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THE RELATIONSHIP BETWEEN RISK-TAKING AND FIRM VALUE: DOES EARNINGS MANAGEMENT MATTER? EVIDENCE FROM AN EMERGING CONTEXT

Saleh Ali El Abd ¹, Aref M. Eissa ^{2*}, Ahmed Diab ³

^{1,2*}Department of Accounting, College of Business Administration, Majmaah University, Al Majmaah, 11952, Saudi Arabia

^{2*}Faculty of Commerce, Cairo University, Giza 12613, Egypt

³Prince Sultan University, Riyadh, Saudi Arabia & Beni-Suef University, Beni-Suef, Egypt

E-mails: ¹saleh.elabd@mu.edu.sa; ^{2*}a.eissa@mu.edu.sa (Corresponding author); ³adiab@psu.edu.sa

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Abstract. This study examines the effect of risk taking on firm value as well as the effect of risk taking on earnings management in Saudi Arabia. In addition, this study investigates the moderating effect of earnings management on the relationship between risk taking and firm value. We analyzed a sample of nonfinancial firms listed in the Saudi Stock Exchange (Tadawul). The study sample consists of 1008 firm-years observations during the period from 2008 to 2019. The results showed that risk-taking activities are positively valued by market participants and correlated with higher earnings management. In addition, the results indicated that earnings management moderates the positive relationship between risk taking and firm value. These findings are important for business organizations which should be aware that more opaque financial information, higher information asymmetry and lower firm value are likely to be the outcomes when managers engage in risky investment decisions. Governments and regulators should not ignore the negative implications of risk taking that require strengthening firms' oversight and corporate governance mechanisms.

Keywords: business risk; firm value; earnings management; emerging markets; Saudi Arabia

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JEL Classifications: G1, G12, G17

1. Introduction

Firms' risk taking (hereafter, RT) has gained significant attention from researchers worldwide, especially after the global financial crisis of 2008. RT reflects the relationship between risk and returns in the investment decision-making process. RT activities are expected to be associated with higher future returns. Further, RT activities are likely to focus on firm long-term performance and projects with larger payback periods. Such activities can have significant implications for the business environment and management behaviors (Fryt et al., 2022). While managers are bound by a fiduciary duty to act in the best interests of shareholders, their conflicting motivations, coupled with their executive authority and superior knowledge of the firm, often lead them to favor a conservative risk profile (Jensen & Meckling, 1976; Menicucci & Paolucci, 2022). However, favoring conservative investment decisions by management makes it easier for them to divert cash flows to their own advantage and engage in perks-consumption when the firm's earnings are less volatile, thus avoiding the potential for reduced cash flow (Paeleman et al., 2024).

Additionally, RT activities affect the firm's growth, present and future value, performance, and its survival in the market. Firms with high growth opportunities tend to engage in higher RT to maximize shareholder wealth, which may increase firm value (FV) (Chong et al., 2018; Younas et al., 2019; Oreshile et al., 2025). Therefore, RT is essential for firms to engage in new growth opportunities, which is vital to ensure their long-term survival, prosperity, and continuity (Su et al., 2017). In contrast, although value cannot be created without risk, excessive risk-taking can harm firms and may lead to their collapse. That is, RT activities could also have a high probability of failure. For instance, excessive RT behaviors might increase bankruptcy risks (Cao et al., 2023). Therefore, examining the effect of RT behaviors on firm value has become an important topic to reveal the existing ambiguity regarding the RT-FV relationship, especially in emerging markets such as Saudi Arabia.

Interestingly, firms with higher RT policies may engage in more earnings management (EM) (Alharbi et al., 2021; Mayberry et al., 2021; Cao et al., 2023). This behavior is considered important for these firms to avoid reporting losses or to increase share prices prior to seasoned equity offerings (Roychowdhury 2006). That is, higher firm risk may induce managers to rely on high equity capital and/or leveraged loans, which makes short-term performance more volatile and creates financial obstacles (Kyaw, 2020). Consequently, corporate management is motivated to engage in exploitative behaviors due to anxieties about career advancement, compensation contracts, litigation risks, profit targets, and the pursuit of business empires (Kothari et al., 2009). In other words, financial manipulations and misstatements may be achieved through exploiting circumstances by management to maintain their firm performance. However, more earnings management practices can negatively affect the capital market, resulting, for example, in stock price crashes (Habib & Hasan, 2017). Therefore, in this study, we are also interested in examining the potential moderating influence of earnings management practices on the relationship between RT and FV.

In doing so, we draw upon the agency theory to understand concerns that may arise when management optimal risk levels differ from those of shareholders. Such risks are closely linked to conflicts between managers (agents) and owners (principals) (Jensen & Meckling, 1976). Consequently, monitoring mechanisms are required as an important governance tool to manage agents' RT behaviors, which is vital to reduce information asymmetry, and, hence, agency problems (Geng et al., 2025; Jin et al., 2025). These concerns are exacerbated when managers engage in opportunistic or earnings management behaviors. These behaviors increase information asymmetry opacity, precluding shareholders' ability to effectively oversight management RT behaviors (Eissa et al., 2025).

