Behavioral Elements Related to Consideration and Use of the Materiality Concept in Accounting Practices

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ABSTRACT
Materiality is one of the constraints in accounting practices. There is an ambiguity of existing accounting rules and company and industry guidelines over how to determine the materiality of an economic event. Accountants increasingly have to use their own judgment in deciding what information to include in financial statements. Without clear definitions, different terminologies mislead users of accounting reports. Accountants' interests may be different from company interests, so their consideration of materiality can be subverted when they maximize their benefits instead of the companies' benefits. This study explores the factors that affect the perception of the materiality concept in accounting practices. This is accomplished through a survey distributed to accounting students and professors at the University of Illinois Springfield. The survey results validate the existing argument that the materiality concept should be considered a part of accountants' estimations and judgments.
Keywords: materiality concept, risk aversion, financial factors, nonfinancial factors

INTRODUCTION
Accounting reports are a necessary source of information for company stakeholders. Accountants consider and use rules and guidelines to produce reports for external users. They regard the existing Generally Accepted Accounting Principles as essential to understanding the content of financial reports. The users of financial statements often observe that disclosures in financial statements are generic boilerplates and therefore do not provide information useful for making decisions. Additionally, stock markets were affected by the internet bubble in 2000, which witnessed deceitful financial statements from many companies. Financial scandals such as those involving Enron, Xerox, Adelphia, Tyco, Global Crossing, and WorldCom have had an impact on investors' confidence regarding the integrity of accounting financial statements.

Accounting authorities react to the occurrence of scandals by issuing new rules or guidelines. Further, accounting practices have been in a state of ongoing fluidity, indicating that accounting reports cannot be consistent over a more extended period. Another aspect that affects the quality of financial reports is accountants' considerations and judgments. To estimate the effect of an economic event on financial statements, accountants use their experience and judgment to interpret existing rules and prepare financial reports (Bernardi & Pincus, 1996; Boatsman & Robertson, 1974). These

individuals' judgments are based on their academic preparations, professional experience, and behavioral aspects (e.g., risk and loss aversions).

Materiality is one of the constraints in accounting practices, and it is a core concept for most financial decisions. The ambiguity of existing accounting rules and company and industry guidelines on how to determine the materiality of an economic event contributes in that accountants increasingly have to use their own judgment in deciding what information to include in financial statements or accompanying notes (Bernstein, 2001, Patterson & Smith, 2003). The meaning of materiality can be perceived in different ways, and the materiality concept can be expressed using terms such as importance, significance, relevance, and degree of omission or misstatement of an economic matter. Without clear definitions, different terminologies mislead users of accounting reports (Hitzig, 2016).

Accountants' interests may be different from company interests, so their consideration of materiality can be subverted when they maximize their benefits instead of the companies' benefits. This is considered an agency problem. The difficulty in establishing a measurable code of conduct in accounting, auditing, and management, among other disciplines, increases the dependency on accountants' perceptions in considering the materiality of an economic event (Juma'h, 2009, 2014).

My aim is to incorporate behavioral issues such as the perception of risk aversion and loss aversion. The judgment of an issue depends on a variety of factors, including the perception of risk and opportunity. Psychological and social beliefs may influence accountants' opinions and, consequently, their judgment in determining the materiality of an economic event. This study aims to explore the factors that affect the perception of the materiality concept in accounting practices.

The second section discusses the theoretical background of the materiality concept in conducting accounting works; the third section describes the data collection and research method, including the intended population, the validation process of the survey, and the statistical methods used to analyze the data; and the fourth section summarizes the main findings, remarks, limitations, and future research suggestions.

THEORETICAL BACKGROUND

Accountants have abundant standards and rules for financial reports. However, these rules are not static. We observe that the Accounting Standards Codification (ASC) is frequently modified by authoritative accounting regulators in the United States. This affects company's stakeholders' ability to compare and rely on financial reports. The determinant drivers of companies' scandals and financial crises are related to financial information and accounting interpretation. Accounting authorities in the United States, such as the American Institute of Certified Public Accountants (AICPA) and the Securities and Exchange Commission (SEC), react to major economic events by modifying existing rules or establishing new ones. For example, the Sarbanes-Oxley Act (2002) was implemented to address ethical issues after the occurrence of many company scandals, such as the Enron case.

