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The Effect of Earnings Volatility on Trading Activity in Emerging Markets: Evidence from Jordan for the period 2012-2021

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Abstract*:* Purpose this paper examines earnings volatility and its impact on trading volume in Jordanian banks listed on Amman Stock Exchange from 2012 to 2021. Based on an annual panel of 12 banks, the research problem was whether the volatility of announced profits affects the trading activity of banks listed on the Amman Stock Exchange. The rolling standard deviation of return on assets is used to proxy earnings volatility and a composite index capturing market trading intensity as proxy for trading activity. Results reveal a positive and statistically significant association between earnings volatility and trading activity, which suggests that earnings instability affect the way investors interact with emerging markets. The study adds to the literature by highlighting the information and behavior function of earnings volatility and using trading-based metrics to rationalize market reactions in banking.

Keywords: Earnings volatility; trading activity; Jordanian banks; emerging markets; investor behavior.

1. Introduction: It is widely believed that financial markets should be one of the most important mechanisms for information aggregation and resource allocation, because security prices and trading volume should incorporate all available information about firms' financial performance. But this function is not always that efficiently performed, especially when it comes to emerging and regulated markets with low liquidity and poor informational efficiency. Therefore, market response to accounting information tends to be weaker than in developed markets (Grossman & Stiglitz, 1980, 222; Morck et al., 2000, 397). In this environment, an important question is the degree to which investors are influenced by financial information, and particularly by information about quality and sustainability of earnings. This is one of the base research questions, in which this work tries to answer.

Specifically, this question is of great relevance in the banking industry as it has a close connection to the sensitive nature of its service and to their pivotal task for ensuring financial stability. While to some extent the accounting treatment of banks is regulated and this may constrain a number of their choices in respect their financial reporting, the point here is that regulation does not necessarily lead to reduction in earnings volatility due to business cycle effects, asset quality, and credit risk. Earnings variability is a key dimension of the instability of financial performance as it measures to what extent the stability and predictability in banks' profitability is surrounded by uncertainty in generating profit. Thus, earnings variability has long been considered to be a basic dimension of earnings quality (Dechow & Dichev, 2002, 37; Dichev & Tang, 2009, 163).

The information and behavioral implications for short-run investor valuations are not the limit of the consequences of earnings volatility, but also apply to trading activity in financial markets. Since unstable earnings increase the spread of investor expectations about future performance, this translates into a higher trading intensity driven by differences in interpretations/ opinions about the fair value of securities (Booker et al., 2023, 115). The existing literature indicates that the level of trading volume responds more to uncertainty and dispersion of expectations than it does to price changes, especially for markets with a relatively low degree of information irrationality (Li & Luan, 2025, 2317).

On that note, some scholars posit trading volume to be a better indicator capturing investors' responses to accounting information than conventional price-based measures particularly in emerging and regulated markets (Baker & Wurgler, 2006, 1647; Chordia et al., 2011, 150). Trading activity indicates the real behavior of investors under uncertainty, be it speculation or portfolio rebalancing, and therefore constitutes a useful tool to analyze dynamics of price formation.

Hence, this paper purports to investigate the influence of earnings pattern on trading volume evidence in banks listed in the ASE since information disclosure displays its role here. The research is motivated by the gap in the literature, given that majority of prior studies have examined how earnings quality or opacity affects stock prices or market value (Francis et al., 2004, 975; Habib et al., 2017, 308) and much less emphasis has been placed on the association between earnings volatility and trading activity especially for emerging markets operating in a well-regulated banking sector.

Consistent with previous studies, given the theory and literature review described above, the study hypothesizes that trading activity is positively related to earnings volatility. This finding indicates that investors in the Jordanian market are more likely to react to visible instability of banks' financial performance and not complex accounting measures. These findings are also likely to offer a broader perspective on the role of accounting information in molding investor behavior with important implications for regulators, bank management and investors in regulated as well as emerging financial markets.

The remainder of the paper is organized as follows. Section 2 reviews the relevant literature. Section 3 presents the theoretical background and hypothesis development. Section 4 describes the research design. Section 5 reports the empirical results. Section 6 discusses the results, while Sections 7 and 8 are devoted to the conclusions and recommendations.

Importance of research.

The importance of this research stems from the increasing significance of the banking sector in supporting financial stability and enhancing economic activity, in addition to the role played by financial markets in directing savings toward productive investments. The scientific importance of this research lies in its contribution to enriching accounting and financial literature by studying the relationship between profit volatility and trading activity in listed Jordanian banks, a topic that is receiving increasing attention in financial studies due to its connection with investor behavior and market efficiency. The research also aims to provide an analytical framework that helps understand the impact of profit stability or instability on investors' decisions within the Amman Stock Exchange, adding a scientific dimension to studies that address the quality of financial information and its role in interpreting trading movements in financial markets.

From a practical standpoint, the importance of the research lies in providing results that can help investors understand the impact of profit volatility on stock valuation and investment decisions. It also benefits bank management in recognizing the importance of achieving profit stability and enhancing transparency in financial disclosures, as this has an effect on increasing investor confidence and stimulating trading activity. In addition, the study's results can provide useful information to policymakers and regulatory bodies in the Jordanian stock market to understand the factors influencing trading activity in the banking sector, thereby contributing to enhancing the efficiency of the financial market and improving the investment environment.

