

DOES ANALYST FOLLOWING IMPROVE FIRM PERFORMANCE? EVIDENCE FROM THE MENA REGION

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Abstract

Given ineffective disclosure and governance mechanisms, are there any mechanisms that can help improve performance of firms in the MENA region? This paper aims to answer the above question by documenting the effect of analyst following on firm performance during the period between 2005 and 2009. Our results show that the extent of analyst following does positively affect firm performance. However, this beneficial impact exists only at high level of analyst following. At lower levels of analysts following, our results show negative relationship between the two. We argue that high levels of analyst following, it becomes hard for insiders to evade effective disclosure of firm value. It, therefore, leads to lower agency problems and, eventually, to better performance. We also show that high levels of analyst following, partly, improve the informativeness of reported earnings. However, it does not improve the informativeness to an extent that the information contained in reported earnings is positively reflected in stock prices.

JEL classification: G32

Keywords: Analyst Following; Corporate Governance; Firm Performance; Earnings Informativeness; Emerging Markets

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1. Introduction

Information is the key to efficient functioning of the stock markets. Securities get priced correctly when the relevant information about firms get incorporated into the prices. Financial analysts play an important role in this process by bringing out new information about firms. Under normal circumstances, stock market participants view analysts' research reports, forecasts, and recommendations as relatively accurate sources of information and use them in their investment decisions. Jensen and Meckling (1976) suggest that, as information intermediaries, financial analysts are able to mitigate the agency problems present within firms. Merton (1987) argues that the market value of a firm is an increasing function of the breadth of investor awareness. Conventional wisdom suggests that one of the ways to increase awareness of an investor regarding a certain firm is by increasing the extent of analyst following. Chung and Jo (1996) argue that the value of a firm is a positive function of number of analysts following a firm. In addition to increasing awareness, analyst following may also effect firm valuation by reducing information asymmetries and agency problems. Analysts perform the task of discovering any information that firm decides to hide. In doing so, they act as a device that

ensures that all information is presented to stock market participants. As a result, they help reduce information asymmetries and positively impact firm valuation. Furthermore, greater the extent of analyst following, greater is the amount of information that gets discovered. The extent of analyst following, therefore, should be an important determinant of the relationship between analyst following and firm valuation.

In this paper, we aim to extend the above strand of literature by documenting whether the extent of analyst following improves firm performance, an important proxy for firm valuation, in the previously unexplored region of the Middle East and North Africa (MENA). To the best of our knowledge, this is the first attempt to relate the two in the MENA region. Given the ability of analysts to uncover new information, it is intuitive to argue that they are able to reduce information asymmetries between outsiders and insiders. Reduction in information asymmetries makes expropriation technology costly and results in disciplining the managers by reducing agency problems. Therefore, analyst following is an obvious determinant of firm performance. Furthermore, conventional wisdom suggests that greater is the extent of analyst following for a certain firm, higher is the reduction in information asymmetries. As a result,

greater is the extent of analyst following, better should be firm performance. Consistent with our expectations, our results show that analyst following does positively affect firm performance in the MENA region (Morocco, Egypt, Saudi Arabia, United Arab Emirates, Jordan, Kuwait, and Bahrain) during the period between 2005 and 2009. However, this positive impact exists only at high levels of analyst following. At lower levels of analyst following, we report a negative impact of analyst following on firm performance – an unexpected finding. Our results are, partly, consistent with prior literature that considers any mechanism that helps resolve information asymmetries between insiders and outsiders as value relevant for stock market participants. As an example, consider Lang et al. (2004) who document a positive valuation effect of analyst following in emerging markets. They argue that emerging markets have scarcity of information, thereby enhancing the value relevance of any mechanism that provides valuable information to investors. Our results are partly consistent because at the lower levels of analyst following, our results show that the extent of analyst following negatively impacts firm performance. This is surprising because, at most, low analyst following should result in no impact on firm performance. Negative association between the two is counter intuitive.

Another surprising finding of our analysis is the negative relationship between firm performance and earnings per share. This relationship is also robust across different sub-samples. One reason for this negative impact is the low information content of reported earnings. Investors, aware of the fact that firms in the emerging markets misreport information, have little faith on reported information. Therefore, they discount earnings per share. In order to see whether the extent of analyst following improves the informativeness of reported earnings, this paper also documents the impact of analyst following on the informativeness of reported earnings. Our results show that analyst following does improve the informativeness of reported earnings, but it does not completely offset the lower faith that investors have on reported information. Our results show that the magnitude of negative relationship between earnings per share and firm performance reduce significantly as the extent of analyst following goes up.