The materiality concept is a critical constraint for the applicability of all accounting rules, and it is considered a disclosure issue. The factors that influence the materiality concept have been classified as financial and nonfinancial for quantitative and nonquantitative matters, respectively (Patillo & Siebel, 1974). By summarizing various definitions of materiality, Shafer (2002) stated that materiality is a concept that represents the minimum misstatements necessary to influence users' judgments. The SEC (Staff Accounting Bulletin [SAB] 99) emphasized that materiality is a matter of not only quantity but also quality, including pervasiveness factors.

Timing is an important issue to consider in any decision, especially for the materiality of an event. According to Treasury Regulation § 1.446-1(e)(2)(ii),

> (a) A change in the method of accounting includes a change in the overall plan of accounting for gross income or deductions or a change in the treatment of any material item used in such overall plan . . . A material item is any item that involves the proper time for the inclusion of the item in income or the taking of a deduction.

Some accounting rules include references to the materiality concept, and there is no specific guide to materiality in accounting and auditing practices (Jacoby & Levy, 2016; Thompson, Hodge, & Worthington, 1990). In accounting practice, accountants have used percentages of some identified items in the income statement or balance sheet as guidelines for materiality consideration. Woolsey (1954a, b) indicated that the materiality thresholds are between 5% and 15% of income before tax, and national certified public accountants (CPAs) have higher materiality thresholds than local and regional CPAs. According to Patterson (1967), the rough criterion of 5–10% of net income is used by some CPAs. Some researchers found that after the 1970s, the percentages had been reduced; additionally, the differences between CPAs decreased regarding the use of percentages in materiality considerations (Carpenter, Dirsmith, & Gupta, 1994; Dyer, 1975; Jennings et al., 1987; Moriarity & Barron, 1976; Patillo, 1976). According to Chewing, Wheeler, and Chan (1998) and Chewing, Pany, and Wheeler (1988), income items are the primary factor considered in accountants' materiality judgment.

In the absence of official materiality guidelines to support accountants' work, they often use rules of thumb when taking into consideration the nature of the item and the size of the entity. Examples of rules of thumb suggested by the literature include a) 10–15% of average net income after taxes for the 3–5 most recent years; b) 5–10% of the current year's income from the continuing operation before taxes; c) 0.5–2% of total revenue or total assets; and d) 1–2% of owners' equity.

Quantitative measures of materiality can be classified into arbitrary (e.g., FAS 28: test for transfer of right 10%), empiric (e.g., FAS 14: industry revenue 10%); and inherent as a logical extension of another guideline (e.g., FAS 14: disclosed dominant segment 90%). The likelihood of occurrence is associated with the materiality concept in some accounting rules (Price & Wallace, 2001). SFAS 5, Accounting for Contingencies, assumes the following for the recognition of liabilities: probable and estimable liabilities are to appear on the face of financial statements. Possible and estimable liabilities are

considered a part of the notes to financial statements. Remote and estimable liabilities are neither reported nor disclosed.

The materiality concept is associated with risk, which is viewed as a measure of uncertainty. Quantitative materiality measurements are a part of risk extents, but the lack of clarity and specificity regarding the interpretation and application of probability in both the financial reporting and auditing literature is a general problem in accounting practices. Practitioners and standard setters should direct attention to this area to enhance the comparability of financial disclosures (Price & Wallace, 2001, 2002).

Qualitative Measures

Qualitative materiality is a challenging issue for accountants' decision-making On August 12, 1999, the SEC published SAB 99, which stated that auditors should not assume that errors are immaterial. According to SAB 99, auditors should consider qualitative factors in addition to quantitative factors. Several works (Carpenter & Dismith, 1992; Carpenter et al., 1994; Krogstad, Ettenson, & Shanteau, 1984) examined the effect of nonfinancial factors on materiality judgments. Krogstad et al. (1984) identified five nonfinancial (contextual) factors that influence auditors' materiality judgments, including industry trends, management cooperativeness, the state of internal control, expected users of financial reports, and management accounting policies.

Experimental studies (Carpenter et al., 1994; Krogstad et al., 1984; Messier, 1983) have stated that experience influences materiality judgments. In analyzing various characteristics of disclosure judgments in less frequent and less structured situations, Messier (1983) stated that, in addition to financial components (e.g., income, earnings trend, total assets, total inventories, and current ratio), nonfinancial aspects are essential in materiality judgments.