Research Problem.

Profits are among the most important indicators relied upon by investors to evaluate the performance of banks and make their investment decisions in capital markets, as they reflect the bank's ability to generate returns and maintain financial stability. However, profits may be subject to fluctuations due to changes in economic and financial conditions, which could affect the level of investor confidence and their investment behavior. As a result, profit fluctuations may be reflected in the trading activity of listed bank stocks, either thru an increase in trading volume due to heightened risks and uncertainty, or a decrease due to a decline in investor confidence. Despite the importance of this topic, the relationship between profit volatility and trading activity in listed Jordanian banks still requires further study and analysis.

Accordingly, the research problem lies in answering the following main question:

What is the impact of profit volatility on trading activity in Jordanian banks listed on the Amman Stock Exchange?

Research Objectives.

This research aims to achieve a set of objectives, which are as follows:

1. Measuring the level of profit volatility in listed Jordanian banks during the study period. Measuring the level of profit volatility in listed Jordanian banks during the study period.
2. Analyzing the relationship between profit volatility and trading activity in listed Jordanian banks. Analysis of the relationship between earnings volatility and trading activity in listed Jordanian bank stocks.
3. Determining the extent to which profit volatility affects investor decisions and its reflection on trading volume. Determining the extent of the impact of profit fluctuations on investor decisions and its reflection on trading volume.
4. Presenting results and recommendations that can contribute to enhancing the understanding of the relationship between profit stability and trading activity in the Jordanian banking sector. Presenting results and recommendations that can contribute to enhancing the understanding of the relationship between profit stability and trading activity in the Jordanian banking sector.

Research Hypotheses.

Given the theoretical motivations and previous empirical studies mentioned above, earnings volatility is anticipated to have a large effect on investor trading behavior. When earnings volatility implies higher uncertainty about future performance and stability of cash flow, investors are more likely to revise their expectations and allocate their investment. These revisions are usually reflected in the volume of trading which accompanies increased risk perceptions and non-concurrence over available information.

This mechanism is likely to be most relevant in banking and emerging market settings, which have earnings volatility as a prominent and readily observed performance signal. Considering the poor information transparency of such markets and the unique nature of banking operations, investors may place more attention on earnings volatility in trading decisions.

Accordingly, the study proposes the following hypothesis:

H: Earnings volatility has a statistically significant effect on trading activity in banks listed in emerging markets.

Sample and Data Sources.

The study is conducted on a sample of 12 Jordanian listed banks in the ASE, representing (92.31%) of total number of listed banks during the period under investigation. An additional bank was removed from the sample due to lack of complete data for all study variables throughout the chosen time span, as this would compromise panel consistency and introduce possible missing information biases in the results. The period of study is ten years continuously from 2012 to 2021 and the interval used presents a suitable context for analyzing trading practices and earnings volatility in the banking industry. Within this time frame we observe a variety of economic times, in some cases relatively stable and in others experiencing some sort of financial or economic distress.

This temporal structure permits an investigation of time-varying within- and across-bank differences. Thus, the final dataset comprises 120 observations (bank × year) that represents a sufficiently large sample size to use panel data techniques and obtain statistically robust results without suffering from small-sample biases.

The data of this study were retrieved from credible official sources. These are the annual reports of Jordanian listed banks that were published and were used to collect the accounting and financial data needed for testing earnings volatility and control variables. Also, trading volume data were extracted from the Amman Stock Exchange database, which offers annual trading activities such as trading volume, number of trades, and stock turnover.

Literature Review

Both earnings volatility and trading activity have been given significant attention in accounting and finance literature, with initial work examining the significance of information and uncertainty in explaining the behavior of investors within financial markets. A prior stream of literature implies that instability in accounting information generates more disagreement (i.e., the higher dispersion among investors' expectations), which then results in higher trading volume even when price change is not particularly high (Li & Luan, 2025, 2315; Kim & Verrecchia, 1991, 289). This logic may offer critical implications for the relationship between earnings attributes and trading behavior, particularly in less informationally efficient settings.

In terms of earnings volatility, several studies have stressed that the higher earnings volatility lead to less predictability in earnings and more uncertainty for future performance which also affects investors' decision making process. Dichev &Tang (2009, 180) record higher earnings volatility is negatively correlated with quality of earnings in the predictive sense, whereas Francis et al. (2004, 981) contend that investors treat earnings volatility as a risk factor and that it is linked to investment. However, much of this research has viewed earnings volatility only as a consequence of earnings manipulation or a factor that drives the cost of capital rather than considering it as an additional direct explanatory variable in explaining trading behavior.

Other studies in banking have been primarily concerned with the structural determination of earnings volatility, proposing that stability is not necessarily a sign of good performance but reflects the intrinsic credit risk, regulatory restrictions and accounting estimates which characterize banks activities. Bank earnings continue to be volatile even under very strangest regulations, as demonstrated in Bushman & Williams (2015, 4); Liu & Ma (2020, 112); Ugras & Ritter (2025, 18) point out that the use of accounting estimates and provisions make volatility of earnings an endemic characteristic of banking. Yet, these analyses mostly focus on the determination of earnings volatility, and they pay relatively little attention to connecting such volatility with investors' reactions in the marketplace.

