

Testing the relationship between trading noise and the performance of financial markets: A case study on the Iraqi Stock Exchange

Abstract:

Search goal to Inventory of the largest possible number of behavioral variables for the financial markets, whether they are individual or intertwined with each other, as well as highlighting the most important effects that these behaviors are likely to have on the performance indicators of the Iraqi Stock Exchange. And it was done By asking the question: "Can models of financial behavior and its variables, including noise trading, explain the changes that occur in the behavior of capital markets, specifically the Iraq Stock Exchange?"The Iraqi Stock Exchange took an intentional sample to study the phenomenon of noise trading. A slowed time-gap autoregressive model was adoptedARDL data analysis and according to Eviews.10. The research concluded that the first period proved the existence of a long-term equilibrium relationship between noise indicators and recorded price indicators. While it became clear in the second period, the noise indicators were more accurate than the first period, and that the number of traded shares and the turnover rate were among the most important indicators of the noise indicators with impact. The research recommended the necessity of following up all performance indicators and trading for the market as a whole and not relying on indicators by themselves and for intermittent periods.

Keywords: trading hype, hype indicators, financial behavior

Introduction

Financial theory, with its accumulations and dialectics, proves its specificity in explaining the performance of capital markets and even the prices of financial assets, almost independently of the purely economic interpretations governed by the fundamentals of supply and demand, transaction costs, alternative opportunities and some movements of macroeconomic indicators. Many models and indicators that They unanimously agree that the foregoing economic fundamentals are among the package of controlling variables only, and openness to the basics of capital markets themselves to realize the behavioral dimension of them, whether it is repeated with patterns or even in renewed phases and calibrated in order to be absorbed by investors, companies or sectors.

Hence, noise trading came to be an important representative of these behaviors, which requires conditions, assumptions, and treatments for correction in absolute and relative volumes within total aggregates of the entire market. Presented in this regard to more than one researcher and writer specializing in the performance and behavior of the markets, specifically Shalfer and his colleagues, whose study was the first guide to diagnosing this type of trading in their study, which came under the title "**Noise trader risk in financial market**" Although there are many who followed the footsteps of these researchers, they did not gain the momentum that the paper focused on in its inclusion of risk and that it is a quantifiable behavior that may date back to some individual and institutional practices

and even the behavior of some portfolio managers or investment funds in the fifties of the last century.

Depending on this, the research was divided into several sections, the first included its methodology, followed by the reference concepts of noise trading, the third included the relationship between market efficiency and this type of trading, and the fourth section was devoted to not including the most important discrepancies with the likely (traditional) trading, while the fifth section contained noise requirements And its effects, all the way to the standard model that tests the relationship between noise indicators and market performance.

Research problem

It can be said that the process of substituting a suitable alternative to explain the behavior of the prices of some financial assets for the options presented previously is not easy due to the conditionality of their compatibility with the logic of the market first and able to predict even a small part of the future performance scenario with the presence of standard models with financial variables and intangible outputs regardless of their value And its direct and reverse direction, and as a result, the research problem can be formulated by saying: Can financial behavior models and its variables, including noise trading, explain the changes that occur in the behavior of capital markets, specifically the Iraqi stock market?

research aims

The research aims to:

1. Covering a conceptual aspect of financial behavior represented by hype trading.

2. Inventory of the largest possible number of market behavioral variables, whether they are individual or intertwined with each other.
3. Shedding light on the most important effects that these behaviors are likely to have on the performance indicators of the Iraqi Stock Exchange.

research importance

The importance of the research is clear that it treats A recent entry that contributes to understanding and explaining the behavior of financial markets in general. In addition to recent trends regarding some commodities as financial assets such as oil and gold, and some applications of portfolio theory to explain exchange rate changes, and they are subject to the same trend in assessing return, risk and timing of cash flows.