Our results are important for investors investing in the MENA region. One of the main problems faced by these investors is that it is almost impossible for them to differentiate between good and bad firms. However, our results show that investors can use analyst following to infer which firm is expected to do good and which firm is expected to do bad. Furthermore, our results also indicate that analyst following can also be used to improve the informativeness of reported earnings. Our results show that investors can complement accounting information with analyst following to distinguish

between true and manipulated accounting information. It is important to mention here that our paper adds to the debate on the effectiveness of alternate/external governance mechanisms in the MENA region. Unlike the developed markets, analysts are not considered very important monitoring mechanisms in the MENA region. Farooq and Id Ali (2012) show no value in analysts' recommendation in the MENA region. They consider lower demand for analyst services and relatively low market for reputation in the MENA region for their result. However, our results indicate that analysts do have some value for stock market participants. The increased scrutiny provided by them helps in reducing information asymmetries, thereby improving firm performance.

The remainder of the paper is structured as follows: Section 2 briefly discusses motivation and background for this study. Section 3 summarizes the data and Section 4 presents assessment of our hypothesis. Section 5 discusses implications of our findings and the paper concludes with Section 6.

2. Motivation and background

Prior literature characterizes emerging markets with ineffective and weak corporate governance mechanisms. Claessens and Fan (2003), for instance, note that traditional governance mechanisms are weak in emerging markets. In another related study, Farooq and Kacemi (2011) document that an average firm in the Middle East and North Africa is owned and controlled by a single entity. They argue that concentration of ownership in the hands of a few gives rise to many of the agency problems. These and numerous other studies argue that weak enforcement of investor protection laws, presence of family control, and lax implementation of anti-director rights contribute to ineffectiveness of corporate governance mechanisms in emerging markets. Prior literature suggests that ineffective governance mechanisms result in poor information disclosure. Leuz et al. (2003), for instance, document that managers and insiders do not disclose true information about their firms in emerging markets. As a result, agency problems are exacerbated, thereby causing adverse impact on firm performance. Dowell et al. (2000) argue that firms with no or little adaptation to global governance standards have lesser market value. In another related study, Black (2001) shows that ineffective corporate governance mechanisms adversely affect firm valuations in emerging markets. This strand of literature argues that higher information asymmetries in poorly governed firms provide incentives to managers/controlling shareholders to expropriate resources, thereby negatively affecting firm performance.

Given that financial analysts can help resolve some of the inefficiencies in corporate governance mechanisms, this paper argues that analyst following

is a value enhancing mechanism in emerging markets. Analysts resolve inefficiencies in governance mechanisms by bringing out new information to stock market participants. Michaely and Womack (1999) note that analysts are the agents that collect, interpret, and disseminate public and private information to stock market participants. By disseminating valuable information, analysts are able to resolve information asymmetries. Amir et al. (1999) also suggest that analysts' research mitigate information deficiencies present in financial statements. This paper argues that analysts' role as information providers is of paramount importance in emerging markets (Claessens et al., 2002; Lins, 2003; Dyck and Zingales, 2004; Nenova, 2003). Nenova (2003) argues that investors discount firms with high information asymmetries. Information asymmetries introduce agency problems within firms and expose investors to excessive risk. Therefore, any mechanism that can help in reducing information asymmetries is of great importance to stock market participants.

Our arguments are consistent with prior literature that considers financial analysts to substitute for corporate governance mechanisms in emerging markets. Lang et al. (2004), for example, document the substitution effect of analysts by showing that the extent of analyst following mitigates the negative effect of lower investor protection on valuation in emerging markets. In another related study, Knyazeva (2007) documents that analyst following improves firm performance by substituting for corporate governance. Main argument in this strand of literature is that analysts' role as information providers allow investors to offset any information misreported by firms. This strand of literature also argues that the nature of analyst's job is such that he has to make every effort to bring to light any information misreported or not disclosed by firms.¹ Conventional wisdom suggests that more is the number of analysts looking out for information, greater is the chances that no information remains misreported or undisclosed. As a result, higher analyst following should affect firm performance more than lower analyst following. At a lower level of analyst following, the information asymmetries are not resolved to an extent that analyst following becomes valuable for stock market participants. It, therefore, leads us to hypothesis a positive but a nonlinear relationship between analyst following and firm performance.

