Original Article

Implications for brokerage firms' financial disclosures: From CSR perspectives

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Alex Wang

(PhD, University of Texas at Austin) is an Associate Professor of Communication Sciences at the University of Connecticut-Stamford. His research focuses on integrated marketing communications, information processing psychology, corporate social responsibility and promotion management. He has industry experience in advertising, public relations and electronic publishing in Taipei, Taiwan and in Boston. His works have been published in the *Journal of Advertising Research*, *Journal of Public Relations Research*, *Journal of Marketing Communications*, *International Journal of Mobile Marketing* and elsewhere. He is also the principal investigator of a grant awarded from FINRA Investor Education Foundation and the recipient of a research papers award from the Association for Education in Journalism and Mass Communication.

ABSTRACT Given the importance of transparency in today's financial environment, it is surprising that limited research has examined investors' attitudes toward brokerage firms' financial disclosures and how their attitudes toward brokerage firms' financial disclosures influence subsequent responses such as perceived trust and attitude toward brokerage firms. Research on Corporate Social Responsibility (CSR) practices and the Social Contract Theory suggests that investors may put a relatively high value on brokerage firms that practice financial disclosures responsibly. This research probed the relevance of this assumption by testing the relations among investors' attitudes toward brokerage firms' financial disclosures, attitudes toward CSR practices, perceived trust toward brokerage firms, attitudes toward brokerage firms and behavioral intentions toward brokerage firms with a survey study. The study used brokerage firms' financial disclosures in general as the focus of this study's survey questions and a convenience sample consisting of investors. The results suggested that investors' positive attitudes toward brokerage firms' financial disclosures positively enhanced their attitudes toward brokerage firms' CSR practices and perceived trust toward brokerage firms, whereas investors' attitudes toward brokerage firms' CSR practices mediated their attitudes toward financial disclosures to enhancing their perceived trust toward brokerage firms. Moreover, investors' attitudes toward brokerage firms mediated their perceived trust toward brokerage firms on enhancing their behavioral intentions toward brokerage firms.
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Keywords: financial disclosures; brokerage firms; CSR practices; perceived trust; attitude and behavioral intention

Correspondence: Alex Wang
Department of Communication Sciences, University of Connecticut-Stamford, One University Place, Stamford, CT 06901, USA
E-mail: alex.wang@uconn.edu

INTRODUCTION

Increasingly, responsible and ethical business practices are expected by consumers. This growing expectation has arisen because consumers expect firms to practice in a responsible fashion.[1] Firms have legal obligations to provide consumers with product disclosures.[2] These disclosures communicate information relevant to purchasing a product and inform consumers of product risks before purchase.[3] In a financial context, one of the major responsibilities of brokerage firms is to ensure that shareholders are provided with disclosures on the financial and operating results of the entity.[4] In practice, financial disclosures provide shareholders with information on the financial and operating results of a company to enable them to understand properly the nature of its business, its current state of affairs and how it is being developed for the future.[5]

Given the importance of transparency in today's financial environment, and that disclosure issues span all sectors, the main value of financial disclosures for market risks in trading activity is that financial disclosures usually include information that helps investors understand the way brokerage firms think about risks and certain adverse outcomes that they might face.[6] Moreover, many shareholders would be interested in information that would help them determine that management is running the enterprise with the best interest of all shareholders in mind. Virtually all brokerage firms that provide any disclosures of trading market risk include a qualitative or quantitative discussion of the risk and how it is measured and managed. However, the importance of financial disclosure depends significantly on the robustness of the financial reporting standards on the basis of which the financial information is prepared and reported.[7]

In theory, brokerage firms should clearly identify inherent risks and estimates used in the preparation and reporting of the financial disclosures in order to give investors a better understanding of the risks they are taking in relying on the judgment of management.[8] For example, in some cases, financial reporting measurement requirements call for the valuation of certain assets on a fair value basis. However, the value of financial disclosure could be undermined when financial disclosures are not provided appropriately. For example, certain situations may invite management to exercise great latitude and influence the direction of earnings in its favor by resorting to less objective estimates based on modeling hypothetical markets.[9] In addition, brokerage firms could intentionally opt to place certain undesirable disclosures away from persuasive information, with the hope of not attracting negative responses from investors.[10] These limitations warrant the study's investigations on investors' attitudes toward financial disclosures and the effect of their attitudes toward financial disclosures on brokerage firms.