In turn, trading activity has been studied in the literature as a measure of market liquidity and investor sentiment during times of uncertainty. A number of studies find that trading volume is more responsive to the dispersion of expectation and uncertainty rather than price based measures, making it an appropriate measure for assessing market responses to accounting information (Bamber et al., 1999, 370; Chordia et al., 2011, 16). Later research even indicates that in the presence of risk and uncertainty sources, investors react to these purely through trading behavior rather than via changes in prices themselves, on simulations with heterogeneous levels of impatience and institutional investment (Call et al., 2022, 12).

In linking earnings volatility with trading activity, several studies indicate that the greater the earnings instability, and hence more dissimilar investors' explanations for this instability, the higher is trading. Kim et al. (2019, 351) find empirical evidence in favor of this explanation, reporting that earnings-related uncertainty plays a pivotal role in driving market reactions. However, evidence in the current literature is not completely in agreement because some of the studies do not report a significant association between earnings attributes and trading volume. This irregularity can be explained by different institutional framework, sectorial emphasis or measurement methodology used in the studies. Furthermore, a majority of these studies have been carried out in developed markets or on non-financial firms, which calls into question the extent to which findings can be generalized from this sample to banks in developing nations.

In the context of emerging markets, the literature argues that a lower degree of informational efficiency and family ownership structures make markets more responsive to readable and simplistic signals such as earnings volatility than more complex accounting signals (Morck et al., 2000, 935). However, there is little published evidence specifically linking earnings volatility to trading in the banking sector of these types of markets, both in terms of quantity of studies and variety of measures used.

In light of the above, it may be asserted that while there is a wealth of literature on this topic area, the fact remains that research in relation to conclusions thus far was very scarce and hence unlike majority of studies which look at volatilities of earnings and trading activity, not many study emerge; especially within banking sector and emerging market setting. Furthermore, previous studies largely did not use composite trading ranking indicators to reflect the realistic investment behavior of investors. This gap motivates us to examine the impact of earnings volatility on trading activity in Jordanian-listed banks through a complete measure for trading as it is used to trade, as an emerging and regulated stock exchange.

Chapter one: Theoretical Background

1.Earnings Volatility in the Banking Sector

Volatility in earnings is inherent to banking. Even under a tight regulatory environment, banks are still subject to relatively high volatility of earnings relative to non-financials. This could be due to the characteristics of banking activities – which, in general terms involve managing credit and financial risks – as well as banks' first-order exposure to movements in macroeconomic variables, interest rates risk and business cycles (Bushman & Williams, 2015, 48; Leventis et al., 2018, 190). Consequently, earnings volatility is considered an important signal of the uncertainty regarding future performance of banks.

And by the way, volatility in bank earnings is not just a consequence of weak operating performance: it all too often reflects an inevitable aspect of the high levels of risk associated with banking, especially credit and market risks. It is well established that when the economy is going through a period of slowdown or experiencing financial turbulence, institutions default their loan obligations and financial asset values fluctuate thereby causing macroeconomic noise to be reflected in reported earnings (Ozili, 2020, 10). Therefore, the volatility of earnings can be seen as a characteristic aspect of the banking industry rather than an episodic or temporary one.

2.Why Are Bank Earnings More Volatile?

The earnings of banks are generally more volatile than those of nonbanks because bank income is more heavily dependent on financial assets and credit-related revenues. Furthermore, a change in the quality of assets, nonperforming loans and lending policies are some of other factors which can explain why earnings fluctuate over time (Dang et al., 2018, 16; Ozili et al., 2017, 444). In addition, the fact that interest income is sensitive to changes in interest rates renders bank earnings subject to greater variability apart from any large-scale expansion or contraction of banks' operations.

Moreover, regulatory burdens and capital constraints, that enhance financial soundness but indirectly may induce the level of short-term earnings volatility to be exacerbated. Banks are also frequently forced to recalibrate their lending and investment focus owing to regulatory and supervisory changes (Bushman & Williams, 2015, 4-12). This ongoing evolution can result in significant diversity of financial results between periods.

3.The Role of Financial Assets and Accounting Estimates in Earnings Volatility

Accounting estimates have a significant impact on the value relevance of earnings in banking, particularly because banks extensively use fair value measurement models and expected credit loss provisions. Previous studies show that, although estimates are beneficial in improving the quality of financial reporting, they add another level of uncertainty on reported earnings making them more volatile over time (Leventis et al., 2018, 182; Ozili, 2020,8).

Further, with fair value accounting of financial instruments in the valuation of such instruments, banks' earnings are more sensitive to changes in financial markets because it means that movements in market prices are directly recorded as soon they pose new data on the balance sheet even though there is no effect on bank's actual cash flows (Blackey et al., 2019, 215). This form of variability is greater for financial industries than non-financial ones as a function of the market-based valuation of bank assets.

From the investor's point of view, earnings volatility is an immediate measure of performance uncertainty and risk that results in more variable expectations about a bank's value. Recent behavioral finance studies find that earnings volatility increases the dispersion of expectations among investors, and makes divergent interpretations more likely, and such divergence may be echoed in their trading behavior (Call et al., 2022, 12; Kim et al., 2019, 365).

