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Role of ESG Disclosure in Determining Asset Allocation Decision: An Individual Investor Perspective

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Besides financial disclosure, there is a rising surge of reporting environmental, social, and governance (ESG) information in emerging countries. The ESG disclosure intended to fulfill the information needs of all the company's stockholders, particularly the investors. This study intends to determine how individual investors materialize ESG information into their investment allocation decision. Moreover, to examine the information dimension having more prudent impact on their investment allocation decision. The primary data was collected through a structured survey from 220 novices and experienced individual investor actively involved in stock market trading Pakistan stock exchange (PSX). The predictive power of the deduced model is determined through covariance-based structural equation modelling. Findings of the study suggest that, on average, the ESG predicts the individual investor's asset allocation decision in the context of the Pakistan stock exchange (PSX). Also, it ascertained that the environment and governance had more magnitude than social information. Addationally, both novice and experienced consider the decision usefulness of ESG disclosure while making investment allocation decision. The proposed model is novel and offer insight for companies listed on Pakistan stock exchange to pay more attention to ESG disclosure practices. Moreover, investor particularly individual investor by incorporating ESG information can make more informed and rational investment allocation decision.

Keywords: ESG, individual investor, asset allocation decision, PSX

INTRODUCTION

The rising corporate stakeholder activism is an intriguing pressure on firms to go beyond the mandatory level of disclosure and sustain sustainability. The emergence of social responsibility provokes several notions like social performance, environmental, social, and governance performance that remain most vibrant. In response to changing regulatory and mainstream investor demand for nonfinancial information, there is a surge in integrating ESG information in investment portfolio management (Esch, Schnellbächer, & Wald, 2019). Moreover, the growing corporate scandal has trembled the investor's trust in conventional financial disclosure practices. The economic contracts are earned based on trust, and stakeholders consider the societal impact of their investment while making asset allocation decisions. Asset allocation decision remains daunting due to systematic and non-systematic risk involved in economic choices (Calabrese, Costa, Levialdi, & Menichini, 2019). The various level of risk and their sources reshape the stakeholder's asset allocation decision. The asset allocation decision primarily determined by the information provided by firms which reflect its financial and nonfinancial prospect.

The financial disclosure practices mainly focus on material information and ignore the viability of nonfinancial information. However, it is evidenced by past studies that financial disclosure is subject to certain limitations and fail to predict the going concern of a business entity (Esch et al., 2019; Khemir, Baccouche, & Ayadi, 2019). Therefore, the stakeholder remains reluctant only to base their asset allocation decision on financial information. The economic utility theory holds the notion that individual remains rational while making asset allocation decision and always remain utility centric by expecting minimum risk and maximum return. According to classical decision-making theory, asset allocation decision is a temporal phenomenon and predicted by the quality of information (Beach & Lipshitz, 2017). Therefore, the corporate disclosure practices of firms remain robust to predict the stakeholder asset allocation decision. The corporate disclosure by firms is requisite to improve transparency and build a sound corporate image. The corporate image or reputation remains central to signal an element of trust and robust to determine the stakeholder choices (Bechara, Damasio, & Damasio, 2000). The stakeholder largely bases their asset allocation decision on the corporate image, which relies on corporate disclosure. Therefore, enrich corporate disclosure remain exceptional to affect the stakeholder perception and mitigate the element of uncertainty involved in asset allocation decision (Becker-Olsen, Cudmore, & Hill, 2006). Studies expounded in past literature established a link between financial disclosure and stakeholder asset allocation decision. However, there is limited empirical evidence regarding the decision usefulness of social information (Bushee, Goodman, & Sunder, 2018).

Social information is also term as the nonfinancial information reflects through environmental, social, and governance information. The ESG remains non-economic. However, they contain material information subject to influence the stakeholder asset allocation decision. The rising socially responsible investment trend has increased investor interest in ESG information. Categorically, ESG information disclosure remains relevant; it provides an outlook on the social performance of the business entity and also assists in making informed asset allocation decisions. In the context of asset

allocation decision, this information provides an alternative outlook of performance concept and foster a more detailed understanding of a business entity (Sultana, Zulkifli, & Zainal, 2018). Therefore, the question of how and why stakeholder integrates ESG information in their asset allocation decision remain vital for research on social disclosure and socially responsible investment and business at large extent. Although, there are several pieces of evidence which posit that value relevance of ESG in guiding investment decision in the context of developed economies (Lokuwaduge & Heenetigala, 2017). The implications of ESG and its value relevance remain divergent in the context of developed economies' due to governance divergence.