According to Carpenter et al. (1994), personal characteristics are essential in materiality judgments. Attention must be paid to the way individual practitioners relate such characteristics to their different perceptions about the uncertain economic consequences of materiality judgments. SAB 99 discusses the importance of qualitative factors in considering and determining materiality by accountants and auditors; this effectively encourages auditors to broaden their perspective. SAB 99 requires further evaluation of any misstatements that are intentional or illegal. Deliberate errors can reflect weakness in internal control. Statements in Auditing Standards (SAS) 89, Audit Adjustment, issued in December 1999, aims to make management acknowledge responsibility for uncorrected misstatements. SAS 89 requires that auditors add the summary of uncorrected errors to their list of items discussed with the audit committee.

In pondering the materiality of an issue, deciding whether to consider qualitative or quantitative factors first is an important step. To eliminate misleading information and to minimize the possibility of lawsuits, auditors identify areas that are vulnerable to a materiality decision; identify the applicability of any existing rules or guidelines such as pronouncements or standards of Financial Accounting Standards Board (FASB), SEC, or any other authoritative body; determine the materiality guidelines for areas not

covered by materiality standards; encourage the implementation of policies related to materiality applications; and determine the implications of materiality concepts to the tasks and work of employees and managers.

SAB No. 99 states that in a variety of considerations, a small misstatement on a financial statement can have a material effect. Examples include the precise nature of measurement or estimation, a change in earnings or other trends, hiding a failure to meet analysts' consensus expectations for the enterprise, and changing a loss into a gain or vice versa.

According to Holder-Webb and Wilkins (2000), SAS No. 59 (Going Concern) can be used as a signal to help users predict bankruptcy. Behn, Kaplan, and Krumwiede (2001) stated that there is a relation between going concern opinion and the ability to acquire financing. This is consistent with Levitt (1998), who said that some managers use numeric management to manipulate business audit opinion.

Accounting, Finance, and Economic Theories

The accounting, finance, and economic disciplines are related to the boundaries of firms and markets regarding financing and dividend decisions, and to risks associated with markets and investment decisions (Asquith & Weiss, 2016). The reliability and accuracy of the information released to stakeholders influence their expectations and therefore their financial decisions. Existing accounting, finance, and economic theories assist in understanding management and investor relationships.

The theory of expected utility (Von Neumann & Morgenstern, 1944) is related to the rational behavior of the individuals considering their benefits in making decisions under uncertainty. Determining the expected value of an investment option, and assuming the rationality of individuals, require some axioms (asymmetry, transitivity, continuity, and independence) that are fundamental to decision-making. Portfolio diversification has been developed through the analysis of mean variance in the study of an asset portfolio (Markowitz, 1952, 1959). The model assumes that the investor is risk averse and prefers the safe investment alternative to reduce risk and maximize profits. The availability of information to all stakeholders of a company is a central determinant in decreasing the asymmetry of information. The imperfection of markets allows space to consider behavioral theories that complement classical accounting, finance, and other related economic theories.

Behavioral accounting, finance, and economic disciplines are influenced by the assumption of the rational behavior of individuals, the diversification of the portfolio of assets by assessing their risk, the irrelevance of the structure of capital with respect to the value of the firm in the market, and the valuation of capital assets and the efficiency of the markets (Black, 1972; Black & Scholes, 1973; Fama, 1965; Fama, Fisher, Jensen & Roll, 1969; Fama & French, 2004; Markowitz, 1952, 1959; Modigliani & Miller, 1958; Miller & Modigliani, 1961; Sharpe, 1964; Von Neumann & Morgenstern, 1944).

An interdisciplinary approach that integrates psychological and sociological matters can contribute to the understanding of management decisions (Riccardi & Simon, 2000; Shefrin, 2010). Behavioral accounting and finance can contribute to improving the knowledge that human beings have of the emotional factors and psychological processes of individuals that influence decision-making (Ricciardi & Simons, 2000). According to DeBondt, Forbes, Hamalainen, and Gulnur (2010), behavioral economic theories can support financial decisions that cannot be achieved from classical models. The behavioral finance model integrates concepts of human behavior to develop the behavioral theory of finance (Statman, 2014; Thaler, 1980, 1991).

Behaviorists state that human actions are subject to emotions that influence the way the actions are carried out (Tversky & Kahneman, 1992). Additionally, behaviorists investigate the behavior of individuals in decision-making, identifying how people think when deciding something, how psychological aspects influence the behavior of individuals who make decisions and influence their financial environment. The behaviorists' approach identifies heuristics and behavioral biases that affect the financial decision-making of individuals under conditions of uncertainty (Kahneman, 2011; Statman, 2014). The agents are not entirely rational when making decisions because of their individual preferences or beliefs. Value-laden elements might influence individuals in their decisions.