Examining Saudi firms in this study is considered important because of the existing business risks in the Saudi business context represented in the economic volatility emerging from oil prices' fluctuations as well as legal and regulatory challenges, such as foreign ownership restrictions and surrounding geopolitical risks. However, recently, with the Saudi Vision 2030 for business growth, there are serious steps being taken by the government towards reducing business risks through following various development policies, the most notable of which is economic diversification. Such policies are considered vital to enhance financial stability and reduce market uncertainty in the business environment. Along with the emerging improvement in the Saudi business setting, it was crucial to enhance financial reporting quality. Recently, the Saudi government has mandated the adoption of the International Financial Reporting Standards (IFRS) by corporations to enhance disclosure, support economic transparency and achieve the business-related goals set in their Vision 2030 (Alruwaili et al., 2025).

By analyzing the data collected from nonfinancial firms listed on the Saudi Stock Exchange (Tadawul) during the period from 2008 to 2019, our results revealed that the positive effect of RT on firm value decreases under information opacity in firms with EM, which can be defined as the deliberate intervention by management in the financial reporting process, using accounting estimates or policy choices to influence reported earnings to achieve specific objectives. This result reflects that EM practices are negatively perceived in the Saudi Stock market. This finding indicates the existence of opportunistic behavior by managers in manipulating accounting numbers rather than reflecting the firm's true economic performance, which may aggravate information asymmetry and increase agency conflicts between management and shareholders. Hence, EM exacerbates management's opportunities to engage in opportunistic practices, such as an involvement in non-value-adding investments, transferring wealth away from shareholders (Eissa et al., 2025). This finding remained robust with using alternative measures of RT and EM. The current finding contributes to literature examining the

implications of RT and EM for FV (e.g., Imhof et al., 2014; Shin & Pyo, 2021; Cao et al., 2023). To the best of our knowledge, this is the first study that examines such relationships in emerging markets, such as Saudi Arabia. Further, the originality of the current study stems from its investigation of the moderating role of EM in the RT-FV relationship. At the practical level, our findings highlight to regulators, firms and governmental agencies the importance of considering the expected negative implications that emerge when firms implement RT policies. The current study ensures that more opaque financial information and earnings manipulations are likely to be reported when managers engage in higher risky investments, which can have significant negative implications for the capital market, such as stock price crashes.

The remainder of the paper is organized as follows. Section two reviews literature and develops the study hypotheses. Section three presents research methods. Section four provides results and discusses the study findings. Finally, section five concludes the paper.

2. Literature review and hypotheses development

2.1. The risk taking-firm value relationship

Literature suggests that firm risk can indicate the extent to which management decisions align with shareholder interests. However, literature mostly focuses on the period prior to taking risk decisions in firms. The classical finance theory views the relationship between risk taking and return as positive, meaning that higher risk is associated with higher returns (Van Dinh, 2023). For instance, Bowman (1980) notes that risky investment projects provide higher returns than other projects, but he/she finds a negative correlation between the level of risks in firms and the level of returns in most industries. Since the publication of Bowman (1980), numerous studies have investigated the relationship between risk and return, albeit with reporting mixed findings (e.g., Ghysels et al., 2016). It is noted that the resultant managerial exploitation and information opacity represent potential costs of enterprise risk, which may reduce corporate future value and could be a possible explanation for Bowman's results.

However, some previous studies documented that a firm's risk taking could benefit its long-term survival and economic growth (Li et al., 2013). Further, Imhof et al. (2014) and Shin and Pyo (2021) explained that excessive risk-taking is not value-destroying, rather it leads to a higher firm value. Consequently, we predict that RT can be positively correlated with firm value by setting our first hypothesis as follows:

H1: There is a positive effect of risk taking on firm value.

2.2. The risk-taking-earnings management relationship

After the financial crisis of 2008, many economic downturns were observed in some countries, with a significant increase in reported failures of high-risk projects. Cao et al. (2023) note that risks undertaken by firms are resource-intensive and depend on capital investment support. That is, the availability of sufficient financial support is a key success factor for high-risk projects. High-risk projects not only require capital investment but also longer payback periods and higher leverage ratios (Djemibissi et al., 2011). However, to avoid losses, financial institutions imposed higher interest rates and stricter contractual terms. Consequently, firms with high-risk projects faced greater constraints in using external financing. If these firms violate debt terms, they will face higher debt costs than other firms. Moreover, it is recognized that shareholders prefer to invest in firms pursuing projects with positive net present values, regardless of the associated risks (Faccio et al., 2016).

