Volatility (High versus Low) and Presentation Method (Disaggregated versus Aggregated) [1,2]

Range [6]			
	Disaggregated	**Aggregated**	Difference (Disaggregated versus Aggregated)
High Volatility	1.235 (0.054) n=23	1.339 (0.746) n=26	-0.104 p=0.584
Low Volatility	1.136 (0.465) n=25	0.987 (0.509) n=23	0.149 p=0.295
Difference (High-Low)	0.099 p=0.499	0.352 **p=0.064**	
Pattern [7]			
	Disaggregated	**Aggregated**	Difference (Disaggregated versus Aggregated)
High Volatility	5.204 (2.345) n=25	5.177 (2.475) n=26	0.027 p=0.946
Low Volatility	6.536 (2.411) n=25	7.308 (1.853) n=24	-0.772 p=0.216
Difference (High-Low)	-1.332 **p=0.053**	-2.131 **p=0.001**	

Table 5.13, Continued

Judgments Based on the Interaction between Perceived Volatility, Volatility and Presentation Method

Panel B: Regression of Judgments Based on the Interaction between Perceived Volatility, Volatility (High versus Low), and Presentation Method (Disaggregated versus Aggregated) [1, 2, 3]

Models: Coefficient Estimate (t-stats) p-value Predicted Sign	**Risky [4]** **n=99**	**Invest 401k[5]** **n=99** (using white's corrected t-statistics)	**Range[6]** **n=96**	**Pattern[7]** **n=99**
Intercept	4.905 (4.24) p<0.001	-0.188 (-2.11) p=0.038	1.692 (4.47) p<0.001	2.422 (1.74) p=0.085
Perceived Volatility [3]	-0.055 (-0.33) p=0.372 +	0.017 (1.56) p=0.068 -	-0.013 (-0.25) p=0.403 +	0.182 (0.95) p=0.343 ?
Volatility [1]	1.385 (1.01) p=0.157 +	0.338 (2.78) p=0.003 -	0.336 (0.76) p=0.226 +	0.521 (0.32) p=0.753 ?
Presentation Method [2]	-2.299 (-1.88) p=0.063 ?	0.151 (1.52) p=0.132 ?	0.021 (0.05) p=0.957 ?	0.651 (0.45) p=0.653 ?
Interaction between Perceived Volatility & Volatility	-0.206 (-0.92) p=0.181 +	**-0.050** **(-2.93)** **p=0.002** -	-0.014 (-0.20) p=0.423 +	-0.414 (-1.52) p=0.131 ?
Interaction between Perceived Volatility & Presentation Method	**0.383** **(1.66)** **p=0.099** **?**	-0.014 (-0.86) p=0.392 ?	0.037 (0.50) p=0.615 ?	-0.249 (-0.93) p=0.356 ?
Interaction between Volatility & Presentation Method	1.691 (0.82) p=0.413 ?	-0.026 (-0.13) p=0.893 ?	0.371 (0.56) p=0.578 ?	0.327 (0.13) p=0.894 ?
Interaction between Perceived Volatility, Volatility, and Presentation Method	-0.161 (-0.50) p=0.622 ?	0.008 (0.29) p=0.771 ?	-0.087 (-0.84) p=0.405 ?	0.195 (0.50) p=0.616 ?

Table 5.13, Continued

Judgments Based on the Interaction between Perceived Volatility, Volatility and Presentation Method

Panel B: Regression of Judgment Based on the Interaction between Perceived Volatility, Volatility (High versus Low), and Presentation Method (Disaggregated versus Aggregated)[1-3]

Models: Coefficient Estimate (t-stats) p-value Predicted Sign	**Risky [4] n=99**	**Invest 401k [5] n=99**	**Range n=96 [6]**	**Pattern [7] n=99**
Control Variables: Persistent [8]	-----	-----	-----	0.424 (3.73) p=0.001 +
Classified [9]	-----	-----	-0.062 (-2.31) p=0.012 -	-----
Manage Operations [10]			-0.081 (-2.52) p=0.007 -	
Manage Continuous Operations [11]	-0.230 (-2.42) p=0.009 -	0.041 (3.26) p=0.001 +		-----
Understand [12]	-----	0.0193 (2.09) p=0.039 ?	-----	-----
Task Complex [13]	0.283 (3.12) p=0.001 +	-----	-----	-----
MBA [14]	-----	-----	-----	1.320 (2.46) p=0.016 ?
Number of Accounting Courses [15]	0.161 (1.79) p=0.078 ?	-----	0.060 (2.19) p=0.031 ?	-----

Table 5.13, Continued

Judgments Based on the Interaction between Perceived Volatility, Volatility and Presentation Method

Panel B: Regression of Judgments Based the Interaction between Perceived Volatility, Volatility (High versus Low), and Presentation Method (Disaggregated versus Aggregated) [1, 2]

Models: Coefficient Estimate (t-stats) p-value Predicted Sign	**Risky [4] n=99**	**Invest 401k [5] n=99**	**Range [6] n=96**	**Pattern [7] n=99**
Adjusted R-Square	**0.205 p=0.001**	**0.260 p<0.001**	**0.130 p=0.014**	0.275 p<0.001

Description of Variables Used in the Models:

[1] Volatility is a manipulated variable coded 1 if defined pension cost is volatile over the three year comparative period; 0 otherwise.

[2] Presentation method is a manipulated variable coded 1 if defined pension cost is disaggregated across sections of the statement of comprehensive income; 0 otherwise.

[3] Perceived volatility is the degree to which participant believes (from memory) that defined pension cost is volatile on a 10-point scale with 1 indicating "no volatility" and 10 indicating "extreme volatility."

[4] Risky is measured by degree to which the participant believes investing in the company's stock is risky on a 10-point scale with 1 indicating "no risk" and 10 indicating "extreme risk."

[5] Willingness to invest their 401k retirement plan is measured by the degree to which participants would invest their 401k retirement plan assets in the company's stock on a percentage scale with 0% indicating "no investment" and 100% indicating "full investment."

[6] Stock price range estimate is measured by a low-high range estimate the participant would place on the company's market price per share on a 7-point scale from $1.00 to $7.00.

[7] The defined pension cost historical pattern is measured by the degree to which the participant believes the historical pattern of the pension cost will continue three years in the future on a 10-point scale with 1 indicating "not likely" and 10 indicating "extreme likely."

[8] Persistent is the degree to which participant believes the defined pension cost is persistent or transitory on a 10-point scale with 1 indicating "transitory" and 10 indicating "persistent."

[9] Classified is the degree to which participant believes how defined pension cost is classified on the statement of comprehensive income was useful in judgments on a 10-point scale with 1 indicating "not helpful" and 10 indicating "extremely helpful."

[10] Manage operations is the degree to which participant believes management is effective in managing operations on a 10-point scale with 1 indicating "not effective" and 10 indicating "extremely effective."

[11] Manage continuous operations is the degree to which participant believes management is effective in managing continuous operations on a 10-point scale with 1 indicating "not effective" and 10 indicating "extremely effective."

[12] Understand is the degree to which participant believes it was easy to understand the performance of the company given the way the information was presented on a 10-point scale with 1 indicating "not easy" and 10 indicating "extremely easy."

[13] Task complex is the degree to which participant believes the overall experimental task was complex on a 10-point scale with 1 indicating "not complex" and 10 indicating "extremely complex."

[14] MBA is coded 1 if the graduate level business student is an MBA student; 0 otherwise.

[15] Number of accounting courses is the number of accounting courses the participant has taken.

5.7 Summary of Findings

As presented below in Table 5.14, I find evidence to support three of the nine hypotheses. Nonprofessional investors freely recall (with an open ended question) more information about defined pension cost when the cost is disaggregated across the statement of comprehensive income relative to when the cost is aggregated in the same statement (H2). Nonprofessional investors evaluate the predominate function of defined pension cost more accurately when the cost is disaggregated across the statement of comprehensive income relative to when the cost is aggregated in the same statement (H3b). Additionally, nonprofessional investors' perceptions of the predominate function of defined pension cost differ between presentation methods (disaggregated across the face of the statement of comprehensive income versus aggregated in the same statement) (H4b).

Further, I find evidence to partially support three of the remaining six hypotheses. In their willingness to invest 401k retirement funds, nonprofessional investors place greater weight on perceived volatility of complex items (i.e., defined pension cost) when the cost has high volatility relative to when the cost has low volatility (H1). Nonprofessional investors place greater weight on perceived volatility of defined pension cost in the risky investment judgment when the cost is disaggregated across the face of the statement of comprehensive income relative to when the cost is aggregated in the same statement (H5a). Finally, nonprofessional investors place greater weight on perceived predominate function of defined pension cost in two judgments (i.e., belief that investing in the company is risky and belief that the defined pension cost historical pattern will continue in the future) when the cost is disaggregated across the face of the

statement of comprehensive income relative to when the cost is aggregated in the same statement (H5b).

Table 5.14

Summary of Findings

Degree of Item Complexity		Testing Hypotheses
Hypothesis 1	Nonprofessional investors will place greater weight on perceived volatility of defined pension cost in judgments when the cost has high volatility relative to when the cost has low volatility.	**Partial Support**
Presentation Method		**Testing Hypotheses**
Hypothesis 2	Nonprofessional investors will acquire more information about defined pension cost when the cost is disaggregated across the statement of comprehensive income relative to when the cost is aggregated in the same statement.	**Support**
Hypothesis 3	a: Nonprofessional investors will evaluate the volatility surrounding defined pension cost more accurately when the cost is disaggregated across the statement of comprehensive income relative to when the cost is aggregated in the same statement.	No Support
	b: Nonprofessional investors will evaluate the predominate function of defined pension cost more accurately when the cost is disaggregated across the statement of comprehensive income relative to when the cost is aggregated in the same statement.	**Support**

Table 5.14, Continued

Summary of Findings

Presentation Method		Testing Hypotheses
Hypothesis 4	a: Nonprofessional investors' perceptions of the volatility surrounding defined pension cost will differ between presentation methods (disaggregated across the face of the statement of comprehensive income versus aggregated in the same statement).	No Support
	b: Nonprofessional investors' perceptions of the predominate function of defined pension cost will differ between presentation methods (disaggregated across the face of the statement of comprehensive income versus aggregated in the same statement).	**Support**
Hypothesis 5	a. Nonprofessional investors will place greater weight on perceived volatility of defined pension cost in judgments when the cost is disaggregated across the face of the statement of comprehensive income relative to when the cost is aggregated in the same statement.	**Partial Support** *(Only with full sample that does not exclude those who failed the manipulation check question)*
	b.Nonprofessional investors will place greater weight on perceived predominate function of defined pension cost in judgments when the cost is disaggregated across the face of the statement of comprehensive income relative to when the cost is aggregated in the same statement.	**Partial Support**
Degree of Item Complexity and Presentation Method (Interaction)		Testing Hypotheses
Hypothesis 6	Nonprofessional investors will place the greatest weight on perceived volatility of defined pension cost in judgments when the cost has high volatility relative to low volatility and is disaggregated across the statement of comprehensive income relative to when the cost is aggregated in the same statement.	No Support

5.8 Post Hoc Analysis

In my paper I apply the tenets of cognitive load theory to examine the effects of item complexity and method used to present a complex item on nonprofessional investors' judgments. However, I have not formally hypothesized any direct relationships between complexity of information (an intrinsic load factor), presentation method (an extraneous load factor) and participants' perceptions of cognitive load. As such, in a post hoc analysis, I investigate the direct effects of volatility (a proxy for degree of item complexity) and presentation method on participants' perceptions of cognitive load. First, I use regression to examine whether volatility (high versus low) increases perceived complexity of pension cost. Then, I use regression to examine whether presentation method (aggregation versus disaggregation) affects participants' perceived understanding, identification, evaluation, and complexity of information in the experimental task.

Related to the effects of volatility increasing perceived complexity of pension cost, Table 5.15, Panel A provides descriptive statistics. As reported, there appears to be a difference in perceptions of increased complexity of pension cost based on volatility (high versus low). Participants in the high volatility condition (mean=6.84) perceive pension costs as significantly ($p<0.01$) more complex than participants in the low volatility condition (mean=5.16).

Panel B in Table 5.15 provides the test results. While controlling for significant covariates, I find support for the Panel A results in that volatility has a positive effect on participants' perceptions of complexity ($p<0.01$). The evidence (not tabulated) becomes stronger when I delete observations for participants who failed the volatility manipulation check question.

Table 5.15

Increased Complexity Based on Volatility

Panel A: Means (Standard Deviations) for Increased Complexity Based on Volatility (High versus Low) [1, 2]

High Volatility	Low Volatility	Difference (High-Low)
6.843 (1.779) n=50	5.163 (2.044) n=49	1.680 **p<0.01**

Panel B: Regression of Increased Complexity Based on Volatility (High versus Low) [1, 2]

Regression n=99	Predicted Sign	Parameter Estimate	t-Value	P-Value
Intercept		5.163	18.89	0.001
Volatility [2]	+	1.680	4.39	**0.001**
Adjusted R-Square = 0.1557				**0.001**

Description of Variables Used in the Models:

[1] Increased Complexity (degree to which participant believes the (lack of) pension volatility increases the complexity of the cost measured on a 10-point scale with 1 indicating "does not increase the complexity" and 10 indicating "increases the complexity."

[2] Volatility is a manipulated variable coded 1 if defined pension cost is volatile over the three year comparative period; 0 otherwise.

Next, I use regression to examine whether presentation method (disaggregation versus aggregation) affects participants' perceptions about cognitive load while completing the experimental task. The perceptions include participants' ability to understand, identify, and evaluate information in working memory. The perceptions also include a belief about overall task complexity.

Table 5.16, Panel A provides descriptive statistics. As reported, there is a significant ($p<0.06$) difference in the users' perception of task complexity based on

presentation method (disaggregated versus aggregated). Participants in the disaggregated condition (mean=5.89) believe the task is less complex than participants in the aggregated condition (mean=6.71).

Panel B in Table 5.16 provides the test results. While controlling for the effects of significant covariates, there is evidence to partially support the idea that presentation method affects participants' perceptions about cognitive load. I find that presentation method significantly ($p<0.03$) negatively effects task complex (i.e., whether a participant believes the overall experimental task was complex).

The results suggest disaggregation reduces extraneous load by presenting a complex item in a way that helps nonprofessional investors understand information about the characteristics of the complex item without having to split their attention by searching (or ignoring) other sources to try and understand the item. Additionally, the results suggest disaggregation reduces intrinsic load by freeing capacity in the nonprofessional's working memory to acquire more information about a complex item. There is also some indication that disaggregation helps nonprofessionals more accurately assess the complex item in judgments.

Lastly, contrary to expectations, I find that presentation method ($p<0.07$) negatively affects evaluate (i.e., whether a participant believes it was easy to evaluate the most important piece of information that led him/her to believe that investing in the company is (not) risky). When I delete observations for participants who failed the presentation method manipulation check question, I find that presentation method does not affect ($p=0.31$) evaluate. All other test results reported on Table 5.16 stay substantially the same.

I find all covariates used in the models are significant ($p<0.10$). The direction and association between the covariates and the dependent variables is as expected in all instances where a direction was posited.

Table 5.16

Perceptions of Cognitive Load Based on Presentation Method

Panel A: Means (Standard Deviations) of Perceptions of Cognitive Load Based on Presentation Method (Aggregated versus Disaggregated) [1]

Method	**Understand**[2]	**Identify**[3]	**Evaluate** [4]	**Task Complex**[5]
Disaggregated	5.332 (2.059) n=50	6.246 (1.721) n=50	5.762 (1.917) n=50	5.890 (2.063) n=50
Aggregated	5.356 (2.092) n=50	6.616 (1.973) n=50	6.270 (2.012) n=50	6.708 (2.191) n=50
Difference (Aggregated- Disaggregated)	-0.024 p=0.954	-0.370 p=0.320	-0.508 p=0.199	**-0.818** **p=0.058**

Panel B: Regression of Perceptions of Cognitive Load Based on Presentation Method (Disaggregated versus Aggregated) [1]

Models: Coefficient Estimate (t-stats) p-value Predicted Sign	**Understand** [2] **n=100**	**Identify**[3] **n=100**	**Evaluate**[4] **n=100**	**Task Complex**[5] **n=100**
Intercept	2.598 (3.13) p<0.003	3.903 (5.35) p<0.001	4.342 (5.37) p<0.001	3.456 (4.16) p<0.001
Presentation Method [1]	-0.100 (-0.25) p=0.400 +	-0.445 (-1.29) p=0.101 +	-0.561 (-1.46) p=0.073 +	**-0.882** **(-2.14)** **p=0.014** **-**

Table 5.16, Continued

Perceptions of Cognitive Load Based on Presentation Method

Panel B: Regression of Perceptions of Cognitive Load Based on Presentation Method (Disaggregated versus Aggregated) [1]

Models: Coefficient Estimate (t-stats) p-value Predicted Sign	**Understand [2] n=100**	**Identify[3] n=100**	**Evaluate[4] n=100**	**Task Complex[5] n=100**
Control variables: Effort [6]				0.497 (4.16) p<0.001 ?
Motivated [7]	0.366 (3.53) p<0.001 +	0.360 (3.94) p=0.001 +	0.256 (2.53) p=0.013 +	
Adjusted R-Square	**0.096 p<0.003**	**0.129 p=0.001**	**0.059 p=0.020**	**0.165 p<0.001**

Description of Variables Used in Models:

[1] Presentation method is a manipulated variable coded 1 if defined pension cost is disaggregated across sections of the statement of comprehensive income; 0 otherwise.