Following the integration of psychological elements into classical financial models, some emotional biases were identified in the financial decision-making process. For example, loss aversion, which Kahneman and Tversky (1979) proposed based on the theory of perspectives, is associated with how individuals evaluate losses or gains in different ways. This explains why a player on a losing streak refuses to accept the loss and continues betting, hoping to recover what was lost. Another way of identifying loss aversion is in terms of advantages and disadvantages in relation to a reference point (Tversky & Kahneman, 1991). Two fundamental components of this theory are a value function that is concave for profits, convex for losses, and more pronounced for losses than for profits; and the value function represents a nonlinear transformation of the probability scale (Olsen, 2010).

Loss aversion is a crucial element of risk and uncertainty decision-making that establishes a higher perception for losses than for gains (Kahneman & Tversky, 1979, 1984; Tversky & Kahneman, 1992). This concept has been applied to a variety of financial and commercial environments with the purpose of explaining the behavior of participants in financial decision-making (Benartzi & Thaler, 1995; Samuelson & Zeckhauser, 1988). Loss aversion can be identified during and after an economic crisis because, during this period, there are fewer approvals of new investment projects that affect the value of the company for shareholders. There are several explanations for investment decision behavior, such as an increase in discount rates due to perceived risk and the influence of loss aversion in financial decision-making (Rivers & Arvai, 2007). Managers understand that under current market conditions, there is a high risk of loss (Ashta & Otto, 2011).

The global crisis environment has resulted in numerous efforts to reform firms and to give their managers greater responsibility. Recent studies have suggested that loss aversion is a factor that can influence managers' financial decisions (Azouzi & Jarboui, 2012). It is a behavior that affects the decision-making of executive officers in different locations around the world (Azouzi & Jarboui, 2013).

This article investigates the risk and loss aversion perceived by accountants who make and analyze financial reports and discusses measures that can be implemented to remedy the same. This is an issue that fits the historical moment the financial world is going through. It is relevant, given the economic events that affect the behavior of the economy at the global and local levels, to individuals who are responsible for conducting financial analyses and making financial decisions that affect the companies and economies of a country.

DATA COLLECTION AND RESEARCH METHOD

This section presents the data collection method (a survey; see Table 1) and the statistical tools and tests used to analyze the data.

Survey

Surveys are most commonly used in behavioral accounting and finance (Bodnaruk & Simonov, 2016; Brink & Rankin, 2013; Pang, Otto, & Worthy, 2014). The selection of the survey's questions relies on rigorous scrutiny of the literature concerning risk, risk aversion, and materiality consideration.

The survey used to collect the data were comprised of three parts. The first part of the survey consisted of 15 questions on materiality use and concept, accounting rules, and other considerations. The second part contained 12 questions linked to the participants' perception of risk in decision-making and included the level of loss aversion. Question 22 in this part established a general frame of reference regarding the current economic environment of the state or country, which defined the socioeconomic circumstances under which the questionnaire was being answered. Question 25 identified risk aversion, question 26 established risk aversion, and question 27 was used to determine the coefficient of loss aversion. The third part consisted of seven questions (28–34) that collected demographic data on the participants and the firms where they worked. To explore the relationship among risk, risk aversion, loss aversion, and the materiality concept, a sample was composed of 101 questionnaires fully answered by professors and students of accounting at the University of Illinois Springfield.

To validate the items in the survey, they were classified as appropriate or not appropriate in relation to the research topic. The survey instrument was distributed to 20 graduate students and 8 professors (Grahama, Harvey, & Puri, 2012; Kapse & Keswani, 2010). Through the validation instrument, we found that all the respondents answered all the questions in the questionnaire, demonstrating the adequacy and relevance of the questions with respect to the topic under study.

The Cronbach's alpha reliability analysis was applied to the questions of the survey using a Likert scale ranging from 1 to 5. The Cronbach's alpha results of all the items except demographics was 0.78, with an average inter-item covariance of 0.069. These results were favorably compared with those of similar studies such as Guillemette, Yao, and James (2015); Hassan, Khalid, and Habib (2014); and Prasad and Mohta (2012), with Cronbach's alpha of 0.53, 0.61, and 0.75, respectively. To explore the determinants that influenced participants' perception of the sufficiency of existing accounting standards and rules concerning materiality (SAR), we used descriptive statistics, pairwise correlation, and multiple regressions (SAR $= \sum X_i + e$; see Black, 2010).

