

# The Moderating Effect of COVID-19 on the Relationship Between Corporate Risk Disclosure and Investor Perceived Confidence

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## ABSTRACT

The COVID-19 pandemic has affected a multifaceted human existence and investors who have to deal with the uncertainty of the stock market is not exempted. Therefore, the study aims to investigate to what extent corporate risk disclosure affects the investors' perceived confidence and trust. Our study employed partial least square analysis on the research framework and hypotheses through Smart-PLS software using data collected from 108 Malaysian individual investors. This study examined three theories, namely Stakeholder, Signalling and Prospect theories, representing the respective variables of investor perceived confidence and trust, corporate risk disclosures, and COVID-19. Based on the theories, the assumption is that investors (as part of stakeholders) will have an increased perception of more losses in times of crisis if they are not given any assurance and transparent disclosure signals. The extant study revealed a direct positive relationship between financial, operations and strategic risk disclosure to perceived investor confidence and trust. The results also indicated that most investors concurred that COVID-19 significantly impacts investor perceived confidence and trust in relation to the three stated risks.

**Keywords:** *Perceived Investor Confidence; Perceived Investor Trust; COVID-19; Financial Risk Disclosure; Operations Risk Disclosure; Strategic Risk Disclosure*

## 1. INTRODUCTION

The presence of the novel coronavirus (COVID-19) has sparked a global health crisis resulting in a pandemic that has affected the daily lives of people all around the world, socially and economically. A report from the International Organization of Securities Commissions (ISCO) during the year 2020 has found and observed that the COVID-19 pandemic itself has created a stressful environment which could possibly bring harm or losses to individual or retail investors through conduct risk. Additionally, they have also stated the importance of disclosure about COVID-19's impact on the company's financial position, operating performance and future prospect to investors and other stakeholders, who require high-quality transparent information. Due to the special circumstances of the pandemic's effects, many recent studies worldwide have conducted in the midst of the pandemic. Some of which included COVID-19's effects on the stock market behavior [1][2][3] and the

economic effects of general financial well-being [4]. In addition, many of these recent studies are based outside of Malaysia, where the regulations on handling the pandemic may be completely different.

While there are many studies focusing on the effects of COVID-19 on investors' reactions by observing and analysing the stock market trading during such uncertain times [2] [3] [5], there is a lack of studies on understanding how investors feel and perceive the situation at the moment. Recent studies on COVID-19's impact on investor behaviour being related to both prospect and signalling theories as confirmed by Budiarmo et. al. [2].

## 2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Financial risk disclosures are an important component in decreasing information asymmetry, implying that their presence reduces investors' uncertainties [6]. Similarly, Hassan & Saleh [7] have found that the financial disclosure is valuable in investment decision-making. It implicates its usefulness and importance towards investors. This is further supported by Lawrence's [8] study where it is found that individuals have the tendency to invest in companies who possess clear and concise financial disclosures. Overall, risk disclosures have been proven to provide useful information to investors [9]. When financial risk disclosures are provided, it is improving investors' trust and confidence and other stakeholders as well [10]. Thus, the following hypothesis is formed:

*H1: There is a positive association between financial risk disclosure and perceived investor confidence and trust.*

Operational risk disclosures also have its own impact compared to financial risk disclosures. The impacts of operational loss events can significantly affect the market values of banks and other financial institutions, implying that operational risk information is an important factor in making investment decisions [11] [12]. It is proven by studies that emphasize operational risk disclosures for effective market discipline [13][14]. Thus, such risk disclosures play a great importance in informational relevance and are implied to affect investors [15]. Benlemlih et. al. [16] emphasizes that disclosures help companies build positive reputations and trust with their investors as they have better information, mitigating the company's' operational risks. Thus, it has solidified that increasing disclosures of information improve the average investor's confidence [17] and the trust [18]. Thus, the following hypothesis is formed:

*H2: There is a positive association between operational risk disclosure and perceived investor confidence and trust.*

According to Chauhan and Kumar [19], various non-financial disclosures have been found to have positive valuation effects on a firm's overall value, implying positive perceptions. In addition, Kim & Yasuda [20] have found that there is a positive relationship between the number of items in business risk disclosure reports and total risk, which implies that the disclosures (which include strategic risks taken by the firm) have an increasing impact on

investors' assessment of firm risk. Strategic risk is a non-financial risk related to the fundamental economy. An economic environment with high uncertainty will affect the company's risk and performance, which will affect the company's ability to create wealth for stockholders [21]. Regarding the relation between disclosure with confidence and trust, Lee & Shailer [17] have unfolded that increased disclosure of corporate governance information improves the average investor's confidence. In the same vein, Tong [18] argued that perceived importance of corporate trust is related in forms of corporate attributes in risk disclosure. Cabedo and Tirado [21] stated that the sensitivity of the company's risk to economic changes is different; therefore, the more transparent disclosure of strategic risk will make it easier for investors to estimate the risks in certain investments, which further increases investors' confidence in the company. Thus, the following hypothesis is formed:

*H3: There is a positive association between strategic risk disclosure and perceived investor confidence and trust.*

The COVID-19 pandemic has caused significant impact on the financial risk attitudes in general with many being more prudent in taking any form of financial risks [22]. Furthermore, Yildirim & Guler [23] in their research revealed there was an increased perceived risk related to the severity of COVID-19. Prior studies also have found that financial risk disclosures are relevant and investors positively gravitate towards it with confidence and trust [7][8][10]. Conversely, Moumen et. al. [24] discovered that investors tend to rely on another source of information due to proprietary costs' tendency to affect the perceived relevance of risk disclosure from annual reports. Moreover, COVID-19 has led to a sharp increase in equity market exposure, which implies low market stability and investor confidence [25]. Thus, the following hypothesis is formed:

*H4: The impact of COVID-19 would influence the relationship between financial risk disclosure and perceived investor confidence and trust.*

According to Zimmer et al. (2010) [26], information relevance directly impacts risk beliefs and attitudes. When people perceive that the information requested is relevant, their risk perceptions diminish and develop positive attitudes toward information shared with them. It is supported by Derouiche et. al. [27] who found that firms have

better efficiency when a firm discloses their operational risk exposures. Nevertheless, it was found that when the operational risk occurs and is disclosed, there would be a negative market reaction, implying the presence of uncertainty and low investor confidence [28]. COVID-19 could possibly amplify these effects negatively and increase the uncertainty and fear investors may have leading to low confidence and trust [29]. Thus, the following hypothesis is formed:

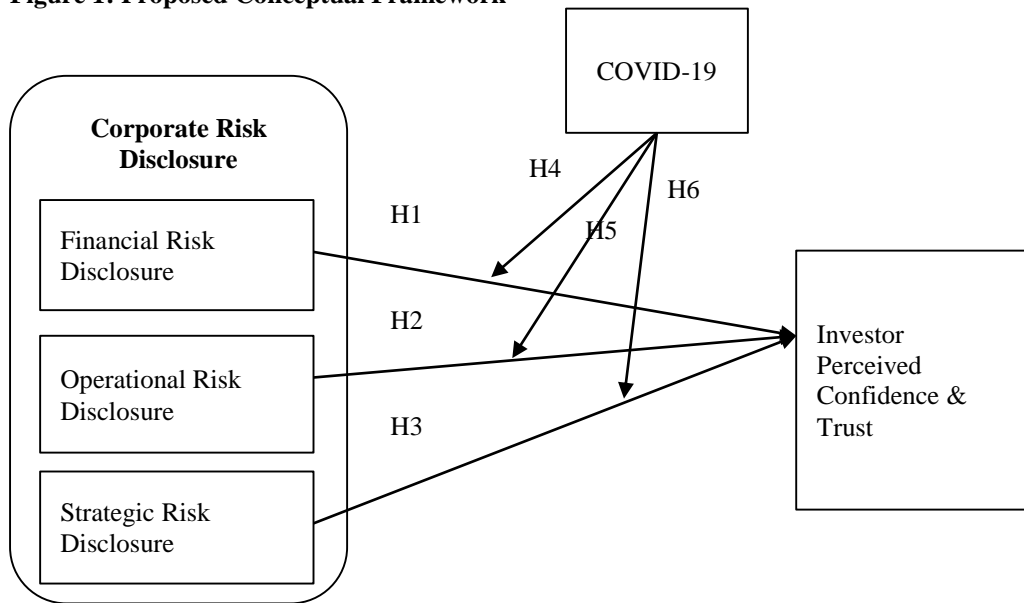
*H5: The impact of COVID-19 would influence the relationship between operations risk disclosure and perceived investor confidence and trust.*