[2] Understand is degree to which participant believes it was easy to understand the financial performance of the company by the way the information was presented measured on a 10-point scale with 1 indicating "not extremely easy" and 10 indicating "extremely easy."

[3] Identify is degree to which participant believes it was easy to locate key pieces of information important for assessing the company measured on a 10-point scale with 1 indicating "extremely difficult to locate" and 10 indicating "extremely easy to locate."

[4] Evaluate is degree to which participant believes it was easy to identify and evaluate the most important piece of information that led to belief that investing in the company's stock is (not) risky (measured on a 10-point scale with 1 indicating "not easy " and 10 indicating "extremely easy."

[5] Task complex is the degree to which participant believes the overall experimental task was complex on a 10-point scale with 1 indicating "not complex" and 10 indicating "extremely complex."

[6] Effort is degree of mental effort participant believes s/he exerted while performing the experimental task on a 10-point scale with 1 indicating "no effort" and 10 indicating "extreme effort."

[7] Motivation is the degree of motivation for participant to answer all questions to the best of ability on a 10-point scale with 1 indicating "not motivated" and 10 indicating "extremely motivated."

In summary, I conduct a post hoc analysis to examine the association between factors of cognitive load (e.g., complexity of information and presentation method) and perceptions of cognitive load. I find that volatility (an intrinsic load factor) increases perceptions of cognitive load. I also find that disaggregation (an extraneous load factor) reduces perceptions of cognitive load by positively affecting participants' ability to learn and/or understand information about a complex item.

CHAPTER 6: CONCLUSION

In this chapter of the dissertation, I present a summary of the study. I discuss contributions and limitations of the study and I discuss future research.

6.1 Summary

In an experimental setting, I examine whether degree of item complexity and method used to present a complex item on the face of a financial statement influences nonprofessional investors' judgments. Degree of item complexity is measured by whether a complex item is (not) highly volatile. The method used to present a complex item is measured by whether a complex item (components of defined pension costs) is disaggregated across different sections of a financial statement (statement of comprehensive income) or aggregated in the same statement.

A study on whether degree of item complexity and method used to present a complex item on the face of a financial statement affects nonprofessional investors' judgments is important for three reasons. First, financial statements are becoming ever more complex and standard setters are interested in better understanding how complex information affects nonprofessional investors' judgments (IASB 2010b). Second, there is a gap in accounting literature as to whether disaggregating a complex item across different sections of a financial statement provides users with decision-useful information (Glaum 2009). Third, there is strong interest by the Financial Accounting Standard Board (FASB) and the International Accounting Standard Board (IASB) in understanding how

disaggregation of items in a financial statement can provide users with transparent and useful information (FASB 2010b).

Using cognitive load theory, I find empirical evidence to support my hypotheses that method used to present a complex item on a financial statement affects nonprofessional investors' acquisition and evaluation of information. More specifically, I find that nonprofessional investors' freely recall more information about defined pension cost when the cost is disaggregated across the statement of comprehensive income relative to when the cost is aggregated in the same statement. I also find that nonprofessional investors evaluate (perceive) the predominate function of defined pension cost more accurately (differently) when the cost is disaggregated across the statement of comprehensive income relative to when the cost is aggregated in the same statement.

Related to investors' judgments, I find partial evidence to support my hypotheses that suggest degree of item complexity and method used to present a complex item on a financial statement affects nonprofessional investors' judgments. In particular, I find that for two of four judgments (i.e., willingness to invest 401k retirement funds in the company and belief that the defined pension cost historical pattern will continue in the future) nonprofessional investors place greater weight on perceived volatility of defined pension cost when the cost has high volatility relative to when the cost has low volatility. I also find that for one of four judgments (i.e., belief that investing in the company is risky) nonprofessional investors place greater weight on perceived volatility of defined pension cost when the cost is disaggregated across the face of the statement of comprehensive income relative to when the cost is aggregated in the same statement.

Further, I find that nonprofessional investors place greater weight on perceived predominate function of defined pension cost in two of four judgments (i.e., belief that investing in the company is risky and belief that the defined pension cost historical pattern will continue in the future) when the cost is disaggregated across the face of the statement of comprehensive income relative to when the cost is aggregated in the same statement.

6.2 Contributions

The results from this study offer contributions to managers, standard setters, and the financial accounting literature. For standard setters and managers, the results of this study show once again that how information is presented affects how information is used. Additionally, the study helps explain why the method of presentation affects how information is used. In particular, the results of this study indicate that disaggregating a complex item across different sections of a financial statement reduces nonprofessional investors' cognitive load. That is, disaggregation reduces extraneous load by presenting a complex item in a manner that helps nonprofessional investors understand information about the characteristics (e.g., volatility and the predominate function) of the item without having to split their attention by searching different sources (e.g., financial statement notes) to try and understand the item. Additionally, disaggregation reduces intrinsic load by helping nonprofessional investors' learn how a complex item and its components influence different economic events. This frees capacity in the nonprofessional's working memory to acquire more information about a complex item and to more accurately evaluate the predominate function of a complex item.

For financial accounting literature, this study answers a call for research suggesting financial presentation issues are fundamental to the field of accounting and we need to learn more about how elements of item complexity and financial presentation affect cognitive processing (Bonner 2008; Libby, Bloomfield, Nelson 2002). More specifically, this study contributes to the financial reporting literature by adding to what we know about degree of item complexity and disaggregation and by introducing factors of cognitive load. Although prior research (Plumlee 2003) suggests that financial statement users may discount higher levels of item complexity in judgments, results from this study show that some financial statement users (e.g., nonprofessional investors) weigh higher levels of item complexity in judgments if information can be presented in a manner that reduces cognitive load.

Further, while prior research (e.g., Lev 1970; Barton and Waymire 2004) suggests disaggregation can be useful in judgments, results from this study provide two possible explanations as to how disaggregating a complex item across a financial statement can be useful in nonprofessional investors' judgments. Disaggregation across a financial statement can help nonprofessional investors understand the components of a complex item without having to split attention to search other sources to try and learn information about the complex item, thus reducing the extrinsic cognitive load experienced by the investor. Additionally, disaggregation across a financial statement can help nonprofessional investors learn how the components of a complex item relate to different economic events, improving their ability to understand (i.e., reducing intrinsic load) and process the information when making judgments.

Overall, this study contributes to the field of financial reporting by helping identify the types of information that should be considered for disaggregation by

managers when they have the discretion to determine how information is presented. Furthermore, this study provides awareness to standard setters that since degree of aggregation can affect how information is used, given discretion, managers may chose not to disaggregate a complex item. As Hunton, Libby, and Mazza (2006) make the point, managers may have incentives to try and hide information with aggregation.

As is the case with IAS 19 *Employee Benefits*, the IASB has removed discretion for managers to decide on whether to disaggregate defined pension cost. Using IAS 19 *Employee Benefits* as a base for my study, I find that with a disaggregated approach to presenting defined pension cost, nonprofessional investors are able to acquire more information about defined pension cost and are able to more accurately understand the function of the cost. This, in turn, helps the nonprofessional investors decide whether the information is useful in some types of judgments (i.e., belief that investing in the company is risky and belief that the defined pension cost historical pattern will continue in the future).

6.3 Limitations

As with any research, this study has a number of limitations to consider. One possible limitation is that I conducted multiple experimental sessions to collect data for analysis. Hence, it is possible that participants discussed the nature of the study with each other. To minimize this potential threat to internal validity, I only debriefed participants about the nature of this study after all sessions were complete.

Another possible limitation of this study is that even though I designed the materials to be representative of a task a nonprofessional investor would complete, I only gave participants a limited amount of background and financial statement information

regarding the fictitious company in the experimental task. The limited amount of information increases the threat to external validity, but it was necessary so that the task could be completed in a reasonable amount of time (estimated 45 minutes), thus increasing the likelihood of participation and effort.

Further, another possible limitation of this study is that I used graduate level business students as surrogates for nonprofessional investors. Although this can sometimes pose a threat to external validity, prior research (Libby, Bloomfield, and Nelson 2002) argues that researchers should match the goals of their experiment with participants needed to achieve the goals of the experiment without unnecessarily using more professional participants than needed. *Ex post*, the participants in this experiment exhibit the basic knowledge and understanding of accounting and finance to be sufficiently representative of the nonprofessional investor.

6.4 Future Research

The results of this study provide several opportunities for future research. First, I use nonprofessional investors' as the participant group of interest. A natural and relevant extension of this research is to try and generalize the findings of this study using other user groups (e.g., professional investor groups, creditors and/or financial analysts). Second, I look at nonprofessional investors' investment judgments relative to investing in one company. A practical extension of this study would be to see if the effects of degree of item complexity and method used to present a complex item across a financial generalize to more diverse scenarios (e.g., users' judgments relative to investing in more than one company). Third, I use an experimental research method. A possible extension would be to use alterative research methods (e.g., a field study or archival research) to

examine the research question. Fourth, I examine the relationships between the manipulated variables of interest (degree of item complexity and method used to present a complex item on a financial statement) and the acquisition, evaluation, and weighing of complex information in judgments. An interesting extension would be to expand the research parameters and investigate the direct relationships between the acquisition, evaluation, and weighing of complex information in judgments. Fifth, although results of this study indicate that disaggregation influences nonprofessional investors' acquisition and evaluating of information, results are a bit weaker with nonprofessional investors' judgments. This could be a result of the proxies used or a difference in how the acquired and evaluated information was used to make a judgment. Regardless, it does seem to warrant additional research.

Finally, another possible extension of the current study would be to examine the effects of disaggregating a complex item on a financial statement on users' judgments in the domain of information systems. Specifically, it would be interesting to conduct a design science study in which the contribution would be to create the decision support system for understanding the impact of complex financial data (e.g., pension cost) on users' judgments. Data would be the appropriate data cube, decision rules would be the templates used for presenting the data in accordance with accounting standards, and the financial statement users would control (i.e., manipulate) the templates to fit his/her cognitive capabilities.

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APPENDIX A

Illustration of
Experimental Task Materials

Dear Participant:

Thank you for agreeing to participate in this experimental research project. The purpose of this study is to improve our understanding of financial reporting.

You are asked to assume the role of an investor who is considering investing in RBC Corporation. You are asked to provide investment judgments and decisions based on descriptive information regarding the company. The information is provided in the attached materials. The materials include excerpts from RBC Corporation's Annual Report:

- Management's Discussion and Analysis
- The Annual Statement of Comprehensive Income
- The Combined Balance Sheet
- Supplemental Notes

The information in the material packet is intended to be representative rather than complete. Please base all of your judgments and decisions only on the information provided.

Your participation in this study is voluntary and all of your responses will be kept confidential. You may also discontinue participation in this study at any time you deem necessary.

Linda Ragland is the principal investigator for this project. Other research faculty and staff, however, may be involved in the study and may act on behalf of Linda. The experiment is considered minimal risk. That is, the risks from participating in the experiment are no more than would be encountered in normal everyday life.

If you have any questions or concerns about the experiment, please contact Linda Ragland at XXX-XXXX. If you have questions or concerns about your rights as a participant in this experiment and you would like to discuss your questions or concerns with someone other than the researchers, please contact the Division of Research Integrity and Compliance at the University of South Florida at XXX-XXXX.

Please carefully read **all** of the following information regarding RBC Corporation. After you read the information, you will be asked a series of questions. There are no wrong or right answers to the questions. Please try, however, to answer all questions using your best judgment and only the information provided.

The Management's Discussion and Analysis of Financial Condition and Results of Operations (MD&A) is intended to help the reader understand the RBC Company, its operations and its present business environment. The MD&A is provided as a supplement to—and should be read in conjunction with—the Company's consolidated financial statements and accompanying notes.

RBC Corporation

Management Discussion & Analysis
(From 2010 Annual Report)

RBC Corporation is a manufacturer, distributor, and marketer of fruit juice. The Company manufactures fruit juices that it sells to bottling and canning operations, wholesalers and some fountain retailers, as well as finished beverages that it sells primarily to distributors.

The Company is one of numerous competitors in the commercial fruit juice market. The company believes that its success depends on its ability to grow and connect with consumers by providing them with a wide variety of choices to meet their desires, needs and lifestyle choices. The continuous success further depends on the ability of the Company's people to execute effectively every day.

The Company's goal is to use its assets—distribution system, global reach and the talent and strong commitment of management and associates—to become more competitive and to accelerate growth in a manner that creates value for the Company's shareowners.

Being a large global company provides unique opportunities for the Company. Challenges and risks, however, accompany these opportunities. Management believes any fluctuations that may occur in the accompanying intangible asset and pension plan figures are the result of the assumptions and decisions made by management and can NOT be attributed to market conditions.

RBC Corporation

Statement of Comprehensive Income

For the Year Ended December 31, 2010
(In millions, expect per share data)

Year End December 31	*2010*	*% Change*	*2009*	*% Change*	*2008*
Sales Revenue	$1,854	0.22%	$1,850	0.22%	$1,846
Cost of Goods Sold	(752)	0.27%	(750)	1.08%	(742)
Selling, General, & Admin. Expenses					
Salaries & Wages	(404)	0.50%	(402)	-1.95%	(410)
Pension–Service Cost	(131)	0.77%	(130)	-1.52%	(132)
Other	(40)	0.00%	(40)	-2.44%	(41)
Income from Operations	$527	-0.19%	$528	1.34%	$521
Other Revenue and Expense					
Interest Expense	(159)	1.92%	(156)	-2.50%	(160)
Pension–Financing Cost	(269)	355.93%	(59)	-77.57%	(263)
Income from Continuing & Financing Operations	$99	-68.37%	$313	219.39%	$98
Income Tax	(38)	-68.07%	(119)	230.56%	(36)
Net Income	$61	-68.56%	$194	212.90%	$62
Other Comprehensive Income					
Unrealized loss–Sale of Investment	(25)	-3.85%	(26)	4.00%	(25)
Pension–Remeasurement Cost	(35)	0.00%	(35)	2.94%	(34)
Comprehensive Income	$1	-99.25%	$133	4,333.33%	$3
Net Income for the year per share	$0.0145	-68.61%	$0.0462	212.16%	$0.0148
Average Shares Outstanding	4,200		4,200		4,200

RBC Corporation

Consolidated Balance Sheet

For the Year Ended December 31, 2010
(In millions, expect per share data)

Year End December 31,	*2010*	*% Change*	*2009*	*% Change*	*2008*
Assets					
Current Assets					
Cash and Cash Equivalents	$918	3.03%	$891	-9.08%	$980
Other Current Assets	31	3.33%	30	3.45%	29
Total Current Assets	$949	3.04%	$921	-8.72%	$1,009
Property, Plant and Equipment, net	1,240	-7.32%	1,338	7.04%	$1,250
Intangibles	233	0.87%	231	0.43%	230
Total Assets	$2,422	-2.73%	$2,490	0.04%	$2,489
Liabilities and Equity					
Current Liabilities:					
Accounts Payable/Accrued Expense	$278	-4.47%	$291	5.82%	$275
Total Current Liabilities	$278	-4.47%	$291	5.82%	$275
Long-Term Liabilities:					
Long-Term Debt	1,056	-7.69%	1,144	16.97%	978
Pension Obligation	669	5.85%	632	-22.26%	813
Total Liabilities	$2,003	-3.10%	$2,067	0.05%	$2,066
Shareholder's Equity					
Common Stock, Authorized 7,000 shares; Issued 4,200 shares	$301	0.00%	$301	0.00%	$301
Retained Earnings	10	0.00%	10	0.00%	10
Accumulated Other Comprehensive Income	108	-3.57%	112	0.00%	112
Total Shareholder's Equity	$419	-0.95%	$423	0.00%	$423
Total Liabilities and Equity	$2,422	-2.73%	$2,490	0.04%	$2,489

RBC Corporation

Supplemental Notes

For the Year Ended December 31, 2010
(In millions, expect per share data)

NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Description of Business
In these notes, the terms ‘‘The RBC Company,’’ ‘‘Company,’’ ‘‘we,’’ and ‘‘our’’ mean The RBC Company. The RBC Company manufactures fruit juices which we sell to bottling and canning operations, wholesalers and some fountain retailers, as well as finished beverages that we sell primarily to distributors. While most of our branded fruit juice is manufactured, sold and distributed by independently owned and managed bottling partners, from time to time we do acquire or take control of bottling or canning operations, often, but not always, in underperforming markets where we believe we can use our resources and expertise to improve performance.

Summary of Significant Accounting Policies
Basis of Presentation
Our financial statements are prepared in accordance with accounting principles generally accepted in the United States. The preparation of our financial statements requires us to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses and the disclosure of contingent assets and liabilities in our financial statements and accompanying notes. Although these estimates are based on our knowledge of current events and actions we may undertake in the future, actual results may ultimately differ from these estimates and assumptions. Furthermore, when testing assets for impairment in future periods, if management uses different assumptions or if different conditions occur, impairment charges may result.

Revenue Recognition
Our Company recognizes revenue when persuasive evidence of an arrangement exists, delivery of products has occurred, the sales price charged is fixed or determinable, and collectability is reasonably assured. For our Company, this generally means that we recognize revenue when title to our products is transferred to our bottling partners, resellers or other customers. In particular, title usually transfers upon shipment to or receipt at our customers’ locations, as determined by the specific sales terms of the transactions.

Cost of Goods Sold
Cost of products sold is primarily comprised of direct materials and supplies consumed in the manufacture of our products, as well as manufacturing labor, depreciation expense, and direct overhead expense necessary to acquire and convert the purchased materials and supplies into finished products. Cost of products sold also includes the cost to distribute products to customers, inbound freight cost, internal transfer costs, and other shipping and handling activity.