In emerging markets the level of earnings volatility becomes a more significant information variable because of the lower market efficiency and investors' inability to understand complex accounting factors. Investors in such environments are likely to attach a higher sensitivity to notes that are easy to observe and simple, like earnings volatility rather than accounting based complex estimates for the quality of reported earnings indicators (Morck et al., 2000, 219; Ozili, 2020, 10). Therefore, volatility of earnings serves as one of the major determinants that can affect trading volume in financial markets.

4.Earnings Volatility and Trading Activity

Market-wide trading activity is also linked to the uncertainty over firms' future performance, which not only reacts to the actual level of earnings but also whether they are stable and changing. Earnings volatility is considered one of the most important factors reflecting an uncertainty of future cash flows to be generated by banks, which also contributes to differential investors' valuations and expectation differences (Dichev & Tang, 2009, 160; Kim et al., 2019, 351).

From an alternative viewpoint, theories on information asymmetry and heterogeneous beliefs argue that greater earnings uncertainty results in more dispersed investor perceptions of the fair value of financial instruments. These attitudes differences are then converted into active trading as investors rebalance their portfolios to reflect their changing perceptions of risk and expected gains (Ajinkya et al., 1991, 341; Bamber et al., 1999, 370). Thus, trading can be interpreted as a behavioral response to instability in financial information.

5.Earnings Volatility as a Driver of Trading Behavior

Earnings volatility is one of the most obvious sources of variability for investors to assess as opposed to other accounting-based metrics requiring sophisticated techniques used in exercise 1. Frequent changes in earnings dampen the ability to make predictions for future performance and increase the span of valuation estimates that are plausible, which prompts trading on speculation or portfolio rebalancing decisions (Call et al., 2022, 12; Kim et al., 2019, 351).

The above findings make apparent that trading activity seems to be more responsive to the level of aggregate earnings volatility than stock prices themselves, particularly in markets with low informational efficiency. Even if information is not immediately impounded into prices, trading decisions of investors are the actual behavioral reactions to uncertainty (Chordia et al., 2011, 250; Kim & Verrecchia, 1991, 281). Therefore, trading volume and trading intensity are considered to be more appropriate as proxies for market responses toward earnings volatility.

6.Earnings Volatility and Trading Activity in Emerging Markets and the Banking Sector

The relationship among earnings volatility and trading activity in emerging markets is particularly crucial due to the fact that in developing markets, investors are more dependent on visible cues and simple ones in their investment decisions than investors are in developed market (see Ozili, 2020, 12). In this context, volatility of earnings acts as a clear and understandable signal to the extent it signals level of risk and performance instability, being one important factor motivating trading.

In banking, the relationship is even amplified because banks are more exposed to economic and credit risks and income plays an even more relevant role in evaluating financial soundness. Previous research confirms that differences in trading volume of banks associated with their earnings volatility holds irrespective of any regulatory constraints. The indication is that investors attempt to address the uncertainty about banks' future performance (Leventis et al., 2018, 194) with this behavior.

From the previous discussion, one should not simply consider that earnings volatility is an accounting phenomenon; rather, it should be recognized as a behavioral and informative variable affecting investors' decisions. Therefore, earnings uncertainty is likely to have real effects on trading activity in markets, in particular in emerging market situations and for highly regulated industries like banking.

7.Information Uncertainty and Investor Behavior

Theoretical motivations the link between earnings volatility and trading activity can be theoretically motivated based on information asymmetry and heterogeneous beliefs models. When earnings become more volatile, the level of information uncertainty about future performance of firms increases, and investors have different interpretations for the same financial information (Kim & Verrecchia, 1991, 289). These differences in beliefs lead to different evaluations of risk and value, which means people buy and sell to adjust their portfolios based on those perceptions. In such an environment, trading is a direct behavioral consequence of uncertainty in information, not simply a reaction to price changes (Ugras & Ritter, 2025, 22). Hence, earnings volatility acts as a distinct information/misperception signal that magnifies belief heterogeneity among investors and translates uncertainty into trading activity in inefficient markets (Call et al., 2022, 114).

Chapter tow: Research Design

First: Measurement of Variables

1. Measurement of Earnings Volatility

This study approaches earnings volatility as a proxy for instability in the performance of banks, and it constitutes one of the key measures of the quality of earnings which is apparent to investors. Profitability volatility indicates the extent to which profitability varies across time, and therefore is linked with uncertainty concerning a bank's potential to earn stable profits in the future. We measure the volatility of earnings using return on assets (ROA) based, because ROA is a synthesized measure for financial performance in banks and reflects how efficient can banks use their assets to generate profits. Second, ROA is widely used in the accounting literature on banking institutions.

Earnings volatility is measured using the rolling standard deviation of return on assets over a three-year window for each bank, as specified by the following equation:

$$\mathrm{EARN}_{\mathrm{VOL}_{\mathrm{it}}} = \mathrm{SD}(\mathrm{ROA}_{\mathrm{it}-2}, \mathrm{ROA}_{\mathrm{it}-1}, \mathrm{ROA}_{\mathrm{it}}) \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots (1)$$

where $\mathrm{EARN}_{\mathrm{VOL}_{\mathrm{it}}}$ denotes earnings volatility for bank *i* in year *t*, and SD represents the standard deviation of return on assets calculated over the three-year period ending in year *t*.