In recent years, financial disclosures have become a serious concern for investors. When investors fail to notice or understand financial disclosures, they may not understand important terms and risks associated with their investments.[11] As a result, the Securities and Exchange Commission (SEC) has initiated an iterative research and design effort to develop suggested language and format for financial disclosures by broker-dealers.[12] Even though the study focused on designing different forms of financial disclosures, it ignored the effect of consumers' attitudes toward financial disclosures on brokerage firms. This study argues that brokerage firms can benefit from improving investors' attitudes toward financial disclosures. Based on assumptions derived from Corporate Social Responsibility (CSR) practices and the Social Contract Theory (SCT), positive attitudes toward disclosures may be enhanced when responsible and ethical practices in disclosing financial information are perceived by investors.[2,13,14]

Specifically, this study uses a survey to examine investors' overall attitudes toward financial disclosures with a focus on brokerage firms. It also examines the relationship among investors' attitudes toward financial disclosures, attitudes toward brokerage firms' CSR practices and attitudes toward brokerage firms. This research did not ask questions regarding any specific investments or brokerage firms. Instead, this research focused on investors' attitudes toward brokerage firms' financial disclosures in general. First, this article examines relevant literature. Next, the study discusses CSR practices and the SCT and suggests its relevance to the study. Then, this study elaborates on the study design, procedure, constructs and measurements. Finally, this study presents results and describes possible implications and future studies.

Research has suggested that investors increasingly expect brokerage firms to disclose financial information in a responsible and ethical fashion.[1,15] When investors perceive ethical practices of financial disclosures by brokerage firms, investors may transfer their positive attitudes toward financial disclosures to brokerage firms. In other words, the positive results may encourage brokerage firms to practice their financial disclosures responsibly. Consequently, the results of this study may help: (i) investigate the extent to which brokerage firms may benefit from reinforcing their financial disclosures; (ii) explore the positive development of financial disclosures for brokerage firms; and (iii) consider the practicality of developing recommendations for enhanced financial disclosures as appropriate.

LITERATURE REVIEW

Research on financial disclosures is scant. However, relevant research regarding warning labels and advertising disclosures is available in studies that cover a wide range of products and services.[2] In health communication, warning labels remind consumers of the dangers associated with alcohol use.[11] Participants noticed, recalled and read more information in warning labels when the warning labels were highly noticeable, compared to the less noticeable warning labels.[16] Moreover, research suggests that visibility increases the effectiveness of warning labels. Consumers notice, read and comply with warning labels that are more noticeable than unnoticeable.[17,18] In other words, behavioral compliance increases with increasing visibility and readability of warning labels.

Another stream of research on advertising disclosures suggests that consumer compliance increases in proportion to the effectiveness of non-verbal communications used in disclosures.[19] For example, the use of symbols may be more effective than words in alerting consumers to important information because they are more likely to attract attention, are easier to process and stimulate greater cognitive elaboration.[20,21] However, many corporations still hesitate to place disclosures in a more effective way, with the fear of presenting less persuasive messages and attracting undesirable consumer responses. Exploring the research findings for financial disclosures, this study uses CSR practices and SCT to support the positive effect of investors' attitudes toward brokerage firms' financial disclosures on their subsequent responses such as investors' attitudes toward brokerage firms and behavioral intentions.

CSR practices and SCT

For the purpose of this study, CSR is defined as a citizenship function with moral, ethical and social obligations between a corporation and its customers.[22.] Specifically in financial settings, investors expect a brokerage firm's commitment to avoiding harm and improving financial transparency.[5,13] In other words, brokerage firms need to achieve appropriate profits while doing what investors perceive is responsible and ethical.[23] Concurrent with more frequent reporting on unethical business practices, brokerage firms increasingly realize that adopting ethical business practices that are more socially responsible can affect positive organizational outcomes.[12]

Research shows that consumer responses are favorable toward firms that are socially responsible.[1] Thus, one objective function consistent with CSR practices in financial disclosure is to minimize the negative consequences and maximize the positive consequences of investment decisions among investors.[24] This function means that identifying responsible financial disclosures requires that investors' interests be considered and integrated into brokerage firms' practices of financial disclosure.[25] For example, when information about socially responsible efforts are made public by either independent sources or firms themselves, consumers' evaluations of those firms are positively affected.[26,27] Moreover, research has found that positive attitude toward a firm's business practices could substantially improve the effectiveness of a firm's business, whereas a firm's business practice, perceived to be unethical, can create negative attitudes that damage a firm's corporate image.[28,29]

Projecting good CSR practices can influence a firm's corporate image since corporate image is the result of interactions between a firm and consumers as well as a firm's attempts to engage in impression management.[30] Research has indicated that creating consumers' positive assessments of CSR practices rests heavily on a corporation's ability to create in consumers' consciousness linkages between a corporation's CSR practices and its corporate image.[31,32] Research has found that consumers have a tendency to form positive attitudes toward socially responsible corporations that follow the appropriate role in society.[27] In other words, if investors believed that brokerage firms practice their financial disclosures responsibly in general, they would form positive attitudes toward their financial disclosures.[1]

In the same line of reasoning, the way brokerage firms practice their financial disclosures may reflect their CSR practices, perceived and evaluated by their customers, investors. For example, Wang[32] examined the relationship among consumers' attitudes toward disclosures in credit card issuers' print ads, attitudes toward credit card issuers' CSR practices and attitudes toward credit card issuers in general. His results suggested that positive attitude toward disclosures positively enhanced attitude toward credit card issuers and credit card issuers' CSR practices. More importantly, attitude toward credit card issuers' CSR practices mediated attitude toward disclosures on enhancing attitude toward credit card issuers.