Selling, General and Administrative Expense
Selling, general, and administrative expense is primarily comprised of administrative salary and wages, pension cost, and other indirect overhead cost. Refer to Note 2 for details on the pension cost.

NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES, CONTINUED

Net Income per Share
Basic net income per share is computed by dividing net income by the weighted-average number of common shares outstanding during the reporting period.

Cash Equivalents
We classify time deposits and other investments that are highly liquid and have maturities of three months or less at the date of purchase as cash equivalents.

Property, Plant and Equipment
Property, plant and equipment are stated at cost. Repair and maintenance costs that do not improve service potential or extend economic life are expensed as incurred. Depreciation is recorded principally by the straight-line method over the estimated useful lives of our assets, which generally have the following ranges: buildings and improvements, 40 years or less; machinery and equipment, 15 years or less; and containers, 10 years or less. Land is not depreciated, and construction in progress is not depreciated until ready for service. Leasehold improvements are amortized using the straight-line method over the shorter of the remaining lease term, including renewals that are deemed to be reasonably assured, or the estimated useful life of the improvement. Refer to Note 3 for more detail.

Goodwill, Trademarks and Other Intangible Assets
We classify intangible assets into three categories: (1) intangible assets with definite lives subject to amortization, (2) intangible assets with indefinite lives not subject to amortization and (3) goodwill. Refer to Note 4 for details on the classification.

We determine the useful lives of our identifiable intangible assets after considering the specific facts and circumstances related to each intangible asset. Factors we consider when determining useful lives include the contractual term of any agreement related to the asset, the historical performance of the asset, the Company's long-term strategy for using the asset, any laws or other local regulations that could impact the useful life of the asset, and other economic factors, including competition and specific market conditions.

Intangible assets that are deemed to have definite lives are amortized, primarily on a straight-line basis, over their useful lives, generally ranging from 1 to 20 years. When certain events or changes in operating conditions occur, an impairment assessment is performed and lives of intangible assets with determinable lives may be adjusted.

Indefinite-lived assets and goodwill are not amortized, but are evaluated annually for impairment or when indicators of a potential impairment are present.

New Accounting Pronouncements and Policies
No new accounting pronouncement issued or effective during the fiscal year has had or is expected to have a material impact on the Financial Statements.

NOTE 2: PENSION BENEFIT PLAN

RBC Corporation sponsors a defined pension benefit plan covering all employees.

Obligations and Funded Status
The following table sets forth the changes in benefit obligations and the fair value of plan assets for our benefit plan (in millions):

Year End December 31	**2010**	**2009**	**2008**
Projected Benefit Obligation at January 1	$3,227	$3,069	$2,706
Current Service Cost	131	130	132
Finance Cost	269	59	263
Benefits Paid	(30)	(31)	(32)
Projected Benefit Obligation at December 31	$3,597	$3,227	$3,069
Change in Plan Assets			
Fair Value of Plan Assets at January 1	$2,595	$2,256	$1,900
Actual Return on Plan Assets	52	45	38
Employer Contributions	311	325	350
Benefits Paid	(30)	(31)	(32)
Fair Value of Plan Assets at December 31	$2,928	$2,595	$2,256
Funded Status (Net Liability)	**$(669)**	**$(632)**	**$(813)**

The pension benefit amount recognized in our consolidated balance sheet is as follows (in millions):

Year End December 31	**2010**	**2009**	**2008**
Current Maturity of Pension Liability	$30	$31	$32
Long-Term Liability	639	601	781
Net Liability Recognized	**$669**	**$632**	**$813**

In December 2008, the Company decided to modify the pension plan. Beginning in 2011, the plan will have a two-part formula to determine pension benefits. The first part will retain the current final average pay structure, where services will freeze as of January 1, 2011, with pay escalating for the lesser of 10 years or until termination. The second part of the formula will be a cash balance account which will commence January 1, 2011, under which employees may receive credits based on age, service, pay and interest. The plan was also modified to allow lump sum distributions.

NOTE 2: PENSION BENEFIT PLAN, CONTINUED

Pension Plan Assets

The following table presents total pension assets for our plan (in millions):

Year End December 31	2010	2009	2008
Cash and Cash Equivalents: (5%)	$146	$130	$113
Equity securities: (60%)			
U.S.-based Companies	$876	$773	$676
International-based Companies	881	783	678
	$1,757	$1,556	$1,354
Fixed Income Securities: (30%)			
Government Bonds	$586	$519	$450
Corporate Bonds	132	117	102
Mutual and Pooled Funds	161	143	124
	$879	$779	$676
Other: (5%)	$146	$130	$113
Total Pension Plan Assets	**$2,928**	**$2,595**	**$2,256**

Pension Plan Investment Strategy

The Company utilizes investment managers to actively manage the pension assets of our plan. We have established asset allocation targets and investment guidelines with our investment managers. Selection of the targeted asset allocation for plan assets was based upon a review of the expected return and risk characteristics of each asset class. Our target allocation is a mix of approximately 60 percent equity investments, 30 percent fixed income investments and 10 percent in alternative investments (5% cash and cash equivalents and 5% other).

Components of Net Periodic Benefit Cost

Net periodic benefit cost for our pension plan consisted of the following (in millions):

Year End December 31	2010	2009	2008
Service Cost			
Current Service Cost	$130	$129	$131
Amortization of Prior Service Cost	1	1	1
Total Pension Service Cost	**$131**	**$130**	**$132**
Finance Cost			
Interest Cost on Projected Benefit Obligation	$321	$104	$301
Expected Return on Plan Assets	(52)	(45)	(38)
Total Pension Financing Cost	**$269**	**$59**	**$263**
Total Cost Recognized in Net Income	**$400**	**$189**	**$395**
Remeasurement Cost Recognized in Other Comprehensive Income	**$35**	**$35**	**$34**

NOTE 2: PENSION BENEFIT PLAN, CONTINUED

The following table sets forth the changes in accumulated other comprehensive income (AOCI) **related** to our pension benefit plan (in millions, pretax)

Year End December 31	**2010**	**2009**	**2008**
Beginning Balance in AOCI-Related to Pensions	$ 75	$41	$08
Recognized Prior Service Cost (credit)	(1)	(1)	(1)
Net Remeasurements in Current Year	35	35	34
Ending Balance in AOCI-Related to Pensions	**$109**	**$75**	**$41**

The following table sets forth amounts in AOCI for our benefit plans (in millions, pretax)

Year End December 31	**2010**	**2009**	**2008**
Prior Service	$5	$6	$7
Remeasurements	104	69	34
Ending Balance in AOCI-Related to Pensions	**$109**	**$75**	**$41**

Amount in AOCI expected to be recognized as components of net periodic pension cost in 2011 is $1 (in millions, pretax).

Assumptions
Certain weighted-average assumptions used in computing the benefit obligations are as follows:

Year End December 31	**2010**	**2009**	**2008**
Discount Rate	10.00%	3.50%	11.00%
Rate of Increase in Compensation Level	5.00%	4.00%	4.00%

Certain weighted-average assumptions used in computing net periodic benefit cost are as follows:

Year End December 31	**2010**	**2009**	**2008**
Discount Rate	10.00%	3.50%	11.00%
Rate of Increase in Compensation Level	5.00%	4.00%	4.00%
Expected **Long-Term** Rate of Return on Plan Assets	8.05%	8.10%	8.05%

The expected long-term rate of return assumption for pension plan assets is based upon the target asset allocation and is determined using forward-looking assumptions. We evaluate the rate of return assumption on an annual basis. The expected **annual** rate of return assumption used in computing 2010 net periodic pension finance cost was 2.00 percent.

As of December 31, 2010, the 10-year annualized return on plan assets was 3.1 percent, the 15-year annualized return was 4.9 percent, and the annualized return since inception was 8.1 percent. The discount rate assumptions used to account for pension benefit plans reflect the rates at which the benefit obligations could be effectively settled. Rates at December 31, 2010, were determined using a cash flow matching technique.

Cash Flows
Our estimated future benefit payments are as follows (in millions):

Year End December 31	**2011**	**2012**	**2013**
Pension benefit payments	$32	$33	$35

NOTE 3: PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment are stated at cost. Repair and maintenance costs that do not improve service potential or extend economic life are expensed as incurred. Depreciation is recorded principally by the straight-line method over the estimated useful lives of our assets, which generally have the following ranges: buildings and improvements: 40 years or less; machinery and equipment: 15 years or less; and containers: 10 years or less. Land is not depreciated, and construction in progress is not depreciated until ready for service. Leasehold improvements are amortized using the straight-line method over the shorter of the remaining lease term, including renewals that are deemed to be reasonably assured, or the estimated useful life of the improvement. Depreciation expense including the depreciation expense of assets under capital lease, totaled approximately $55 million, $50 million and $45 million for the years ended December 31, 2010, 2009 and 2008, respectively.

The following table summarizes our property, plant and equipment (in millions):

Year Ended December 31	**2010**	**2009**	**2008**
Land	200	200	155
Building and Improvements	325	363	355
Machinery and Equipment	536	550	500
Construction in Progress	234	275	285
Less accumulated depreciation	(55)	(50)	(45)
Net-Property, Plant and Equipment	**$1,240**	**$1,338**	**$1,250**

Certain events or changes in circumstances may indicate that the recoverability of the carrying amount of property, plant and equipment should be assessed, including, among others, a significant decrease in market value, a significant change in the business climate in a particular market, or a current period operating or cash flow loss combined with historical losses or projected future losses. When such events or changes in circumstances are present, we estimate the future cash flows expected to result from the use of the asset (or asset group) and its eventual disposition. These estimated future cash flows are consistent with those we use in our internal planning. If the sum of the expected future cash flows (undiscounted and without interest charges) is less than the carrying amount, we recognize an impairment loss. The impairment loss recognized is the amount by which the carrying amount exceeds the fair value. We use a variety of methodologies to determine the fair value of property, plant and equipment, including appraisals and discounted cash flow models, which are consistent with the assumptions we believe hypothetical marketplace participants would use.

NOTE 4: INTANGIBLE ASSETS

The following table summarizes information related to indefinite-lived intangible assets (in millions):

December 31,	**2010**	**2009**	**2008**
Trademarks	$201	$182	$180
Goodwill	9	10	11
Bottlers' franchise rights	8	9	10
Other	(17)	-	-
Total indefinite-lived intangible assets	**$201**	**$201**	**$201**

The following table provides information related to the carrying value of our goodwill (in millions):

Year	**2010**	**2009**	**2008**
Balance as of January 1	$10	$11	$9
Goodwill acquired during the year	0	0	2
Goodwill related to the sale of a business	(1)	(1)	0
Balance as of December 31	**$9**	**$10**	**$11**

The following table summarizes information related to definite-lived intangible assets, which primarily consist of customer relationships and trademarks (in millions):

December 31	**2010**	**2009**	**2008**
Gross Carrying Amount	$30	$29	$24
Adjustments	4	2	6
Less Accumulated Amortization	(2)	(1)	(1)
Total definite-lived intangible assets-net	**$32**	**$30**	**$29**

Total amortization expense for intangible assets subject to amortization was approximately $2 million, $1 million, and $1 million for the years ended December 31, 2010, 2009, 2008, respectively. Based on the carrying value of amortized intangible assets as of December 31, 2010, we estimate our amortization expense for the next five years will be as follows (in millions): 2011- $2; 2012-$2; 2013-$2; 2014-$1; and 2015- $1.

Intangible assets were also tested for impairment and based on management's assumptions there were no impairments.

RBC Corporation

Statement of Comprehensive Income

For the Year Ended December 31, 2010
(In millions, expect per share data)

Year End December 31	*2010*	*% Change*	*2009*	*% Change*	*2008*
Sales Revenue	$1,854	0.22%	$1,850	0.22%	$1,846
Cost of Goods Sold	(752)	0.27%	(750)	1.08%	(742)
Selling, General, & Admin. Expenses					
Salaries & Wages	(404)	0.50%	(402)	-1.95%	(410)
Net Pension Cost	(435)	94.20%	(224)	-47.79%	(429)
Other	(40)	0.00%	(40)	-2.44%	(41)
Income from Operations	$223	-48.62%	$434	93.75%	$224
Other Revenue and Expense					
Interest Expense	(159)	1.92%	(156)	-2.50%	(160)
Income from Continuing & Financing Operations	$64	-76.98%	$278	334.38%	$64
Income Tax	(38)	-68.07%	(119)	230.56%	(36)
Net Income	$26	-83.65%	$159	467.86%	$28
Other Comprehensive Income					
Unrealized loss–Sale of Investment	(25)	-3.85%	(26)	4.00%	(25)
Comprehensive Income	$1	-99.25%	$133	4,333.33%	$3
Net Income for the year per share	$0.0062	-83.64%	$0.0379	465.67%	0.0067
Average Shares Outstanding	4,200		4,200		4,200

RBC Corporation

Consolidated Balance Sheet

For the Year Ended December 31, 2010
(In millions, expect per share data)

Year End December 31,	*2010*	*% Change*	*2009*	*% Change*	*2008*
Assets					
Current Assets					
Cash and Cash Equivalents	$918	3.03%	$891	-9.08%	$980
Other Current Assets	31	3.33%	30	3.45%	29
Total Current Assets	$949	3.04%	$921	-8.72%	$1,009
Property, Plant and Equipment, net	1,240	-7.32%	1,338	7.04%	$1,250
Intangibles	233	0.87%	231	0.43%	230
Total Assets	$2,422	-2.73%	$2,490	0.04%	$2,489
Liabilities and Equity					
Current Liabilities:					
Accounts Payable/Accrued Expense	$278	-4.47%	$291	5.82%	$275
Total Current Liabilities	$278	-4.47%	$291	5.82%	$275
Long-Term Liabilities:					
Long-Term Debt	1,056	-7.69%	1,144	16.97%	978
Pension Obligation	773	10.27%	701	-17.24%	847
Total Liabilities	$2,107	-1.36%	$2,136	1.71%	$2,100
Shareholder's Equity					
Common Stock, Authorized 7,000 shares; Issued 4,200 shares	$301	0.00%	$301	0.00%	$301
Retained Earnings	10	0.00%	10	0.00%	10
Accumulated Other Comprehensive Income	4	-90.70%	43	-44.87%	78
Total Shareholder's Equity	$315	-11.02%	$354	-9.00%	$389
Total Liabilities and Equity	$2,422	-2.73%	$2,490	0.04%	$2,489

RBC Corporation

Supplemental Notes

For the Year Ended December 31, 2010
(In millions, expect per share data)

NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Description of Business
In these notes, the terms ‘‘The RBC Company,’’ ‘‘Company,’’ ‘‘we,’’ and ‘‘our’’ mean The RBC Company. The RBC Company manufactures fruit juices which we sell to bottling and canning operations, wholesalers and some fountain retailers, as well as finished beverages that we sell primarily to distributors. While most of our branded fruit juice is manufactured, sold and distributed by independently owned and managed bottling partners, from time to time we do acquire or take control of bottling or canning operations, often, but not always, in underperforming markets where we believe we can use our resources and expertise to improve performance.

Summary of Significant Accounting Policies
Basis of Presentation
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Revenue Recognition
Our Company recognizes revenue when persuasive evidence of an arrangement exists, delivery of products has occurred, the sales price charged is fixed or determinable, and collectability is reasonably assured. For our Company, this generally means that we recognize revenue when title to our products is transferred to our bottling partners, resellers or other customers. In particular, title usually transfers upon shipment to or receipt at our customers’ locations, as determined by the specific sales terms of the transactions.

Cost of Goods Sold
Cost of products sold is primarily comprised of direct materials and supplies consumed in the manufacture of our products, as well as manufacturing labor, depreciation expense, and direct overhead expense necessary to acquire and convert the purchased materials and supplies into finished products. Cost of products sold also includes the cost to distribute products to customers, inbound freight cost, internal transfer costs, warehousing costs and other shipping and handling activity.

Selling, General and Administrative Expense
Selling, general, and administrative expense is primarily comprised of administrative salary and wages, pension cost, and other indirect overhead cost. Refer to Note 2 for details on the pension cost.

NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES, CONTINUED

Net Income per Share
Basic net income per share is computed by dividing net income by the weighted-average number of common shares outstanding during the reporting period.

Cash Equivalents
We classify time deposits and other investments that are highly liquid and have maturities of three months or less at the date of purchase as cash equivalents.

Property, Plant and Equipment
Property, plant and equipment are stated at cost. Repair and maintenance costs that do not improve service potential or extend economic life are expensed as incurred. Depreciation is recorded principally by the straight-line method over the estimated useful lives of our assets, which generally have the following ranges: buildings and improvements, 40 years or less; machinery and equipment, 15 years or less; and containers, 10 years or less. Land is not depreciated, and construction in progress is not depreciated until ready for service. Leasehold improvements are amortized using the straight-line method over the shorter of the remaining lease term, including renewals that are deemed to be reasonably assured, or the estimated useful life of the improvement. Refer to Note 3 for more detail.

Goodwill, Trademarks and Other Intangible Assets
We classify intangible assets into three categories: (1) intangible assets with definite lives subject to amortization, (2) intangible assets with indefinite lives not subject to amortization and (3) goodwill. Refer to Note 4 for details on the classification.

We determine the useful lives of our identifiable intangible assets after considering the specific facts and circumstances related to each intangible asset. Factors we consider when determining useful lives include the contractual term of any agreement related to the asset, the historical performance of the asset, the Company's long-term strategy for using the asset, any laws or other local regulations that could impact the useful life of the asset, and other economic factors, including competition and specific market conditions.