Moreover, the ESG information is mandatory in most developed economies wherein the context of developing economies, it remains on the discretion of firms. Corporate disclosure regulations in the context of developing economies' does not bound companies to disclose their social performance indicator (Amel-Zadeh & Serafeim, 2018). Therefore, it extends the notion of how and to what extent stakeholders from developing economics perceived the decision usefulness of ESG information.

Moreover, It is also evidence by past studies that they only consider the objective measure of ESG information and overlook the subjective aspect of ESG information (Zwaan, Brimble, & Stewart, 2015). Therefore, the question of stakeholder perceived utility of ESG information by using its subjective measures in the context of developing economy may remain robust to investigate.

In the context of developing economies like Pakistan, corporate communication reported seems reduced. According to Cohen, Holder-Webb, and Zamora (2015), unlike financial information disclosure, social performance information remains marginal. The ESG information remains marginal due to voluntary disclosure policies. However, recently the security exchange commission of Pakistan (SECP) has amended the revised code of corporate governance, 2017. According to the provision of the revised code of corporate governance, 2017, it is the fiduciary duty of the board of directors to provide social information disclosure. The board remains responsible for protecting the rights of stockholder and keeping an eye on the decision-making behavior of management (Shah, Ahmad, & Mahmood, 2018). Therefore, besides the decision usefulness of ESG, it also provides a foundation to reduce agency problems between principal and agent.

Agency problem spur due to divergent interest of stockholder and management. The firm listed on the stock exchange has various stakeholders, notably shareholders, suppliers, customers, and society at large. The firm remains profit-centric; however, societal obligation also remains robust. Therefore, firms operating within a society expected to be socially responsible and sustainable (Agrawal & Knoeber, 1996), extending the notion of socially responsible firms, investors demand information regarding the social performance of an entity before making their asset allocation decision (Henke, 2016). The social performance information reflected through ESG also mitigate the uncertainty and assure the stakeholder that their investment is ethical and contain the element of sustainability (Chiu & Wang, 2015).

The investor, particularly in the context of stock market investment, face uncertainty while making asset allocation decision. The stock market mobilizes the savings of society and boosts the economic development. The stock market contains four main stakeholders, firstly, firms listed on the stock exchange, second, institutional investor, third, individual investor, and fourth, the regulator (Brown, Harlow, & Tinic, 1988). Institutional and individual investors both use the information before making an asset allocation decision. The institutional investor has more resources than an individual investor to make a sound investment decision. Past studies provide abundant evidence about the asset allocation decision of institutional investor; however, overlooked the asset allocation practices of individual investor (Blankespoor, Dehaan, Wertz, & Zhu, 2019). In the context of Pakistan, household participation in stock market investment is minimal, and only 0.025% of the population participate in stock trading (Naveed, Zahid, and Bashir,2019). The oblivious reason for such minimal market participation is market uncertainty and trust. The economic contract and transaction usually based on trust. The social performance of a firm sets the foundation for trust and positively affects investor behavior (Shah et al., 2018).

The individual investor considers the financial performance while making asset allocation decision however, there are no such information how social performance reflected through ESG impact their asset allocation decision. Therefore, based on substantive literature the main objective of this study is to determine the decision usefulness of ESG information by considering the individual investor perspective. Moreover, the study also intent to examine which dimension of social performance remain robust to impact the induvial investor asset allocation decisions (Agrawal & Knoeber, 1996). Accordingly, the study also examines the potential role of individual investor risk tolerance as an intervening variable. The rest of this paper is structured as follows: Section 2 reviews previous studies and develops hypotheses. Section 3 explains the research methods. Section 4 discusses results and discussion and finally, Section 5 concludes the study.

REVIEW OF LITERATURE

Past studies have examined the phenomena of corporate communication by using various theoretical perspectives; economic and non-economic perspective relating to the decision usefulness of the information. According to Beach and Lipshitz (2017), decision usefulness information theory employed to deduce the hypothesis. The theory of decision usefulness information provides the basis to investigate the decision usefulness of financial information while making asset allocation decisions (Bechara et al., 2000). According to the prophecy of decision usefulness, information companies disclose critical financial information to assist stakeholders in making inform and rational asset allocation decisions. On the other hand, the stakeholder integrates the type of information