Therefore, considering such pressures, managers of RT firms have an incentive to manage earnings to avoid term or contract violations. That is, to secure support from financial institutions, managers are incentivized to manipulate earnings to report strong performance and low financial risk. This is consistent with the view that managers working in high-risk establishments are motivated to find ways to achieve their own personal gains (Dechow et al., 1995; Kothari et al. 2005; Hutton et al., 2009). In this regard, some studies have provided evidence that EM can be a useful tool for managers to achieve their personal goals. In this regard, Guidry et al. (1999) find that managers use accrual-based EM to maximize their short-term rewards. Roychowdhury (2006) noted that managers engage in transaction-based real EM to avoid reporting annual losses. Accordingly, managers in high risk-taking firms may engage in earnings manipulation, and selectively hoard firm-specific information in the process of operating risky projects (Cao et al., 2023). Considering the above discussion, we

expect that enterprise risk may encourage managers to adopt a more exploitative EM approach. Consequently, the second hypothesis is formulated as follows:

H2: There is a positive effect of RT on EM.

2.3. The moderating influence of earnings management on the RT-FV relationship

Accrual-based EM involves managers who select certain accounting policies from a range of generally accepted policies to achieve profit targets. Managers in firms with higher RT behaviors are expected to focus on improving earnings quality to increase the perceived value of the company depending on the correlation between reported earnings and share price. Recent literature indicates that RT is likely to be associated with EM practices (e.g., Cao et al., 2023). However, although EM activities are informative, they allow managers to display opportunistic behaviors and mislead stakeholders (e.g., Cao et al., 2023). Consequently, we believe that EM might moderate the expected positive relationship between RT and FV. Hence, the third Hypothesis is set as follows:

H3: EM practices moderate the relationship between RT and firm value.

3. Data and methodology

This study employs a quantitative research method based on a deductive methodology. We reviewed literature to develop the study hypotheses. Such hypotheses were empirically tested depending on financial data as shown below in section 3.1. The deductive methodology is considered appropriate for examining the relationships among the earnings management, risk taking and firm value, and for theoretically validating the derived hypotheses.

3.1. Sample selection

This study population consisted of all firms listed on the Saudi Stock Exchange (Tadawul) during the period from 2008 to 2019. Financial data were extracted manually from the annual financial statements, and governance data were extracted from governance reports. Stock prices were collected from “*saudiexchange.sa*”, “*argaam.com*”, and “*mubasher.info/markets/TDWL*”. Sectors with less than 24 observations were excluded to ensure the accuracy of calculating abnormal accruals according to the modified Jones model (1991) used by Dechow et al. (1995). Also, sectors such as financial services, insurance, and banking are excluded, as they are subject to different regulatory procedures. Finally, firms with missing data were excluded. Applying the above criteria, the final sample size was 84 firms with 1008 firm-years observations. Table 1 presents sample distribution across sectors.

Table 1. Sample distribution

Sector		Observations	Percentage
1	Basic materials	384	38.10%
2	Capital goods	108	10.71%
3	Consumer services	48	4.76%
4	Durable goods	48	4.76%
5	Food retail and production	168	16.67%
6	Healthcare	24	2.38%
7	Luxury goods retail	48	4.76%
8	Media and entertainment	24	2.38%
9	Transportation	48	4.76%
10	Telecommunications	36	3.57%
11	Real estate management and development	72	7.14%
Total		1008	100%

3.2. Variables' measurements

Firm value is measured depending on Tobin's Q as a ratio of the firm's market value to total assets (Eissa & Eliwa, 2021; Eissa et al., 2025). RT is measured depending on the standard deviation of return on assets and return on equity (Harjoto & Laksmana, 2018; Bhuiyan et al., 2021). EM is measured depending on the modified Jones model (1991) used by Dechow et al. (1995) as follows:

$$ACC_{it}/TA_{it-1} = \alpha + B_1(1/TA_{it-1}) + B_2[(\Delta REV_{it} - \Delta REC_{it})/TA_{it-1}] + B_3(PPE_{it}/TA_{it-1}) + \varepsilon_{it} \text{ Model (1)}$$

In addition, EM is computed according to modified Jones model (1991) used by Kothari et al. (2005), in which return on assets is added, as follows:

$$ACC_{it}/TA_{it-1} = \alpha + B_1(1/TA_{it-1}) + B_2[(\Delta REV_{it} - \Delta REC_{it})/TA_{it-1}] + B_3(PPE_{it}/TA_{it-1}) + B_4(ROA_{it-1}/TA_{it-1}) + \varepsilon_{it} \text{ Model (2)}$$

Where: ACC_{it} is total accruals computed as the difference between net profit and operating cash flow, TA_{it-1} is total assets in the beginning of the year, ΔREV_{it} is the change of revenues during the year t, ΔREC_{it} is the change in receivables during the year t. PPE_{it} is the gross Property, Plant, and Equipment. ROA_{it-1} is lagged return on assets for firm i.