Research Hypothesis

Based on what was stated in the research problem and in sequence with its objectives and importance, the research hypothesis is summarized that a package of noise trading variables based on variations in its indicators is likely to affect the behavior and performance of the Iraqi stock market indices of prices, volumes and trades (existing, company, sector, market) .

temporal and spatial boundaries:

As mentioned above, the Iraqi Stock Exchange took a purposive sample to study the phenomenon of noise trading. Tests are conducted on it for the period of the year (2010-2021) with monthly observations and for intermittent periods.

First: The theoretical framework for noise circulation

Investors in the capital markets seek to discover any pattern of market trends to reach a faster and clearer understanding of the movement of

prices, volumes and trading. Among investors, some of them rely on technical analysis for their belief in the ability of this analysis to detect the patterns referred to within several hypotheses, the most important of which is that history repeats itself, and that the market as the most appropriate financial environment for pricing, evaluation and discovery of the work of the system of return and risk, and most importantly knowing the timing of cash flow, on the other hand ensures the basic analysis including It contains financial information about the company's position and financial performance over a period of time and its flows and balances are included in reports and financial statements and knowledge of the financial managers' trends and horizons, and if it is assumed for the sake of argument that the available information, whether it is from the market or from sectors or even companies, the hype trading is represented by those situations in which investors are unable to absorb and understand that information, which guides them to make And making wrong decisions, and they are in this description unable to distinguish between what is real or not, and even if they possess that real information, their feelings and emotions are what lead them to make a financial decision (Fang&chang, 2020.317-324))

And before them discussed Fang and his colleagues in the year 2019 this phenomenon, assuming that it is one of the pillars of the structure of modern capital markets, and this assumption is due to the fact that the large number of information, the different sources and the varying timings make trading noise inevitable, so it is a random buying and selling process that may be for the purposes of liquidity, speculation, or even without Specific goals, in which individuals, companies, or even intermediary institutions may contribute as a seller or as a buyer. In the first case, it enters the market by relying on some wrong or even correct information, but it is led by feelings of optimism and pessimism, and in the second case, when the company contributes to announcing its decisions, directions and plans And exploiting the financial conditions of competing companies (&et.aIFang,2019,1-45).

The nineties era is one of the most important turning points in the framing of this phenomenon, which was emphasized by him Palomino believes that noise traders or what is called noise traders are the ones who think that they have special information about prices. It starts from their

short-term horizon, which in the most cases does not exceed the medium term because the deviations in their decisions become apparent after a period of time that is often longer than the average term (Palomino, 1999,1-40).

Second: Noise and market efficiency

It is no secret to researchers that there are many requirements to achieve market efficiency, and this efficiency may penetrate or be achieved from time to time in the capital markets, including that there should be parallel fluctuations, up and down, between the prices of financial assets and their real values, and that they are expressive of each other. Noise causes the first violations of this efficiency, which causes deviations of values from their reality, and as a result there is an additional effort to reach them. Noise trades represent accumulations caused by some traders who make and take financial decisions based on distorted information, in which noise may be targeted or not, but it has become part of the market structure (Feng&et.al,2014,1-7).

The efficiency of the market often indicates that the market in general does not allow the reaping of profits higher than the average market return, and there is no case for market penetration **Beat the market** by traders, particularly in the short term (Bageli, 2006, 1-15) which is what noise traders make, so it is an efficiency that is not limited to a specific financial asset, but that Milton Friedman, in his discussions about exchange rates, mentioned that there are two types of traders, one of which disturbs the balance of the market and the other is corrected by the fact that in both cases they take the situation The opposite and they were referred to as the speculators (Friedman, 1953, 157).