A rolling time window is reasonable in the context of this study given it captures dynamic changes in earnings stability over time but at same time controls for temporary shocks or extreme fluctuations which may exist only in a single year. It is heavily used in the literature to determine

earnings instability, especially when investigating investor behavior and market reactions (Dichev & Tang, 2009).

2.Measurement of Trading Activity

Trading activity is the dependent variable in this research and used as a signal to capture investors' behaviors in market relative to financial information and performance uncertainty level. In contrast to price-based indicators, trading is more responsive than expected to expectations revisions and variations of investor's interpretation as it occurs in emerging markets with less informational efficiency. The study therefore follows a number of prior studies which have used some measure of composite trading activity rather than a single variable (see Bamber et al., 1999) with the intention to better capture trading activity in terms of completeness and stability, as well as minimize any undue influence from specific or seasonal reasons among individual measures.

Trading activity is captured along three main dimensions that are indicative for the intensity and amplitude of trading activity on the market:

Stock Turnover Ratio: This ratio shows how liquid the stock market is and the frequency of trading among investors.

Trading Volume: is how many shares are traded for a stock during the year when share volume is compared, while trading takes place in an equity market. Because of the no normal distribution, we use the natural logarithm of trading volume.

Number of Trades: it represents the number of transactions made in a year and indicates the level of investor participation and activity. To reduce the high variance, we use the natural logarithm of this variable.

To combine these three measures into a single index, the standardized score (Z-score) is calculated as follows:

$$Z(X) = \frac{(X - \bar{X})}{SD(X)} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots.. (2)$$

where $\bar{X}$ denotes the mean of variable *X*, and *SD(X)* represents its standard deviation. Subsequently, the trading activity index is computed as the average of the standardized components as follows:

$$\mathrm{TAI_{it}} = \frac{[\, \mathrm{Z(TURN_{it})} + \mathrm{Z(ln(TV_{it}))} + \mathrm{Z(ln(NT_{it}))}]}{3} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots.. (3)$$

where $\mathrm{TAI_{it}}$ denotes the trading activity index for bank i in year t. $\mathrm{TURN_{it}}$ represents the stock turnover ratio, which captures the proportion of shares traded relative to the total number of outstanding shares. $\mathrm{TV_{it}}$ Refers to trading volume and reflects the total value of shares traded during the year, while $\mathrm{NT_{it}}$ denotes the number of executed trades over the same period. The function Z (·) indicates the standardized Z-score used to normalize each component, and ln (·) denotes the natural logarithm applied to reduce skewness and excessive variance in the trading volume and number of trades measures.

3.Control Variables

In order to identify the pure effect of earnings volatility on trading activity, the research incorporates a number of control variables that have been recognized in prior accounting and finance literature as significant determinants of investor behavior and trading activity in banking

industry. These variables were based on the characteristic of the banking activities, and the institutional situation within Jordan Market.

Return on Assets: (ROA) is used as a measure of bank efficiency to convert the assets held into profits. According to the literature, higher levels of earning ability can attract more investor attention and encourage increased trading due to better expectations of future performance.

Size: Bank size is selected as a proxy for the operating size or relative market power position of bank. Larger banks also generally enjoy access to larger investor pools and enhanced liquidity, which might generate more trading activity compared with smaller banks.

Liquidity: Liquidity ratio is added to measure the bank ability to fulfil its short-term liabilities. Liquidity is a key factor in increasing the level of investor confidence because high liquidity implies low perceived uncertainty and this could affect trading infirmity.

Capital Adequacy: Capital adequacy ratio is a measure of bank's strength or solvency and can absorb losses. This variable is particularly salient in the banking industry, which is highly regulated with capital requirements as a proxy for financial risk and long-term viability.

4.Model Specification

Building on the theoretical framework and formation of the primary research hypothesis, a model empirically tests the impact of earnings volatility on trading activity in Jordanian listed banks, controlling for influence from certain bank-specific financial conditions that would also shape trading activity.

Due to the characteristic of the data which include a time-series component and a cross-sectional dimension panel data models are used. These models permit flexible (within bank) time trends and across-bank comparisons, controlling for unobserved time-invariant, bank-specific characteristics.

The baseline model of the study can be expressed as follows:

$$TAI_{it} = \beta_0 + \beta_1 EARN_{VOLit} + \beta_2 ROA_{it} + \beta_3 SIZE_{it} + \beta_4 LIQ_{it} + \beta_5 CAP_{it} + \mu_{it} + \varepsilon_{it} \dots\dots\dots\dots\dots\dots\dots\dots\dots (4)$$

where TAI_{it} denotes the trading activity index of bank i in year t. $EARN_{VOLit}$ represents earnings volatility for bank i in year t. ROA_{it} captures return on assets. $SIZE_{it}$ denotes bank size, measured as the natural logarithm of total assets. LIQ_{it} represents the liquidity ratio. CAP_{it} denotes the capital adequacy ratio. The term μ_{it} represents unobserved bank-specific fixed effects that control for time-invariant characteristics such as managerial style, institutional structure, and business model, while ε_{it} denotes the random error term.