Intangible assets that are deemed to have definite lives are amortized, primarily on a straight-line basis, over their useful lives, generally ranging from 1 to 20 years. When certain events or changes in operating conditions occur, an impairment assessment is performed and lives of intangible assets with determinable lives may be adjusted.

Indefinite-lived assets and goodwill are not amortized, but are evaluated annually for impairment or when indicators of a potential impairment are present.

New Accounting Pronouncements and Policies
No new accounting pronouncement issued or effective during the fiscal year has had or is expected to have a material impact on the Financial Statements.

NOTE 2: PENSION BENEFIT PLAN

RBC Corporation sponsors a defined pension benefit plan covering all employees.

Obligations and Funded Status

The following table sets forth the changes in benefit obligations and the fair value of plan assets for our benefit plan (in millions):

Year End December 31	**2010**	**2009**	**2008**
Projected Benefit Obligation at January 1	$3,296	$3,103	$2,706
Current Service Cost	131	130	132
Finance Cost	269	59	263
Remeasurement Cost	35	35	34
Benefits Paid	(30)	(31)	(32)
Projected Benefit Obligation at December 31	$3,701	$3,296	$3,103
Change in Plan Assets			
Fair Value of Plan Assets at January 1	$2,595	$2,256	$1,900
Actual Return on Plan Assets	52	45	38
Employer Contributions	311	325	350
Benefits Paid	(30)	(31)	(32)
Fair Value of Plan Assets at December 31	$2,928	$2,595	$2,256
Funded Status (Net Liability)	**$(773)**	**$(701)**	**$(847)**

The pension benefit amount recognized in our consolidated balance sheet is as follows (in millions):

Year End December 31	**2010**	**2009**	**2008**
Current Maturity of Pension Liability	$30	$31	$32
Long-Term Liability	743	670	815
Net Liability Recognized	**$773**	**$701**	**$847**

In December 2008, the Company decided to modify the pension plan. Beginning in 2011, the plan will have a two-part formula to determine pension benefits. The first part will retain the current final average pay structure, where services will freeze as of January 1, 2011, with pay escalating for the lesser of 10 years or until termination. The second part of the formula will be a cash balance account which will commence January 1, 2011, under which employees may receive credits based on age, service, pay and interest. The plan was also modified to allow lump sum distributions.

NOTE 2: PENSION BENEFIT PLAN, CONTINUED

Pension Plan Assets

The following table presents total pension assets for our plan (in millions):

Year End December 31	2010	2009	2008
Cash and Cash Equivalents: (5%)	$146	$130	$113
Equity securities: (60%)			
U.S.-based Companies	$876	$773	$676
International-based Companies	881	783	678
	$1,757	$1,556	$1,354
Fixed Income Securities: (30%)			
Government Bonds	$586	$519	$450
Corporate Bonds	132	117	102
Mutual and Pooled Funds	161	143	124
	$879	$779	$676
Other: (5%)	$146	$130	$113
Total Pension Plan Assets	**$2,928**	**$2,595**	**$2,256**

Pension Plan Investment Strategy

The Company utilizes investment managers to actively manage the pension assets of our plan. We have established asset allocation targets and investment guidelines with our investment managers. Selection of the targeted asset allocation for plan assets was based upon a review of the expected return and risk characteristics of each asset class. Our target allocation is a mix of approximately 60 percent equity investments, 30 percent fixed income investments and 10 percent in alternative investments (5% cash and cash equivalents and 5% other).

Components of Net Periodic Benefit Cost

Net periodic benefit cost for our pension plan consisted of the following (in millions):

Year End December 31	2010	2009	2008
Service Cost			
Current Service Cost	$130	$129	$131
Amortization of Prior Service Cost	1	1	1
Total Pension Service Cost	**$131**	**$130**	**$132**
Finance Cost			
Interest Cost on Projected Benefit Obligation	$321	$104	$301
Expected Return on Plan Assets	(52)	(45)	(38)
Total Pension Financing Cost	**$269**	**$59**	**$263**
Remeasurement Cost	**$35**	**$35**	**$34**
Total Cost Recognized in Net Income	**$435**	**$224**	**$429**

NOTE 2: PENSION BENEFIT PLAN, CONTINUED

The following table sets forth the changes in accumulated other comprehensive income (AOCI) **related** to our pension benefit plan (in millions, pretax)

Year End December 31	**2010**	**2009**	**2008**
Beginning Balance in AOCI-Related to Pensions	$ 6	$7	$08
Recognized Prior Service Cost (credit)	(1)	(1)	(1)
Ending Balance in AOCI-Related to Pensions	**$5**	**$6**	**$7**

The following table sets forth amounts in AOCI for our benefit plans (in millions, pretax)

Year End December 31	**2010**	**2009**	**2008**
Prior Service	$5	$6	$7
Ending Balance in AOCI-Related to Pensions	**$5**	**$6**	**$7**

Amount in AOCI expected to be recognized as components of net periodic pension cost in 2011 is $1 (in millions, pretax).

Assumptions
Certain weighted-average assumptions used in computing the benefit obligations are as follows:

Year End December 31	**2010**	**2009**	**2008**
Discount Rate	10.00%	3.50%	11.00%
Rate of Increase in Compensation Level	5.00%	4.00%	4.00%

Certain weighted-average assumptions used in computing net periodic benefit cost are as follows:

Year End December 31	**2010**	**2009**	**2008**
Discount Rate	10.00%	3.50%	11.00%
Rate of Increase in Compensation Level	5.00%	4.00%	4.00%
Expected **Long-Term** Rate of Return on Plan Assets	8.05%	8.10%	8.05%

The expected long-term rate of return assumption for pension plan assets is based upon the target asset allocation and is determined using forward-looking assumptions. We evaluate the rate of return assumption on an annual basis. The expected **annual** rate of return assumption used in computing 2010 net periodic pension finance cost was 2.00 percent.

As of December 31, 2010, the 10-year annualized return on plan assets was 3.1 percent, the 15-year annualized return was 4.9 percent, and the annualized return since inception was 8.1 percent. The discount rate assumptions used to account for pension benefit plans reflect the rates at which the benefit obligations could be effectively settled. Rates at December 31, 2010, were determined using a cash flow matching technique.

Cash Flows
Our estimated future benefit payments are as follows (in millions):

Year End December 31	**2011**	**2012**	**2013**
Pension benefit payments	$32	$33	$35

NOTE 3: PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment are stated at cost. Repair and maintenance costs that do not improve service potential or extend economic life are expensed as incurred. Depreciation is recorded principally by the straight-line method over the estimated useful lives of our assets, which generally have the following ranges: buildings and improvements: 40 years or less; machinery and equipment: 15 years or less; and containers: 10 years or less. Land is not depreciated, and construction in progress is not depreciated until ready for service. Leasehold improvements are amortized using the straight-line method over the shorter of the remaining lease term, including renewals that are deemed to be reasonably assured, or the estimated useful life of the improvement. Depreciation expense including the depreciation expense of assets under capital lease, totaled approximately $55 million, $50 million and $45 million for the years ended December 31, 2010, 2009 and 2008, respectively.

The following table summarizes our property, plant and equipment (in millions):

Year Ended December 31	**2010**	**2009**	**2008**
Land	200	200	155
Building and Improvements	325	363	355
Machinery and Equipment	536	550	500
Construction in Progress	234	275	285
Less accumulated depreciation	(55)	(50)	(45)
Net-Property, Plant and Equipment	**$1,240**	**$1,338**	**$1,250**

Certain events or changes in circumstances may indicate that the recoverability of the carrying amount of property, plant and equipment should be assessed, including, among others, a significant decrease in market value, a significant change in the business climate in a particular market, or a current period operating or cash flow loss combined with historical losses or projected future losses. When such events or changes in circumstances are present, we estimate the future cash flows expected to result from the use of the asset (or asset group) and its eventual disposition. These estimated future cash flows are consistent with those we use in our internal planning. If the sum of the expected future cash flows (undiscounted and without interest charges) is less than the carrying amount, we recognize an impairment loss. The impairment loss recognized is the amount by which the carrying amount exceeds the fair value. We use a variety of methodologies to determine the fair value of property, plant and equipment, including appraisals and discounted cash flow models, which are consistent with the assumptions we believe hypothetical marketplace participants would use.

NOTE 4: INTANGIBLE ASSETS

The following table summarizes information related to indefinite-lived intangible assets (in millions):

December 31,	**2010**	**2009**	**2008**
Trademarks	$201	$182	$180
Goodwill	9	10	11
Bottlers' franchise rights	8	9	10
Other	(17)	-	-
Total indefinite-lived intangible assets	**$201**	**$201**	**$201**

The following table provides information related to the carrying value of our goodwill (in millions):

Year	**2010**	**2009**	**2008**
Balance as of January 1	$10	$11	$9
Goodwill acquired during the year	0	0	2
Goodwill related to the sale of a business	(1)	(1)	0
Balance as of December 31	**$9**	**$10**	**$11**

The following table summarizes information related to definite-lived intangible assets, which primarily consist of customer relationships and trademarks (in millions):

December 31	**2010**	**2009**	**2008**
Gross Carrying Amount	$30	$29	$24
Adjustments	4	2	6
Less Accumulated Amortization	(2)	(1)	(1)
Total definite-lived intangible assets-net	**$32**	**$30**	**$29**

Total amortization expense for intangible assets subject to amortization was approximately $2 million, $1 million, and $1 million for the years ended December 31, 2010, 2009, 2008, respectively. Based on the carrying value of amortized intangible assets as of December 31, 2010, we estimate our amortization expense for the next five years will be as follows (in millions): 2011- $2; 2012-$2; 2013-$2; 2014-$1; and 2015- $1.

Intangible assets were also tested for impairment and based on management's assumptions there were no impairments.

RBC Corporation

Statement of Comprehensive Income

For the Year Ended December 31, 2010
(In millions, expect per share data)

Year End December 31	*2010*	*% Change*	*2009*	*% Change*	*2008*
Sales Revenue	$1,854	0.22%	$1,850	0.22%	$1,846
Cost of Goods Sold	(752)	0.27%	(750)	1.08%	(742)
Selling, General, & Admin. Expenses					
Salaries & Wages	(404)	0.50%	(402)	-1.95%	(410)
Pension–Service Cost	(131)	0.77%	(130)	-1.52%	(132)
Other	(40)	0.00%	(40)	-2.44%	(41)
Income from Operations	$527	-0.19%	$528	1.34%	$521
Other Revenue and Expense					
Interest Expense	(159)	1.92%	(156)	-2.50%	(160)
Pension–Financing Cost	(198)	1.02%	(196)	-0.51%	(197)
Income from Continuing & Financing Operations	$170	-3.41%	$176	7.32%	$164
Income Tax	(66)	-1.49%	(67)	13.56%	(59)
Net Income	$104	-4.59%	$109	3.81%	$105
Other Comprehensive Income					
Unrealized loss–Sale of Investment	(25)	-3.85%	(26)	4.00%	(25)
Pension–Remeasurement Cost	(35)	0.00%	(35)	2.94%	(34)
Comprehensive Income	$44	-8.33%	$48	4.35%	$46
Net Income for the year per share	$0.0248	-4.62%	$0.0260	4.00%	$0.0250
Average Shares Outstanding	4,200		4,200		4,200

RBC Corporation

Consolidated Balance Sheet

For the Year Ended December 31, 2010
(In millions, expect per share data)

Year End December 31,	*2010*	*% Change*	*2009*	*% Change*	*2008*
Assets					
Current Assets					
Cash and Cash Equivalents	$918	-4.57%	$962	5.25%	$914
Other Current Assets	31	3.33%	30	3.45%	29
Total Current Assets	$949	-4.33%	$992	5.20%	$943
Property, Plant and Equipment, net	1,240	-7.32%	1,338	7.04%	$1,250
Intangibles	233	0.87%	231	0.43%	230
Total Assets	$2,422	-5.43%	$2,561	5.70%	$2,423
Liabilities and Equity					
Current Liabilities:					
Accounts Payable/Accrued Expense	$278	-4.47%	$291	5.82%	$275
Total Current Liabilities	$278	-4.47%	$291	5.82%	$275
Long-Term Liabilities:					
Long-Term Debt	1,056	-7.69%	1,144	16.97%	978
Pension Obligation	669	-4.84%	703	-5.89%	747
Total Liabilities	$2,003	-6.31%	$2,138	6.90%	$2,000
Shareholder's Equity					
Common Stock, Authorized 7,000 shares; Issued 4,200 shares	$301	0.00%	$301	0.00%	$301
Retained Earnings	10	0.00%	10	0.00%	10
Accumulated Other Comprehensive Income	108	-3.57%	112	0.00%	112
Total Shareholder's Equity	$419	-0.95%	$423	0.00%	$423
Total Liabilities and Equity	$2,422	-5.43%	$2,561	5.70%	$2,423

RBC Corporation

Supplemental Notes

For the Year Ended December 31, 2010
(In millions, expect per share data)

NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Description of Business
In these notes, the terms ‘‘The RBC Company,’’ ‘‘Company,’’ ‘‘we,’’ and ‘‘our’’ mean The RBC Company. The RBC Company manufactures fruit juices which we sell to bottling and canning operations, wholesalers and some fountain retailers, as well as finished beverages that we sell primarily to distributors. While most of our branded fruit juice is manufactured, sold and distributed by independently owned and managed bottling partners, from time to time we do acquire or take control of bottling or canning operations, often, but not always, in underperforming markets where we believe we can use our resources and expertise to improve performance.

Summary of Significant Accounting Policies
Basis of Presentation
Our financial statements are prepared in accordance with accounting principles generally accepted in the United States. The preparation of our financial statements requires us to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses and the disclosure of contingent assets and liabilities in our financial statements and accompanying notes. Although these estimates are based on our knowledge of current events and actions we may undertake in the future, actual results may ultimately differ from these estimates and assumptions. Furthermore, when testing assets for impairment in future periods, if management uses different assumptions or if different conditions occur, impairment charges may result.

Revenue Recognition
Our Company recognizes revenue when persuasive evidence of an arrangement exists, delivery of products has occurred, the sales price charged is fixed or determinable, and collectability is reasonably assured. For our Company, this generally means that we recognize revenue when title to our products is transferred to our bottling partners, resellers or other customers. In particular, title usually transfers upon shipment to or receipt at our customers’ locations, as determined by the specific sales terms of the transactions.

Cost of Goods Sold
Cost of products sold is primarily comprised of direct materials and supplies consumed in the manufacture of our products, as well as manufacturing labor, depreciation expense, and direct overhead expense necessary to acquire and convert the purchased materials and supplies into finished products. Cost of products sold also includes the cost to distribute products to customers, inbound freight cost, internal transfer costs, warehousing costs and other shipping and handling activity.

Selling, General and Administrative Expense
Selling, general, and administrative expense is primarily comprised of administrative salary and wages, pension cost, and other indirect overhead cost. Refer to Note 2 for details on the pension cost.

NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES, CONTINUED

Net Income per Share
Basic net income per share is computed by dividing net income by the weighted-average number of common shares outstanding during the reporting period.

Cash Equivalents
We classify time deposits and other investments that are highly liquid and have maturities of three months or less at the date of purchase as cash equivalents.

Property, Plant and Equipment
Property, plant and equipment are stated at cost. Repair and maintenance costs that do not improve service potential or extend economic life are expensed as incurred. Depreciation is recorded principally by the straight-line method over the estimated useful lives of our assets, which generally have the following ranges: buildings and improvements, 40 years or less; machinery and equipment, 15 years or less; and containers, 10 years or less. Land is not depreciated, and construction in progress is not depreciated until ready for service. Leasehold improvements are amortized using the straight-line method over the shorter of the remaining lease term, including renewals that are deemed to be reasonably assured, or the estimated useful life of the improvement. Refer to Note 3 for more detail.

Goodwill, Trademarks and Other Intangible Assets
We classify intangible assets into three categories: (1) intangible assets with definite lives subject to amortization, (2) intangible assets with indefinite lives not subject to amortization and (3) goodwill. Refer to Note 4 for details on the classification.

We determine the useful lives of our identifiable intangible assets after considering the specific facts and circumstances related to each intangible asset. Factors we consider when determining useful lives include the contractual term of any agreement related to the asset, the historical performance of the asset, the Company's long-term strategy for using the asset, any laws or other local regulations that could impact the useful life of the asset, and other economic factors, including competition and specific market conditions.

Intangible assets that are deemed to have definite lives are amortized, primarily on a straight-line basis, over their useful lives, generally ranging from 1 to 20 years. When certain events or changes in operating conditions occur, an impairment assessment is performed and lives of intangible assets with determinable lives may be adjusted.

Indefinite-lived assets and goodwill are not amortized, but are evaluated annually for impairment or when indicators of a potential impairment are present.

New Accounting Pronouncements and Policies
No new accounting pronouncement issued or effective during the fiscal year has had or is expected to have a material impact on the Financial Statements.

NOTE 2: PENSION BENEFIT PLAN

RBC Corporation sponsors a defined pension benefit plan covering all employees.