which remain value-free and transparent while making asset allocation decision. Beside decision usefulness information theory, there are other theoretical perspectives which have been used to analyze the impact of information disclosure on investment decision (Naveed, Zahid, and Bashir,2019). The signaling theory remains robust to explain the phenomena of information. The signaling theory is relevant when two parties involved in the information sharing process. Signaller and receiver both have different interests; inferior signallers have the incentive to cheat and mislead the receiver. The potential presence of false signallers is contingent on many management studies. In the context of stock market investment, firms listed on the stock exchange send a different signal through information disclosure to attract the investor. Similarly, the firms send false signals through financial information disclosure to mislead investor, which in turn affect their asset allocation decision. As most of the past studies expounded in literature posit that financial information is tempered and subject to earning management, which adversely impacts the investment decisions (Lesser, Rößle, & Walkshäusl, 2016). According to signaling theory, tempered signals mislead the receiver and result in a suboptimal decision (Spence, 2002). Therefore, the mainstream investor looks toward alternative information sources to base their asset allocation decisions. The growing corporate information scandal and mismatch between reported material value and the underlying value of the firm's assets have shaken their investor trust in conventional corporate disclosure practices (Kothari, 2019).

The rising discrepancy in corporate financial disclosure adversely affects the investor trust. The trust remains vital in stock market investment; therefore, the induvial investor remains reluctant to participate in the stock market. Therefore, there is a rising surge of mainstream investor activism to demand more transparent corporate financial disclosure to make informed asset allocation decisions. The investor activism exerts pressure on firms to be socially responsible and communicate their social performance. Although social performance disclosure remains voluntary according to the provision of corporate governance issued by the security exchange commission of Pakistan (Naveed, Zahid, and Bashir,2019). However, there is a rising demand by stakeholders that force companies to report their social performance. Social performance reflected through environmental, social, and governance (ESG) does not contain financial information; however, it contains material information about the sustainability goals of an organization. The ESG provides an alternative outlook to assist the investor in assessing the firms value and making more informed and rationale asset allocation decisions.

Moreover, as the ESG information endorse the social and environmental commitment of firm toward society therefore, signal a cue of integrity and trust. According to signalling theory quality of signal is robust to influence the receiver choices to reshape their financial behaviour (Escrig-Olmedo, Rivera-Lirio, Muñoz-Torres, & Fernández-Izquierdo, 2017). Therefore, ESG information build the investor trust and positively affect their asset allocation decision. Most of the mainstream investor presume that sound investment opportunities originate from firms with sound corporate image. The image and reputation of a firm is based on the quality of corporate disclosure. Firms which disclosure both financial and nonfinancial disclosure reap the benefit of their image and persuade investor asset allocation decision. Therefore, it is worthwhile to examine how ESG information determine individual investor risk tolerance and asset allocation decision. The environmental information contains firm's performance about the environmentally friendly practices to meet the millennium goal of suitability. The environmental information also reflects the environmental commitment of a firms to remain obligatory toward environmental sustainability (Naveed, Zahid and Bashir,2019). The last decade witnesses an increased attention toward environmental preservation environmental sustainability remain the core agenda of various regulatory institutions around the globe. Therefore, considering the robustness of environmental information companies around the world are expected to remain conscious about environment while formulating their resource exploitation strategies. Likewise, the investor also demands that their investment beside higher return also include the element of sustainability. The environmental information signals a cure of trust and credibility and potentially effect investor behaviour and attitude toward an investment opportunity (Amel-Zadeh & Serafeim, 2018). Beside asset allocation decision environmental information also influence risk tolerance of investor toward an investment opportunity. According to signalling theory quality signal reduce the uncertainty and assist investor to make sound investment decision. The stock market is subject to uncertainty rather than risk alone therefore, the main intent of signalling theory is to mitigate the element of uncertainty and assist them to make rational economic choices (Nguyen, Gallery, & Newton, 2019). In this research it is deduced based on substantive literature that ESG information impact individual investor risk tolerance as an intervening variable and asset allocation decision as a dependent variable. Therefore, based on substantive literature review we propose our first direct and indirect hypothesis:

H_1: Environmental information significantly impacts individual investor asset allocation decisions.

H_2: Risk tolerance mediates the relationship between ESG information and individual investor asset allocation decision.