3.3 Research models

To test the first hypothesis "there is a positive effect of RT on firm value in Saudi Arabia", the study follows Bhuiyan et al. (2021); in formulating the model as follows:

$$FV_{it} = \alpha + B_1(RT_{it}) + B_2(FirmSize_{it}) + B_3(LEV_{it}) + B_4(ROA_{it}) + B_5(FAge_{it}) + B_6(ASize_{it}) + B_7(Industries) + B_8(Years) \text{ Model (3)}$$

To test the second hypothesis "there is a positive effect of RT on EM in Saudi Arabia", the study follows Harjoto and Laksmana (2018); Eissa and Eliwa (2021) in formulating the model as follows:

$$EM_{it} = \alpha + B_1(RT_{it}) + B_2(FirmSize_{it}) + B_3(LEV_{it}) + B_4(ROA_{it}) + B_5(FAge_{it}) + B_6(ASize_{it}) + B_7(Industries) + B_8(Years) \text{ Model (4)}$$

To test the third hypothesis "EM moderates the relationship between RT and firm value in Saudi Arabia", the study follows Harjoto and Laksmana (2018); Eissa and Eliwa (2021) in formulating the model as follows:

$$FV_{it} = \alpha + B_1(RT_{it}) + B_2(EM_{it}) + B_3(RT_{it} * EM_{it}) + B_4(FirmSize_{it}) + B_5(LEV_{it}) + B_6(ROA_{it}) + B_7(FAge_{it}) + B_8(ASize_{it}) + B_9(Industries) + B_{10}(Years) \text{ Model (5)}$$

Where: $EM_{1\&2it}$ is EM for firm i in the year t, computed according to Models 1 and 2, $RT_{1\&2it}$ is measured depending on standard deviation of return on assets and return on equity for firm i across five years t to t-4. FV_{it} is firm value depending on Tobin's Q as mentioned in section 4-2, $FirmSize_{it}$ is the natural logarithm of total assets for firm i at the end year t. LEV_{it} is the firm leverage computed according to total debt scaled by total assets for firm I in the year t, ROA_{it} is return on assets computed as net profit scaled by total assets for firm i in the year t, $FAge_{it}$ is the natural logarithm for firm age, $ASize_{it}$ is a dummy variable equal one if the firm is audited by big4 and zero otherwise.

4. Empirical results

4.1. Descriptive statistics

Table 2 shows descriptive statistics of our data. The mean value of FV is 1.638 with a standard deviation (SD) of 0.760, and a range from 0.09 to 3.27. The mean value of EM_1 is 0.045 with an SD of 0.038, and a range from 0.00 to 0.14. The mean value of EM_2 is 0.044 with an SD of 0.038, and a range from 0.00 to 0.13. The mean value of RT_1 is 0.073 with an SD of 0.180, and a range from 0.01 to 1.68. The mean value of RT_2 is 0.180 with an SD of 0.384, and a range from 0.02 to 2.92.

Table 2. Descriptive statistics

		FV	EM1	EM2	RT ₁	RT ₂	FirmSize	LEV	ROA	FAge	ASize
N	Valid	1008	1008	1008	1008	1008	1008	1008	1008	1008	1008
	Missing	0	0	0	0	0	0	0	0	0	0
Mean		1.638	0.045	0.044	0.073	0.180	14.545	0.375	0.054	3.203	0.584
Std. Error of Mean		.023	0.001	0.001	0.005	0.012	0.047	0.006	0.002	0.0186	0.0155
Median		1.370	0.034	0.032	0.048	0.076	14.487	0.367	0.045	3.332	1.000
Std. Deviation		0.760	0.038	0.038	0.180	0.384	1.496	0.209	0.081	0.591	0.493
Minimum		0.09	0.00	0.00	0.01	0.02	11.05	0.01	-0.13	0.00	0.00
Maximum		3.27	0.14	0.13	1.68	2.92	17.68	0.94	0.24	4.14	1.00

Table 3 presents Pearson correlation matrix. *EM1* and *EM2* are positively correlated with *FV* at the 5% significance level. Notably, the positive relationship between *EM* and *FV* in Saudi Arabia can be explained by the fact that Saudi Market is an emerging market that does not differentiate between actual and managed earnings due to market inefficiencies (Asiri & Alzeera, 2013; Alreshidi, 2025; Asiri et al., 2026). Here, corporate managers engage in *EM* to reduce earnings volatility and project stability, which may be interpreted by investors as a positive signal (De Jong et al., 2014). Furthermore, we noticed that ownership concentration reduces the opportunistic nature of *EM* and makes it a tool for aligning expectations (Usman & Yero, 2012). Regulatory oversight mitigates the perceived risks associated with this behavior (Jouber & Fakhfakh, 2011). Consequently, *EM* has a positive impact on firm value in the short term. Further, *RT₁* and *RT₂* are positively correlated with *FV* at the 1% level. In addition, the correlations between independent variables are below 0.5, and the VIF in all regression is below 4, suggesting that our regressions do not reflect the presence of the multi-collinearity problem.