H1a: There is a positive, but nonlinear, relationship between analyst following and firm performance in emerging markets

¹ Plentiful of prior literature suggests that the compensation of analysts depend on their accuracy (Stickel, 1992; Hong and Kubik, 2003). Therefore, it is intuitive to argue that analysts strive for gathering as much value relevant information as possible.

However, a second school of thought contests the value enhancing impact of analyst following in emerging markets.² This school of thought cites several reasons behind no impact of analyst following in emerging markets. Most important of them are: (1) Lower market for reputation, (2) Less demand for analyst services, and (3) Unscrupulous behavior of brokerage houses. All of these factors are expected to affect value enhancing role of analysts to a varying degree.

- The first issue that arises in emerging markets is the absence of market for reputation. Anecdotal evidence suggests that there are no rating agencies like "Institutional Investor (publisher of All-American Research Team)" or "The Wall Street Journal (publisher of Best on the Street)" in most of the emerging markets. Therefore, there is little incentive for analysts to improve their rankings or reputation. In the absence of market for reputation, it is not entirely clear why analysts would compete for quality. In addition, evidence also suggests lower development of financial press or financial media in these markets. For instance, there are no well-developed TV channels are that specifically related to financial news. If there were such TV channels, it would have been possible for some analysts to develop reputation of being accurate and it would have pushed the others to be accurate as well. Lower market for reputation should lower the pressures that analysts may face to improve value of their research. As a result, value enhancing role analysts is expected to be less pronounced in emerging markets.

- Another issue that often arises in emerging stock markets is the lower demand for analyst services. Prior literature suggests limited participation of local populations in emerging stock markets. Giannetti and Koskinen (2005), for example, document that only 3.3% of Indian population invests in stock market, while this statistics is 1.2% for Turkey and 2.3% for Sri Lanka. They also show that, in contrast to emerging markets, 40.4% of Australian population, 26.0% of the US populations, and 31.0% of New Zealand population invests in stock markets. We argue that limited participation of local populations in stock markets lowers the demand for analyst services in emerging markets. Lower demand of analyst services should reduce the incentives for analysts to improve their research, thereby resulting in a weaker relationship between analyst following and firm performance.

- In addition to the above two factors, inadequate regulations pertaining to brokerage houses may also result in lowering the value of analyst research. Prior literature documents that brokerage

² There is not enough evidence on how valuable analyst research is in most of the emerging markets. Erdogan et al. (2011), for instance, document that analysts are not able to distinguish well performing and poorly performing firms in Turkey. In another related study, Farooq and Ahmed (2013) report low value of analyst recommendations in Pakistan.

houses collude to manipulate stock prices in emerging markets. Khwaja and Mian (2006) document that “when brokers trade on their own behalf, they earn at least 50 to 90 percentage points higher annual returns and these abnormal returns are earned at the expense of outside investors”. In another related study, Khanna and Sunder (1999) argue that “brokers were often accused of collaborating with the company owners to rig share prices in pump and dump schemes”. Farooq and Ahmed (2013) argue that one of the channels via which brokerage houses manipulate prices is by using financial analysts employed by them. They explain a scenario where a brokerage house starts accumulating stocks at a lower price. It gradually pushes the stock price up until it reaches a level where brokerage houses ask their analysts to issue buy recommendations. Naive investors, anticipating stock prices to go up further, keep on buying in response to analysts’ buy recommendations. At this high price, brokerage houses start disposing off their accumulated stocks. An outcome of such behavior is the decline in value enhancing role analysts in emerging markets.

All of the above mentioned factors may result in insignificant relationship between analyst following and firm performance.

H1b: There is no relationship between analyst following and firm performance in emerging markets

3. Data

This paper examines how the extent of analyst following affects firm performance in the MENA region. We select Morocco, Egypt, Saudi Arabia, United Arab Emirates, Jordan, Kuwait, and Bahrain as the representative stock markets for the MENA region because of their relatively more development. The sample period is between 2005 and 2009. The following sub-sections will explain the data in greater detail.