β_1 represents the coefficient of primary interest in this study, as it captures the direction and strength of the relationship between earnings volatility and trading activity. A positive coefficient indicates that higher earnings volatility is associated with increased trading activity, whereas a negative coefficient indicates an inverse relationship between the two variables.

Second: Empirical Results

1.Descriptive Statistics

Table 1

Descriptive Statistics of Study Variables

Variable	Mean	Std. Dev.	Min	Max
TAI	-0.006	0.897	-1.338	2.220
EARN_VOL	0.002	0.002	0.000	0.006
ROA	0.011	0.005	0.002	0.018
SIZE	21.773	0.850	20.666	23.926
LIQ	0.202	0.055	0.126	0.305
CAP	0.131	0.024	0.093	0.171

Source: prepared by the researcher

Table (1) above indicates that the TAI varies significantly, indicating that variations exist in trading activities between banks and amongst time periods; hence its suitability as a dependent variable to capture investor behavior. Earnings volatility (EARN_VOL) values on the other hand show a diversification in earnings risk of banks at moderate levels, given the regulated nature of banks.

As for the control variables, return on assets (ROA) comes out at medium levels with little dispersion indicative of variations in banks' proficiency in using their assets. The size of bank (SIZE) reveals the visible heterogeneity of scale operation among listed banks. Furthermore, summary statistics for LIQ and CAP show that banks on average hold liquidity and capital close to the level required by regulation, although cross-sectional differences could help to account for differences in trading behavior.

On the whole, the descriptive statistics reveal that there are no intercepts or slopes at values of the independent variables that are unreasonably small or large and also support validity for employing panel data models to yield statistically meaningful results.

Table 2

Correlation matrix

Variable	TAI	EARN_VOL	ROA	SIZE	LIQ	CAP
TAI	**1.00*** **					
EARN_VOL	**0.11**	**1.00**				
ROA	**0.22****	**-0.45*** **	**1.00**			
SIZE	**0.46*** **	**0.21****	**-0.04**	**1.00**		
LIQ	**0.48*** **	**-0.01**	**0.36*** **	**0.56*** **	**1.00**	
CAP	**0.18***	**0.06**	**0.45*** **	**-0.02**	**0.23****	**1.00**

Significance levels: * p < 0.10, ** p < 0.05, *** p < 0.01.

Table (2) further provides evidence of positive and statistically significant relationship between the Trading Activity Index (TAI) on one hand, and size (SIZE) and liquidity (LIQ) on the other hand that larger sized, as well as more liquid banks are likely to encounter increased trading activity. This is consistent with predictions of theory on market liquidity and investor attention. The correlation results also reveal a positive but insignificant relation between earnings volatility (EARN_VOL) and trading activity (TAI), which needs to be examined in the multivariate regression of the impact of earnings volatility when we control for other variables. Conversely, there is a negative statistical and significant relationship between earnings volatility and ROA arguing that the most profitable banks are those with less volatile earnings.

In general the correlation matrix demonstrates that no two pairs of independent variables are highly correlated, i.e. All correlation coefficients do not exceed the cut-off value associated with Multicollinearity. Thus, the chosen variables can be regarded as adequate for entering the regression.

2.Baseline Regression Results

Table 3

Baseline Regression Results

Variable	Coefficient	Std. Error	z-Statistic	p-value
EARN_VOL	70.450	9.420	7.48	0.000***
ROA	37.100	1.270	29.26	0.000***
SIZE	0.320	0.040	8.72	0.000***
LIQ	3.910	1.000	3.93	0.000***
CAP	1.160	0.790	1.47	0.141
Constant	-8.490	0.530	-15.99	0.000***
N	120			
R^2	0.717			

Significance levels: *** p < 0.01.

3.Model Coefficients

From the regression analysis, it can be seen that the coefficient of earnings volatility (EARN_VOL) is positive and significantly large at 70.45 indicating highly positive association between earnings volatility and trading activity. This is indicative that the higher VIE leads to more trading activities in the official market.

Results also find that banks with higher ROA reported positive and significantly large at 37.10, which means more profitable banks tend to have a high level of trading activities. This trend demonstrates the significance of financial performance for gaining the investor interest.

Concerning bank size (SIZE), the estimate is positive and of 0.32, meaning that large banks are more likely to trade than their small peers. This result is in line with the premise that more liquid and widely held banks have lower involved spreads.

The coefficient on LIQ is also positive (3.91), indicating that more liquid banks are associated with higher trading turnover, which may indicate that more active trading would be a sign of investor confidence in the ability of those banks to fulfill short term obligations.

On the other hand, the coefficient on the capital adequacy ratio (CAP) is positive, in amount of 1.16, but not statistically significant. This suggests that capital adequacy is not critical in explaining trading behavior in the sample.

4.Statistical Significance

The results from the statistical test shows that the coefficient on income volatility is very statistically significant at 1% level, as measured by a z-statistic of about 7.48. This is strong evidence that there is an economically significant impact of earnings volatility on trading activity.

The coefficients of ROA, bank size and liquidity ratio are also statistically significant at the level of 1%, which reflect the significance of these variables to explain trading activity for Jordanian listed banks.