Categorically the dimensions of ESG may robust to determine the investor asset allocation decision and reshape their risk attitude. Past studies proclaim that governance remains the most prudent dimension of ESG for the investor over other dimensions. Corporate governance is subject to protect the rights of shareholder and govern the decision-making behavior of management. Corporate governance ensures the transparency and mitigates the agency problem arises due to the separation of ownership and control (Aguilera, Judge, & Terjesen, 2018). The governance mechanism of a firm is attributed to resolve the conflict of interest between

management and shareholder and reflect an impression of integrity and transparency. Corporate governance also ensures the reliability and transparency of corporate disclosure and assist the stakeholder in making a sound investment decision. Corporate governance remains requisite for effective internal control to achieve the organizational goals effectively. Therefore, the quality of governance ensures the improvement of both the environmental and social dimensions of corporate activates. The survey study conducted by Filatotchev, Poulsen, and Bell (2019), posits that governance remains the central theme of the mainstream investor, broker, and financial analysts compared to social and environmental criteria. Likewise, Walsh, Mitchell, Jackson, and Beatty (2009), proclaim that mainstream investors rank first financial performance, second, governance mechanism, and lastly, a firm's environmental and social commitment. The study of Kothari (2019) posits that improved governance mechanism is in the pursuit of pure financial rationality, whereas when it improves its social and environmental performance, this is probably more toward sustainability. Both financial and sustainability involve divergent impacts on investor risk tolerance and asset allocation decision. Past studies adhere to the notion that investors mainly focus on governance and pay least attention to environmental and social information. However, a recent trend of socially responsible investment and shareholder activism has revitalized the significance of environmental and social information to make sound investment decision. Accordingly, Bradford, Earp, Showalter, and Williams (2016) proclaim that social issues remain more relevant than environmental issues for socially responsible investors. In line with this discussion, it is presumed that individual investor does not equally weight to ESG dimensions and governance remain prudent to derive asset allocation decision than environmental and social dimension. Likewise, it is also deduced based on past literature that environmental information has more rigor and relevance to asset allocation decisions than social information (Brocas, Carrillo, Giga, & Zapatero, 2019; Sultana et al., 2018). However, past literature particularly in the context of Pakistan contain no empirical evidence about the decision usefulness of ESG and its relative utility to mainstream investor involved in stock market trading. Therefore, the study fill this gap by empirically testing the following hypothesis:

H_3: Corporate governance information significantly impacts individual investor asset allocation decisions.

H_4: Social information significantly impacts individual investor asset allocation decisions.

THEORETICAL FRAMEWORK & RESEARCH DESIGN

Based on a substantive literature review, the following theoretical framework has been proposed for statistical testing. The theoretical underpinning of the proposed model is based on the signaling theory. ESG is being incorporated as an explanatory variable while the risk tolerance is an intervening variable while the asset allocation decision is depended variable.

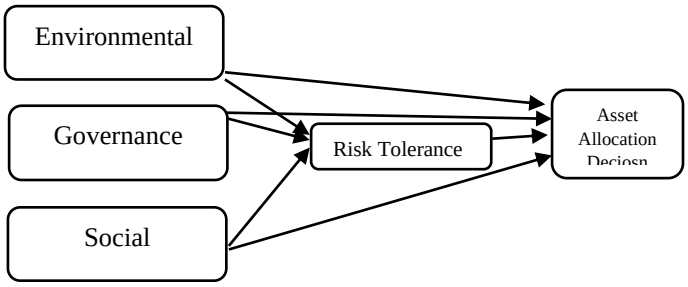

Figure 1: Theoretical Model

Data collection & Participants

The research philosophy of this study embraces post-positivism while the research approach is deductive, and survey strategy is opted to accomplish the objective of the study. The primary data has been collected from an individual investor actively involved in stock trading at Pakistan stock exchange. There are two types of investors usually involved in stock market trading, namely: institutional and individual investors. Past studies mainly remain concern about the asset allocation decision of institutional investors and overlook individual investor investment behavior. Therefore, the unit of analysis of this study is an only individual investor who remains involved in stock market trading. According to Pakistan stock exchange statistics, there only 55,000 individual households that participate in stock market trading (Naveed, Zahid, and Bashir,2019). Mostly household investors in Pakistan hesitate to mobilize their savings in a risky investment like a stock market investment, which is one of the oblivious reasons for such minimal stock market participation. The study uses a convenient sampling technique to derive the appropriate sample size. The primary data has been collected through adopted questionnaire from past studies. A self-administrated survey was carried out to gauge the respondent's perceived decision usefulness of ESG information in making sound asset allocation decisions. A total of 300 questionnaires were distributed among targeted respondents, and the final sample size counts to 254. The response rate remains 84%.

Measurement & Statistical Technique

The individual investor filled out the questionnaire about respond to their socio-economic characteristics, perceived usefulness of ESG information, risk tolerance, and asset allocation decision. The formative questionnaire was adopted from past studies, and the reliability and validity of the scale were ascertained. The multiple 18 items scale relevant to ESG has adopted (Clark-Murphy & Soutar, 2004; Cohen et al., 2015; J. Cohen, 2015), and individual investor asset allocation decision items have been adopted from (Khemir, Baccouche & Ayadi, 2019). The risk tolerance has been operationalized by adopting a six-item scale form (Hemrajani & Sharma, 2018).