Obligations and Funded Status
The following table sets forth the changes in benefit obligations and the fair value of plan assets for our benefit plan (in millions):

Year End December 31	**2010**	**2009**	**2008**
Projected Benefit Obligation at January 1	$3,298	$3,003	$2,706
Current Service Cost	131	130	132
Finance Cost	198	196	197
Benefits Paid	(30)	(31)	(32)
Projected Benefit Obligation at December 31	$3,597	$3,298	$3,003
Change in Plan Assets			
Fair Value of Plan Assets at January 1	$2,595	$2,256	$1,900
Actual Return on Plan Assets	52	45	38
Employer Contributions	311	325	350
Benefits Paid	(30)	(31)	(32)
Fair Value of Plan Assets at December 31	$2,928	$2,595	$2,256
Funded Status (Net Liability)	**$(669)**	**$(703)**	**$(747)**

The pension benefit amount recognized in our consolidated balance sheet is as follows (in millions):

Year End December 31	**2010**	**2009**	**2008**
Current Maturity of Pension Liability	$30	$31	$32
Long-Term Liability	639	672	715
Net Liability Recognized	**$669**	**$703**	**$747**

In December 2008, the Company decided to modify the pension plan. Beginning in 2011, the plan will have a two-part formula to determine pension benefits. The first part will retain the current final average pay structure, where services will freeze as of January 1, 2011, with pay escalating for the lesser of 10 years or until termination. The second part of the formula will be a cash balance account which will commence January 1, 2011, under which employees may receive credits based on age, service, pay and interest. The plan was also modified to allow lump sum distributions.

NOTE 2: PENSION BENEFIT PLAN, CONTINUED

Pension Plan Assets

The following table presents total pension assets for our plan (in millions):

Year End December 31	**2010**	**2009**	**2008**
Cash and Cash Equivalents: (5%)	$146	$130	$113
Equity securities: (60%)			
U.S.-based Companies	$876	$773	$676
International-based Companies	881	783	678
	$1,757	$1,556	$1,354
Fixed Income Securities: (30%)			
Government Bonds	$586	$519	$450
Corporate Bonds	132	117	102
Mutual and Pooled Funds	161	143	124
	$879	$779	$676
Other: (5%)	$146	$130	$113
Total Pension Plan Assets	**$2,928**	**$2,595**	**$2,256**

Pension Plan Investment Strategy

The Company utilizes investment managers to actively manage the pension assets of our plan. We have established asset allocation targets and investment guidelines with our investment managers. Selection of the targeted asset allocation for plan assets was based upon a review of the expected return and risk characteristics of each asset class. Our target allocation is a mix of approximately 60 percent equity investments, 30 percent fixed income investments and 10 percent in alternative investments (5% cash and cash equivalents and 5% other).

Components of Net Periodic Benefit Cost

Net periodic benefit cost for our pension plan consisted of the following (in millions):

Year End December 31	**2010**	**2009**	**2008**
Service Cost			
Current Service Cost	$130	$129	$131
Amortization of Prior Service Cost	1	1	1
Total Pension Service Cost	**$131**	**$130**	**$132**
Finance Cost			
Interest Cost on Projected Benefit Obligation	$250	$241	$235
Expected Return on Plan Assets	(52)	(45)	(38)
Total Pension Financing Cost	**$198**	**$196**	**$197**
Total Cost Recognized in Net Income	**$329**	**$326**	**$329**
Remeasurement Cost Recognized in Other Comprehensive Income	**$35**	**$35**	**$34**

NOTE 2: PENSION BENEFIT PLAN, CONTINUED

The following table sets forth the changes in accumulated other comprehensive income (AOCI) **related** to our pension benefit plan (in millions, pretax)

Year End December 31	**2010**	**2009**	**2008**
Beginning Balance in AOCI-Related to Pensions	$ 75	$41	$08
Recognized Prior Service Cost (credit)	(1)	(1)	(1)
Net Remeasurements in Current Year	35	35	34
Ending Balance in AOCI-Related to Pensions	**$109**	**$75**	**$41**

The following table sets forth amounts in AOCI for our benefit plans (in millions, pretax)

Year End December 31	**2010**	**2009**	**2008**
Prior Service	$5	$6	$7
Remeasurement	104	69	34
Ending Balance in AOCI-Related to Pensions	**$109**	**$75**	**$41**

Amount in AOCI expected to be recognized as components of net periodic pension cost in 2011 is $1 (in millions, pretax).

Assumptions

Certain weighted-average assumptions used in computing the benefit obligations are as follows:

Year End December 31	**2010**	**2009**	**2008**
Discount Rate	8.00%	8.00%	9.00%
Rate of Increase in Compensation Level	5.00%	4.00%	4.00%

Certain weighted-average assumptions used in computing net periodic benefit cost are as follows:

Year End December 31	**2010**	**2009**	**2008**
Discount Rate	8.00%	8.00%	9.00%
Rate of Increase in Compensation Level	5.00%	4.00%	4.00%
Expected **Long-Term** Rate of Return on Plan Assets	8.05%	8.10%	8.05%

The expected long-term rate of return assumption for pension plan assets is based upon the target asset allocation and is determined using forward-looking assumptions. We evaluate the rate of return assumption on an annual basis. The expected **annual** rate of return assumption used in computing 2010 net periodic pension finance cost was 2.00 percent.

As of December 31, 2010, the 10-year annualized return on plan assets was 3.1 percent, the 15-year annualized return was 4.9 percent, and the annualized return since inception was 8.1 percent. The discount rate assumptions used to account for pension benefit plans reflect the rates at which the benefit obligations could be effectively settled. Rates at December 31, 2010, were determined using a cash flow matching technique.

Cash Flows

Our estimated future benefit payments are as follows (in millions):

Year End December 31	**2011**	**2012**	**2013**
Pension benefit payments	$32	$33	$35

NOTE 3: PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment are stated at cost. Repair and maintenance costs that do not improve service potential or extend economic life are expensed as incurred. Depreciation is recorded principally by the straight-line method over the estimated useful lives of our assets, which generally have the following ranges: buildings and improvements: 40 years or less; machinery and equipment: 15 years or less; and containers: 10 years or less. Land is not depreciated, and construction in progress is not depreciated until ready for service. Leasehold improvements are amortized using the straight-line method over the shorter of the remaining lease term, including renewals that are deemed to be reasonably assured, or the estimated useful life of the improvement. Depreciation expense including the depreciation expense of assets under capital lease, totaled approximately $55 million, $50 million and $45 million for the years ended December 31, 2010, 2009 and 2008, respectively.

The following table summarizes our property, plant and equipment (in millions):

Year Ended December 31	**2010**	**2009**	**2008**
Land	200	200	155
Building and Improvements	325	363	355
Machinery and Equipment	536	550	500
Construction in Progress	234	275	285
Less accumulated depreciation	(55)	(50)	(45)
Net-Property, Plant and Equipment	**$1,240**	**$1,338**	**$1,250**

Certain events or changes in circumstances may indicate that the recoverability of the carrying amount of property, plant and equipment should be assessed, including, among others, a significant decrease in market value, a significant change in the business climate in a particular market, or a current period operating or cash flow loss combined with historical losses or projected future losses. When such events or changes in circumstances are present, we estimate the future cash flows expected to result from the use of the asset (or asset group) and its eventual disposition. These estimated future cash flows are consistent with those we use in our internal planning. If the sum of the expected future cash flows (undiscounted and without interest charges) is less than the carrying amount, we recognize an impairment loss. The impairment loss recognized is the amount by which the carrying amount exceeds the fair value. We use a variety of methodologies to determine the fair value of property, plant and equipment, including appraisals and discounted cash flow models, which are consistent with the assumptions we believe hypothetical marketplace participants would use.

NOTE 4: INTANGIBLE ASSETS

The following table summarizes information related to indefinite-lived intangible assets (in millions):

December 31,	**2010**	**2009**	**2008**
Trademarks	$201	$182	$180
Goodwill	9	10	11
Bottlers' franchise rights	8	9	10
Other	(17)	-	-
Total indefinite-lived intangible assets	**$201**	**$201**	**$201**

The following table provides information related to the carrying value of our goodwill (in millions):

Year	**2010**	**2009**	**2008**
Balance as of January 1	$10	$11	$9
Goodwill acquired during the year	0	0	2
Goodwill related to the sale of a business	(1)	(1)	0
Balance as of December 31	**$9**	**$10**	**$11**

The following table summarizes information related to definite-lived intangible assets, which primarily consist of customer relationships and trademarks (in millions):

December 31	**2010**	**2009**	**2008**
Gross Carrying Amount	$30	$29	$24
Adjustments	4	2	6
Less Accumulated Amortization	(2)	(1)	(1)
Total definite-lived intangible assets-net	**$32**	**$30**	**$29**

Total amortization expense for intangible assets subject to amortization was approximately $2 million, $1 million, and $1 million for the years ended December 31, 2010, 2009, 2008, respectively. Based on the carrying value of amortized intangible assets as of December 31, 2010, we estimate our amortization expense for the next five years will be as follows (in millions): 2011- $2; 2012-$2; 2013-$2; 2014-$1; and 2015- $1.

Intangible assets were also tested for impairment and based on management's assumptions there were no impairments.

RBC Corporation

Statement of Comprehensive Income

For the Year Ended December 31, 2010
(In millions, expect per share data)

Year End December 31	*2010*	*% Change*	*2009*	*% Change*	*2008*
Sales Revenue	$1,854	0.22%	$1,850	0.22%	$1,846
Cost of Goods Sold	(752)	0.27%	(750)	1.08%	(742)
Selling, General, & Admin. Expenses					
Salaries & Wages	(404)	0.50%	(402)	-1.95%	(410)
Net Pension Cost	(364)	0.83%	(361)	-0.55%	(363)
Other	(40)	0.00%	(40)	-2.44%	(41)
Income from Operations	$294	-1.01%	$297	2.41%	$290
Other Revenue and Expense					
Interest Expense	(159)	1.92%	(156)	-2.50%	(160)
Income from Continuing & Financing Operations	$135	-4.26%	$141	8.46%	$130
Income Tax	(66)	-1.49%	(67)	13.56%	(59)
Net Income	$69	-6.76%	$74	4.23%	$71
Other Comprehensive Income					
Unrealized loss–Sale of Investment	(25)	-3.85%	(26)	4.00%	(25)
Comprehensive Income	$44	-8.33%	$48	4.35%	$46
Net Income for the year per share	$0.0164	-6.82%	$0.0176	4.14%	0.0169
Average Shares Outstanding	4,200		4,200		4,200

RBC Corporation

Consolidated Balance Sheet

For the Year Ended December 31, 2010
(In millions, expect per share data)

Year End December 31,	*2010*	*% Change*	*2009*	*% Change*	*2008*
Assets					
Current Assets					
Cash and Cash Equivalents	$918	-4.57%	$962	5.25%	$914
Other Current Assets	31	3.33%	30	3.45%	29
Total Current Assets	$949	-4.33%	$992	5.20%	$943
Property, Plant and Equipment, net	1,240	-7.32%	1,338	7.04%	$1,250
Intangibles	233	0.87%	231	0.43%	230
Total Assets	$2,422	-5.43%	$2,561	5.70%	$2,423
Liabilities and Equity					
Current Liabilities:					
Accounts Payable/Accrued Expense	$278	-4.47%	$291	5.82%	$275
Total Current Liabilities	$278	-4.47%	$291	5.82%	$275
Long-Term Liabilities:					
Long-Term Debt	1,056	-7.69%	1,144	16.97%	978
Pension Obligation	773	0.13%	772	-1.15%	781
Total Liabilities	$2,107	-4.53%	$2,207	8.51%	$2,034
Shareholder's Equity					
Common Stock, Authorized 7,000 shares; Issued 4,200 shares	$301	0.00%	$301	0.00%	$301
Retained Earnings	10	0.00%	10	0.00%	10
Accumulated Other Comprehensive Income	4	-90.70%	43	-44.87%	78
Total Shareholder's Equity	$315	-11.02%	$354	-9.00%	$389
Total Liabilities and Equity	$2,422	-5.43%	$2,561	5.70%	$2,423

RBC Corporation

Supplemental Notes

For the Year Ended December 31, 2010
(In millions, expect per share data)

NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Description of Business
In these notes, the terms ‘‘The RBC Company,’’ ‘‘Company,’’ ‘‘we,’’ and ‘‘our’’ mean The RBC Company. The RBC Company manufactures fruit juices which we sell to bottling and canning operations, wholesalers and some fountain retailers, as well as finished beverages that we sell primarily to distributors. While most of our branded fruit juice is manufactured, sold and distributed by independently owned and managed bottling partners, from time to time we do acquire or take control of bottling or canning operations, often, but not always, in underperforming markets where we believe we can use our resources and expertise to improve performance.

Summary of Significant Accounting Policies
Basis of Presentation
Our financial statements are prepared in accordance with accounting principles generally accepted in the United States. The preparation of our financial statements requires us to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses and the disclosure of contingent assets and liabilities in our financial statements and accompanying notes. Although these estimates are based on our knowledge of current events and actions we may undertake in the future, actual results may ultimately differ from these estimates and assumptions. Furthermore, when testing assets for impairment in future periods, if management uses different assumptions or if different conditions occur, impairment charges may result.

Revenue Recognition
Our Company recognizes revenue when persuasive evidence of an arrangement exists, delivery of products has occurred, the sales price charged is fixed or determinable, and collectability is reasonably assured. For our Company, this generally means that we recognize revenue when title to our products is transferred to our bottling partners, resellers or other customers. In particular, title usually transfers upon shipment to or receipt at our customers’ locations, as determined by the specific sales terms of the transactions.

Cost of Goods Sold
Cost of products sold is primarily comprised of direct materials and supplies consumed in the manufacture of our products, as well as manufacturing labor, depreciation expense, and direct overhead expense necessary to acquire and convert the purchased materials and supplies into finished products. Cost of products sold also includes the cost to distribute products to customers, inbound freight cost, internal transfer costs, warehousing costs and other shipping and handling activity.

Selling, General and Administrative Expense
Selling, general, and administrative expense is primarily comprised of administrative salary and wages, pension cost, and other indirect overhead cost. Refer to Note 2 for details on the pension cost.

NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES, CONTINUED

Net Income per Share
Basic net income per share is computed by dividing net income by the weighted-average number of common shares outstanding during the reporting period.

Cash Equivalents
We classify time deposits and other investments that are highly liquid and have maturities of three months or less at the date of purchase as cash equivalents.

Property, Plant and Equipment
Property, plant and equipment are stated at cost. Repair and maintenance costs that do not improve service potential or extend economic life are expensed as incurred. Depreciation is recorded principally by the straight-line method over the estimated useful lives of our assets, which generally have the following ranges: buildings and improvements, 40 years or less; machinery and equipment, 15 years or less; and containers, 10 years or less. Land is not depreciated, and construction in progress is not depreciated until ready for service. Leasehold improvements are amortized using the straight-line method over the shorter of the remaining lease term, including renewals that are deemed to be reasonably assured, or the estimated useful life of the improvement. Refer to Note 3 for more detail.

Goodwill, Trademarks and Other Intangible Assets
We classify intangible assets into three categories: (1) intangible assets with definite lives subject to amortization, (2) intangible assets with indefinite lives not subject to amortization and (3) goodwill. Refer to Note 4 for details on the classification.

We determine the useful lives of our identifiable intangible assets after considering the specific facts and circumstances related to each intangible asset. Factors we consider when determining useful lives include the contractual term of any agreement related to the asset, the historical performance of the asset, the Company's long-term strategy for using the asset, any laws or other local regulations that could impact the useful life of the asset, and other economic factors, including competition and specific market conditions.

Intangible assets that are deemed to have definite lives are amortized, primarily on a straight-line basis, over their useful lives, generally ranging from 1 to 20 years. When certain events or changes in operating conditions occur, an impairment assessment is performed and lives of intangible assets with determinable lives may be adjusted.

Indefinite-lived assets and goodwill are not amortized, but are evaluated annually for impairment or when indicators of a potential impairment are present.

New Accounting Pronouncements and Policies
No new accounting pronouncement issued or effective during the fiscal year has had or is expected to have a material impact on the Financial Statements.

NOTE 2: PENSION BENEFIT PLAN

RBC Corporation sponsors a defined pension benefit plan covering all employees.

Obligations and Funded Status
The following table sets forth the changes in benefit obligations and the fair value of plan assets for our benefit plan (in millions):

Year End December 31	**2010**	**2009**	**2008**
Projected Benefit Obligation at January 1	$3,367	$3,037	$2,706
Current Service Cost	131	130	132
Finance Cost	198	196	197
Remeasurement Cost	35	35	34
Benefits Paid	(30)	(31)	(32)
Projected Benefit Obligation at December 31	$3,701	$3,367	$3,037
Change in Plan Assets			
Fair Value of Plan Assets at January 1	$2,595	$2,256	$1,900
Actual Return on Plan Assets	52	45	38
Employer Contributions	311	325	350
Benefits Paid	(30)	(31)	(32)
Fair Value of Plan Assets at December 31	$2,928	$2,595	$2,256
Funded Status (Net Liability)	**$(773)**	**$(772)**	**$(781)**

The pension benefit amount recognized in our consolidated balance sheet is as follows (in millions):

Year End December 31	**2010**	**2009**	**2008**
Current Maturity of Pension Liability	$30	$31	$32
Long-Term Liability	639	672	715
Net Liability Recognized	**$773**	**$772**	**$781**

In December 2008, the Company decided to modify the pension plan. Beginning in 2011, the plan will have a two-part formula to determine pension benefits. The first part will retain the current final average pay structure, where services will freeze as of January 1, 2011, with pay escalating for the lesser of 10 years or until termination. The second part of the formula will be a cash balance account which will commence January 1, 2011, under which employees may receive credits based on age, service, pay and interest. The plan was also modified to allow lump sum distributions.