Third: The contrast between hype trading and traditional trading

Some financial literature, specifically those that linked efficiency and noise and even some frameworks for technical analysis, as well as some recent books on commodities such as oil, exchange and gold, have revealed that there are fluctuations caused by noise behaviors and reactions related to the situation of correction and taking the opposite situation. Two types of traders summarized in Table (1) in the form of differences to distinguish between What is traditional trading (arbitrage) and unconventional trading (noise).

table(1)The contrast between hype trading and traditional trading

traditional trading	trading noise	T
It is based on a sufficient amount of quantitative and non-quantitative information about the company, the sector, the market and its owners to have their expectations about the minimum limits of the expected returns.	Financial decisions (finance and investment) are made on the basis of tastes, fads, feelings, and unreal or justified influences within the financial and economic logics.	1
Its supporters are aware of the existence of random and unrealistic buying and selling movements, and their main interest is in the implications of the basic analysis of the company and the sector.	Those who hold this view believe that noise will generate noise regardless of its source and type, and thus they rely on technical analysis.	2

<p>The behavior of this trading can be studied sequentially and there is no need to separate the periods and by any technique.</p>	<p>It can be observed and tracked over separate time periods, whether convergent or divergent, within time series, cross sections, or even longitudinal data.</p>	<p>3</p>
<p>Emphasis on the timing, source, reliability and cost of the information within the financial reporting package for the balance sheet and the disclosure of income, flows and retained earnings. Despite all this, the trader may be exposed to a loss.</p>	<p>The sources of information in it are misleading and the signals generated by it are wrong because there is a defect in the beliefs that drive decisions, which results in wrong decisions, even if they are sometimes profitable.</p>	<p>4</p>
<p>A cumulative and uninterrupted behavior because it is trading that creates value.</p>	<p>The behavior is temporary across certain periods and is diagnosed by volumes, trades, prices, and even market liquidity.</p>	<p>5</p>
<p>More disciplined behavior and is directly related to the correction of price movement.</p>	<p>Contributes to raising the level of random price movement and the accumulation of imbalances and pricing deviations.</p>	<p>6</p>

<p>The presence of traders as a correction factor to eliminate any deviations because their expectations are limited to a certain range.</p>	<p>It is assumed that there are traders who seek to influence in an extreme way in the short term, intentional or otherwise.</p>	<p>7</p>
<p>It is possible for the decision maker to follow their behavior because their money is smart and build their portfolios on several bases, including diversification and arbitrage, not just emotions and feelings.</p>	<p>Misleading the financial decision maker because the trading decisions in it do not depend on the state of the market, whether it is Bull Market or Bear Market.</p>	<p>8</p>

Source: Prepared by the researchers based on: (Olivier, Jeanne, & Rose, Andrew K., 2000), (Fang, Ming, & Chang, Chiu-lan, 2020), (Feng, Jin, Lin, Dengpeng, & Yan, Xiangbin, 2014) (Han, Jungsun, 2009), (Shleifer Andrei, & Summers, Lawrence H., 1990) (Alfonso, Simon, & Feruerriegel, Stefan, & Neumann, Dirk, 2020), (Peress, Joel & Schmidt, Daniel, 2020)

Fourth: Noise requirements and effects

Uncovering the volume and impact of hype trading is one of the challenges facing those interested in capital markets of all kinds, even countries, whether they are developed, emerging or even underdeveloped because of their short movement and that exit and entry to the market and timings are often ambiguous, in addition to this, they need follow-up Continuous and subject to the procedures of this market, which may be a direct or indirect cause of it, from here it was necessary to have some conditions that, if achieved, there were trading noises in the markets, sectors, companies and even for the financial asset alone, including:

1. Unusual (abnormal) returns are achieved in a specific period, but it is mostly short-term and extends to the medium-term, and the momentum of these returns in the long-term disappears (Chang&Fang, 2020, 317-324).
2. FocusFang and his colleagues assert that bad news affects the price as a first stage and that the effect of good news is focused on trading volumes, specifically if both effects are classified outside the normal distribution and the two cases referred to are adopted by noise traders despite their inaccuracy in entering and exiting the market for investment and financing (Fong & et.al,2020,1-7).
3. Its term is short, its profits are quick, its profits are random, the returns and risk double in its superficial form, and they leave an impact on stock prices.
4. Its traders may be individuals, institutional companies, investment portfolios collected by false or correct sources of information and used incorrectly by them.(DeLong&et.al,1990,703-737).
5. If diagnosed, it is likely to make the market more transparent in its dealings, because it controls the irrational or random part of the price movement.
6. That these trades be continuous, but at intervals so that they create a momentum that is diagnosed during these periods and affect the market as a whole and result in liquidity.
7. Statistically, the serial correlation has zero, meaning that the relationships do not interact with each other and that the variance is equal to the correct one and its interpretation is that the results are distributed naturally.
8. Weak correlation with economic fundamentals such as supply and demand, or even market fundamentals in pricing and evaluation, and that the overall performance, not the detailed one, is weak or regressing, so what

drives them is emotion, feelings, extremism and excessive confidence (Peress&shmidt,1-68,2020).

9. The behavior of noise traders must be regular and not cancel each other out and may resemble herd behavior in order to ensure influence in the market.

10. They stay for long periods in the market, not only to lose, but to wait as long as possible to achieve profits (Fama, 1970,383-417).

Based on these requirements to achieve noise trading within the growing relative weight of the total capital market trading, and in general, this growing relative weight can leave several effects, which are often described as the movement of small particles around a large body, as they move randomly, irregularly and continuously and often occur difference in investor returnsAnd the arbitrageurs among them in particular, and that the continuation of this trend and the increase in its momentum causes a breach of the market efficiency in terms of the ability to achieve higher returns, specifically in the short term higher than the market returns and transforming it from a complete market to an incomplete market with inefficiency (Palomino, 1999,1-40).

On the other hand, focusShah and Malik in the year 2020 on the risks generated by such behaviors as they achieve gaps in the procedures system and one of the sources of risk as they begin with instability due to the randomness of sources and the disorder of the financial decision (Malik & Shah,2020,59-85), and the procedures themselves may be a source The risk is when it is lax and allows some practices of this kind, which are discovered after a period of time when market liquidity suddenly accumulates from the impact of individuals, companies, institutions, or even owners of investment funds or portfolios, specifically when their behavior is close to each other and for a period of time not to mention Their large trading volume

(Hartmann & et.al, 2018, 1-24), which causes abnormal returns referred to in point (1) of the requirements to achieve noise and reach successive positions to liquidate the market in short periods of time that may not exceed a few weeks within the herd approach (1885-1899 Greene&Simert, 1999,), which are generally cases that correspond to retail trades, small deals, electronic orders, net investment fund flows, and the rise in the total value of retail trades within the total total of trades (Peress & shmidt,2020,1-68).

Another effect of noise trading is the difficulty of identifying it and separating it from traditional or conducted tradingBy arbitrage on a continuous or daily basis, which accumulates from the difficulties of being able to predict market conditions due to its dependence on the language used, negative and positive attitudes, private information and tone of voice. Note that the indicators prepared for diagnosing such trades, even if they are available, are difficult to track due to their need for relative and absolute information on the numerator, denominator and differences between the highest Prices and below, volume differences, closing and opening rates, turnover rates, momentum indicators, statistical measures of dispersion such as skewness and flatness, interpretation of survey results and forecasts of future profits, whether for a financial asset or a financial asset such as exchange rates and oil, or even for the market as a whole.Alfonso & et.al, 2020, 1-38) and (Bagchi, 2006, 1-15).

Fifth: Describe the variables used in the model

To prove the validity of the hypothesis or not and to access the main objective of the research as well as to support the results of the analysis that were presented in the first topic, the standard model will be designed and described as follows:

X1 the previous closing price, X2 the current closing price, X3 the current opening price, X4 the highest price, X5 the lowest price, X6 the number of

shares traded, X7 the stock turnover, X8 the current opening price - the last closing price, X9 the margin of the highest and lowest price, and finally Y expressing The market price index.