Before proceeding toward statistical analysis, the data cleansing has been performed to assess the data normality. The multivariate assumption has been checked to avoid any bias and determine the predictive power of the proposed model. The descriptive statistics and correlation matrix reflect the

properties of primary data and assert no such multicollinearity issue. The covariance-based structural equation modeling has been performed to assess the direct and indirect results of the proposed model. The researcher estimated SEM by using AMOS as an extension of SPSS. The procedure of covariance-based structural equation modeling is depicted in the following diagram (Hair, Black, Babin, Anderson, & Tatham, 2006).

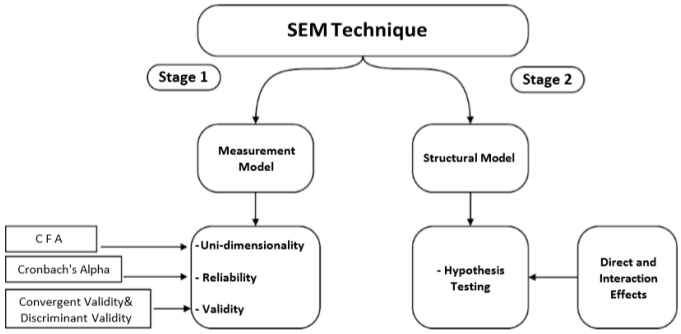

Figure 2: Structural equation Modeling(SEM)

DATA ANALYSIS AND RESULTS

The present study uses structural equation modeling (SEM)because of its suitability to test complex models. AMOS 21 was used for analysis purposes.

Descriptive Statics for Demographics

Table 1: Gender

	Frequency	Percent
Male	191	75.2
Female	63	24.8
Total	254	100.0

Table 2: Education Descriptive

	Frequency	Percent
0.00	9	3.5
1.00	38	15.0
2.00	126	49.6
3.00	67	26.4
4.00	12	4.7
5.00	2	.8
Total	254	100.0

Normality

Normality refers to the distribution of the data. Several methods have been suggested in the literature for testing the normality of the data like Shapiro and Walk and Shape, skewness, and kurtosis. This study uses skewness and kurtosis for establishing the normality of the data. According to the George and Mallery (2010) value of skewness and kurtosis must be between ±2. Table 3 presents that all items reflect the characteristic of normal distribution.

Table 3: Items Descriptives

	Minimum Statistic	Maximum Statistic	Mean Statistic	S. D Statistic	Skewness Statistic	Skewness Std. Error	Kurtosis Statistic	Kurtosis Std. Error
EN1	1	5	2.70	.984	.194	.153	-.911	.304
EN2	1	5	3.28	.930	-.486	.153	-.734	.304
EN3	1	5	2.59	.972	.472	.153	-.325	.304
EN4	1	5	2.74	.997	.284	.153	-.931	.304
RT1	2	5	4.08	.692	-.615	.153	.822	.304
RT2	2.0	5.0	4.035	.6494	-.471	.153	.852	.304
RT3	2.0	5.0	4.008	.6887	-.376	.153	.220	.304
RT4	2.0	5.0	4.083	.6691	-.256	.153	-.194	.304
RT5	2	5	4.02	.677	-.327	.153	.153	.304
RT6	2	5	4.11	.672	-.522	.153	.666	.304
GOV1	1	5	3.54	.878	-.215	.153	-.495	.304
GOV2	1	5	3.54	.865	-.363	.153	-.237	.304
GOV3	1	5	3.60	.827	-.458	.153	.290	.304
GOV4	1	5	3.78	.759	-.866	.153	1.302	.304
GOV5	1	5	3.41	.915	-.195	.153	-.488	.304
GOV6	1	5	3.74	.832	-.508	.153	.040	.304
AA1	2	5	4.01	.622	-.699	.153	1.910	.304
AA2	2	5	3.87	.656	-.454	.153	.674	.304
AA3	2.0	5.0	4.130	.5854	-.503	.153	1.902	.304
SOC1	2.0	5.0	3.807	.6758	-.365	.153	.321	.304
SOC2	2	5	3.89	.697	-.483	.153	.512	.304
SOC3	2	5	3.86	.728	-.339	.153	.036	.304
SOC4	2	5	3.75	.733	-.417	.153	.131	.304
SOC5	2	5	3.76	.694	-.433	.153	.317	.304
SOC6	2	5	3.94	.760	-.554	.153	.283	.304
SOC7	2	5	3.83	.709	-.155	.153	-.214	.304
SOC8	1	5	3.28	.882	.128	.153	-.595	.304