Table 3. Correlations' matrix

Correlations											
		FV	EM1	EM2	RT ₁	RT ₂	FirmSize	LEV	ROA	FAge	ASize
FV	Pearson Correlation	1									
	Sig. (2-tailed)										
	N	1008									
EM1	Pearson Correlation	0.065**	1								
	Sig. (2-tailed)	.040									
	N	1008	1008								
EM2	Pearson Correlation	0.063**	.946***	1							
	Sig. (2-tailed)	.047	.000								
	N	1008	1008	1008							
RT ₁	Pearson Correlation	.267***	.160***	.167***	1						
	Sig. (2-tailed)	.000	.000	.000							
	N	1008	1008	1008	1008						
RT ₂	Pearson Correlation	.227***	.196***	.190***	.841***	1					
	Sig. (2-tailed)	.000	.000	.000	.000						
	N	1008	1008	1008	1008	1008					
FirmSize	Pearson Correlation	-.292***	-.219***	-.206***	-.294***	-.305***	1				
	Sig. (2-tailed)	.000	.000	.000	.000	.000					
	N	1008	1008	1008	1008	1008	1008				
LEV	Pearson Correlation	-.141***	.117***	.121***	-.143***	.028	.390***	1			
	Sig. (2-tailed)	.000	.000	.000	.000	.376	.000				
	N	1008	1008	1008	1008	1008	1008	1008			
ROA	Pearson Correlation	.244***	-.134***	-.143***	-.082***	-.201***	.115***	-.311***	1		

	Sig. (2-tailed)	.000	.000	.000	.009	.000	.000	.000			
	N	1008	1008	1008	1008	1008	1008	1008	1008		
FAge	Pearson Correlation	.195***	-.078**	-.065**	.013	-.047	-.209***	-.212***	.115***	1	
	Sig. (2-tailed)	.000	.013	.039	.680	.135	.000	.000	.000		
	N	1008	1008	1008	1008	1008	1008	1008	1008	1008	
ASize	Pearson Correlation	.025	-.097***	-.087***	-.184***	-.218***	.439***	.204***	.286***	-.113***	1
	Sig. (2-tailed)	.424	.002	.006	.000	.000	.000	.000	.000	.000	
	N	1008	1008	1008	1008	1008	1008	1008	1008	1008	1008

*, **, ***, Correlation is significant at the 0.10, 0.05 and 0.01 levels respectively (Sig 2-tailed).

4.2. Testing the RT-FV relationship (H1)

We estimated model 3 depending on the OLS regression method to test our first hypothesis (i.e., the RT-FV relationship). As shown in Panel A of Table 4, the results reveal that RT_1 and RT_2 have significant positive effects on FV with $\beta = 1.084$, and 0.506 at $p < 0.01$, respectively. This result indicates that firm value increases during period of increased risk-taking. In addition, we re-estimated model 3 after controlling for lagged Tobin's Q to avoid issues stemming from endogeneity and reverse-causality. Such issues arise from ignoring some variables affecting the consistency of RT and the market value of the firm when formulating the regression model, or from the existence of a reciprocal effect between the market value of the firm and RT . The results presented in Panel B of Table 4 ensure that RT has a positive effect on firm value. These results are consistent with the view that risk-taking, which stems from the selection of investment projects with varying uncertainties about expected future cash flows increases firm value (e.g., Jensen & Meckling, 1976). These results are consistent with literature supporting this prediction (e.g., Imhof et al., 2014), supporting the acceptance of H1.

Table 4. The OLS regression results of model 3 (H1)

Panel A: OLS regression of Model 3

	Dependent variable is (FV)					
	Independent RT ₁			Independent RT ₂		
	B	t	Sig.	B	t	Sig.
Intercept	3.239***	10.918	0.000	3.457***	11.317	0.000
RT ₁	1.084***	9.226	0.000			
RT ₂				0.506***	8.586	0.000
FirmSize	-0.178***	-9.167	0.000	-0.174***	-8.903	0.000
LEV	0.211	1.637	0.102	0.072	.556	0.578
ROA	2.710***	8.905	0.000	2.897***	9.410	0.000
FAge	0.099**	2.415	0.016	.097**	2.349	0.019
ASize	0.207***	4.423	0.000	0.221***	4.686	0.000
Industries	Included			Included		
Years	Included			Included		
Adjusted R Square	37.5%			36.8%		
F test	22.55***			21.939***		
Obs.	1008			1008		

Panel B: OLS regression of Model 3 after controlling lagged firm value

	Dependent variable is (FV)					
	Independent RT ₁			Independent RT ₂		
	B	t	Sig.	B	t	Sig.
Intercept	0.939***	4.866	0.000	0.933***	4.803	0.000
RT ₁	0.289***	3.839	0.000			
RT ₂				0.126***	3.360	0.001
FirmSize	-0.043***	-3.416	0.001	-0.042***	-3.301	0.001
LEV	0.016	.198	0.843	-0.024	-.305	0.760
ROA	0.737***	3.754	0.000	0.772***	3.879	0.000
FAge	0.020	.737	0.461	0.018	.658	0.511
ASize	0.049*	1.683	0.093	0.052*	1.757	0.079
FV _{t-1}	0.800***	40.807	0.000	0.804***	41.097	0.000

Industries	Included	Included
Years	Included	Included
Adjusted R Square	78.9%	78.8%
F test	123.9***	123.310***
Obs.	924	924

4.3. Testing the RT-EM relationship (H2)

We estimated model 4 depending on the OLS regression method to test our second hypothesis (i.e., the RT-EM relationship). As shown in Panel A of Table 5, the results explain that RT_1 has a significant positive effect on EM_1 and EM_2 with $\beta = 0.017$, and 0.018 at $p < 0.05$ and 0.01, respectively. Also, RT_2 has a significant positive effect on EM_1 and EM_2 with $\beta = 0.006$, and 0.007 at $p < 0.05$, respectively. These results ensure that EM rises during the period of increased risk-taking.