Data Analysis

In the total sample of 101, there were 62 males and 39 females. Regarding their education, 21 participants were undergraduates, 70 were in master's programs, and 9 were with doctorate studies. With respect to age, 66 participants were younger than 30 years, 18 were between 30 and 50, and 16 were older than 50 years. Seventeen of the participants had more than 10 years of professional experience.

Table 1 presents the questionnaire's items, the symbols used for each item, the answer counts in each codification, and the mean and standard deviation of each item. Of the participants, 73 said they have used or considered the materiality concept, and 97% said they anticipate using it in the future. About 82% of the participants highly agreed or agreed that the materiality concept is a qualitative and quantitative matter. We noted that the participants' perception of the cumulative occurrence of an event increased compared with that of a single occurrence. Further, 21% of participants indicated that the materiality concept should not be treated as a percentage of sales, income, or assets. Further, 14% of the participants associated the word "risk" with opportunity. About 66% and 21% of the participants associated this word with uncertainty and loss, respectively. About 30% of the participants were risk averse, and 56% were loss averse.

Table 1: Questionnaire Items and Descriptive Statistics

FACTORS INFLUENCING ACCOUNTING STUDENTS AND PROFESSORS' CONSIDERATION OF MATERIALITY

This instrument was developed with the objective of exploring the factors that affect the use of the materiality concept in accounting work. The document consists of three parts. The first part collects information about general aspects of accounting decision-making. The second includes items related to behavioral issues associated with decision-making, and the third contains demographic data of the participant and company. The questions in the document do not have correct or incorrect answers; they seek to obtain a subjective response from the respondent. We appreciate your participation.

Section I: Materiality Considerations

Please select the answer that is the most accurate.	Symbol	Mean	SD	Codification				
				Yes	No			
1. Do you currently or have you ever used or considered the materiality concept in your work?	CCM	0.73	0.04	73	28			
2. Do you expect to consider materiality in the future?	FCM	0.97	0.02	98	3			
3. Do you consider the pros and cons associated with materiality use?	PCM	0.83	0.04	84	16			
4. Have you attended seminars or conferences related to materiality?	ASM	0.17	0.04	17	84			
[5=strongly agree; 4=agree; 3=neither agree nor disagree; 2=disagree; 1=highly disagree				5	4	3	2	1
5. The existing accounting rules concerning materiality are sufficient.	SAR	3.48	0.1	10	40	39	7	5
6. A uniform quantitative threshold for materiality should not be established as an accounting rule.	UQT	3.14	0.11	13	25	36	24	3
7. Materiality should be considered a qualitative matter.	Qual	3.39	0.10	9	46	30	10	5
8. Materiality should be considered a quantitative matter.	Quan	3.74	0.1	18	53	23	3	4
9. Materiality should be considered both a qualitative and quantitative matter.	QQ	4.08	0.08	33	49	15	4	0
10. Materiality should be considered a legal matter.	LM	3.65	0.09	10	58	21	10	2
11. Materiality should be considered in the verification of a single event.	SE	3.58	0.09	12	46	29	13	0
12. Materiality should be considered in the verification of the cumulative occurrence of an event.	CE	3.98	0.09	25	51	19	6	0
13. The materiality of income statement accounts should be considered a percentage of sales, income before tax, or net income.	ISP	3.86	0.08	16	56	23	6	0
14. The materiality of balance sheet accounts should be considered a percentage of total assets.	BSP	3.60	0.09	11	46	33	10	1
15. To consider the inclusion of an account in financial statements or their notes and as rules of thumb, what range of the following accounts (items) percentages should be used. Please checkmark the selected answer:	ROT	0.81	0.04	1=answered, 0=not answered. 79 answered the question, and the rest specified that it cannot be determined				

Item	(0.05%–1%]	(1%–2%]	(2%–3%]	(3%–5%]	(5%–10%]	other, specify
Sales						
Income before tax						
Net income						
Total assets						

.