Common method bias (CMB)

The problem of common method bias(CMB) rises when the data collected at a single time frame, which could affect the validity. Harman's single-factor test using SPSS was used to test CMB. Results reveal that the first factor explains that 41.17 percent of total variance explained, and five factors were found with eigenvalues greater than 1. This confirms that there is no threat of CMB affecting the construct's validity (Podsakoff and Organ, 1986). In addition to Harman's one-factor test, the influence of the common latent factor was checked in the measurement model.

We found significant positive results between hypothesized measurement items and their respective factors in the research model. Likewise, the AVE of the common latent factor item designated lower than the substantive constructs under this research. Thus, we confirmed the absence of CMB after analyzing the outcomes collectively and individually.

Correlation

Table 4 reflects the correlation among variables. It provides support to our research hypothesis. All factors are positively correlated to asset allocation and risk tolerance. The table shows a weak correlation between independent variables, which confirms that there is no chance of multicollinearity.

Confirmatory factor analysis (CFA)

CFA was run in AMOS 21 to confirm the factor structure, remove the items having low standardized factor loading, and assess the convergent validity of the study constructs. The reliability and validity of the constructs are confirmed through the measurement model. Figure 3 shows the measurement model. Table 4 presents the model fitness of the measurement model, and data show good model fit as recommended in previous studies (Tanaka, 1993; Hu and Bentler, 1999; Hair et al., 2010).

To validate the measurement model, it's essential to establish the discriminant and convergent validity. Convergent validity of the data assessed through average variance extracted (AVE). Researchers (e.g., Hair et al., 2010) have recommended that AVE value above 0.50 indicates that the loaded items show a higher variance in the respective construct than the error term. AVE ranges from 0.513 to 0.731, mentioned in table 4. To confirm the discriminant validity square root of the AVE used and value above 0.70 indicates that each item loaded higher (distinctively) on the respective construct than other factors (Hair et al., 2010).

Moreover, the value of square root of AVE is higher than the highest square correlation of the construct with any other latent construct which confirms that adequate discriminant validity was achieved. Moreover, the composite realibilty of all construct is greater than 0.70 which indicates all constructs have acceptable reliability. Overall model fitness allow us to proceed to structural equation modeling(SEM). value for model fit indicies of Cmin/Df 1.712, RMR 0.031, GFI 0.873, AGFI 0.846, CFI 0.958 and RMSEA 0.052 confirms the good model fit for SEM.

Table 4: Correlation and Reliability Analysis

	CR	AVE	MSV	Max R(H)	Risk_tol	Environmental	Governance	Social	Asset_Alloc
Risk_tol	0.942	0.731	0.372	0.948	**0.855**				
Environmental	0.808	0.513	0.124	0.810	0.336	**0.716**			
Governance	0.930	0.690	0.271	0.935	0.505	0.352	**0.830**		
Social	0.922	0.599	0.498	0.935	0.610	0.232	0.480	**0.774**	
Asset_Alloc	0.843	0.642	0.498	0.849	0.603	0.330	0.521	0.706	**0.801**

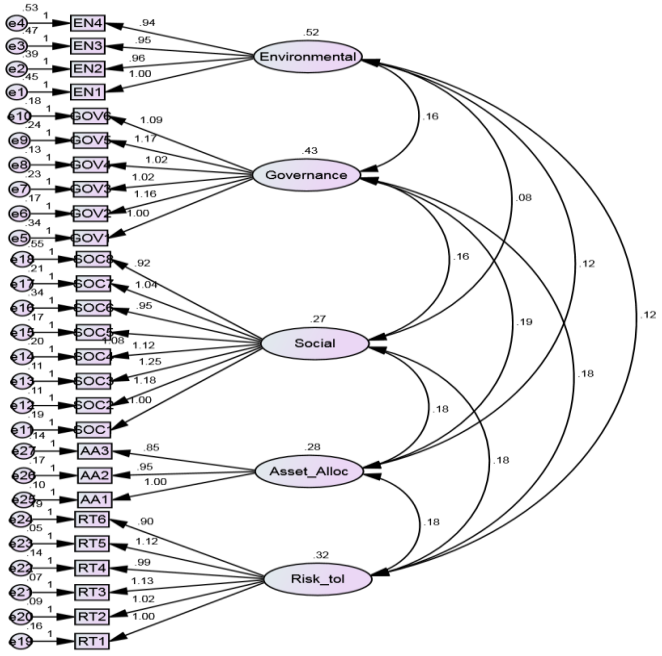

Figure 3: Measurement Model

Structural models

structural models were used to test all the hypotheses. Since the present study has a mediator so bootstrapping is recommended to get the valid result of mediation. Hence, this study tested hypothesis by performing bootstrapping 5,000 (resampling) with 95% bias-corrected confidence interval with p-value for a two-tailed significance (*p: 0.05, **p: 0.01, ***p: 0.001).