Before entering the model tests, we will present a table showing the time-series static test for search variables according to the results of the Phelps-Peron test (PP), only the Phelps-Peron (PP) test was taken for all models, as it is more accurate.

Table (2): Philips Peron Test ResultsPhillips-Perron test statistic

stability test						
Variables	Level			(1st difference)		
	PP	Sig.	Results	PP	Sig.	Results
market price index(-1)	1.584898	0.9994	No stationary	-8.636558	0.0000	Stationary
previous closing price	-8.277928	0.0000	stationary	-36.12921	0.0001	Stationary
current closing price	-8.228535	0.0000	stationary	-36.03602	0.0001	Stationary
current opening price	-7.620188	0.0000	stationary	-20.29945	0.0001	Stationary
the highest price	-7.521362	0.0000	stationary	-49.45472	0.0001	Stationary
lowest price	-7.609960	0.0000	stationary	-16.16218	0.0001	Stationary

The number of shares traded	-7.432325	0.0000	stationary	-26.78734	0.0001	Stationary
stock turnover ratio	-6.573262	0.0000	stationary	-21.93785	0.0001	Stationary
Current Opening Price - Previous Closing Price	-8610832	0.0000	stationary	-33.74467	0.0001	Stationary
Maximum margin and lowest price	-7.348087	0.0000	stationary	-34.30805	0.0001	Stationary

Source: The table is prepared by researchers based on program outputsViews.10.

It is clear from the previous table that the explanatory variables and the dependent variable have passed the testsStability in general, except for the market price index, which stabilized after taking the first difference

The first period:Estimation and analysis of the relationship between stock market noise and market index for the period 2010-2015

1- Slowed time-gap autoregressive model testARDL.

After the stability tests that were conducted on the economic variables (the stock market noise factors) X1, X2, X3, X4, X5, X6, X7, X8, X9) as explanatory variables and the market index (Y) as the dependent variable, and it was found that it was stable at the level and at the first difference (1). With this condition, the ARDL model test and the table below can be applied. It shows us the test results for this model.

Table (3) Model Test Results ARDL

Dependent Variable: Y				
Method: ARDL				
Date: 04/05/22 Time: 11:11				
Sample (adjusted): 2010M02 2015M12				
Included observations: 70 after adjustments				
Maximum dependent lags: 1 (Automatic selection)				
Model selection method: Akaike info criterion (AIC)				
Dynamic regressors (0 lag, automatic): X1 X2 X3 X4 X5 X6 X7 X8 X9				
Fixed regressors: C				
Variable	Coefficient	std. Error	t-Statistic	Prob.*
market price index (-1)	1.021578	0.029648	34.45656	0.0000
previous closing price	-0.430445	0.294294	-1.462635	0.1487
current closing price	0.288344	0.245035	1.176745	0.2439
current opening price	-0.353204	1.424941	-0.247873	0.8051
the highest price	0.115148	0.480177	0.239803	0.8113

lowest price	0.365987	1.593975	0.229607	0.8192
The number of shares traded	1.56E-10	9.03E-11	1.726256	0.0894
stock turnover ratio	-0.059556	0.045523	-1.308267	0.1957
Current Opening Price - Previous Closing Price	0.036763	0.049470	0.743140	0.4600
Maximum margin and lowest price	0.010146	0.206411	0.049152	0.9609
C	-1.665930	2.870084	-0.580446	0.5638
R-squared	0.961486	Mean dependent var		98.26257
Adjusted R-squared	0.956435	SD dependent var		10.93787
SE of regression	2.282982	Akaike info criterion		4.608363
Sum squared resid	317.9323	Schwarz criterion		4.897455
Log likely	-152.2927	Hannan-Quinn criter.		4.723194
F-statistic	190.3544	Durbin-Watson stat		1.899471
Prob(F-statistic)	0.0000000			
*Note: p-values and any subsequent tests do not account for model				

Source: The table is prepared by researchers based on program outputsViews.10.