Section II: Behavioral Aspects

For questions 16 to 27, please choose one answer. If the answer requires written answer, please use the space provided for that purpose. 5=always; 4=frequently; 3=sometimes; 2=rarely; 1=never	Symbol	Mean	SD	5	4	3	2	1
16. How often do you use financial models (financial ratios, net present value, discounted cash flows and valuation of capital assets, among others) in financial decision-making?	FMU	2.97	0.09		29	40	30	2
17. How often do you consider the use of nonfinancial models in financial decision-making?	NFMU	2.8	0.09		21	45	25	10
18. How often does your professional experience influence the financial decisions you make in your company?	PEFD	2.95	0.11		36	32	16	15
19. How often do your personal preferences affect the financial decisions you make in your company?	PPFD	2.55	0.08		15	41	25	18
20. If the result of the financial analysis is negative for a decision, and your perception is positive, how likely are you to make the transaction?	ANPP	2.55	0.08		8	51	28	13
21. How often do the financial decisions you make influence the economic performance of the company?	IEPC	2.54	0.10		17	37	21	21
5=very good; 4=good; 3=neutral; 2=bad; 1=very bad				5	4	3	2	1
22. How do you describe the economic situation in general during the past two years?	GES	3.12	0.09	5	27	48	18	3
23. How do you describe the economic situation of your firm during the past two years?	FES	3.25	0.1	8	27	50	7	6
24. When you hear the word risk, the first thing that comes to your mind is: 1. opportunity; 2. uncertainty; or 3. Loss	RD	1.94	0.06			15	65	21
25. If an investment costs $50,000, which one of the following alternatives would you select? 1. 100% of probability to win $100,000. 2. 50% of probability to win $200,000 and 50% of probability to win nothing.	RA	1.32	0.05				70	31
26. If an initial investment costs $100,000, and it is anticipated to lose all the investment or to add $100,000 to try to cover the initial investment, which alternative do you select? 1. No additional investment: 100% probability of losing $100,000. 2. Additional investment: 50% probability of losing $200,000 and 50% probability of losing nothing.	LA	1.57	0.05				45	56
27. In a game of flipping a coin, if you lose, you must pay $10,000; what possible gain would be needed to offset the loss? 1. $10,000 2. $20,000 3. more than $20,000	CLA	1.83	0.05			6	25	70

Section III: Demographic data. Please select the most accurate answer for each item.

28. Gender	Female (39)	Male (62)	I prefer not to answer (0)		
29. Age	☐ 21–30 (64)	☐ 31–40 (15)	☐ 41–50 (7)	☐ 51–60 (14)	☐ over 60 (3)
30. Education	☐ high school (9)	☐ associate (11)	☐ bachelor's (41)	☐ master's (31)	☐ doctorate (9)
31. Income level	☐ under $50,000 (76)	☐ $51,000–$100,000 (11)	☐ $101,000–$150,000 (10)	☐ $151,000–$200,000 (4)	☐ over $200,000 (0)
32. Professional experience	☐ under 5 years (70)	☐ 5–10 years (7)	☐ 10–15 years (6)	☐ 15–20 years (5)	☐ over 20 years (13)
33. Current position	☐ under 5 years (82)	☐ 5–10 years (8)	☐ 10–15 years (4)	☐ 15–20 years (4)	☐ over 20 years (3)
34. Your organization is	☐ accounting firm (14)	☐ education institution (4)	☐ service firm (13)	☐ manufacturing company (18)	☐ other, type _(52)_____
Any other comments _____					

According to Table 2, SAR was significantly correlated (α = 0.05) with the consideration of qualitative matters (Qual), quantitative matters (Quan), rules of thumb (ROT), general economic situations (GES), risk aversion (RA), and professional experience (PE). An interesting finding was that gender was not correlated with any other item.