NOTE 2: PENSION BENEFIT PLAN, CONTINUED

Pension Plan Assets

The following table presents total pension assets for our plan (in millions):

Year End December 31	2010	2009	2008
Cash and Cash Equivalents: (5%)	$146	$130	$113
Equity securities: (60%)			
U.S.-based Companies	$876	$773	$676
International-based Companies	881	783	678
	$1,757	$1,556	$1,354
Fixed Income Securities: (30%)			
Government Bonds	$586	$519	$450
Corporate Bonds	132	117	102
Mutual and Pooled Funds	161	143	124
	$879	$779	$676
Other: (5%)	$146	$130	$113
Total Pension Plan Assets	**$2,928**	**$2,595**	**$2,256**

Pension Plan Investment Strategy

The Company utilizes investment managers to actively manage the pension assets of our plan. We have established asset allocation targets and investment guidelines with our investment managers. Selection of the targeted asset allocation for plan assets was based upon a review of the expected return and risk characteristics of each asset class. Our target allocation is a mix of approximately 60 percent equity investments, 30 percent fixed income investments and 10 percent in alternative investments (5% cash and cash equivalents and 5% other).

Components of Net Periodic Benefit Cost

Net periodic benefit cost for our pension plan consisted of the following (in millions):

Year End December 31	2010	2009	2008
Service Cost			
Current Service Cost	$130	$129	$131
Amortization of Prior Service Cost	1	1	1
Total Pension Service Cost	**$131**	**$130**	**$132**
Finance Cost			
Interest Cost on Projected Benefit Obligation	$250	$241	$235
Expected Return on Plan Assets	(52)	(45)	(38)
Total Pension Financing Cost	**$198**	**$196**	**$197**
Remeasurement Cost	**$35**	**$35**	**$34**
Total Cost Recognized in Net Income	**$364**	**$361**	**$363**

NOTE 2: PENSION BENEFIT PLAN, CONTINUED

The following table sets forth the changes in accumulated other comprehensive income (AOCI) **related** to our pension benefit plan (in millions, pretax)

Year End December 31	**2010**	**2009**	**2008**
Beginning Balance in AOCI-Related to Pensions	$ 6	$7	$08
Recognized Prior Service Cost (credit)	(1)	(1)	(1)
Ending Balance in AOCI-Related to Pensions	**$5**	**$6**	**$7**

The following table sets forth amounts in AOCI for our benefit plans (in millions, pretax)

Year End December 31	**2010**	**2009**	**2008**
Prior Service	$5	$6	$7
Ending Balance in AOCI-Related to Pensions	**$5**	**$6**	**$7**

Amount in AOCI expected to be recognized as components of net periodic pension cost in 2011 is $1 (in millions, pretax).

Assumptions

Certain weighted-average assumptions used in computing the benefit obligations are as follows:

Year End December 31	**2010**	**2009**	**2008**
Discount Rate	8.00%	8.00%	9.00%
Rate of Increase in Compensation Level	5.00%	4.00%	4.00%

Certain weighted-average assumptions used in computing net periodic benefit cost are as follows:

Year End December 31	**2010**	**2009**	**2008**
Discount Rate	8.00%	8.00%	9.00%
Rate of Increase in Compensation Level	5.00%	4.00%	4.00%
Expected **Long-Term** Rate of Return on Plan Assets	8.05%	8.10%	8.05%

The expected long-term rate of return assumption for pension plan assets is based upon the target asset allocation and is determined using forward-looking assumptions. We evaluate the rate of return assumption on an annual basis. The expected **annual** rate of return assumption used in computing 2010 net periodic pension finance cost was 2.00 percent.

As of December 31, 2010, the 10-year annualized return on plan assets was 3.1 percent, the 15-year annualized return was 4.9 percent, and the annualized return since inception was 8.1 percent. The discount rate assumptions used to account for pension benefit plans reflect the rates at which the benefit obligations could be effectively settled. Rates at December 31, 2010, were determined using a cash flow matching technique.

Cash Flows

Our estimated future benefit payments are as follows (in millions):

Year End December 31	**2011**	**2012**	**2013**
Pension benefit payments	$32	$33	$35

NOTE 3: PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment are stated at cost. Repair and maintenance costs that do not improve service potential or extend economic life are expensed as incurred. Depreciation is recorded principally by the straight-line method over the estimated useful lives of our assets, which generally have the following ranges: buildings and improvements: 40 years or less; machinery and equipment: 15 years or less; and containers: 10 years or less. Land is not depreciated, and construction in progress is not depreciated until ready for service. Leasehold improvements are amortized using the straight-line method over the shorter of the remaining lease term, including renewals that are deemed to be reasonably assured, or the estimated useful life of the improvement. Depreciation expense including the depreciation expense of assets under capital lease, totaled approximately $55 million, $50 million and $45 million for the years ended December 31, 2010, 2009 and 2008, respectively.

The following table summarizes our property, plant and equipment (in millions):

Year Ended December 31	**2010**	**2009**	**2008**
Land	200	200	155
Building and Improvements	325	363	355
Machinery and Equipment	536	550	500
Construction in Progress	234	275	285
Less accumulated depreciation	(55)	(50)	(45)
Net-Property, Plant and Equipment	**$1,240**	**$1,338**	**$1,250**

Certain events or changes in circumstances may indicate that the recoverability of the carrying amount of property, plant and equipment should be assessed, including, among others, a significant decrease in market value, a significant change in the business climate in a particular market, or a current period operating or cash flow loss combined with historical losses or projected future losses. When such events or changes in circumstances are present, we estimate the future cash flows expected to result from the use of the asset (or asset group) and its eventual disposition. These estimated future cash flows are consistent with those we use in our internal planning. If the sum of the expected future cash flows (undiscounted and without interest charges) is less than the carrying amount, we recognize an impairment loss. The impairment loss recognized is the amount by which the carrying amount exceeds the fair value. We use a variety of methodologies to determine the fair value of property, plant and equipment, including appraisals and discounted cash flow models, which are consistent with the assumptions we believe hypothetical marketplace participants would use.

NOTE 4: INTANGIBLE ASSETS

The following table summarizes information related to indefinite-lived intangible assets (in millions):

December 31,	**2010**	**2009**	**2008**
Trademarks	$201	$182	$180
Goodwill	9	10	11
Bottlers' franchise rights	8	9	10
Other	(17)	-	-
Total indefinite-lived intangible assets	**$201**	**$201**	**$201**

The following table provides information related to the carrying value of our goodwill (in millions):

Year	**2010**	**2009**	**2008**
Balance as of January 1	$10	$11	$9
Goodwill acquired during the year	0	0	2
Goodwill related to the sale of a business	(1)	(1)	0
Balance as of December 31	**$9**	**$10**	**$11**

The following table summarizes information related to definite-lived intangible assets, which primarily consist of customer relationships and trademarks (in millions):

December 31	**2010**	**2009**	**2008**
Gross Carrying Amount	$30	$29	$24
Adjustments	4	2	6
Less Accumulated Amortization	(2)	(1)	(1)
Total definite-lived intangible assets-net	**$32**	**$30**	**$29**

Total amortization expense for intangible assets subject to amortization was approximately $2 million, $1 million, and $1 million for the years ended December 31, 2010, 2009, 2008, respectively. Based on the carrying value of amortized intangible assets as of December 31, 2010, we estimate our amortization expense for the next five years will be as follows (in millions): 2011- $2; 2012-$2; 2013-$2; 2014-$1; and 2015- $1.

Intangible assets were also tested for impairment and based on management's assumptions there were no impairments.

High Volatility and Disaggregated Condition with Alternative Trend Pattern

RBC Corporation

Statement of Comprehensive Income

For the Year Ended December 31, 2010
(In millions, expect per share data)

Year End December 31	***2010***	***% Change***	***2009***	***% Change***	***2008***
Sales Revenue	$1,854	0.22%	$1,850	0.22%	$1,846
Cost of Goods Sold	(752)	0.27%	(750)	1.08%	(742)
Selling, General, & Admin. Expenses					
Salaries & Wages	(404)	0.50%	(402)	-1.95%	(410)
Pension–Service Cost	(132)	1.54%	(130)	-0.76%	(131)
Other	(40)	0.00%	(40)	-2.44%	(41)
Income from Operations	$526	-0.38%	$528	1.15%	$522
Other Revenue and Expense					
Interest Expense	(159)	1.92%	(156)	-2.50%	(160)
Pension–Financing Cost	(263)	345.76%	(59)	-78.07%	(269)
Income from Continuing & Financing Operations	$104	-66.77%	$313	236.56%	$93
Income Tax	(42)	-64.71%	(119)	271.88%	(32)
Net Income	$62	-68.04%	$194	218.03%	$61
Other Comprehensive Income					
Unrealized loss–Sale of Investment	(25)	-3.85%	(26)	4.00%	(25)
Pension–Remeasurement Cost	(34)	-2.86%	(35)	0.00%	(35)
Comprehensive Income	$3	-97.74%	$133	13200.00	$1
Net Income for the year per share	$0.0148	-67.97	$0.0462	218.62%	$0.0145
Average Shares Outstanding	4,200		4,200		4,200

RBC Corporation

Consolidated Balance Sheet

For the Year Ended December 31, 2010
(In millions, expect per share data)

Year End December 31,	*2010*	*% Change*	*2009*	*% Change*	*2008*
Assets					
Current Assets					
Cash and Cash Equivalents	$992	3.03%	$898	-1.54%	$912
Other Current Assets	31	3.33%	30	3.45%	29
Total Current Assets	$1,023	10.24%	$928	-1.38%	$941
Property, Plant and Equipment, net	1,240	-7.32%	1,338	7.04%	$1,250
Intangibles	233	0.87%	231	0.43%	230
Total Assets	$2,496	-0.04%	$2,497	3.14%	$2,421
Liabilities and Equity					
Current Liabilities:					
Accounts Payable/Accrued Expense	$278	-4.47%	$291	5.82%	$275
Total Current Liabilities	$278	-4.47%	$291	5.82%	$275
Long-Term Liabilities:					
Long-Term Debt	1,056	-7.69%	1,144	16.97%	978
Pension Obligation	669	5.02%	637	-22.13%	818
Total Liabilities	$2,003	-3.33%	$2,072	0.05%	$2,071
Shareholder's Equity					
Common Stock, Authorized 7,000 shares; Issued 4,200 shares	$301	0.00%	$301	0.00%	$301
Retained Earnings	10	0.00%	10	0.00%	10
Accumulated Other Comprehensive Income	182	59.65%	114	192.31%	39
Total Shareholder's Equity	$493	16.00%	$425	21.43%	$350
Total Liabilities and Equity	$2,496	-0.04%	$2,497	3.14%	$2,421

RBC Corporation

Supplemental Notes

For the Year Ended December 31, 2010
(In millions, expect per share data)

NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Description of Business
In these notes, the terms ‘‘The RBC Company,’’ ‘‘Company,’’ ‘‘we,’’ and ‘‘our’’ mean The RBC Company. The RBC Company manufactures fruit juices which we sell to bottling and canning operations, wholesalers and some fountain retailers, as well as finished beverages that we sell primarily to distributors. While most of our branded fruit juice is manufactured, sold and distributed by independently owned and managed bottling partners, from time to time we do acquire or take control of bottling or canning operations, often, but not always, in underperforming markets where we believe we can use our resources and expertise to improve performance.

Summary of Significant Accounting Policies
Basis of Presentation
Our financial statements are prepared in accordance with accounting principles generally accepted in the United States. The preparation of our financial statements requires us to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses and the disclosure of contingent assets and liabilities in our financial statements and accompanying notes. Although these estimates are based on our knowledge of current events and actions we may undertake in the future, actual results may ultimately differ from these estimates and assumptions. Furthermore, when testing assets for impairment in future periods, if management uses different assumptions or if different conditions occur, impairment charges may result.

Revenue Recognition
Our Company recognizes revenue when persuasive evidence of an arrangement exists, delivery of products has occurred, the sales price charged is fixed or determinable, and collectability is reasonably assured. For our Company, this generally means that we recognize revenue when title to our products is transferred to our bottling partners, resellers or other customers. In particular, title usually transfers upon shipment to or receipt at our customers’ locations, as determined by the specific sales terms of the transactions.

Cost of Goods Sold
Cost of products sold is primarily comprised of direct materials and supplies consumed in the manufacture of our products, as well as manufacturing labor, depreciation expense, and direct overhead expense necessary to acquire and convert the purchased materials and supplies into finished products. Cost of products sold also includes the cost to distribute products to customers, inbound freight cost, internal transfer costs, warehousing costs and other shipping and handling activity.

Selling, General and Administrative Expense
Selling, general, and administrative expense is primarily comprised of administrative salary and wages, pension cost, and other indirect overhead cost. Refer to Note 2 for details on the pension cost.

NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES, CONTINUED

Net Income per Share
Basic net income per share is computed by dividing net income by the weighted-average number of common shares outstanding during the reporting period.

Cash Equivalents
We classify time deposits and other investments that are highly liquid and have maturities of three months or less at the date of purchase as cash equivalents.

Property, Plant and Equipment
Property, plant and equipment are stated at cost. Repair and maintenance costs that do not improve service potential or extend economic life are expensed as incurred. Depreciation is recorded principally by the straight-line method over the estimated useful lives of our assets, which generally have the following ranges: buildings and improvements, 40 years or less; machinery and equipment, 15 years or less; and containers, 10 years or less. Land is not depreciated, and construction in progress is not depreciated until ready for service. Leasehold improvements are amortized using the straight-line method over the shorter of the remaining lease term, including renewals that are deemed to be reasonably assured, or the estimated useful life of the improvement. Refer to Note 3 for more detail.

Goodwill, Trademarks and Other Intangible Assets
We classify intangible assets into three categories: (1) intangible assets with definite lives subject to amortization, (2) intangible assets with indefinite lives not subject to amortization and (3) goodwill. Refer to Note 4 for details on the classification.

We determine the useful lives of our identifiable intangible assets after considering the specific facts and circumstances related to each intangible asset. Factors we consider when determining useful lives include the contractual term of any agreement related to the asset, the historical performance of the asset, the Company's long-term strategy for using the asset, any laws or other local regulations that could impact the useful life of the asset, and other economic factors, including competition and specific market conditions.

Intangible assets that are deemed to have definite lives are amortized, primarily on a straight-line basis, over their useful lives, generally ranging from 1 to 20 years. When certain events or changes in operating conditions occur, an impairment assessment is performed and lives of intangible assets with determinable lives may be adjusted.

Indefinite-lived assets and goodwill are not amortized, but are evaluated annually for impairment or when indicators of a potential impairment are present.

New Accounting Pronouncements and Policies
No new accounting pronouncement issued or effective during the fiscal year has had or is expected to have a material impact on the Financial Statements.

NOTE 2: PENSION BENEFIT PLAN

RBC Corporation sponsors a defined pension benefit plan covering all employees.

Obligations and Funded Status
The following table sets forth the changes in benefit obligations and the fair value of plan assets for our benefit plan (in millions):

Year End December 31	**2010**	**2009**	**2008**
Projected Benefit Obligation at January 1	$3,232	$3,074	$2,706
Current Service Cost	132	130	131
Finance Cost	263	59	269
Benefits Paid	(30)	(31)	(32)
Projected Benefit Obligation at December 31	$3,597	$3,232	$3,074
Change in Plan Assets			
Fair Value of Plan Assets at January 1	$2,595	$2,256	$1,900
Actual Return on Plan Assets	52	45	38
Employer Contributions	311	325	350
Benefits Paid	(30)	(31)	(32)
Fair Value of Plan Assets at December 31	$2,928	$2,595	$2,256
Funded Status (Net Liability)	**$(669)**	**$(637)**	**$(818)**

The pension benefit amount recognized in our consolidated balance sheet is as follows (in millions):

Year End December 31	**2010**	**2009**	**2008**
Current Maturity of Pension Liability	$30	$31	$32
Long-Term Liability	639	606	786
Net Liability Recognized	**$669**	**$637**	**$818**

In December 2008, the Company decided to modify the pension plan. Beginning in 2011, the plan will have a two-part formula to determine pension benefits. The first part will retain the current final average pay structure, where services will freeze as of January 1, 2011, with pay escalating for the lesser of 10 years or until termination. The second part of the formula will be a cash balance account which will commence January 1, 2011, under which employees may receive credits based on age, service, pay and interest. The plan was also modified to allow lump sum distributions.

NOTE 2: PENSION BENEFIT PLAN, CONTINUED

Pension Plan Assets

The following table presents total pension assets for our plan (in millions):

Year End December 31	2010	2009	2008
Cash and Cash Equivalents: (5%)	$146	$130	$113
Equity securities: (60%)			
U.S.-based Companies	$876	$773	$676
International-based Companies	881	783	678
	$1,757	$1,556	$1,354
Fixed Income Securities: (30%)			
Government Bonds	$586	$519	$450
Corporate Bonds	132	117	102
Mutual and Pooled Funds	161	143	124
	$879	$779	$676
Other: (5%)	$146	$130	$113
Total Pension Plan Assets	**$2,928**	**$2,595**	**$2,256**

Pension Plan Investment Strategy

The Company utilizes investment managers to actively manage the pension assets of our plan. We have established asset allocation targets and investment guidelines with our investment managers. Selection of the targeted asset allocation for plan assets was based upon a review of the expected return and risk characteristics of each asset class. Our target allocation is a mix of approximately 60 percent equity investments, 30 percent fixed income investments and 10 percent in alternative investments (5% cash and cash equivalents and 5% other).