3.1 Analyst following

We define analyst following by the maximum number of analysts issuing annual earnings forecasts in a given year. Greater the number of analysts following a firm, the better is its information environment and lower is information asymmetry. Data for analyst following is obtained from the I/B/E/S.³ Table 1

³ The Institutional Brokers' Estimate System (I/B/E/S) is a database owned by Thomson Financials and provides data on analyst activities, such as earnings forecasts and stock recommendations issued by them. The IBES provides a data entry for each forecast and each recommendation announcement by each analyst whose brokerage house contributes to the database. Each observation in the file represents the issuance of a forecast or a recommendation by a particular brokerage house for a specific firm. For instance, one observation would be a forecast or a recommendation by Brokerage House ABC regarding Firm XYZ.

documents the descriptive statistics for analyst following during our sample period. Panel A presents descriptive statistics for each year, while Panel B and Panel C presents similar statistics for each country and each industry respectively. Our results in Table 1, Panel A, show that analyst following gradually increased from 0.8497 in 2005 to 2.8732 in 2009. It shows gradual improvement in analyst industry in the MENA region. It also shows that maximum analyst following that a firm generated was 11 analysts in 2005. It also gradually increased to 20 analysts by 2009. Furthermore, Table 1, Panel B, shows that firms headquartered in United Arab Emirates, Morocco, and Egypt have the highest level of analyst following in the region. We report average analyst following of 1.6780 in United Arab Emirates, 1.6238 in Morocco, and 1.3145 in Egypt. Table 1, Panel B, also reports that firms headquartered in Kuwait have the least level of analyst following in the region. The results in Table 1, Panel C, show that firms belonging to Telecommunication sector have the highest level of analyst following. It is intuitive because most of Telecommunication firms are large and very profitable firms in the region.

Table 1 documents the descriptive statistics for analyst following in the MENA region, i.e. Morocco, Jordan, Bahrain, Egypt, Kuwait, United Arab of Emirates, Saudi Arabia, and Qatar. The sample period is from 2005 to 2009. Panel A document descriptive statistics for each year, while Panel B and Panel C document similar statistics for each country and each industry respectively.

3.2 Firm performance

This paper measures firm performance by market-adjusted returns (RET). We define RET as the difference between stock returns and market returns. Stock prices and market index are obtained from the Datastream. The stock price data and the market index data was obtained for the first and the last day of a given year to compute RET.

3.3 Control variables

This paper uses the following firm-specific characteristics as control variables. The data for control variables is obtained from the Worldscope.

- **SIZE:** We measure size by log of market capitalization. Conventional wisdom suggests that large firms have lower agency problems due to increased interest from stock market participants (investors and analysts). Lower agency problems should lead to better performance of large firms (Fang et al., 2009). Furthermore, Bhattacharyya and Saxena (2009) argue that larger firms have more bargaining power over their suppliers and competitors, thereby improving their performance.

Table 1. Descriptive statistics for analyst following**Panel A.** Analyst following in different years

Years	Average	Standard Deviation	Maximum	Minimum
2005	0.2621	0.8497	11	0
2006	0.4681	1.1791	13	0
2007	0.6909	1.4454	13	0
2008	1.0439	2.1206	14	0
2009	1.4015	2.8732	20	0

Panel B. Analyst following in different countries

Countries	Average	Standard Deviation	Maximum	Minimum
Bahrain	0.3095	0.6220	3	0
Egypt	1.3145	2.3932	14	0
Jordan	0.3102	0.7532	5	0
Kuwait	0.2415	0.9515	12	0
Morocco	1.6238	1.1392	8	0
Qatar	0.6487	1.8132	13	0
Saudi Arabia	0.6352	1.6066	14	0
United Arab of Emirates	1.6780	3.2715	20	0

Panel C. Analyst following in different industries

Industry	Average	Standard Deviation	Maximum	Minimum
Oil and Gas	0.3647	0.9238	5	0
Basic Materials	0.9000	1.5137	10	0
Industrials	0.7870	1.6066	14	0
Consumer Goods	0.4603	0.9242	5	0
Healthcare	0.6000	0.8329	3	0
Consumer Services	0.4240	1.4241	15	0
Telecommunication	4.7600	4.6319	14	0
Utilities	1.6285	1.7836	6	0
Financials	0.7851	1.9637	20	0
Technology	1.1428	2.3904	11	0

- **LEVERAGE:** We measure leverage by total debt to total asset ratio. High leverage exposes firms to greater financial risk. High risk should result in lower performance (Mitton, 2002).

- **EPS:** This paper defines EPS as earnings per share. EPS is an important variable that measures investor interest in a firm (Chang et al., 2008). It also measures accounting performance of a firm. Higher investor interest and superior accounting performance is expected to translate into better stock price performance.