In addition, we re-estimated model 4 after controlling for audit committee characteristics (e.g., expertise, meetings frequency, size, independence and ownership interest), to avoid the potential endogeneity stemming from omitted variables that may affect EM practices. In doing so, audit committee expertise (ACE) is measured by the proportion of audit experts on the audit committee. Audit committee meetings (ACM) are measured using the natural logarithm of the number of audit committee meetings in a year. Audit committee size (ACS) is measured by the number of members in the committee. Audit committee independence (ACIND) is measured as the proportion of independent members in the committee. Finally, audit committee ownership (ACO) is measured as the proportion of shares held by audit committee members. The results presented in Panel B of Table 5 confirm the previous results, i.e., RT has a positive effect on EM, supporting H2. Hence, RT can lead firms to conceal the material information regarding risky investments in various accrual accounts. Consequently, RT is associated with EM practices, which decreases transparency financial reporting quality (Mayberry et al., 2021; Cao et al., 2023).

Table 5. OLS regression results of model 4 (H2)

Panel A: OLS regression of Model 4												
	Dependent variable is (EM1)						Dependent variable is (EM2)					
	Independent RT ₁			Independent RT ₂			Independent RT ₁			Independent RT ₂		
	B	t	Sig.	B	t	Sig.	B	t	Sig.	B	t	Sig.
Intercept	0.131***	7.382	0.000	0.125** *	6.857	0.000	0.117** *	6.777	0.000	0.110	6.197	.000
RT ₁	0.017**	2.370	0.018				0.018** *	2.650	0.008			
RT ₂				0.006**	1.920	0.045				0.007**	01.984	0.035
FirmSize	- 0.005***	-4.678	0.000	- 0.005** *	-4.684	0.000	- 0.004** *	-3.956	0.000	- 0.005** *	-4.020	0.000
LEV	0.030***	3.918	0.000	0.028** *	3.661	0.000	0.026** *	3.382	0.001	0.023** *	3.078	0.002
ROA	-0.004	-0.212	.832	-0.002	-.100	0.920	-0.021	-1.203	0.229	-0.020	-1.099	0.272
FAge	-0.005**	-2.173	0.030	- 0.005**	-2.226	0.026	-0.004*	-1.726	0.085	-0.004*	-1.812	0.070
ASize	-0.002	-0.805	0.421	-0.002	-.756	0.450	-0.002	-0.668	0.504	-0.002	-0.632	0.527
Industries	Included			Included			Included			Included		
Years	Included			Included			Included			Included		
Adjusted R Square	14.6%			16.8%			15%			14.7%		
F test	7.164***			7.066***			7.354***			7.189***		
Obs.	1008			1008			1008			1008		
Panel B: OLS regression of Model 4 after controlling audit committee characteristics												
	Dependent variable is (EM1)						Dependent variable is (EM2)					
	Independent RT ₁			Independent RT ₂			Independent RT ₁			Independent RT ₂		
	B	t	Sig.	B	t	Sig.	B	t	Sig.	B	t	Sig.
Intercept	0.128***	6.155	0.000	0.131** *	6.232	0.000	0.118** *	5.731	0.000	0.121** *	5.854	0.000
RT ₁	0.023***	3.115	0.002				0.019** *	2.680	0.007			

RT ₂				0.009**	2.355	0.019				0.006*	1.777	0.076
FirmSize	- 0.006***	-4.546	0.000	- 0.006** *	-4.584	0.000	- 0.005** *	-3.976	0.000	- 0.005** *	-4.049	0.000
LEV	0.039***	4.525	0.000	0.036** *	4.207	0.000	0.035** *	4.162	0.000	0.033** *	3.879	0.000
ROA	0.013	.693	0.489	0.017	.859	0.391	-0.002	-0.091	0.928	0.001	0.028	0.977
FAGE	-0.004	-1.582	0.114	-0.005	-1.645	0.100	-0.004	-1.546	0.123	-0.004	-1.625	0.105
ASize	-0.003	-1.038	0.299	-0.003	-1.012	0.312	-0.003	-.895	0.371	-0.003	-0.893	0.372
ACE	-0.017*	-1.699	0.090	-0.018*	-1.787	0.074	-0.005	-.536	0.592	-0.007	-0.639	0.523
ACM	0.000	.104	0.917	- 1.794E- 5	-.029	0.977	0.000	0.434	0.665	0.000	0.318	0.751
ACS	0.002	.797	0.425	0.002	.899	0.369	0.001	0.322	0.748	0.001	0.411	0.681
ACI	- 0.023***	-2.743	0.006	- 0.023** *	-2.732	0.006	- 0.019**	-2.303	0.022	-0.019*	-2.278	0.023
ACO	0.000*	-1.766	0.078	0.000*	-1.696	0.090	0.000*	-1.938	0.053	0.000*	-1.877	0.061
Industries	Included			Included			Included			Included		
Years	Included			Included			Included			Included		
Adjusted R Square	14.6%			14.2%			13.8%			13.4%		
F test	5.787***			5.631***			5.465***			5.315***		
Obs.	1008			1008			1008			1008		