The disclosure of a firm’s strategic risks can clarify any future or external events that may or may not affect the company’s decision and its activities, this includes various non-financial information that investors may care about. According to Chauhan & Kumar [19], firms that disclose non-financial

information suffer less during a financial crisis. This supports Lopatta et. al. [30] who found that investors highly value companies that include critical global developments within their reports such as COVID-19. Nevertheless, Elshandidy & Zeng [31] found that any additional risk disclosure does not matter or add value for investors and is considered merely a routine. In addition, strategic risks including external shock factors such as government economic policy uncertainty may result in decreased stock price reactions, implying decrease in investor confidence [32]. Furthermore, Liu et. al. [29] found that COVID-19 has a significant negative impact on stock markets worldwide, implying investors’ fear of investment risks brought on by COVID-19. Thus, the following hypothesis is formed:

*H6: The impact of COVID-19 would influence the relationship between strategic risk disclosure and perceived investor confidence and trust.*

**Figure 1: Proposed Conceptual Framework**



**3. RESEARCH METHODS**

Our study employed cross-sectional methods where respondents' quantitative information will be collected only once [33] [34]. Since this study’s purpose is to measure the degree of relation between two or more different variables, the use of descriptive research under correlational design is most suited [35]. We used online questionnaires to the respondents. Generally, online surveys have poor response rates due to issues such as survey fatigue and emails being filtered to the spam folder which are

common phenomena [36]. This issue is the same during COVID-19, where studies like Hensen et. al. [37] have acknowledged several challenges of remote quantitative data collection methods, including higher non-responses than face-to-face methods.

Furthermore, Prommegger et. al. [38] has addressed the difficulties of data collection in between different waves of COVID-19 and has found that it influences their respondent’s perception and intentions. Thus, many of these issues add to the

respondents' reluctance to disclose their own perceptions. Hence, this study has created self-administered online questionnaires via Google Forms as it is a free user-friendly surveying tool with a simple interface. The design of the questionnaire was adapted from several studies such as Linsley & Shrives [39], Amran et. al., [40], Abdullah et. al. [41], Wilson [42], Lucarelli et. al. [43] and Tong [18]. The questionnaire was pre-tested to a sample of 30 respondents in order to ensure its clarity.

**3.1. Sampling Design**

This study's population sample shall be individual retail investors residing in Malaysia who are interested in looking at corporate risk disclosures and annual reports of the companies they have invested in. Kalay [44] has found that investors that demand disclosures are particularly driven by their abilities to use such information. Thus, the reason for selecting them is because they understand the importance of disclosures and take them into account when making investment decisions for themselves [45][46]. Therefore, they can express their perceptions on whether they feel confident and have an element of trust towards such disclosures in the midst of COVID-19. In addition, by taking into consideration that this study intends to apply structural equation modeling (SEM), issues in regard to sample sizes are that there is no general consensus

on such matters, and a minimum sample size of 200 for any SEM is recommended [47]. According to Ramayah et. al. [48], the recommended minimum number of observations for PLS-SEM is merely 30 to 100 observations. On the other hand, another rough guideline for estimating minimum sample size is the 10 times rule where the sample size should be 10 times the maximum number of arrowheads pointing at a latent variable anywhere in the PLS path model [49]. To analyse the data collected from this study, the SPSS and SmartPLS software were employed to measure commonly used statistical procedures and generate statistical analysis. Notably, SmartPLS software employs a variance-based structural equation modelling (SEM) using the partial least squares (PLS) path modelling method.

**3.2. Data Analysis and Discussion**

*Common Method Variance*

As indicated in Table 1, if the total variance for a single factor is less than 50%, this proves that the data sample is not affected by common method bias according to Harman's single factor test [50]. This study's total variance for a single factor is 49.8% (as shown in Table 1) which is close to but has not exceeded the 50% cut-off, which indicates that the data results would not be very affected by common method bias.

**Table 1:** Common Method Variance Assessment

Factor	Total Variance Explained			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative%	Total	% of Variance	Cumulative%
1	18.419	51.165	51.165	17.944	49.845	49.845
2	3.100	8.611	59.776			
3	2.227	6.186	65.962			
4	0.930	2.583	68.545			
5	0.913	2.537	71.082			
6	0.789	2.191	73.273			
7	0.734	2.040	75.313			
8	0.695	1.930	77.243			
9	0.665	1.848	79.091			
10	0.616	1.711	80.802			
11	0.552	1.533	82.335			
12	0.548	1.522	83.858			
13	0.484	1.344	85.202			
14	0.440	1.222	86.423			
15	0.404	1.123	87.546			
16	0.391	1.087	88.633			
17	0.369	1.025	89.658			
18	0.347	0.963	90.621			
19	0.333	0.926	91.547			