Consumers' positive attitudes have been defined as favorable and transferable.[33] Research has found that consumers who have favorable attitudes toward a corporation are likely to engage in assimilation when processing information about the corporation.[34] When consumers are processing financial disclosures, they may perceive the way a brokerage firm practices financial disclosures as a reflection of the firm's CSR practices.[2,14] Thus, investors who have favorable attitudes toward a firm's financial disclosures should show attitudinal shifts in the direction of the advocacy and transfer their favorable attitudes into favorable attitudes toward the firm's CSR practices. Thus, the study tests the following hypothesis.

Hypothesis 1: Investors' positive attitudes toward brokerage firms' financial disclosures will positively enhance their attitudes toward brokerage firms' CSR practices.

Investors who have favorable attitudes toward a firm's CSR practices should also transfer their favorable attitudes into trust toward the firm. The SCT further supports this proposition. The SCT suggests that corporations exist not only for themselves but also for the welfare of consumers.[35] The concept of the social contract suggests a moral framework that encompasses the real and perceived relationships between corporations and consumers.[35] Similar to

CSR, the SCT encompasses more than the benefits of products. Research has suggested that the contract between firms and customers may be expanded in financial context to incorporate expectations that a brokerage firm should provide clear financial disclosures about any potentially adverse effects of investment for investors.[32,12]

In the same line of reasoning, this study argues that the transferred effect of positive attitude toward brokerage firms' financial disclosures can attribute to investors' perceived trust toward brokerage firms. One of the important elements in perceived credibility is trustworthiness. Kramer[36] defines trustworthiness as a state of perceived vulnerability derived from a person's uncertainty regarding the motives, intentions and prospective actions of others on whom they depend. The absence of a stake or personal gain from a particular source is called independence, which describes a necessary condition for trustworthiness.[37]

Financial disclosures attempt to inform and make investors aware of important financial information. They may also change investors' attitudes about certain investments and influence their behaviors about investing. One important effect between attitude toward brokerage firms' financial disclosures and perceived trust toward brokerage firms is that research tends to consider firms practicing business ethically as more trustworthy than firms practicing business irresponsibly. Research has considered perceived trust as a perceived quality.[38] Therefore, investors may assess brokerage firms' financial disclosures to arrive at an overall assessment in evaluating perceived trust toward brokerage firms. Because negative attitude toward a brokerage firm's unethical disclosure practices may be perceived as having ulterior motives, the absence of a stake or personal gain from the brokerage firm is not established. Thus, perceived trust toward brokerage firms may be weakened by negative attitude toward both brokerage firms' financial disclosures and CSR practices as source independence is a necessary condition for perceived trust toward firms.[37] Thus, the study tested the following hypotheses.

Hypothesis 2: Investors' positive attitudes toward brokerage firms' financial disclosures will positively enhance their perceived trust toward brokerage firms.

Hypothesis 3: The impact of investors' attitudes toward brokerage firms' financial disclosures on their perceived trust toward brokerage firms is mediated by investors' attitudes toward brokerage firms' CSR practices.

As financial disclosures are meant to inform investors of potential risks associated with their investments, financial disclosures speak to investors' genuine vulnerability to the information on which they rely. Based on the SCT, socially responsible corporations should be keen to reassure consumers by reinforcing the social contract between corporations and consumers.[2] Research argues that corporations thrive when adhering to obligations imposed by social contracts.[35,39] The SCT suggests that brokerage firms have an obligation to warn consumers noticeably of potential investment risks. In addition, the SCT suggests that when brokerage firms ethically disclose potential investment risks, investors' enhanced perceived trust toward brokerage firms would also enhance their attitudes toward brokerage firms. Therefore, the SCT offers an important theoretical basis for the examination of the relationships among investors' perceived trust toward brokerage firms, attitudes toward brokerage firms and behavioral intentions.

Based on the SCT that consumers may put a relatively high value and trust on brokerage firms that disclose financial disclosures responsibly and ethically, Torres *et al*[2] probed the relevance of this assumption. They reviewed print advertisement warning practices with a content analysis of consumer magazines and examined the effectiveness of label placement strategies. Validating the assumptions derived from the SCT, they found more positive consumer responses for attitude toward the brand when warning labels were overtly rather than discreetly placed in print ads.