- **GROWTH:** This paper measures GROWTH by growth in earnings per share. Jegadeesh and Livnat (2006) document that firms with higher growth have better stock price performance.

- **PoR:** It is defined as percentage of earnings paid as dividends. Prior literature considers dividends as a tool via which firms can reduce information asymmetries (Grossman and Hart, 1980; Jensen, 1986; La Porta et al., 2000). Lower information asymmetries should lead to better stock price performance.

- **VOLATILITY:** It is the measure of a stock's average annual price movement to a high and low from a mean price for each year. For example, a

stock's price volatility of 20% indicates that the stock's annual high and low price has shown a historical variation of +20% to -20% from its annual average price. We expect firms with high volatility to exhibit low stock price performance.

Table 2 documents the statistics for our control variables during our sample period. Panel A documents the descriptive statistics for control variables used in our analysis and Panel B documents the correlation between different control variables. As is expected, Table 2, Panel A, shows that firms in the MENA region pay low fraction of their earnings as dividends. Our results show that the PoR is 30.3736% for our sample firms. This observation is in contrast to the PoR in the developed countries where almost 80% of earnings are distributed to shareholders as dividends. Table 2, Panel A, also shows that firms in the MENA region have very low leverage. This observation is consistent with prior literature that shows that firms in the MENA region rely on their retained earnings for their long-term financial needs (Achy, 2009). Furthermore, Table 2, Panel B, shows low correlation between our control variables, thereby allowing us to include these variables in regression analysis.

The following table documents the statistics for control variables used in regression. The sample comprise of firms from Morocco, Jordan, Bahrain, Egypt, Kuwait, United Arab of Emirates, Saudi

Arabia, and Qatar. The period of analysis is from 2005 to 2009. Panel A document descriptive statistics for control variables, while Panel B document correlation between different control variables.

Table 2. Statistics for control variables

Panel A. Descriptive statistics

	Mean	Median	Standard Deviation
EPS	3.8409	0.1760	17.8059
SIZE	6.3646	6.3966	2.3453
LEVERAGE	18.7935	13.5730	18.6983
VOLATILITY	30.7110	29.9760	10.8343
PoR	30.3736	21.5045	29.0761
GROWTH	11.8849	7.6535	64.1726

Panel B. Correlation matrix

	EPS	SIZE	LEVERAGE	VOLATILITY	PoR	GROWTH
EPS	1.0000					
SIZE	0.2425	1.0000				
LEVERAGE	0.0337	-0.0086	1.0000			
VOLATILITY	-0.1553	0.3339	0.0135	1.0000		
PoR	0.1398	0.0512	-0.0708	-0.1815	1.0000	
GROWTH	-0.0130	-0.0375	0.0062	-0.0827	-0.1560	1.0000

4. Methodology

This paper aims to document the effect of analyst following on firm performance in the MENA region. In order to test this hypothesis, we estimate a regression equation with market-adjusted returns (RET) as a dependent variable and two variables representing analyst following (ANALYST) and square of analyst following (ANALYST*ANALYST) as independent variables. Furthermore, as mentioned above, we also include a number of control variables in our regression equation. These variables are earnings per share (EPS), log of market capitalization (SIZE), total debt to total asset ratio (LEVERAGE), stock price volatility (VOLATILITY), dividend payout ratio (PoR), growth in earnings per share (GROWTH), and year dummies (YDUM). Our basic regression takes the following form. It is important to mention here that we use panel data regression with fixed effects for our analysis. Hausman test was used to decide between fixed effect and random effects.

$$\begin{aligned}
 \text{RET} = & \alpha + \beta_1(\text{ANALYST}) + \beta_2(\text{ANALYST} * \text{ANALYST}) \\
 & + \beta_3(\text{EPS}) + \beta_4(\text{SIZE}) + \beta_5(\text{LEVERAGE}) + \beta_6(\text{VOLATILITY}) \\
 & + \beta_7(\text{PoR}) + \beta_8(\text{GROWTH}) + \sum_{Yr} \beta^{Yr}(\text{YDUM}) + \varepsilon
 \end{aligned} \quad (1)$$

The results of our analysis are reported in Table 3. Our results show that the extent of analysts following improves firm performance only at high

levels. We report significant and positive coefficient of ANALYST*ANALYST. At low levels of analyst following, our results indicate a negative relationship between analyst following and firm performance. We report significantly negative coefficient of ANALYST. Our results indicate that high analyst following is associated with lower information asymmetries in the MENA region. Lower information asymmetries lead to lower agency problems, thereby positively influencing firm performance. However, at low level of analyst following, information asymmetries do not get resolved to an extent that it influences firm performance positively. Surprisingly, our results also show that there is a negative relationship between earnings per share and firm performance. We report significant and negative coefficient of EPS. It indicates that stock market participants do not value the reported earnings on their face value.