4.4. Testing the moderating influence of EM on the RT-FV relationship (H3)

We estimated model 5 depending on the OLS regression method to test our third hypothesis (i.e., the expected moderating influence of EM on the RT-FV relationship). As shown in Panel A of Table 6, Columns 1 to 4, reveal that RT1 and RT2 have a significant positive effect on FV with $\beta = 1.697, 1.698, 0.590$ and 0.568 at $p < 0.01$, respectively. This result ensures that firm value increases during periods of increased risk-taking. However, EM moderates the positive relationship between RT and firm value. The interaction variables RT1*EM1 and RT1*EM2 have a significant negative effect on FV (As shown in Columns 1-2) with $\beta = -6.650$ and -6.575 at $p < 0.01$, respectively. Likewise, the interaction variables RT2*EM1 and RT2*EM2 have a significant negative effect on FV (As shown in Columns 3-4) with $\beta = -3.068$ and -3.818 at $p < 0.05$, respectively. These results indicate that market participants react negatively to RT when EM practices increase.

Additionally, we re-estimated model 5 after controlling for lagged Tobin's Q. The results presented in Panel B of Table 5 confirm that EM still moderates the positive relationship between RT and firm value, consistent with our prediction in H3. This finding can be explained within the framework of agency theory (Jensen and Meckling, 1976), as risk-taking is generally viewed as a positive factor reflecting management's pursuit of value-added investment opportunities. However, the increase in EM alongside rising risk levels alter the significance of this behavior. In high-risk environments, management tends to use EM to reduce volatility or conceal true performance, thereby distorting accounting information (Beyer et al., 2019; Eissa et al., 2025). This distortion undermines investor confidence and increases information asymmetry, ultimately raising the cost of capital and reducing the company's market value (Chaney & Lewis, 1995). These results are consistent with literature that highlights the importance of governance tools to manage agents' risk-taking behaviors to mitigate agency problems (Geng et al., 2025; Jin et al., 2025).

Consequently, the RT-FV relationship shifts from positive to negative when risk-taking is interpreted as opportunistic behavior supported by EM, rather than as an efficient investment decision. At this time, EM acts are negatively perceived, transforming risk from a source of value into a source of erosion.

Table 6. OLS regression results of model 5 (H3)