CSR practices and the SCT are very applicable in disciplines such as finance because they provide a theoretical basis that is valuable in assessing the effectiveness of brokerage firms' marketing communications including financial disclosures.[13,35,40] This applicability is particularly important for the focus of this study as the study focuses on examining investors' attitudes toward brokerage firms' financial disclosures and subsequent responses in general. Based on CSR practices and the SCT, brokerage firms should reinforce the social contract and responsibility between firms and investors by openly providing financial information that is rightfully needed by prospective investors.[40] As a result, brokerage firms perceived as trustworthy may generate more positive responses than brokerage firms perceived as failing their social responsibility in their financial disclosures. Based on the aforementioned literature, the study tests the following hypotheses.

Hypothesis 4: Investors' perceived trust toward brokerage firms will positively enhance their attitudes toward brokerage firms.

Hypothesis 5: Investors' perceived trust toward brokerage firms will positively enhance their behavioral intentions toward brokerage firms.

Finally, consumer response across the hierarchy-of-effects among perceived trust toward brokerage firms, attitude toward brokerage firms and behavioral intention may differentially change as a result of attitude toward brokerage firms' financial disclosures and CSR practices, summarized in Figure 1. This is because these responses were usually measured for each element of the hierarchy chain in past research.[2] Based on the subsequent effects of investors' attitudes toward brokerage firms' financial, CSR practices and perceived trust toward brokerage firms, the aforementioned discussion leads to the following hypothesis.

Hypothesis 6: The impact of investors' perceived trust toward brokerage firms on their behavioral intentions toward brokerage firms is mediated by investors' attitudes toward brokerage firms.

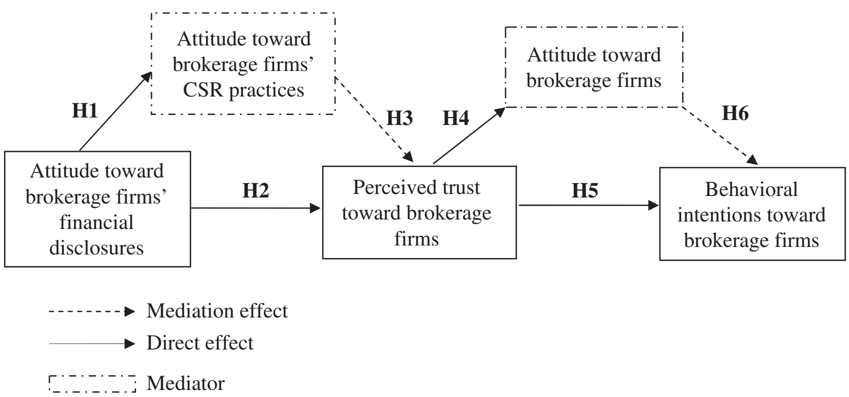

Figure 1: Summary of hypothesis.

METHOD

Survey procedures and participants

To assess the study's hypotheses, an online survey was used. In order to recruit representative participants, this study used screening questions to recruit and identify investors who have been investing in the financial market. Participants' levels of experiences in investments were asked to see whether participants had experiences in making investments before they participated in this study. If participants did not have an investment account and any experiences with making investments, they were not asked to fill out the survey.

Recruiting advertisements were posted on several listservs, finance-related blogs and websites that targeted investors in tri-state areas including lower Fairfield County in Connecticut, New York City and New Jersey. They were selected based on the goal of reaching investors from selected geographical areas mentioned above. For example, MBA program listservs were used to recruit MBA students in tri-state areas. Recruiting advertisements were also posted on financial-related blogs and websites that could reach investors in the study's designated geographical areas. It is important to acknowledge that the survey sample was a convenience sample. However, the advertisements used to recruit the sample covered a wide range of groups whose members have certain levels of experiences in making investments before according to the screening questions.

Investors qualified and interested in participating in this study clicked on the survey link that directed them to complete the study. The online survey was self-administered with participants recording an identifier code in place of their names to ensure confidentiality and promote confidence in providing sensitive information accurately. No personal information was sufficient to identify participants. A total of 2961 investors responded to the recruiting advertisements and visited the study site, whereas 511 qualified investors eventually filled out the online survey. No observations from 511 participants had to be dropped because of missing information. Their responses were used for data analysis.

Measures

The survey administered to the participants adopted established items and scales.[2,13,41–43] Research examining the effects of disclosures on consumer responses reveals various dimensions that can be used to assess consumer attitude.[3] This study used attitude toward financial disclosures, attitude toward CSR practices, perceived trust toward brokerage firms, attitude toward brokerage firms and behavioral intention as outcome variables relevant to CSR and the SCT. Table 1 summarizes descriptive statistics for the main measures including items, indications of where the items were derived, and Cronbach's α values when available.