Table 3 documents the effect of analyst following on firm performance in the MENA region (Morocco, Egypt, Saudi Arabia, United Arab Emirates, Jordan, Kuwait, and Bahrain). The period of analysis is from 2005 to 2009. The panel data regression with fixed effects is performed using Equation (1). The coefficients with 1% significance are followed by ***, coefficient with 5% by **, and coefficients with 10% by *.

Table 3. Effect of analyst following on firm performance

	Equation (1)
ANALYST	-0.0901***
ANALYST*ANALYST	0.0069***
EPS	-0.0150***
SIZE	0.6773***
LEVERAGE	0.0063
VOLATILITY	-0.0296**
PoR	0.0022**
GROWTH	0.0026***
Year Dummies	Yes
No. of Observations	974
F-Value	47.32
R ² within	0.4022

There may be concerns that the results obtained above are confined to certain sub-sets of stocks. For instance, smaller firms have higher information asymmetries and analysts' role to reduce these asymmetries should be more pronounced in these firms relative to larger firms. As a result, analyst following should be more value relevant for small firms. Lang et al. (2004) argue that increased analyst following is associated with higher valuations, particularly for firms likely to have higher information asymmetries. In order to overcome these concerns, we divide our sample into different groups – large / small firms, firms with high / low debt, and firms from common law / civil law countries. All of these groups are characterized by different levels of information asymmetries. Large firms, firms with high debt, and firms from common law countries have better information environment relative to small firms, firms with low debt, and firms from civil law countries, respectively. We re-estimate Equation (1) for each group. Results of our analysis are reported in Table 4. We report that our results hold true in both civil law and common law countries. Interestingly, our results also show that our results hold in a sub-sample of large firms and in a sub-sample of firms with high leverage. We report negative and significant

coefficient of ANALYST and positive and significant coefficient of ANALYST*ANALYST for these groups. Both of these groups have lower information asymmetries. Larger firms enjoy more interests from investors and analysts, while firms with high debt command more scrutiny from creditors. As a result, the incremental value of analysts should be less pronounced in these sub-samples. We report insignificant impact of analyst following in sub-samples characterized by high information asymmetries – small firms and firms with low debt. This finding is in contrast with Lang et al. (2004) who document that analyst following is more value relevant in asymmetric information environments.

The following table documents the effect of analyst following on firm performance in different sub-samples (Large/Small, High Leverage/Low Leverage, Common Law/Civil Law). The sample comprise of firms from the MENA region (Morocco, Egypt, Saudi Arabia, United Arab Emirates, Jordan, Kuwait, and Bahrain). The period of analysis is from 2005 to 2009. The panel data regression with fixed effects is performed using Equation (1). The coefficients with 1% significance are followed by ***, coefficient with 5% by **, and coefficients with 10% by *.

Table 4. Effect of analyst following on firm performance in different sub-samples

	Size		Leverage		Legal Traditions	
	Large	Small	High	Low	Common Law	Civil Law
ANALYST	-0.0875**	-0.0614	-0.1017***	-0.0516	-0.0282	-0.0988**
ANALYST*ANALYST	0.0063**	-0.0175	0.0071***	0.0060	0.0041**	0.0065*
EPS	-0.0167***	-0.1194***	-0.0110*	-0.0167***	-0.0620***	-0.0066**
SIZE	0.719***	0.6222***	0.7515***	0.7281***	1.1338***	0.3967***
LEVERAGE	0.0029	-0.0054**	0.0012	-0.0099	0.01410*	0.0031
VOLATILITY	-0.0411**	-0.0249**	-0.0183	-0.0475**	-0.0592***	0.0038
PoR	0.0041***	-0.0008	0.0018	0.0025*	0.0038**	0.0015
GROWTH	0.0038***	0.0011***	0.0031***	0.0018***	0.0017**	0.0030***
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes
No. of Observations	554	420	462	512	320	654
F-Value	41.10	19.61	17.24	37.45	65.80	16.33
R ² within	0.4518	0.3532	0.4208	0.4584	0.7128	0.3117