Panel A: OLS regression of Model 5												
	Dependent variable is (FV)						Dependent variable is (FV)					
	Column 1			Column 2			Column 3			Column 4		
	Independent RT_1*EM_1			Independent RT_1*EM_2			Independent RT_2*EM_1			Independent RT_2*EM_2		
	B	t	Sig.	B	t	Sig.	B	t	Sig.	B	t	Sig.
Intercept	3.343***	10.439	0.000	3.260** *	10.198	0.000	3.339** *	10.423	0.000	3.356** *	10.504	0.000
RT ₁	1.697***	7.050	0.000	1.698** *	6.429	0.000						
RT ₂							0.590** *	5.620	0.000	0.568** *	5.298	0.000
EM ₁	1.475**	2.575	0.010				1.210**	2.039	0.042			
EM ₂				1.425**	2.421	0.016				1.190*	1.955	0.051
RT ₁ *EM ₁	- 6.650***	-2.984	0.003									
RT ₁ *EM ₂				- 6.575** *	-2.661	0.008						
RT ₂ *EM ₁							-3.068**	-2.033	0.030			
RT ₂ *EM ₂										-3.818**	-1.961	0.044
FirmSize	- 0.169***	-8.673	0.000	- 0.170** *	-8.724	0.000	- 0.168** *	-8.494	0.000	-0.169	-8.549	0.000
LEV	0.197	1.516	0.130	0.195	1.504	0.133	0.040	0.309	0.758	0.041	0.315	0.753
ROA	2.741***	9.046	0.000	2.711** *	8.932	0.000	2.920** *	9.475	0.000	2.924** *	9.497	0.000
FAge	0.104**	2.555	0.011	0.104**	2.548	0.011	0.103**	2.493	0.013	0.102**	2.479	0.013
ASize	0.210***	4.503	0.000	0.211** *	4.533	0.000	0.224** *	4.763	0.000	0.224** *	4.756	0.000
Industries	Included			Included			Included			Included		
Years	Included			Included			Included			Included		
Adjusted R Square	38.1%			37.9%			39.9%			39.9%		
F test	21.636***			21.526***			20.662***			20.643***		
Obs.	1008			1008			1008			1008		
Panel B: OLS regression of Model 5 after controlling lagged firm value												
	Dependent variable is (FV)						Dependent variable is (FV)					
	B	t	Sig.	B	t	Sig.	B	t	Sig.	B	t	Sig.
Intercept	0.736***	3.615	0.000	0.929** *	4.557	0.000	0.893** *	4.455	0.000	0.895** *	4.483	0.000
RT ₁	0.581***	3.984	0.000	0.558** *	3.494	0.000	0.190** *	2.997	0.003			
RT ₂										0.204** *	3.161	0.002
EM ₁	0.375	1.035	0.301				0.292	0.781	0.435			
EM ₂				0.229	0.622	0.534				0.250	0.659	0.510
RT ₁ *EM ₁	-3.230**	-2.346	0.019									
RT ₁ *EM ₂				-2.896*	-1.908	0.057						
RT ₂ *EM ₁							-2.799**	-2.257	0.020			
RT ₂ *EM ₂										-1.974**	-2.485	0.0138
FirmSize	- 0.041***	-3.246	0.001	- 0.042** *	-3.292	0.001	- 0.040** *	-3.157	0.002	- 0.040** *	-3.173	0.002
LEV	0.019	0.231	0.817	0.018	0.227	0.821	-0.031	-0.384	0.701	-0.034	-0.426	0.670
ROA	0.753***	3.840	0.000	0.729** *	3.711	0.000	0.785** *	3.940	0.000	0.777** *	3.901	0.000
FAge	0.021	0.770	0.442	0.020	0.764	0.445	0.018	0.686	0.493	0.019	0.692	0.489
ASize	0.050*	1.727	0.084	0.051*	1.742	0.082	0.053*	1.806	0.071	0.054*	1.822	0.069
FV _{t-1}	0.798***	40.695	0.000	0.799** *	40.676	0.000	0.804** *	41.026	0.000	0.804** *	41.033	0.000
Industries	Included			Included			Included			Included		

Years	Included	Included	Included	Included
Adjusted R Square	78.9%	79.6%	78.8%	78.7%
F test	116.281***	115.976***	115.099***	115.189***
Obs.	924	924	924	924

5. Discussion and conclusion

This research contributes to the existing literature by investigating the effect of RT on firm value and the effect of RT on EM. We depend on a sample of nonfinancial firms listed on Saudi Arabia Stock Exchange (Tadawul), during the period 2008 to 2019, where the final sample size includes 1008 firm years observations. The results revealed a positive effect of RT on firm value in Saudi Arabia, consistent with the agency theory that (Jensen & Meckling, 1976), and existing empirical literature (e.g., Imhof et al., 2014). In addition, we find a positive effect of RT on EM in Saudi Arabia, consistent with previous studies indicating that firms with RT use various accrual accounts for concealing the material information regarding risky investments, which ultimately decreases transparency and financial statements' quality (Mayberry et al., 2021; Cao et al., 2023).

Besides, our results revealed that EM moderates the relationship between RT and firm value in Saudi Arabia. This finding is consistent with the agency theory (Jensen & Meckling, 1976), indicating that the prevalence of EM practices along with rising risk behavior alters the market valuation of these risk-taking activities. Managers tend to use EM to reduce volatility or conceal true performance, thereby distorting accounting information during risk-taking periods. Such a distortion undermines investor confidence and increases information asymmetry, ultimately raising the cost of capital and reducing firm value.

This study contributes to literature by presenting unique evidence on the relationship between RT and firm value in emerging markets, such as Saudi Arabia, by investigating the moderating role of EM in the RT-FV relationship. At the practical level, our findings highlight to businesses and investors importance of considering the expected negative implications that emerge when firms implement RT policies. The current study ensures that more opaque financial information and earnings manipulations would be the result when managers engage in higher risky investments, which can have significant negative implications for the capital market, such as stock price crashes. In this context, governments and regulators should ensure the application of effective oversight and corporate governance mechanisms in firms to reduce the negative implications of risk taking.

Finally, our results are not without limitations as we measured RT depending on volatility in ROA and ROE, and EM depending on accruals EM. Future research can re-examine the underlying relationships depending on different proxies for RT and real activity manipulation. Moreover, future research may consider re-examining the existing relationships across longer periods, considering bankruptcy risks when testing the effect of EM on the relationship between RT and firm value. Finally, future studies may consider investigating the effects of macro-economic variables, such as economic policy uncertainty and geopolitical risks, on the relationship between RT and firm value.

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Saleh Ali El ABD

ORCID: <https://orcid.org/0009-0002-7638-7603>

Aref M. EISSA

ORCID: <https://orcid.org/0000-0003-1878-6374>

Ahmed DIAB

ORCID: <https://orcid.org/0000-0001-8413-7829>

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