The structural model (see Figure 4) was tested for the influence of each information type on asset allocation with the mediating role of risk tolerance. Model fits indices for structural model suggest a good model fit with the value of $\chi 2/df$ 2,057 1.959, AGFI 0.825, CFI 0.940, GFI 0.857, RMR0.104, and RMSEA 0.065. All these parameters are within limits recommended by Tanaka (1993), Hu and Bentler (1999), Hair et al. (2010).

The results (see Table 5) show that Environment information significantly positive affects the asset allocation and risk tolerance behavior of the investor with β 0.177 and 0.151, respectively, that supports H_1. While Social information significantly positive affects the asset allocation and risk tolerance behavior of the investor with β 0.721 and 0.553, respectively, that supports H_3. Governance information also significantly positive affects the asset allocation and risk tolerance behavior of the investor with β 0.331 and 0.252, respectively, that supports H_4.

Table 5: Regression Weights

Variable with Effect Size			Estimate	P
Risk_tol	<---	Environmental	.151	.012
Risk_tol	<---	Governance	.252	***
Risk_tol	<---	Social	.553	***
Asset_Alloc	<---	Social	.721	***
Asset_Alloc	<---	Governance	.331	***
Asset_Alloc	<---	Environmental	.177	.023
Asset_Alloc	<---	Risk_tol	.278	.003

To check the mediation hypothesis present study uses the Sobel test, Aroian test, and Goodman test. Risk tolerance mediates the relationship between Environmental information and asset allocation with Sobel test P-value 0.058, Aroian test P-value 0.06 6and Goodman test P-value 0.050, which confirms the mediating role of risk tolerance between Environmental information and asset allocation that support H_2.

Risk tolerance mediates the relationship between Governance information and asset allocation with Sobel test P-value 0.014, Aroian test P-value 0.016 6and Goodman test P-value 0.012, which confirms the mediating role of risk tolerance between Governance information and asset allocation that support H_2 while Risk tolerance mediates the relationship between Social information and asset allocation with Sobel test P-value 0.004, Aroian test P-value 0.004 and Goodman test P-value 0.004, which confirms the mediating role of risk tolerance between Social information and asset allocation that support H_2.

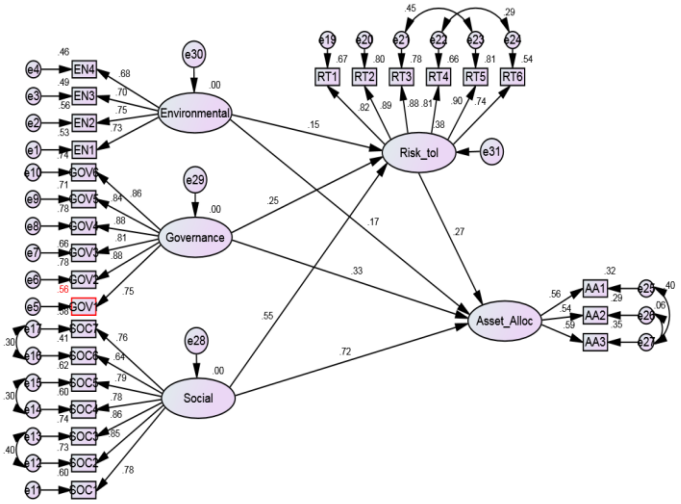

Figure 4: Path Model

DISCUSSION & CONCLUSION

The study examines the role of ESG information in determining individual investor allocation decisions and second also compared the value relevance of each of the ESG dimensions. Moreover, the intervening effect of risk tolerance has been assessed to ascertain the indirect effect of the explanatory variable on asset allocation decisions of the individual investor. The results of covariance-based structural equation modeling predict that ESG information collectively determines the individual investor's risk tolerance and their asset allocation decision. The induvial investor involved in stock market trading at Pakistan stock exchange integrates ESG information in their asset allocation decision.