20	0.317	0.880	92.427
21	0.280	0.778	93.204
22	0.260	0.722	93.926
23	0.249	0.691	94.618
24	0.218	0.604	95.222
25	0.205	0.568	95.790
26	0.193	0.535	96.325
27	0.188	0.523	96.848
28	0.169	0.469	97.317
29	0.159	0.441	97.757
30	0.151	0.420	98.177
31	0.147	0.409	98.586
32	0.131	0.363	98.949
33	0.115	0.319	99.268
34	0.099	0.276	99.544
35	0.089	0.247	99.791
36	0.075	0.209	100.000

Extraction Method: Principal Axis Factoring

### 3.3. Multicollinearity

Table 2 indicated a collinearity test using SmartPLS was done on this study, and it was found

that all inner VIF values are less than 5, suggesting no serious collinearity issues between the independent and dependent variables.

Table 2: Collinearity Statistics

	<b>C</b>	<b>FRD</b>	<b>ORD</b>	<b>SRD</b>	<b>T</b>
<b>C</b>					
<b>FRD</b>	1.592	-	-	-	1.592
<b>ORD</b>	1.849	-	-	-	1.849
<b>SRD</b>	1.56	-	-	-	1.56
<b>T</b>					

Note: C = Investor Perceived Confidence, FRD = Financial Risk Disclosure, ORD = Operations Risk Disclosure, SRD = Strategic Risk Disclosure, T = Investor Perceived Trust

### 3.4. Multicollinearity

#### *Demographic and Socio-Economic Profiles*

As shown in Table 3, there consists of a total of 108 respondents for this study. The collected responses for male and female investors are both 50%. Most respondents who responded are in an age range of less than 25 years old (46.30%) while the next largest age group is in an age range of above 55 years old (28.70%). In regard to the investor's

education level, the majority in this study possess a bachelor's degree (65.74%). As for investment experience, most have less than one year of experience (45.37%) followed by experiences of 2 to 5 years and above 10 years (both 23.15%). Lastly, in terms of net monthly income, most respondents have less than RM2,000 (45.37%) followed by ranges of RM2,000-RM5,000 (21.30%) and RM5,000-RM8,000 (17.59%).

Table 3. Demographic Profiles of Respondents

<b>Demographic Variables</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Gender</b>		
Male	54	50.00%
Female	54	50.00%
<b>Age</b>		
Less than 25 years	50	46.30%
25-35 years	17	15.74%

35-45 years	4	3.70%
45-55 years	6	5.56%
More than 55 years	31	28.70%
<b>Education Level</b>		
Secondary School	2	1.85%
Foundation	0	0.00%
Diploma	15	13.89%
Bachelor's Degree	71	65.74%
Master's Degree	18	16.67%
PhD	2	1.85%
<b>Investment Experience</b>		
Less than 1 year	49	45.37%
2-5 years	25	23.15%
5-8 years	4	3.70%
8-10 years	5	4.63%
Above 10 years	25	23.15%
<b>Net Monthly Income</b>		
Less than RM2,000	49	45.37%
RM2,000-RM5,000	23	21.30%
RM5,000-RM8,000	19	17.59%
RM8,000-RM10,000	4	3.70%
RM 10,000 and above	13	12.04%
<b>Total</b>	<b>108</b>	<b>100%</b>

### 3. RESULTS AND DISCUSSION

SmartPLS was used to test the correlation between the latent variables and the results show that

all correlations between financial risk disclosures, operations risk disclosure and strategic risk disclosure significantly correlated with investor perceived confidence and trust (see Table 4).

**Table 4.** Path Coefficients (N:108)

Hypothesis	Relationship	Original Sample	P Values	Results
H1	FRD -> C	0.406	0.000	Significant
	FRD -> T	0.480	0.000	Significant
H2	ORD -> C	0.337	0.000	Significant
	ORD -> T	0.214	0.001	Significant
H3	SRD -> C	0.383	0.000	Significant
	SRD -> T	0.298	0.000	Significant

Note: C = Investor Perceived Confidence, FRD = Financial Risk Disclosure, ORD = Operations Risk Disclosure, SRD = Strategic Risk Disclosure, T = Investor Perceived Trust

In multigroup analysis, the interpretation of whether there is a significant difference of the path coefficients for the two groups is the most important [51]. The first step begins by analysing the 2 data

groups RI and RS separately prior to determining if there are group specific differences through separate path analysis (see Table 5).