Table 2: Correlation Coefficient (%)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
1 SAR	100																																
2 UQT	19.4	100																															
3 CCM	-4.9	1.8	100																														
4 FCM	-17.0	3.5	15.2	100																													
5 PCM	9.1	9.0	**49.0**	23.3	100																												
6 ASM	10.6	**26.7**	22.0	7.9	20.2	100																											
7 Qual	**40.9**	**35.1**	5.4	-4.1	12.4	1.4	100																										
8 Quan	**49.7**	**29.1**	1.5	2.0	-5.4	8.3	55.8	100																									
9 QQ	5.0	19.2	10.6	9.6	19.0	-2.3	23.8	0.4	100																								
10 LM	7.0	-9.2	4.5	6.1	2.4	9.9	-5.7	-3.1	21.3	100																							
11 SE	1.2	-7.7	12.8	4.8	14.5	24.9	-2.1	-3.7	8.6	47.5	100																						
12 CE	-10.9	8.5	25.2	13.0	22.6	**29.1**	9.7	-0.5	23.9	**41.7**	**59.7**	100																					
13 ISP	19.4	16.1	13.7	10.9	20.0	**28.3**	**36.9**	**29.3**	14.5	3.1	23.8	48.7	100																				
14 BSP	16.4	1.5	19.6	4.6	4.4	20.5	18.0	16.3	-9.7	18.2	**28.3**	24.7	**67.6**	100																			
15 ROT	**26.5**	6.0	-5.9	4.9	1.9	-1.9	6.7	13.1	6.6	8.2	-9.7	-3.8	18.3	14.7	100																		
16 FMU	-7.6	8.3	20.7	20.5	0.5	12.5	-3.6	3.8	-20.8	-12.4	11.1	8.5	19.2	**29.8**	-3.2	100																	
17 NFMU	-15.2	2.1	10.8	8.4	17.7	20.9	-23.7	**-28.6**	-6.5	4.1	**33.9**	15.7	2.2	0.4	-8.7	**39.4**	100																
18 PPFD	3.3	11.3	14	-8.6	**25.5**	16.5	7.2	-13.6	15.7	10.6	**37.6**	23.5	16.7	23.5	-3.4	20.2	**43.2**	100															
19 PEFD	-6.7	11.0	8.8	3.9	15.9	19.5	0.1	-19.6	20.4	22.5	**28.2**	**42.8**	14.1	-0.4	2.3	**36.6**	**36.7**	**55.2**	100														
20 ANPP	6.2	16.0	23.6	-9.9	18.8	2.7	10.9	5.9	-5.2	2.8	14.9	12.3	21.9	**32.7**	10.0	22.9	22.1	**44.9**	26.4	100													
21 IEPC	-0.4	16.0	23.3	-2.6	**36.5**	19.1	3.4	-10.0	20.2	17.7	**43.4**	**32.6**	17.8	8.1	-5.4	**32.6**	**30.3**	**50.2**	**61.4**	**28.3**	100												
22 GES	**23.8**	23.5	6.7	-4.2	0.6	2.5	**26.7**	33.9	-6.2	-7.0	-2.5	1.1	15.6	17.3	2.3	13.6	4.0	21.8	1.4	**41.8**	17.1	100											
23 FES	12.2	22.5	7.0	-1.7	0.5	-9.2	**27.5**	**27.9**	-4.5	-21.1	-18.5	-0.4	15.7	1.7	7.4	24.9	13.3	17.2	12.6	**37.5**	11.9	**56.3**	100										
24 RD	4.5	-6.0	23.6	-1.8	13.3	4.5	-5.9	10.3	-13.5	-10.0	8.6	9.5	10.6	6.5	-9.3	-2.7	-8.3	3.9	-8.9	-5.7	-6.5	9.2	-4.6	100									
25 RA	**29.3**	-11.3	7.6	-13.7	7.0	16.0	-3.7	4.9	-21.9	-4.1	-16.7	**-31.9**	-14.5	4.6	-1.3	-14.4	-8.8	-10.5	-24.4	-20.5	-24.3	-2.5	4.0	-0.6	100								
26 LA	11.0	10.3	11.2	7.8	-8.4	19.0	5.9	3.8	-6.4	1.2	13.2	15.4	9.2	14.0	15.4	9.2	5.2	17.1	3.2	21.6	-6.6	8.8	-1.0	-15.7	-9.5	100							
27 CLA	10.3	9.1	7.4	16.1	19.3	11.2	11.9	-2.8	11.7	-21.9	-20.3	6.7	**25.8**	5.7	4.0	4.8	-3.2	14.4	14.7	5.3	5.6	12.0	**28.5**	-0.4	-0.7	5.9	100						
28 G	-13.1	-6.2	0.1	-0.8	-15.1	10.1	-22.5	-12.5	-12.7	6.0	14.0	6.4	-1.9	6.4	14.1	-8.6	-3.2	0.5	0.6	5.5	-8.1	-13.6	-9.0	-15.9	0.2	18.4	15.0	100					
29 A	-18.3	3.0	**29.5**	10.4	22.3	**29.8**	-23.0	-10.1	-1.3	16.7	**39.7**	**31.1**	11.4	11.0	-15.9	17.6	**27.6**	16	**30.6**	12.6	41.0	-6.0	-10.5	18.2	-13.0	4.1	12.1	**39.3**	100				
30 Ed	-9.6	9.0	24.5	3.3	6.0	19.4	-1.8	2.7	3.6	17.9	20.1	22.2	17.0	23.3	-17.6	10.5	14.6	10.8	15.5	22.4	15.4	-0.6	-11.7	16.3	-20.9	-2.1	-4.1	**26.7**	**56.4**	100			
31 IL	-17.1	17.4	26.6	9.0	23.2	24.9	-6.2	-10.8	16.3	20.5	**25.3**	**28.7**	0.1	0.2	-16.4	13.5	21.8	17.3	**34.2**	7.1	**38.8**	2.0	-5.6	3.1	-10.9	-11.7	9.4	23.1	**75.7**	**48.9**	100		
32 PE	**-28.2**	11.3	**27.3**	10.3	22.9	**39.4**	-25.0	-20.6	3.9	17.1	**36.9**	**35.3**	**4.6**	4.3	-15.4	20.5	**41.8**	20.7	**41.2**	13.1	**43.2**	-5.6	-12.0	7.1	-8.0	1.8	10.8	**35.3**	**87.0**	**52.5**	**79.3**	100	
33 CP	-24.4	-0.3	21.1	7.3	18.7	**28.4**	-24.5	**-31.7**	19.7	16.4	**31.6**	35.9	2.1	-6.3	-13.3	11.5	**30.8**	20.4	41.6	-8.4	**49.4**	-8.6	-15.7	-18.5	-14.1	3.8	17.0	21.7	**57.9**	**26.9**	**57.8**	**70.3**	100
34 OT	-23.9	-7.2	-9.4	6.8	-9.0	-13.3	-12.9	-3.4	4.5	4.0	-2.6	5.4	6.3	-2.4	-24.2	-5.6	-11.4	-3.7	-0.2	-10.7	0.9	2.7	-9.6	10.9	-13.0	-8.2	-1.4	13.0	17.0	22.7	9.0	8.3	4.6