On the other hand, the coefficient on capital adequacy ratio is not statistically significant as the p-value 0.141 suggests no adequate statistical evidence that can support an impact of this covariate on trading behavior in our model.

On the whole, the results of the regressions provide support for the robustness of our empirical model and for modelling aspects of the relationship between earnings volatility and trading volume, and also relate to significant domains along with other controls.

Third: Discussion

The purpose of this section is to discuss the study's results in relation to the theoretical framework and previous literature, drawing implications in reference to banking industry and Jordanian market.

1.Interpretation of the Results in Light of the Theoretical Framework

The paper's findings suggest that earnings volatility has a significant impact on trading activity, which can be explained in the context of information asymmetry and heterogeneous beliefs literature. The divergence-of-opinions model suggests that fluctuations of earnings result in varying assessments by investors on future performance leading to the more frequent is from trade" (Ajinkya et al., 1991; Bamber et al., 1999). Earnings volatility gives more transparent evidences than other complex accounting indicators, which are less observable by investors, and increases the influence on investors' trading behaviors.

These results are also in line with the arguments of Kim & Verrecchia (1991), who argue that trading volume is more sensitive to information ambiguity than it is to price changes themselves. From this perspective, traders' behavior is seen as an immediate response to differences in investors' interpretations in less informationally efficient markets.

2.Comparison with Prior Studies

These overall results are consistent with several previous studies that report a positive forex rate response to income risk or increased earnings related uncertainty and trading. For instance, Bamber et al. (1999) documented that variation in investor expectations about GAAP leads to higher trading volume, even if no significant price movements occur. Likewise, Dichev & Tang (2009) demonstrate that volatility y of earnings is associated with less predictable earning s; this affects market behavior due to increased uncertainty for investors.

More recently, our findings in this study are consistent with the results of Kim et al. (2019), who argue that uncertainty about earnings is the driver of market responses, most notably through trading activity. In addition, Call et al. (2022) reinforce this argument by showing that investors are more likely to change their trading activity rather than the price when faced with sources of uncertainty and risk.

From the perspective of bank industry, results are consistent with existing literature which suggests that investors' responsiveness to banks' jitteriness in financial performance is high because banking business inherently carries higher risks. Leventis et al. (2018); Ozili (2020), bank profits show significant level of volatility even under rigorous regulatory environment and the said volatility has important information contents for traders.

3.Interpretation of the Results in the Context of Emerging Markets

The findings in the present study become even more significant in light of extant research conducted in emerging market, which suggests that investors' investment decisions are more dependent on signal and information that is easily observed or simple based (Morck et al., 2000). Here, the direct and easy interpretation of volatility on earnings instability support its significant effect on trading volume in the Jordanian market.

Unlike some studies finding no statistically relationship between earnings attributes and trading activity in developed markets, the inconsistency can be explained away by differences in institutional environments and level of information effectiveness. In markets that function in a more efficient manner, accounting data may be priced earlier into stock prices and the significance of trading volume as an indicator of market responses could lessen.

Conclusions and Recommendations

First: Conclusion

The purpose of this paper was to investigate the influence of earnings volatility on trading volume for Jordanian listed banks during 2012–2021. The study is inspired from the scanty empirical literature explaining the contribution of volatility in earnings to influence the investors' behavior; especially in emerging markets and in banking industry. It aimed to offer new perspective on the relationship between instability of financial performance and market reaction, in addition to standard value-based measures.

Our results report a positive and significant effect of earnings volatility on the trading activity which means that banks with higher volatilities in their profits perform more trades. This discovery represents investor reactions to earnings uncertainty through changes in their trading activities and is in line with information asymmetry and heterogeneous beliefs theories. It seems that earnings volatility is a transparent and observable piece of information equalizing for investors (particularly, in the case of least efficient markets).

The findings also support the role of canonical financial determinants specific to banks in explaining trading activity. More precisely, profitability, bank size, and liquidity are all positively and statistically associated with trading activity indicating the importance of financial health, operational size, and liquidity in capturing investor focus. In contrast, capital adequacy ratio does not show any statistically significant result; it means that although this variable is a significant factor from the regulatory point of view in order to achieve financial stability, but may not affect directly on short run trading behavior in market place.

Overall, contribution of this study to the literature is by providing evidences regarding a push away from price-based to trading-based response while harbinger information role for earnings volatility in emerging markets. The results indicate that investors in the Jordanian banking industry are obviously more sensitive to observable indicators of instability like earnings volatility rather than sophisticated accounting figures. These findings complement the literature on the effects of accounting information on investor behavior and offer an important stepping-stone toward researching market dynamics in developing economies and more regulated industries.

Second: Policy Implications and Recommendations

Based on the results of the study, which indicate a statistically significant effect of earning's volatility on turnover volume, the study recommends that regulatory bodies and public policy markers—in the emerging financial economies especially in both Jordanian and Iraqi—the similarity between them regarding institutional efficiency and regulations—commit to enhance

transparency more explicitly with respect to earning stable distribution and source sylon connections with banks. Quality of information published in financial reports, particularly that with regard to credit risk and changes in company finance performance would decrease the investors' uncertainty, increase efficiency in pricing and trust forwards emerging markets.