Components of Net Periodic Benefit Cost

Net periodic benefit cost for our pension plan consisted of the following (in millions):

Year End December 31	2010	2009	2008
Service Cost			
Current Service Cost	$131	$129	$130
Amortization of Prior Service Cost	1	1	1
Total Pension Service Cost	**$132**	**$130**	**$131**
Finance Cost			
Interest Cost on Projected Benefit Obligation	$301	$104	$321
Expected Return on Plan Assets	(38)	(45)	(52)
Total Pension Financing Cost	**$263**	**$59**	**$269**
Total Cost Recognized in Net Income	**$395**	**$189**	**$400**
Remeasurement Cost Recognized in Other Comprehensive Income	**$34**	**$35**	**$35**

NOTE 2: PENSION BENEFIT PLAN, CONTINUED

The following table sets forth the changes in accumulated other comprehensive income (AOCI) **related** to our pension benefit plan (in millions, pretax)

Year End December 31	**2010**	**2009**	**2008**
Beginning Balance in AOCI-Related to Pensions	$ 76	$42	$08
Recognized Prior Service Cost (credit)	(1)	(1)	(1)
Net Remeasurements in Current Year	34	35	35
Ending Balance in AOCI-Related to Pensions	**$109**	**$76**	**$42**

The following table sets forth amounts in AOCI for our benefit plans (in millions, pretax)

Year End December 31	**2010**	**2009**	**2008**
Prior Service	$5	$6	$7
Remeasurements	104	70	35
Ending Balance in AOCI-Related to Pensions	**$109**	**$76**	**$42**

Amount in AOCI expected to be recognized as components of net periodic pension cost in 2011 is $1 (in millions, pretax).

Assumptions
Certain weighted-average assumptions used in computing the benefit obligations are as follows:

Year End December 31	**2010**	**2009**	**2008**
Discount Rate	9.00%	3.50%	12.00%
Rate of Increase in Compensation Level	5.00%	4.00%	4.00%

Certain weighted-average assumptions used in computing net periodic benefit cost are as follows:

Year End December 31	**2010**	**2009**	**2008**
Discount Rate	9.00%	3.50%	12.00%
Rate of Increase in Compensation Level	5.00%	4.00%	4.00%
Expected **Long-Term** Rate of Return on Plan Assets	8.05%	8.10%	8.05%

The expected long-term rate of return assumption for pension plan assets is based upon the target asset allocation and is determined using forward-looking assumptions. We evaluate the rate of return assumption on an annual basis. The expected **annual** rate of return assumption used in computing 2010 net periodic pension finance cost was 2.00 percent.

As of December 31, 2010, the 10-year annualized return on plan assets was 3.1 percent, the 15-year annualized return was 4.9 percent, and the annualized return since inception was 8.1 percent. The discount rate assumptions used to account for pension benefit plans reflect the rates at which the benefit obligations could be effectively settled. Rates at December 31, 2010, were determined using a cash flow matching technique.

Cash Flows
Our estimated future benefit payments are as follows (in millions):

Year End December 31	**2011**	**2012**	**2013**
Pension benefit payments	$32	$33	$35

NOTE 3: PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment are stated at cost. Repair and maintenance costs that do not improve service potential or extend economic life are expensed as incurred. Depreciation is recorded principally by the straight-line method over the estimated useful lives of our assets, which generally have the following ranges: buildings and improvements: 40 years or less; machinery and equipment: 15 years or less; and containers: 10 years or less. Land is not depreciated, and construction in progress is not depreciated until ready for service. Leasehold improvements are amortized using the straight-line method over the shorter of the remaining lease term, including renewals that are deemed to be reasonably assured, or the estimated useful life of the improvement. Depreciation expense including the depreciation expense of assets under capital lease, totaled approximately $55 million, $50 million and $45 million for the years ended December 31, 2010, 2009 and 2008, respectively.

The following table summarizes our property, plant and equipment (in millions):

Year Ended December 31	**2010**	**2009**	**2008**
Land	200	200	155
Building and Improvements	325	363	355
Machinery and Equipment	536	550	500
Construction in Progress	234	275	285
Less accumulated depreciation	(55)	(50)	(45)
Net-Property, Plant and Equipment	**$1,240**	**$1,338**	**$1,250**

Certain events or changes in circumstances may indicate that the recoverability of the carrying amount of property, plant and equipment should be assessed, including, among others, a significant decrease in market value, a significant change in the business climate in a particular market, or a current period operating or cash flow loss combined with historical losses or projected future losses. When such events or changes in circumstances are present, we estimate the future cash flows expected to result from the use of the asset (or asset group) and its eventual disposition. These estimated future cash flows are consistent with those we use in our internal planning. If the sum of the expected future cash flows (undiscounted and without interest charges) is less than the carrying amount, we recognize an impairment loss. The impairment loss recognized is the amount by which the carrying amount exceeds the fair value. We use a variety of methodologies to determine the fair value of property, plant and equipment, including appraisals and discounted cash flow models, which are consistent with the assumptions we believe hypothetical marketplace participants would use.

NOTE 4: INTANGIBLE ASSETS

The following table summarizes information related to indefinite-lived intangible assets (in millions):

December 31,	**2010**	**2009**	**2008**
Trademarks	$201	$182	$180
Goodwill	9	10	11
Bottlers' franchise rights	8	9	10
Other	(17)	-	-
Total indefinite-lived intangible assets	**$201**	**$201**	**$201**

The following table provides information related to the carrying value of our goodwill (in millions):

Year	**2010**	**2009**	**2008**
Balance as of January 1	$10	$11	$9
Goodwill acquired during the year	0	0	2
Goodwill related to the sale of a business	(1)	(1)	0
Balance as of December 31	**$9**	**$10**	**$11**

The following table summarizes information related to definite-lived intangible assets, which primarily consist of customer relationships and trademarks (in millions):

December 31	**2010**	**2009**	**2008**
Gross Carrying Amount	$30	$29	$24
Adjustments	4	2	6
Less Accumulated Amortization	(2)	(1)	(1)
Total definite-lived intangible assets-net	**$32**	**$30**	**$29**

Total amortization expense for intangible assets subject to amortization was approximately $2 million, $1 million, and $1 million for the years ended December 31, 2010, 2009, 2008, respectively. Based on the carrying value of amortized intangible assets as of December 31, 2010, we estimate our amortization expense for the next five years will be as follows (in millions): 2011- $2; 2012-$2; 2013-$2; 2014-$1; and 2015- $1.

Intangible assets were also tested for impairment and based on management's assumptions there were no impairments.

High Volatility and Aggregated Condition with Alternative Trend Pattern

RBC Corporation

Statement of Comprehensive Income

For the Year Ended December 31, 2010
(In millions, expect per share data)

Year End December 31	***2010***	***% Change***	***2009***	***% Change***	***2008***
Sales Revenue	$1,854	0.22%	$1,850	0.22%	$1,846
Cost of Goods Sold	(752)	0.27%	(750)	1.08%	(742)
Selling, General, & Admin. Expenses					
Salaries & Wages	(404)	0.50%	(402)	-1.95%	(410)
Net Pension Cost	(429)	91.52%	(224)	-48.51%	(435)
Other	(40)	0.00%	(40)	-2.44%	(41)
Income from Operations	$229	-47.24%	$434	99.08%	$218
Other Revenue and Expense					
Interest Expense	(159)	1.92%	(156)	-2.50%	(160)
Income from Continuing & Financing Operations	$70	-74.82%	$278	379.31%	$58
Income Tax	(42)	-64.71%	(119)	271.88%	(32)
Net Income	$28	-82.39%	$159	511.54%	$26
Other Comprehensive Income					
Unrealized loss–Sale of Investment	(25)	-3.85%	(26)	4.00%	(25)
Comprehensive Income	$3	-97.74%	$133	13200.00%	$1
Net Income for the year per share	$0.0067	-82.32%	$0.0379	511.29%	$0.0062
Average Shares Outstanding	4,200		4,200		4,200

RBC Corporation

Consolidated Balance Sheet

For the Year Ended December 31, 2010
(In millions, expect per share data)

Year End December 31,	*2010*	*% Change*	*2009*	*% Change*	*2008*
Assets					
Current Assets					
Cash and Cash Equivalents	$992	10.47%	$898	-1.54%	$912
Other Current Assets	31	3.33%	30	3.45%	29
Total Current Assets	$1,023	10.24%	$928	-1.38%	$941
Property, Plant and Equipment, net	1,240	-7.32%	1,338	7.04%	$1,250
Intangibles	233	0.87%	231	0.43%	230
Total Assets	$2,496	-0.04%	$2,497	3.14%	$2,421
Liabilities and Equity					
Current Liabilities:					
Accounts Payable/Accrued Expense	$278	-4.47%	$291	5.82%	$275
Total Current Liabilities	$278	-4.47%	$291	5.82%	$275
Long-Term Liabilities:					
Long-Term Debt	1,056	-7.69%	1,144	16.97%	978
Pension Obligation	773	9.34%	707	-17.12%	853
Total Liabilities	$2,107	-1.63%	$2,142	1.71%	$2,106
Shareholder's Equity					
Common Stock, Authorized 7,000 shares; Issued 4,200 shares	$301	0.00%	$301	0.00%	$301
Retained Earnings	10	0.00%	10	0.00%	10
Accumulated Other Comprehensive Income	78	77.27%	44	1,000.00%	4
Total Shareholder's Equity	$389	9.58%	$355	12.70%	$315
Total Liabilities and Equity	$2,496	-0.04%	$2,497	3.14%	$2,421

RBC Corporation

Supplemental Notes

For the Year Ended December 31, 2010
(In millions, expect per share data)

NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Description of Business
In these notes, the terms ‘‘The RBC Company,’’ ‘‘Company,’’ ‘‘we,’’ and ‘‘our’’ mean The RBC Company. The RBC Company manufactures fruit juices which we sell to bottling and canning operations, wholesalers and some fountain retailers. While most of our branded fruit juice is manufactured, sold and distributed by independently owned and managed bottling partners, from time to time we do acquire or take control of bottling or canning operations, often, but not always, in underperforming markets where we believe we can use our resources and expertise to improve performance.

Summary of Significant Accounting Policies
Basis of Presentation
Our financial statements are prepared in accordance with accounting principles generally accepted in the United States. The preparation of our financial statements requires us to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses and the disclosure of contingent assets and liabilities in our financial statements and accompanying notes. Although these estimates are based on our knowledge of current events and actions we may undertake in the future, actual results may ultimately differ from these estimates and assumptions. Furthermore, when testing assets for impairment in future periods, if management uses different assumptions or if different conditions occur, impairment charges may result.

Revenue Recognition
Our Company recognizes revenue when persuasive evidence of an arrangement exists, delivery of products has occurred, the sales price charged is fixed or determinable, and collectability is reasonably assured. For our Company, this generally means that we recognize revenue when title to our products is transferred to our bottling partners, resellers or other customers. In particular, title usually transfers upon shipment to or receipt at our customers’ locations, as determined by the specific sales terms of the transactions.

Cost of Goods Sold
Cost of products sold is primarily comprised of direct materials and supplies consumed in the manufacture of our products, as well as manufacturing labor, depreciation expense, and direct overhead expense necessary to acquire and convert the purchased materials and supplies into finished products. Cost of products sold also includes the cost to distribute products to customers, inbound freight cost, internal transfer costs, warehousing costs and other shipping and handling activity.

Selling, General and Administrative Expense
Selling, general, and administrative expense is primarily comprised of administrative salary and wages, pension cost, and other indirect overhead cost. Refer to Note 2 for details on the pension cost.

NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES, CONTINUED

Net Income per Share
Basic net income per share is computed by dividing net income by the weighted-average number of common shares outstanding during the reporting period.

Cash Equivalents
We classify time deposits and other investments that are highly liquid and have maturities of three months or less at the date of purchase as cash equivalents.

Property, Plant and Equipment
Property, plant and equipment are stated at cost. Repair and maintenance costs that do not improve service potential or extend economic life are expensed as incurred. Depreciation is recorded principally by the straight-line method over the estimated useful lives of our assets, which generally have the following ranges: buildings and improvements, 40 years or less; machinery and equipment, 15 years or less; and containers, 10 years or less. Land is not depreciated, and construction in progress is not depreciated until ready for service. Leasehold improvements are amortized using the straight-line method over the shorter of the remaining lease term, including renewals that are deemed to be reasonably assured, or the estimated useful life of the improvement. Refer to Note 3 for more detail.

Goodwill, Trademarks and Other Intangible Assets
We classify intangible assets into three categories: (1) intangible assets with definite lives subject to amortization, (2) intangible assets with indefinite lives not subject to amortization and (3) goodwill. Refer to Note 4 for details on the classification.

We determine the useful lives of our identifiable intangible assets after considering the specific facts and circumstances related to each intangible asset. Factors we consider when determining useful lives include the contractual term of any agreement related to the asset, the historical performance of the asset, the Company's long-term strategy for using the asset, any laws or other local regulations that could impact the useful life of the asset, and other economic factors, including competition and specific market conditions.

Intangible assets that are deemed to have definite lives are amortized, primarily on a straight-line basis, over their useful lives, generally ranging from 1 to 20 years. When certain events or changes in operating conditions occur, an impairment assessment is performed and lives of intangible assets with determinable lives may be adjusted.

Indefinite-lived assets and goodwill are not amortized, but are evaluated annually for impairment or when indicators of a potential impairment are present.

New Accounting Pronouncements and Policies
No new accounting pronouncement issued or effective during the fiscal year has had or is expected to have a material impact on the Financial Statements.

NOTE 2: PENSION BENEFIT PLAN

RBC Corporation sponsors a defined pension benefit plan covering all employees.

Obligations and Funded Status
The following table sets forth the changes in benefit obligations and the fair value of plan assets for our benefit plan (in millions):

Year End December 31	**2010**	**2009**	**2008**
Projected Benefit Obligation at January 1	$3,302	$3,109	$2,706
Current Service Cost	132	130	131
Finance Cost	263	59	269
Remeasurement Cost	34	35	35
Benefits Paid	(30)	(31)	(32)
Projected Benefit Obligation at December 31	$3,701	$3,302	$3,109
Change in Plan Assets			
Fair Value of Plan Assets at January 1	$2,595	$2,256	$1,900
Actual Return on Plan Assets	52	45	38
Employer Contributions	311	325	350
Benefits Paid	(30)	(31)	(32)
Fair Value of Plan Assets at December 31	$2,928	$2,595	$2,256
Funded Status (Net Liability)	**$(773)**	**$(707)**	**$(853)**

The pension benefit amount recognized in our consolidated balance sheet is as follows (in millions):

Year End December 31	**2010**	**2009**	**2008**
Current Maturity of Pension Liability	$30	$31	$32
Long-Term Liability	743	676	821
Net Liability Recognized	**$773**	**$707**	**$853**

In December 2008, the Company decided to modify the pension plan. Beginning in 2011, the plan will have a two-part formula to determine pension benefits. The first part will retain the current final average pay structure, where services will freeze as of January 1, 2011, with pay escalating for the lesser of 10 years or until termination. The second part of the formula will be a cash balance account which will commence January 1, 2011, under which employees may receive credits based on age, service, pay and interest. The plan was also modified to allow lump sum distributions.

NOTE 2: PENSION BENEFIT PLAN, CONTINUED

Pension Plan Assets

The following table presents total pension assets for our plan (in millions):

Year End December 31	**2010**	**2009**	**2008**
Cash and Cash Equivalents: (5%)	$146	$130	$113
Equity securities: (60%)			
U.S.-based Companies	$876	$773	$676
International-based Companies	881	783	678
	$1,757	$1,556	$1,354
Fixed Income Securities: (30%)			
Government Bonds	$586	$519	$450
Corporate Bonds	132	117	102
Mutual and Pooled Funds	161	143	124
	$879	$779	$676
Other: (5%)	$146	$130	$113
Total Pension Plan Assets	**$2,928**	**$2,595**	**$2,256**

Pension Plan Investment Strategy

The Company utilizes investment managers to actively manage the pension assets of our plan. We have established asset allocation targets and investment guidelines with our investment managers. Selection of the targeted asset allocation for plan assets was based upon a review of the expected return and risk characteristics of each asset class. Our target allocation is a mix of approximately 60 percent equity investments, 30 percent fixed income investments and 10 percent in alternative investments (5% cash and cash equivalents and 5% other).

Components of Net Periodic Benefit Cost

Net periodic benefit cost for our pension plan consisted of the following (in millions):

Year End December 31	**2010**	**2009**	**2008**
Service Cost			
Current Service Cost	$131	$129	$130
Amortization of Prior Service Cost	1	1	1
Total Pension Service Cost	**$132**	**$130**	**$131**
Finance Cost			
Interest Cost on Projected Benefit Obligation	$301	$104	$321
Expected Return on Plan Assets	(38)	(45)	(52)
Total Pension Financing Cost	**$263**	**$59**	**$269**
Remeasurement Cost	**$34**	**$35**	**$35**
Total Cost Recognized in Net Income	**$429**	**$224**	**$435**

NOTE 2: PENSION BENEFIT PLAN, CONTINUED

The following table sets forth the changes in accumulated other comprehensive income (AOCI) **related** to our pension benefit plan (in millions, pretax)

Year End December 31	**2010**	**2009**	**2008**
Beginning Balance in AOCI-Related to Pensions	$ 6	$7	$08
Recognized Prior Service Cost (credit)	(1)	(1)	(1)
Ending Balance in AOCI-Related to Pensions	**$5**	**$6**	**$7**

The following table sets forth amounts in AOCI for our benefit plans (in millions, pretax)

Year End December 31	**2010**	**2009**	**2008**
Prior Service	$5	$6	$7
Ending Balance in AOCI-Related to Pensions	**$5**	**$6**	**$7**

Amount in AOCI expected to be recognized as components of net periodic pension cost in 2011 is $1 (in millions, pretax).