Moreover, result of the study also confirm that beside direct relation there is an indirect effect of ESG on risk tolerance of individual investor. There is a interlinkage of risk tolerance between ESG information and asset allocation decision of individual investor. The result of the study remains align with past studies expounded in literature. Most recently the study of Khemir, Baccouche & Ayadi, (2019), posit the same findings and disclosed a positive significant impact of ESG information on stakeholder investment behaviour. Moreover, the study of Naveed, Zahid and Bashir, (2019), proclaim that nonfinancial information (ESG) is prerequisite to build the sound corporate reputation and determine the retail investor investment behaviour. Categorically the result of each dimension such as environmental (Benlemlih, Shaukat, Qiu, & Trojanowski, 2018; Sultana et al., 2018), social (Bennett, James, & Klinkers, 2017; Lesser et al., 2016) and corporate governance disclosure (Aguilera et al., 2018; Filatotchev et al., 2019) remain aligned with our findings. The empirical findings also validate the signalling theory in the context of Pakistan stock exchange. Accordingly, it is proclaim based on statistical results that behaviour of Pakistani individual investors toward ESG information seems like that of emerging and developed countries. Regarding the hypotheses about the comparative weight of the influence of various ESG dimensions on asset allocation decision, the results of the study state that all the dimension contain value relevance to determine investor risk tolerance and asst allocation decision. However, the magnitude of governance remains vital to determine the individual investor risk tolerance in the context of Pakistan stock exchange. The individual investor involved in stock market treading rank ESG as governance, social and environmental. The perceived decision usefulness of governance and social information remain more robust than environmental information. The mainstream investor in Pakistan beside financial performance remain mostly concern with governance and social information. Beside asset allocation decision governance and social dimension of ESG also remain vital to affect risk tolerance of individual investor in the context of Pakistan stock exchange.

Conclusion

The purpose of this study was to determine how individual investors materialize ESG information into their investment allocation decision. Moreover, to examine the interlinkage of risk tolerance between ESG information and asset allocation decision. The contextual setting of the study was provided by individual investors involved in stock market trading at Pakistan stock exchange. Based on structural equation modeling, we find that there is a causal relationship between ESG information and individual investor asset allocation decision.

Moreover, the indirect result of the study also suggest that risk tolerance mediates the relationship between ESG information and asset allocation decision. The results of the study confirm the decision relevance and usefulness of ESG information int the context of Pakistan. The findings of the study also posit the governance and social information remain more viable than environmental information to induce the individual investor's risk tolerance and asset allocation decision. We examined that some Pakistani firms listed on Pakistan stock exchange communicate ESG information in their annual reports despite the absence of legal obligation. Though it is marginal, ESG disclosure remain complementary to corporate financial disclosure as it only indicates the non-financial performance of a business entity. Findings of the study leads to interesting results since ESG information disclosure practices must be revised. Corporate disclosure should incorporate ESG information beside provide detail financial information in their annual reports. Indeed, relevant ESG information should be provided so that mainstream investor can makes sound asset allocation decision.

The study remains basic in nature and contribute to build the body of knowledge in the context of social information and asset allocation decision. Moreover, the study also contributes by validating the signalling theory in the context of an emerging country, but also provide a comparison of the impact of each dimension on asset allocation decisions. We believe that findings of the study has significant implications for firms listed on Pakistan stock exchange to notice the material value of ESG information and re-formulate their financial disclosure practices in line with perceived expectations and need of mainstream actors in the financial market. The study findings also presents an important implications for regulator such as security exchange commission of Pakistan (SECP), to revise the provision of laws regarding information discloser and integrate relevant clause regarding ESG information. The legislation may force the companies to reshape their disclosure practices and adopt the new perspective of social performance. The provision of ESG information will robustly assist various stakeholder to make informed investment decision. This study is not without limitation. Though survey-based study remains most suitable when we deal with subjective reality instead of objective reality it also contain an element of biasness in respondents responses. Therefore, future studies to minimize the risk of biases may consider the actual trading data of individual investor form brokerage houses. Similarly, the study used the quantitative research design to investigate the phenomena, future studies can use concurrent research design to explore the decision usefulness of ESG information and individual investor asset allocation decision. Moreover, the

study only incorporated explanatory, mediating and dependent variable and overlook the significance of moderating variable. Beside information the personality traits, financial literacy and cognitive biases shape the financial behaviour of investor. Therefore, future studies may include various cognitive biases and personal traits of investor to examine their risk tolerance and investment behaviour. Finally, the study can be conducted in other contexts by assessing the responses form other information users such as suppliers, customer and NGO's to insight the decision usefulness of ESG information.

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