Attitude toward financial disclosures in this study pertained to investors' attitudes toward brokerage firms' financial disclosures in general. In this sense, the construct measured an overall assessment of brokerage firms' financial disclosures. It was not measured for a specific brokerage firm's financial disclosures. A two-item, seven-point Likert scale (ranging from 'strongly disagree = 1' to 'strongly agree = 7') that were domain specific to brokerage firms and targeted toward the social contract implications of disclosures were used to assess participants' attitudes toward brokerage firms' financial disclosures.[2] These items were used to cover the contractual circumstances implied between brokerage firms' financial disclosures and prospective investors. The items were: (i) brokerage firms have an obligation to noticeably warn investors of potential risks in their investments and (ii) when brokerage firms openly place financial disclosures about potential investment risks, my trust in them increases. The Cronbach's α value for

Table 1: Descriptive statistics for the main constructs

Constructs	*M*	*SD*	α
Attitude toward financial disclosures (Torres et al[2])	5.16	1.58	0.73
1. Brokerage firms have an obligation to noticeably warn investors of potential risks in their investments (1=strongly disagree to 7=strongly agree)	5.36	1.82	—
2. When brokerage firms openly place financial disclosures about potential investment risks, my trust in them increases (1=strongly disagree to 7=strongly agree)	4.98	1.73	—
Attitude toward CSR practices (David et al[13])	3.60	1.16	0.84
1. Brokerage firms compete fairly with its competitors (1=perform poorly to 7=perform extremely well)	3.81	1.37	—
2. Brokerage firms act responsibly toward the environment (1=perform poorly to 7=perform extremely well)	3.52	1.37	—
3. Brokerage firms strive to build long-term relations with its consumers (1=perform poorly to 7=perform extremely well)	3.56	1.39	—
4. Brokerage firms are willing to listen to its consumers (1=perform poorly to 7=perform extremely well)	3.51	1.50	—
Perceived trust toward brokerage firms (Grazioli and Jarvenpaa[42])	3.45	1.35	0.92
1. Brokerage firms are credible (1=extremely disagree to 7=extremely agree)	3.60	1.55	—
2. Brokerage firms are trustworthy (1=extremely disagree to 7=extremely agree)	3.52	1.56	—
3. Brokerage firms are keeping customers' best interests in mind (1=extremely disagree to 7=extremely agree)	3.30	1.44	—
4. Brokerage firms are reliable (1=extremely disagree to 7=extremely agree)	3.37	1.45	—
Attitude toward brokerage firms (Hallahan[43]; MacKenzie and Lutz[43])	3.40	1.34	0.96
1. I would describe brokerage firms as… (1=bad to 7=good)	3.58	1.37	—
2. I would describe brokerage firms as… (1=unpleasant to 7=pleasant)	3.61	1.38	—
3. I would describe brokerage firms as… (1=low quality to 7=high quality)	3.31	1.42	—
4. I would describe brokerage firms as… (1=desirable to 7=desirable)	3.20	1.54	—
5. I would describe brokerage firms as… (1=unfavorable to 7=unfavorable)	3.31	1.54	—
Behavioral intention	2.42	1.56	—
1. I would rely on brokerage firms to make investment decisions (1=strongly disagree to 7=strongly agree)			

attitude toward brokerage firms' financial disclosures was 0.73.

Corporations have to follow the rules of behavior considered appropriate by society, whether these rules are stated in laws or are defined by ethical standards. Corporations have relationships with consumers, and relationships are managed to understand the practices of CSR. In a CSR context, the relational practice involves the quality of the existing relationships between corporations and their customers. Maintaining communication is a purposeful activity to achieve the relational practice, which will determine in turn consumers' assessments of relational practices. This study identified and measured two specific aspects of attitude toward CSR practices; ethical practices and relational practices. In other words, these two aspects represented investors' attitudes toward brokerage firms' CSR practices in general for the purpose of this study. These categories are by no means exhaustive, yet they capture the essence of most mainstream CSR practices.[13,14]

Investors' attitudes toward CSR practices were measured by asking investors how well brokerage firms perform the following aspects of CSR practices in general: (i) compete fairly with its competitors, (ii) act responsibly toward the environment, (iii) strive to build long-term relations with its consumers and (iv) are willing to listen to its consumers.[13] These four items were measured by seven-point Likert scale, ranging from 'perform poorly = 1' to 'perform extremely well = 7'. The score of attitude toward CSR practices was computed by averaging these four items. The Cronbach's α value for attitude toward CSR practices was 0.84.