Table (2) shows us that a modelARDL automatically determines the degrees of time delay for the variables. The results of (Adjusted R-squared) news showed that not all the explanatory variables were able to explain (95%) of the changes in the market price index, but rather the focus was on the price itself and the number of traded shares, and that (5 %) is due to other factors not included in the model. As for the (F-statistic) test, it indicates the overall significance of the model from the statistical point of view at a probability level that amounted to about (Prob = 0.0000), less than 5%, and the D-W statistics indicate that its value reached (1.899471) This explains that the model is free from the problem of autocorrelation.

2- The results of the boundary test for cointegration Bound Test

To test the existence of a long-run equilibrium relationship (the existence of co-integration) between the explanatory variables and (Y) As a dependent variable, a bound test must be conducted. If the value exceeds the maximum tabular value, this means that there is a joint integration relationship between the explanatory variables and the dependent variable, and if it is between the two values, the situation is critical and doubtful, and if it is less than the minimum value, it is not integrated as In the following table: -

Table (4) Results of Border Test Bound Test

Statistical test used Test Statistic	Calculated value Value	The number of independent variables K
F-statistic	9.209840	9
(Critical Value Bound)		
morale level	I0 Bound	I1 Bound
10%	2.89	1.92

5%	3.21	2.17
2.5%	3.51	2.43

Source: The table is prepared by researchers based on program outputsViews.10.

It is noted from the above table (4) that the value of (The calculated F-statistic reached (9.209840), which is greater than the maximum and minimum tabular value, as they reached (3.21) (2.17) at the level of significance (5%), which means that we reject the null hypothesis and accept the alternative hypothesis, and this means that there is a joint integration relationship between (X1,X2,X3,X4,X5,X6,X7X,8X,X9) (Y), i.e. a long-term equilibrium relationship.

3- Estimated parameters test (short term).

This test shows the estimation of the short-term parameters in order to detect the degree of influence of the independent variable on the dependent variable, and this test shows the error correction coefficient (UECM) which measures the speed of the model's return to equilibrium in the long term, and the table below shows this.

Table (5) Results of estimating the error correction model and the short-term relationship

Method: ARDL				
Variable	Coefficient	std. Error	t-Statistic	Prob.*
market price index(1-)	1.021578	0.029648	34.45656	0.0000

previous closing price	-0.430445	0.294294	-1.462635	0.1487
current closing price	0.288344	0.245035	1.176745	0.2439
current opening price	-0.353204	1.424941	-0.247873	0.8051
the highest price	0.115148	0.480177	0.239803	0.8113
lowest price	0.365987	1.593975	0.229607	0.8192
The number of shares traded	1.56E-10	9.03E-11	1.726256	0.0894
stock turnover ratio	-0.059556	0.045523	-1.308267	0.1957
Current Opening Price - Previous Closing Price	0.036763	0.049470	0.743140	0.4600
Maximum margin and lowest price	0.010146	0.206411	0.049152	0.9609
C	-1.665930	2.870084	-0.580446	0.5638
CointEq(-1)*	-0.035920	0.015610	2.301040	0.0245

Source: The table is prepared by researchers based on program outputsViews.10.

We note through Table (5) the results of estimating the parameters of the independent variable in the short term, as the table shows the existence of an inverse relationship with statistical significance between the dependent variable (Y), and the independent variables X1), X3, X7), and there is a direct statistically significant relationship between the dependent variable (Y) and the independent variables X2, X4, X5, X6, X8, X9) and the dependent variable (Y).