**Table 5.** Data Groups Formed for COVID-19

Dummy Variable	Items	Records
RI	CVD1 (1.0) CVD2 (0.0)	20
RI	CVD1 (1.0) CVD2 (1.0)	85

RS	CVD1 (1.0) CVD3 (0.0)	13
RS	CVD1 (1.0) CVD3 (1.0)	92

It can be observed in Table 6 that the p values for both groups are closely similar to Table 9 which shows all relationships are significant.

**Table 6.** Bootstrapping Results for RI and RS

	RI		RS	
	Original Samples	P value	Original Samples	P value
<b>FRD -&gt; C</b>	0.361	0.000	0.406	0.000
<b>FRD -&gt; T</b>	0.533	0.000	0.471	0.000
<b>ORD -&gt; C</b>	0.361	0.000	0.315	0.000
<b>ORD -&gt; T</b>	0.188	0.017	0.213	0.005
<b>SRD -&gt; C</b>	0.407	0.000	0.408	0.000
<b>SRD -&gt; T</b>	0.298	0.000	0.307	0.000

For hypotheses 1, 2 and 3, this study has found a significant positive relationship between financial, operations and strategic risk disclosure to perceived investor confidence and trust. This supports the findings of the studies that have proved overall corporate risk disclosures have provided useful and important information to investors as well as boosting their confidence and trust [9][15][17][18]. In particular, this study provide supports that financial risk disclosures still are useful, valuable and a concern because financial information is still relevant as investors will definitely lean towards clear and concise financial risk disclosures [7][8]. Next, operations risk disclosures are also found to be a concern and factor for investors in their decision making due to its operation loss being a significant impact on a company's value [12][13][14]. Finally, the presences of strategic risk disclosures are also found to be another important factor to investors in their assessment and perception of a company's risk [19][20].

For hypotheses 4, 5 and 6, this study has not found any significant difference on the relationship of COVID-19's impact or improvement towards financial, operations and strategic risk disclosures to perceived investor confidence and trust. In addition, as to whether COVID-19 improves or impacts investor confidence and trust could not also be compared opposing each other due to both groups RI (relationship improved) and RS (relationship significant) do not have too many differences, implying no moderating role. Thus, it can be concluded that both dummy variables RI (relationship improved) and RS (relationship significant) are significantly similar to each other.

Nevertheless, the majority of investors have acknowledged that COVID-19 did have both significant impact and improvement towards their perceived confidence and trust towards financial, operations and strategic risk disclosure

#### 4. IMPLICATION

From this study, investor perceptions of confidence and trust in corporate risk disclosures appear relevant and valuable to its users, namely investors. The presence of corporate risk disclosures has confirmed its use again to positively affect investors' perceptions and reduce information asymmetry despite being pressured by risk and uncertainty of COVID-19 [27]. This in turn can possibly increase companies' sustainability and value as investors approve of the disclosures presented have informational relevance [15][41][52]. On the other hand, COVID-19 is thought to cause negative impacts on financial risk attitudes [22][53]. Nevertheless, this study's findings imply that investors accept COVID-19's presence in improving and impacting their confidence and trust in corporate risk disclosures. The presence of corporate risk disclosures had increased investor's trust which lowered the level of uncertainty and perceived risks [3]. Thus, this supports Lopatta et. al. [30] in agreement that investors highly valued companies that include critical global developments, such as COVID-19, in their reporting as a sign of transparency.

## 5. CONCLUSION AND RECOMMENDATION

Firstly, due to limited resources, accessibility and the ongoing pandemic, the methods of data collection have been limited very much towards online surveys and contacts under a restricted timeline. The collected sample size of 108 is considered the minimum and may be insufficient even though Ramayah et. al. [48] suggested the minimum sample size for PLS-SEM can be 30 to 100 observations. Secondly, the research framework is narrow with it being limited to only 3 types of corporate risk disclosures. This can be expanded further to other types of corporate governance disclosures other than corporate risk disclosures. Thirdly, the study is conducted within Malaysian geographical borders and the results may vary between different countries. Due to the differences in types of stock markets between different countries around the world, the reactions of investors may differ in unstabilised circumstances or crises caused by COVID-19 [1]. Finally, this study was conducted with a relatively minimal sample size of 108 despite having done bootstrapping samples of 500 with the help of an advanced software like SmartPLS. Thus, this sample size may not be sufficient enough to represent the entire population Malaysian individual investors and their perspective on corporate risk disclosures in Malaysia. This limitation is expected to be overcome for further research.

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