Perceived trust toward brokerage firms included four items, measured by asking investors whether brokerage firms are credible, trustworthy, keeping customers' best interests in mind and reliable.[42] The Likert-type scales were used to measure this variable yielding scores ranging from 1 (extremely disagree) to 7 (extremely agree) for each. Attitude toward brokerage firms was measured by asking the participants to complete the sentence, 'In general, I would describe brokerage firms as …,' using a 5-item scale composed of good/bad, pleasant/unpleasant, high quality/low quality, desirable/not desirable and favorable/unfavorable.[41,43] The Cronbach's α values for perceived trust toward brokerage firms and attitude toward brokerage firms were 0.92 and 0.97, respectively. Finally, behavioral intention was measured by asking the participants whether they would rely on brokerage firms to make their investment decisions, using a 7-point scale, where 'strongly disagree' was coded as '1' and 'strongly agree' was coded as '7'.

RESULTS

To answer the study's hypotheses, a series of single regression models were used.[44] Attitude toward CSR practices was regressed on attitude toward brokerage firms' financial disclosures ($\beta = 0.32$, $P < 0.000$), $F\ (1, 509) = 58.19$, $P < 0.000$, $R^2 = 0.1$. The results in Table 2 revealed that investors' positive attitudes toward brokerage firms' financial disclosures positively enhanced their attitudes toward brokerage firms' CSR practices. Perceived trust toward brokerage firms was regressed on attitude toward brokerage firms' financial disclosures ($\beta = 0.3$, $P < 0.000$), $F\ (1, 509) = 51.44$, $P < 0.000$, $R^2 = 0.09$. The results revealed that investors' positive attitudes toward brokerage firms' financial disclosures positively enhanced their perceived trust toward brokerage firms. Hence, the Hypotheses 1 and 2 were supported. Figure 2 summarizes the results of the study's hypotheses.

To test the Hypothesis 3, a multiple regression model was used to test for a mediation effect.[45] Perceived trust toward brokerage firms was regressed on attitude toward brokerage firms' financial disclosures ($\beta = 0.12$, $P < 0.001$) and attitude toward CSR practices ($\beta = 0.56$, $P < 0.000$), $F\ (2, 508) = 150.14$, $P < 0.000$, $R^2 = 0.37$. An acceptable mediation held since the standardized coefficient of attitude toward brokerage firms' financial disclosures on perceived trust toward brokerage firms was much less in the multiple regression equation than in the single regression equation tested for the Hypothesis 2.[45]

Table 2: Regression analysis

Independent variable	*β (P)*	*Dependent variable (hypothesis)*	*R^2*
Attitude toward brokerage firms' financial disclosures	0.32 (0.000)	Attitude toward brokerage firms' CSR practices (H1)	0.1
Attitude toward brokerage firms' financial disclosures	0.3 (0.000)	Perceived trust toward brokerage firms (H2)	0.09
Attitude toward brokerage firms' financial disclosures	0.12 (0.001)	Perceived trust toward brokerage firms (H3)	0.37
Attitude toward brokerage firms' CSR practices	0.56 (0.000)	—	—
Perceived trust toward brokerage firms	0.65 (0.000)	Attitude toward brokerage firms (H4)	0.42
Perceived trust toward brokerage firms	0.54 (0.000)	Behavioral intentions toward brokerage firms (H5)	0.29
Perceived trust toward brokerage firms	0.17 (0.000)	Behavioral intentions toward brokerage firms (H6)	0.48
Attitude toward brokerage firms	0.57 (0.000)	—	—

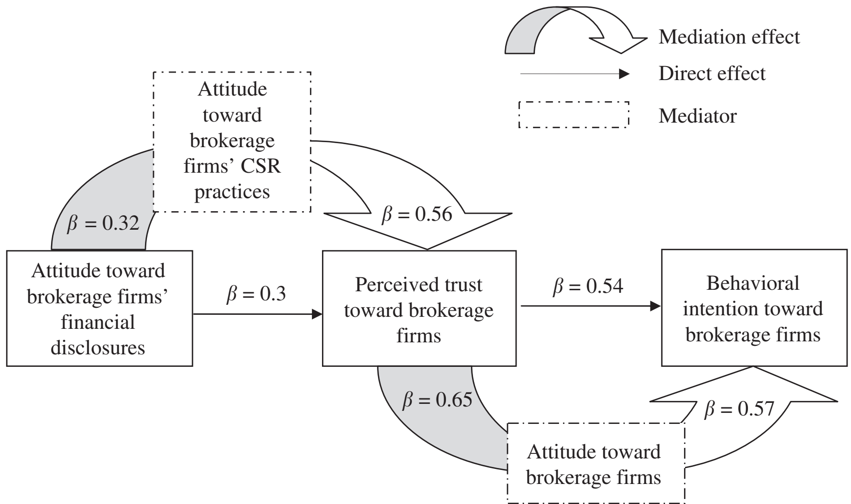

Figure 2: Results of the tested model.