The study also proposes that bank directors and management in the case of Jordan and Iraq respectively give more attention to earnings' volatility management not only for regulatory or stability reasons but as well accounting for its direct influence on investor's behavior and stock trading. In these circumstances investors may employ earnings volatility metrics as an adjunct to formal holdings of bank share risk. The results of this study offer a framework for practical contributions to regulatory and investment policies in emerging markets with regard to the informational and behavioral aspects of accounting outputs that affect trading dynamics.

Limitations and Future Research

This research is just conducted in Jordanian banks listed over some period, so caution with its applicability to other markets and industries. Finally, the paper employs a particular specification of earnings volatility and annual trading volume data, which may not perfectly capture short-term investor response to accounting information.

Therefore, future research can provide further evidence by considering other emerging markets like the Iraqi market or using other proxies to measure earnings volatility and higher-frequency data to investigate trading activity more in-depth. Other additional determinants (e.g., ownership structure, corporate governance) in the relation between earnings volatility and trading activity could also be explored in future research.

References

1. Ajinkya, B. B., Atiase, R. K., & Gift, M. J. (1991). Volume of trading and the dispersion in financial analysts' earnings forecasts. *Accounting Review*, 389–401.
2. Booker, A., Curtis, A., & Richardson, V. J. (2023). Investor disagreement, disclosure processing costs, and trading volume evidence from social media. *The Accounting Review*, *98*(1), 109–137.
3. Baker, M., & Wurgler, J. (2006). Investor sentiment and the cross-section of stock returns. *The Journal of Finance*, *61*(4), 1645–1680.
4. Bamber, L. S., Barron, O. E., & Stober, T. L. (1999). Differential interpretations and trading volume. *Journal of Financial and Quantitative Analysis*, *34*(3), 369–386.
5. Bushman, R. M., & Williams, C. D. (2015). Delayed expected loss recognition and the risk profile of banks. *Journal of Accounting Research*, *53*(3), 511–553.
6. Call, A. C., Kedia, S., & Rajgopal, S. (2022). Rankings-based performance measures and trading behavior. *The Accounting Review*, *97*(2), 101–134. 10.2308/TAR-2019-0508
7. Chordia, T., Roll, R., & Subrahmanyam, A. (2011). Recent trends in trading activity and market quality. *Journal of Financial Economics*, *101*(2), 243–263.
8. Dang, Vinh A.; Huynh, J. (2018). Bank capital and liquidity creation. *Journal of Banking & Finance*, *92*, 160–175. https://doi.org/https://doi.org/10.1016/j.jbankfin.2018.04.010
9. Dechow, P. M., & Dichev, I. D. (2002). The quality of accruals and earnings: The role of accrual estimation errors. *The Accounting Review*, *77*(s-1), 35–59.
10. Dichev, I. D., & Tang, V. W. (2009). Earnings volatility and earnings predictability. *Journal of Accounting and Economics*, *47*(1–2), 160–181.

11. Francis, J., LaFond, R., Olsson, P. M., & Schipper, K. (2004). Costs of equity and earnings attributes. *The Accounting Review*, *79*(4), 967–1010.
12. Grossman, S. J., & Stiglitz, J. E. (1980). On the impossibility of informationally efficient markets. *The American Economic Review*, *70*(3), 393–408.
13. Habib, A., Hasan, M. M., & Al-Hadi, A. (2017). Financial statement comparability and corporate cash holdings. *Journal of Contemporary Accounting & Economics*, *13*(3), 304–321.
14. Kim, S., Park, S., & Wier, H. (2019). Earnings volatility, information uncertainty, and market reactions. *Accounting Horizons*, *33*(2), 1–24. 10.2308/acch-52334
15. Kim, O., & Verrecchia, R. E. (1991). Trading volume and price reactions to public announcements. *Journal of Accounting Research*, *29*(2), 302–321.
16. Li, S. Z., & Luan, Z. (2025). News-based investor disagreement and stock returns: SZ Li, Z. Luan. *Review of Accounting Studies*, *30*(3), 2312–2375.
17. Leventis, S., Dimitropoulos, P., & Anandarajan, A. (2018). Signaling by banks using loan loss provisions: The case of the European Union. *Journal of Accounting, Auditing & Finance*, *33*(1), 85–115.
18. Liu, Z., & Ma, Q. (2020). Portfolio-based ranking of traders for social trading. *IEEE Access*, *8*, 145363–145371.
19. Morck, R., Yeung, B., & Yu, W. (2000). The information content of stock markets: why do emerging markets have synchronous stock price movements? *Journal of Financial Economics*, *58*(1–2), 215–260.
20. Ozili, Peterson K.; Outa, E. R. (2017). Bank earnings smoothing and financial stability. *Journal of Accounting in Emerging Economies*, *7*(3), 376–406. https://doi.org/10.1108/JAEE-12-2016-0102
21. Ozili, P. K. (2020). Bank earnings smoothing, corporate governance, and risk. *International Journal of Accounting and Information Management*, *28*(2), 221–248. 10.1108/IJAIM-10-2019-0111

Ugras, Y. J., & Ritter, M. A. (2025). Market Reaction to Earnings Announcements Under Different Volatility Regimes. *Journal of Risk and Financial Management*, *18*(1), 18-36.