5. Discussion of results

Our results have shown that high level of analyst following has a positive impact on firm performance. We argue that at high level of analyst following, information asymmetries are reduced to a significant level and therefore cause firm performance to improve. One implication of our argument is that, at high level of analyst following, firms should be unable to manipulate their financial statements. As a result, we should expect a positive impact of high analyst following on the informativeness of reported earnings. In order to test our conjecture, we introduce two more variables in Equation (1). These variables represent interaction between analyst following and earnings per share (ANALYST*EPS) and interaction between square of analyst following and earnings per share (ANALYST*ANALYST*EPS). Our modified equation takes the following form:

$$\begin{aligned} \text{RET} = & \alpha + \beta_1(\text{ANALYST}) + \beta_2(\text{ANALYST} * \text{ANALYST}) \\ & + \beta_3(\text{EPS}) + \beta_4(\text{ANALYST} * \text{EPS}) + \beta_5(\text{ANALYST} * \text{ANALYST} * \text{EPS}) \\ & + \beta_6(\text{SIZE}) + \beta_7(\text{LEVERAGE}) + \beta_8(\text{VOLATILITY}) \\ & + \beta_9(\text{PoR}) + \beta_{10}(\text{GROWTH}) + \sum_{\text{Year}} \beta_{11}(\text{YDUM}) + \varepsilon \end{aligned} \quad (2)$$

The results of our analysis are reported in Table 5. Contrary to our expectations, our results report negative and significant coefficient of ANALYST*EPS and of ANALYST*ANALYST*EPS. However, we show that the magnitude of coefficient of ANALYST*ANALYST*EPS is significantly less than coefficient of ANALYST*EPS. It shows that higher level of analyst following does have, at least, some beneficial impact on the informativeness of reported earnings. However, the beneficial impact is not to an extent that it results in completely restoring the credibility of reported earnings. Our findings, partly, support Farooq (2013) who document positive impact of analyst following on informativeness of reported earnings in the MENA region.

The following table documents the effect of analyst following on informativeness of earnings in the MENA region (Morocco, Egypt, Saudi Arabia, United Arab Emirates, Jordan, Kuwait, and Bahrain). The period of analysis is from 2005 to 2009. The panel data regression with fixed effects is performed using Equation (2). The coefficients with 1% significance are followed by ***, coefficient with 5% by **, and coefficients with 10% by *.

Table 5. Effect of analyst following on informativeness of earnings

	Equation (2)
ANALYST	-0.1044***
ANALYST*ANALYST	0.0087***
EPS	-2.3700***
ANALYST*EPS	-0.2419**
ANALYST*ANALYST*EPS	-0.0005**
SIZE	0.6756***
LEVERAGE	0.0062
VOLATILITY	-0.0300**
PoR	0.0023**
GROWTH	0.0027***
Year Dummies	Yes
No. of Observations	974
F-Value	40.01
R ² within	0.4034

6. Conclusion

This paper documents the impact of analyst following on firm performance in the MENA region during the period between 2005 and 2009. The results of our analysis show that higher analyst following, indeed, leads to better performance. We argue that lower information asymmetries that arise as a result of high analyst following reduce agency problems and result in improving stock price performance of firms. We also show that our results hold across different sub-samples characterized by different characteristics. For instance, we show that our results are qualitatively the same in the common law as well as the civil law countries. We also show that our results hold in a sub-sample of large firms and in a sub-sample of firms

with high leverage. Interestingly, in the sub-samples where analysts are needed the most – small firms and firms with low leverage – our results do not hold. We report insignificant relationship between analyst following and firm performance in these sub-samples. These sub-samples are characterized by higher agency problems and therefore incremental value of analysts should be higher in these sub-samples. Surprisingly, we also show that low level of analyst following is associated with lower stock price performance. It shows that lower analyst following does not resolve information asymmetries and agency problems.

Our results also show negative association between earnings per share and firm performance. It indicates low informativeness of reported earnings. Given that higher analyst following lowers

information asymmetries, this paper also tests whether analyst following improves informativeness of reported earnings or not. Our results show that high level of analyst following does improve the quality of reported earnings, but not to a level that it is positively reflected in stock prices. Our results have implications for investors, regulators, and policy makers in a way that we show misleading information in reported earnings. Our results indicate that earnings alone do not convey much information to stock market participants. Only those reported earnings that are complemented by high analyst coverage may have some information value.

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