As Baron and Kenny[46] have suggested, the results of three regression equations provided the tests of the linkages of the mediating effect. The results revealed that there was a mediation effect between attitude toward brokerage firms' financial disclosures and attitude toward CSR practices on perceived trust toward brokerage firms as three conditions of mediation held. First, Hypothesis 1 was supported as attitude toward brokerage firms' financial disclosures positively enhanced attitude toward CSR practices. Second, the Hypothesis 2 was supported as attitude toward brokerage firms' financial disclosures positively enhanced perceived trust toward brokerage firms. Finally, attitude toward CSR practices positively affected perceived trust toward brokerage firms, and attitude toward brokerage firm's financial disclosures had less effect on attitude toward perceived trust toward brokerage firms. Thus, the Hypothesis 3 was supported.

Attitude toward brokerage firms was regressed on perceived trust toward brokerage firms ($\beta = 0.65$, $P < 0.000$), $F\ (1, 509) = 375.39$, $P < 0.000$, $R^2 = 0.42$. The results revealed that investors' perceived trust toward brokerage firms positively enhanced their attitudes toward brokerage firms. Behavioral intention was regressed on perceived trust toward brokerage firms ($\beta = 0.54$, $P < 0.000$), $F\ (1, 509) = 209.83$, $P < 0.000$, $R^2 = 0.29$. The results revealed that investors' perceived trust toward brokerage firms positively enhanced their behavioral intentions toward brokerage firms. Hence, the hypotheses 4 and 5 were supported.

To test the Hypothesis 6, a multiple regression model was used to test for a mediation effect.[45] Behavioral intention was regressed on perceived trust toward brokerage firms ($\beta = 0.17$, $P < 0.000$) and attitude toward brokerage firms ($\beta = 0.57$, $P < 0.000$), $F\ (2, 508) = 234.56$, $P < 0.000$, $R^2 = 0.48$. An acceptable mediation held since the standardized coefficient of perceived trust toward brokerage firms on behavioral intention was much less in the multiple regression equation than in the single regression equation tested for the Hypothesis 5.[46] Consequently, the results of three regression equations provided the tests of the linkages of the mediating effect and supported Hypothesis 6.

DISCUSSION

The financial business environment has fundamentally changed since the meltdown in late 2008. On entering a new world in which financial accountability has become critical to the success of brokerage firms, firms are required to act more responsibly. Although good practices of financial disclosures certainly have positive effects on investors' responses, firms should not expect investors to necessarily reward them because of positive perceptions of financial disclosures. This is because the relationship between brokerage firms' financial disclosures and behavioral intentions is not a direct linear relationship.

This study found that investors' attitudes toward brokerage firms' CSR practices and attitudes toward brokerage firms are mediator variables in explaining the relationship between brokerage firms' financial disclosures and behavioral intention. The findings in this study illustrate how investors' positive attitudes toward brokerage firms' financial disclosures enhanced their attitudes toward brokerage firms' CSR practices and brokerage firms. These results were in concert with the study's arguments and revealed that investors' favorable attitudes toward financial disclosures could help enhance positive outcomes for firms. More importantly, this positive effect was mediated by the positive relationship between investors' attitudes toward financial disclosures and CSR practices and perceived trust toward brokerage firms and behavioral intention.

The findings suggest that investors' behavioral intentions toward brokerage firms depend on their perceptions of financial disclosures and attributions of CSR practices on trust toward brokerage firms. Specifically, the results confirmed that investors' attitudes toward brokerage firms' CSR practices mediated the relationship between their attitudes toward brokerage firms' financial disclosures and their perceived trust toward brokerage firms. Consequently, investors' attitudes toward brokerage firms mediated the relationship between their perceived trust toward brokerage firms and their behavioral intentions toward brokerage firms.

The results are encouraging for brokerage firms in many ways. Since late 2008, the importance of financial disclosures has increasingly entered the language of financial business with the trend toward sustainable development. For example, the SEC has initiated research and design effort to develop suggested language and format for financial disclosures by broker-dealers in 2004 and 2005.[12] In today's society, investors are concerned with brokerage firms' practices of financial disclosures more than ever in the past. Consistent with previous research propositions, this study found that investors' positive attitudes toward brokerage firms' financial disclosures indirectly affect corporate image.

This study also extended prior research on CSR by investigating various mediator variables associated with predictors and criterion variables involved in the financial disclosure context. To date, a majority of CSR research has been conducted based on a broad assumption that people would have similar levels of supports toward CSR, without sufficient attempts to identify various variables involved in the processes. This study advanced understanding of the impact of CSR practices by examining how investors' perceptions of financial disclosures and attributions of CSR practices influence their attitudes and behavioral intentions.