Assumptions
Certain weighted-average assumptions used in computing the benefit obligations are as follows:

Year End December 31	**2010**	**2009**	**2008**
Discount Rate	9.00%	3.50%	12.00%
Rate of Increase in Compensation Level	5.00%	4.00%	4.00%

Certain weighted-average assumptions used in computing net periodic benefit cost are as follows:

Year End December 31	**2010**	**2009**	**2008**
Discount Rate	9.00%	3.50%	12.00%
Rate of Increase in Compensation Level	5.00%	4.00%	4.00%
Expected **Long-Term** Rate of Return on Plan Assets	8.05%	8.10%	8.05%

The expected long-term rate of return assumption for pension plan assets is based upon the target asset allocation and is determined using forward-looking assumptions. We evaluate the rate of return assumption on an annual basis. The expected **annual** rate of return assumption used in computing 2010 net periodic pension finance cost was 2.00 percent.

As of December 31, 2010, the 10-year annualized return on plan assets was 3.1 percent, the 15-year annualized return was 4.9 percent, and the annualized return since inception was 8.1 percent. The discount rate assumptions used to account for pension benefit plans reflect the rates at which the benefit obligations could be effectively settled. Rates at December 31, 2010, were determined using a cash flow matching technique.

Cash Flows
Our estimated future benefit payments are as follows (in millions):

Year End December 31	**2011**	**2012**	**2013**
Pension benefit payments	$32	$33	$35

NOTE 3: PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment are stated at cost. Repair and maintenance costs that do not improve service potential or extend economic life are expensed as incurred. Depreciation is recorded principally by the straight-line method over the estimated useful lives of our assets, which generally have the following ranges: buildings and improvements: 40 years or less; machinery and equipment: 15 years or less; and containers: 10 years or less. Land is not depreciated, and construction in progress is not depreciated until ready for service. Leasehold improvements are amortized using the straight-line method over the shorter of the remaining lease term, including renewals that are deemed to be reasonably assured, or the estimated useful life of the improvement. Depreciation expense including the depreciation expense of assets under capital lease, totaled approximately $55 million, $50 million and $45 million for the years ended December 31, 2010, 2009 and 2008, respectively.

The following table summarizes our property, plant and equipment (in millions):

Year Ended December 31	**2010**	**2009**	**2008**
Land	200	200	155
Building and Improvements	325	363	355
Machinery and Equipment	536	550	500
Construction in Progress	234	275	285
Less accumulated depreciation	(55)	(50)	(45)
Net-Property, Plant and Equipmen	**$1,240**	**$1,338**	**$1,250**

Certain events or changes in circumstances may indicate that the recoverability of the carrying amount of property, plant and equipment should be assessed, including, among others, a significant decrease in market value, a significant change in the business climate in a particular market, or a current period operating or cash flow loss combined with historical losses or projected future losses. When such events or changes in circumstances are present, we estimate the future cash flows expected to result from the use of the asset (or asset group) and its eventual disposition. These estimated future cash flows are consistent with those we use in our internal planning. If the sum of the expected future cash flows (undiscounted and without interest charges) is less than the carrying amount, we recognize an impairment loss. The impairment loss recognized is the amount by which the carrying amount exceeds the fair value. We use a variety of methodologies to determine the fair value of property, plant and equipment, including appraisals and discounted cash flow models, which are consistent with the assumptions we believe hypothetical marketplace participants would use.

NOTE 4: INTANGIBLE ASSETS

The following table summarizes information related to indefinite-lived intangible assets (in millions):

December 31,	**2010**	**2009**	**2008**
Trademarks	$201	$182	$180
Goodwill	9	10	11
Bottlers' franchise rights	8	9	10
Other	(17)	-	-
Total indefinite-lived intangible assets	**$201**	**$201**	**$201**

The following table provides information related to the carrying value of our goodwill (in millions):

Year	**2010**	**2009**	**2008**
Balance as of January 1	$10	$11	$9
Goodwill acquired during the year	0	0	2
Goodwill related to the sale of a business	(1)	(1)	0
Balance as of December 31	**$9**	**$10**	**$11**

The following table summarizes information related to definite-lived intangible assets, which primarily consist of customer relationships and trademarks (in millions):

December 31	**2010**	**2009**	**2008**
Gross Carrying Amount	$30	$29	$24
Adjustments	4	2	6
Less Accumulated Amortization	(2)	(1)	(1)
Total definite-lived intangible assets-net	**$32**	**$30**	**$29**

Total amortization expense for intangible assets subject to amortization was approximately $2 million, $1 million, and $1 million for the years ended December 31, 2010, 2009, 2008, respectively. Based on the carrying value of amortized intangible assets as of December 31, 2010, we estimate our amortization expense for the next five years will be as follows (in millions): 2011- $2; 2012-$2; 2013-$2; 2014-$1; and 2015- $1.

Intangible assets were also tested for impairment and based on management's assumptions there were no impairments.

Questionnaire Set

Part 1

1. On the line below, please place a slash mark ("/") to indicate the degree to which you believe management is effective at managing **income from operations**.

Not Effective — Extremely Effective

1---------2---------3---------4---------5---------6---------7---------8---------9---------10

2. On the line below, please place a slash mark ("/") to indicate the degree to which you believe management is effective at managing **income from continuing & financing operations**.

Not Effective — Extremely Effective

1---------2---------3---------4---------5---------6---------7---------8---------9---------10

3. On the line below, please place a slash mark ("/") to indicate the degree to which you believe management is effective at managing overall **performance**.

Not Effective — Extremely Effective

1---------2---------3---------4---------5---------6---------7---------8---------9---------10

Questionnaire

Part 1 (Continued)

4. On the line below, please place a slash mark ("/") to indicate the degree to which you believe investing in the company's stock is **risky**.

No Risk — Extreme Risk

1---------2---------3---------4---------5---------6---------7---------8---------9---------10

5. Please list three pieces of information that led to your belief in question 4 concerning degree of riskiness?

(1)_____

(2)_____

(3) _____

6. From question 5, please rank in order the importance of the 3 pieces of information.

(1) The most important piece of information is _____

(2) The second most important piece of information is _____

(3) The third most important piece of information is _____

Questionnaire

Part 1 (Continued)

7. On the line below, please place a slash mark ("/") to indicate the degree to which you would be willing to invest your 401K retirement plan assets in the company's stock.

No Investment — Full Investment

0%------10%-----20%-----30%-----40%-----50%-----60%-----70%-----80%-----90%-----100%

8. The principal United States market in which the Company's common stock is listed and traded is the New York Stock Exchange. The following table sets forth, for the year-end periods indicated, the average price per share for the Company's common stock, as reported on the New York Stock Exchange composite tape.

Year Ending December 31	Average
2010	$3.81
2009	$3.34
2008	$4.24

Using the financial statement information and the company's stock price information, on the line below, please place **TWO** slash marks ("/") to indicate a high and low range estimate you would place on RBC's market price per-share for the year ending December 31, 2011.

$1.00----1.50----2.00----2.50----3.00----3.50----4.00----4.50----5.00----5.50----6.00----6.50----$7.00

9. Please provide in the box below the most likely market price per-share value you would place on RBC Corporation's stock at the end of the year December 31, 2011.

$ _____._____

Questionnaire

Part 2

*Please complete this set of questions **without** referring to any of the packet materials or responses to the first set of the questions.*

1. On the lines below, please list **ALL** of the pieces of information that you can recall about pension cost that appeared in the **statement of comprehensive income**.

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Questionnaire

Part 2 (Continued)

*Please complete this set of questions **without** referring to any of the packet materials or responses to the first set of the questions.*

2. On the line below, please place a slash mark ("/") to indicate the degree to which you believe it was easy to understand the financial performance of the company given the way the information was presented.

Not Extremely Easy — Extremely Easy

1---------2---------3---------4---------5---------6---------7---------8---------9---------10

3. On the line below, please place a slash mark ("/") to indicate the degree to which you believe it was easy to locate key pieces of information important for your assessment of the company.

Extremely Difficult to Locate — Extremely Easy to Locate

1---------2---------3---------4---------5---------6---------7---------8---------9---------10

4. On the line below, please place a slash mark ("/") to indicate the degree to which you believe it was easy to identify and evaluate the most important piece of information that led to your belief that investing in the company's stock is (not) risky.

Not Easy — Extremely Easy

1---------2---------3---------4---------5---------6---------7---------8---------9---------10

Questionnaire

Part 2 (Continued)

*Please complete this set of questions **<u>without</u>** referring to any of the packet materials or responses to the first set of the questions.*

5. On the line below, please place a slash mark ("/") to indicate the degree to which you believe the historical pattern of the pension cost will continue three years in the future.

Not Likely — Extremely Likely

1---------2---------3---------4---------5---------6---------7---------8---------9---------10

6. Please place a check mark next to the number of locations where you recall pension cost information appearing in the **statement of comprehensive income**.

a. _____ **NOT PRESENTED** in the statement of comprehensive income

b. _____Presented in **ONE** location in the statement of comprehensive income

c. _____ Presented in **MORE THAN ONE** location in the statement of comprehensive income

Questionnaire

Part 2 (Continued)

*Please complete this set of questions **without** referring to any of the packet materials or responses to the first set of the questions.*

7. Please place a check mark next to the location where you recall the pension cost information being shown in the statement of comprehensive income. Please check **ONLY ONE** answer.

   a. _____ Part of income from operations

   b. _____ Part of income from continuing & financing operations

   c. _____ Part of other comprehensive income

   d. _____ All of the above

   e. _____ None of the above

8. Please place a check mark next to the item that you recall representing the largest portion of total pension cost. Please check **ONLY ONE** answer.

   a. _____ Service Cost

   b. _____ Financing Cost

   c. _____ Remeasurement Cost

   d. _____ Other (please list)

Questionnaire

Part 2 (Continued)

*Please complete this set of questions **without** referring to any of the packet materials or responses to the first set of the questions.*

9. On the line below, please place a slash mark ("/") to indicate the degree to which you believe the item that you selected in question 8 above best explains total pension cost.

No Explanation — Full Explanation

1---------2---------3---------4---------5---------6---------7---------8---------9---------10

10. On the line below, please place a slash mark ("/") to indicate the degree to which you believe the pension cost was volatile (fluctuated).

No Volatility — Extreme Volatility

1---------2---------3---------4---------5---------6---------7---------8---------9---------10

11. Please place a check mark next to the item representing the reason you were told by management for any changes in pension costs. Please check **ONLY ONE** answer.

a. _____ Market fluctuations

b. _____ Management assumptions and investment decisions

c. _____ None of the above

Questionnaire

Part 2 (Continued)

*Please complete this set of questions **without** referring to any of the packet materials or responses to the first set of the questions.*

12. Please place a check mark next to the item that you recall representing the most volatile portion of total pension cost. Please check **ONLY ONE** answer.

a. _____ Service Cost

b. _____ Financing Cost

c. _____ Remeasurement Cost

d. _____ None of the portions of pension cost was volatile

13. On the line below, please place a slash mark ("/") to indicate the degree to which you believe total pension cost is persistent (i.e., reoccurring) in nature.

Not Persistent									Extremely Persistent
1	2	3	4	5	6	7	8	9	10

14. On the line below, please place a slash mark ("/") to indicate the degree to which you believe the way the pension cost was presented on the statement of comprehensive income was useful in your judgments.

Not Helpful									Extremely Helpful
1	2	3	4	5	6	7	8	9	10

Questionnaire

Part 2 (Continued)

*Please complete this set of questions **without** referring to any of the study materials or responses to the first set of the questions.*

15. On the line below, please place a slash mark ("/") to indicate the degree to which you believe you weighed the pension cost information **differently** in your judgments because of the section of the statement of comprehensive income where pension costs were located.

Did Not Effect — Strongly Effected

1---------2---------3---------4---------5---------6---------7---------8---------9---------10

16. On the line below, please place a slash mark ("/") to indicate the degree to which you believe management is effective at managing the pension cost.

Not Effective — Extremely Effective

1---------2---------3---------4---------5---------6---------7---------8---------9---------10

17. On the line below, please place a slash mark ("/") to indicate the degree to which you believe pensions are complex.

Not Complex — Extremely Complex

1---------2---------3---------4---------5---------6---------7---------8---------9---------10

Questionnaire

Part 2 (Continued)

*Please complete this set of questions **without** referring to any of the study materials or responses to the first set of the questions.*

18. On the line below, please place a slash mark ("/") to indicate the degree to which you believe the (lack of) pension volatility increased (did not increase) the complexity of the cost.

Did Not Increase the Complexity									Increased the Complexity
1	2	3	4	5	6	7	8	9	10

19. On the line below, please place a slash mark ("/") to indicate the degree to which you believe the (lack of) pension volatility influenced your judgments.

Did Not Influence									Strongly Influenced
1	2	3	4	5	6	7	8	9	10

20. On the line below, please place a slash mark ("/") to indicate the degree to which you believe the task in this experiment was complex.

Not Complex									Extremely Complex
1	2	3	4	5	6	7	8	9	10

Questionnaire

Part 2 (Continued)

*Please complete this set of questions **without** referring to any of the study materials or responses to the first set of the questions.*

21. Considering the entire task, how much mental effort did you exert while performing the task?

No Effort — Extreme Effort

1---------2---------3---------4---------5---------6---------7---------8---------9---------10

22. Considering the entire task, were you motivated to answer the questions to the best of your ability?

Not Motivated — Extremely Motivated

1---------2---------3---------4---------5---------6---------7---------8---------9---------10

Questionnaire

Part 2 (Continued)

23. Demographic Questions

a. Age _____

b. Are you a M.B.A. student? Yes_____ No_____

c. If you answered "yes" to part (b), what year are you in the program? 1st_____ 2nd____

d. If you answered "no" to part (b), please identify your Major_____

e. How many accounting/finance courses have you taken? _____

f. Have you completed a financial analysis course? Yes_____ No_____

g. If you answered "no" to part (f), are you currently enrolled in a financial analysis course? Yes_____ No_____

h. Have you ever had any work experience in accounting or finance? Yes____ No_____

i. If you answered "yes" to part (h) how many years and/or months have you worked in accounting or finance? _____ Years and _____Months

j. Have you ever had any work experience related to pension accounting? Yes___ No___

k. If you answered "yes" to part (j), how many years and/or months have you worked with pensions? _____ Years and _____ Months

l. Have you ever had any work experience related to fair value measures? Yes___ No___

m. If you answered "yes" to part (l), how many years and/or months have your worked with fair value measures ?____ Years and _____Months

n. Have you ever invested in the stock market? Yes _____ No_____

o. If you answered "yes" to part (n), how many years and/or months have you invested in the stock market? _____ Years and _____ Months

Questionnaire

Part 2 (Continued)

24. Please answer the following multiple choice questions about pension cost.

_____ 1. The components of annual pension expense include

a. service cost, interest on liability, actual return on plan assets, amortization of prior service cost, and gains and losses
b. service cost and gains and losses
c. service cost and interest on liability
d. none of the above

_____ 2. Pension Service cost

a. is the expense caused by the increase in pension benefits payable to employees because of their services rendered during the current year
b. is the expense caused by the decrease in pension benefits payable to employees because of their services rendered during the current year
c. is a plan amendment expense
d. none of the above

_____ 3. The financing of a defined pension plan includes

a. interest costs, effects of changes in interest rates, and the actual return on plan assets
b. service cost, effects of changes in interest rates, and the actual return on plan assets
c. actuarial gains and losses
d. none of the above

_____ 4. An underfunding status of the pension plan occurs when

a. the projected benefit obligation is greater than the fair value of the plan assets
b. the projected benefit obligation is less than the fair value of the plan assets
c. the vested benefit obligation is greater than the fair value of the plan assets
d. none of the above

_____ 5. Remeasurement cost includes

a. losses due to changes in salary expectations
b. gains due to changes in employee turnover assumption
c. losses due to change in demographic assumptions (e.g., mortality and age).
d. all of the above

Questionnaire

Part 2 (Continued)

25. Please indicate your preference between two lotteries where the outcome would only be dependent on chance.

For **EACH** of the following ten choices, please **CIRCLE** the option you prefer.

	Option A		Option B
Example	0% chance of $5.00 100% chance of $4.80	Or	0% chance of $10.55 100% chance of $0.30

You should make **TEN** circles, one for each pair of options.

1	0% chance of $6.00 100% chance of $4.80	Or	0% chance of $11.55 100% chance of $0.30
2	10% chance of $6.00 90% chance of $4.80	Or	10% chance of $11.55 90% chance of $0.30
3	20% chance of $6.00 80% chance of $4.80	Or	20% chance of $11.55 80% chance of $0.30
4	30% chance of $6.00 70% chance of $4.80	Or	30% chance of $11.55 70% chance of $0.30
5	40% chance of $6.00 60% chance of $4.80	Or	40% chance of $11.55 60% chance of $0.30
6	50% chance of $6.00 50% chance of $4.80	Or	50% chance of $11.55 50% chance of $0.30
7	60% chance of $6.00 40% chance of $4.80	Or	60% chance of $11.55 40% chance of $0.30
8	70% chance of $6.00 30% chance of $4.80	Or	70% chance of $11.55 30% chance of $0.30
9	80% chance of $6.00 20% chance of $4.80	Or	80% chance of $11.55 20% chance of $0.30
10	90% chance of $6.00 10% chance of $4.80	Or	90% chance of $11.55 10% chance of $0.30