Bold numbers are significant at 5% level

Table 3 shows different models that are thought to explain SAR. All models consider RA as the highest significant factor, followed by quantitative matters, considering the pros and contras of using the materiality concept (PCM), ROT, future consideration of materiality (FCM), and professional experience.

Table 3: OLS Results for Variables Predicting Sufficient Accounting Rules (SAR) for the Materiality Concept

Items	Model 1	Model 2	Model 3	Model 4
RA	**0.46**	**0.51**	**0.53**	**0.58**
Quan	**0.45**	**0.4**	**0.39**	**0.36**
PCM	**0.44**	**0.34**	**0.37**	0.53
ROT	**0.43**	**0.45**	**0.34**	**0.38**
FCM	**-0.1**	**-0.95**	**-1.05**	**-0.99**
PE	**-0.11**	**-0.13**	**-0.12**	**-0.37**
CCM				-0.34
ASM				0.09
UQT			0.1	0.14
Qual		0.09	0.06	0.09
QQ		0.12	0.09	0.12
LM				0.12
SE				0.17
CE				-0.26
ISP				0.02
BSP				-0.09
FMU				0.05
NFMU		0.11		0.05
PEFD				0.11
ANPP				-0.02
IEPC				-0.02
GES		0.07	0.12	0.14
FES			-0.14	-0.16
RD				0.11
LA			0.21	**0.28**
CLA			0.19	0.24
G				-0.1
A				0.21
Ed				0.13
IL				0.12
CP				-0.02
OT				-0.06
Cons	**1.59**	0.48	0.47	-0.61
F	6.33	4.11	3.35	3.50
Prob>F	0.00	0.00	0.00	0.00
R^2	0.43	0.47	0.51	0.65
Ad R^2	0.39	0.42	0.43	0.46

Summary and Conclusions

Materiality concern is not just a matter of quantitative issues; it is also related to qualitative, legal, and behavioral aspects. The aim of the article was to explore the relationship between risk and loss aversion and the perceptions of accounting students and professors regarding materiality consideration and use. Of the participants, 97% anticipated using the materiality concept. The possibility of establishing a uniform quantitative threshold for materiality as an accounting rule was not supported by the participants. However, the majority of participants (82 of 101) stated that materiality should be considered a qualitative and quantitative matter. The survey results validated the existing argument that the materiality concept should be considered a part of accountants' estimations and judgments.

Suggestions for future study include examining more behavioral determinants to explain why individuals consider materiality measures in different manners. Additionally, it would be helpful to try to use other research methods such as simulations, group discussions, and experimental studies. Collecting data from different practitioners can assist in determining different factors that affect the materiality consideration. This study can be replicated by comparing the perceptions of accountants, auditors, internal auditors, IT auditors, external auditors, and decision makers with respect to materiality consideration and use.

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