Implications

Most investors are dependent on brokerage firms for gathering financial information. As a result, financial disclosures related to investment decisions play important roles in helping investors make investment decisions. Studies have found that perceptions related to a firm's CSR practices can significantly influence attitude toward the firm.[46] Such perceptions have important implications in a number of areas, ranging from the nature of attitude toward a firm to the judgment of an investment decision. As a positive relationship between consumer responses and CSR practices is evident, projecting good

CSR practices can influence a brokerage firm's image and investors' behavioral intentions. Based on this study's results, it is encouraging that brokerage firms can improve their practices of financial disclosures and communicate their good CSR practices to positively enhance their corporate images.

Financial disclosures are increasingly common for a range of products including investment services, banking and credit cards.[32] Thus, the study's results can also be applicable for brokerage firms that advertise financial products or services. For example, credit card debt is a growing problem.[47] The Consumer Credit Counseling Service of America found half of college students with credit cards do not pay their balances off each month, incurring high monthly interest fees.[48] This could be because banks or credit card issuers fail to display financial disclosures included in their credit card solicitations responsibly.[48] As investing and credit cards have become more commonplace, they also have become more complicated. Irresponsible disclosures and constant changes of supplementary disclosures have joined to produce the seeming paradox that these industries are both widely consumed and widely criticized. Given that irresponsible and unethical advertising practices are rather prevalent in the consumer environment, this study may prime brokerage firms and policy makers about this particular area of research inquiry in the future.

Limitations

Despite the inherent limitations of this study (for example, context-specific) that have to be confirmed in future research, some of the limitations should be taken into consideration. First, this study acknowledges the limitation of using a regional and non-probability sampling method. Another limitation has to do with investors' motivations to process financial disclosures. The variation in the correspondence of motivation and attitude may raise an important issue. For example, more motivated investors may find financial disclosures important. This is because this type of investor is motivated to process financial disclosures before making investment decisions. If investors were less motivated to process financial disclosures, they may not find financial disclosures or even CSR practices valuable.

On a related note, this study's participants did not actually make any investments. This study measured investors' behavioral intentions toward investments. It is not clear whether conclusions reached by this study would apply to their own investing behaviors. Investors with more at stake may be more motivated to evaluate financial disclosures, CSR practices and brokerage firms in general. Finally, the findings of the mediating effects might seem intuitive. However, this study did not test which aspect of financial disclosures was most influential. For example, investors may care about conflict of interest information more than fees information. It is possible that different aspects of financial disclosures may contribute to investors' attitudes toward financial disclosures and brokerage firms differently.

Future research

Because of the limitation of using a regional and convenience sample in this study, future research should use a more diverse sample to generalize this study's results. This study did not test which aspect of financial disclosures was most influential. Thus, the merits of comparing different aspects of financial disclosures and their relationship to CSR practices deserve further study. Future research should also examine the relationship between various practices of financial disclosures and different aspects of CSR practices. On a related note, future research on financial disclosures and CSR practices can also assist brokerage firms by identifying the types of CSR practices that are likely to trigger investor awareness and assessing the likely impact of CSR practices based on possible tactics that can improve the effectiveness of financial disclosures.

'Deception is a multidisciplinary construct, circumscribed by the law but descriptive of consumer behavior' (Richards,[49] p. 2). Research on inference making has demonstrated that investors may make inferences from financial disclosures and then believe the inferences to have been directly stated in financial disclosures.[50] As a result, deceptive information in financial disclosures is the first element examined for possible deception. The definition of deceptive information explicitly includes the content and/or context of financial disclosures as elements that could be responsible for deception.[51] Thus, financial disclosures are sources of deception. Although deceptiveness requires a test of attribution of attitude, the essence of measuring deceptiveness is not what investors may comprehend but rather what they believe.[50] Future study should further investigate this issue due to the importance of the relationship between financial disclosures and CSR practices.

CONCLUSION

Given the increasing concern over financial disclosures and popularity of CSR practices, this study examined the relationship between financial disclosures and CSR. Importantly, this study focused variables on specific settings and raised questions relating to the importance of financial disclosures and CSR. The results suggested that the positive effect of financial disclosures and CSR and the mediation effects were encouraging for brokerage firms. Although investors' attitudes toward CSR practices can mediate investors' attitudes toward financial disclosures on their perceived trust toward brokerage firms, further mediated by their attitudes toward brokerage firms on their behavioral intentions, it is important for brokerage firms to continue enhancing their financial disclosures, especially advertising and displaying financial disclosures responsibly.

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