The estimated relationship also showed that the unconstrained error correction coefficient (UECM) with a value of (-0.035920), negative and significant, with a probability (Prob = 0.0245), and this indicates the existence of a equilibrium relationship in the short term between the variables (X1,X2,X3,X4,X5,X6,X7X,8X,X9) and (Y) and towards an equilibrium relationship in the long run, and the value of the error correction coefficient means that the equilibrium imbalance (short-term imbalance) in (Y) in the previous period (t-1) can be corrected in the current period (t) towards the long equilibrium relationship The term is due to any shock (shock) or change in the independent variable, and the error correction coefficient is relatively high, meaning that (Y) takes approximately 3.15) months and a half towards the equilibrium value due to any shock in the model or change in the independent variable.

4- Test the estimated parameters (long-term).

This test shows the estimation of the parameters in the long run in order to reveal the degree of influence of the independent variable on the dependent variable, as well as to determine the type of long-term relationship, as in the following table: -

Table (6) Results of estimating long-term parameters

Levels Equation				
Case 2: Restricted Constant and No Trend				
Variable	Coefficient	std. Error	t-Statistic	Prob.
previous closing price	840.7705	7927.495	0.106058	0.9160
current closing price	-834.6991	7885.968	-0.105846	0.9162
current opening price	-812.9527	8002.685	-0.101585	0.9196
the highest price	227.5000	2212.063	0.1102845	0.9186
lowest price	624.2402	6214.037	0.100456	0.9204
The number of shares traded	-5.01E-08	4.87E-07	-0.102885	0.9185
stock turnover ratio	22.26388	214.1184	0.103979	0.9177
Current Opening Price - Previous Closing Price	-1.023487	1.439597	-0.710954	0.4796
Maximum margin and lowest price	-0.282450	5.733858	-0.049260	0.9609
C	-98.51886	1809.149	-0.054456	0.9568

Source: The table is prepared by researchers based on program outputsViews.10.

We note through table (6) the results of estimating the parameters of the independent variable in the long term, as the table shows that there is an inverse relationship with statistical significance between the dependent variable (Y), and the independent variables X2), X3, X6, X8, X9), and there is a direct statistically significant relationship between the dependent variable (Y) and the independent variables (7) X1, X4, X5, X) and the dependent variable (Y), which Confirms the validity of what was stated on the theoretical side in terms of the disappearance of the momentum of variables in the long term.

Second period: Estimation and analysis of the relationship between stock market noise and market index for the period 2016-2021

1- Slowed time-gap autoregressive model test ARDL

After the stability tests that were conducted on the stock market noise indicators (X1,X2,X3,X4,X5,X6,X7,X8,X9) as explanatory variables and the market index (Y) as the dependent variable, and it was found that it was stable at the level and at the first difference (1). With this condition, the ARDL model test and the table below can be applied. It shows us the test results for this model.

Table (7) Model Test Results ARDL

Dependent Variable: Y				
Method: ARDL				
Date: 04/05/22 Time: 23:49				
Sample (adjusted): 2016M02 2021M12				
Included observations: 71 after adjustments				
Maximum dependent lags: 1 (Automatic selection)				
Model selection method: Akaike info criterion (AIC)				
Dynamic regressors (0 lag, automatic): X1 X2 X3 X4 X5 X6 X7 X8 X9				
Fixed regressors: C				
Variable	Coefficient	std. Error	t-Statistic	Prob.*
market price index(-1)	0.980172	0.031467	31.14946	0.0000
previous closing price	-21.80832	25,54470	-0.853732	0.3965
current closing price	26.01141	15.33788	1.695893	0.0949

current opening price	12.40426	26.70091	0.464563	0.6439
the highest price	9.143091	12.88687	0.709489	0.4807
lowest price	-29.82880	15.37488	-1.940100	0.0569
The number of shares traded	9.92E-10	2.70E-10	3.672659	0.0005
stock turnover ratio	-1.674695	0.511819	-3.272046	0.0017
Current Opening Price - Previous Closing Price	-4.735181	28.5969	-0.166090	0.8686
Maximum margin and lowest price	-2.232442	5.390361	-0.414154	0.6801
C	11.58761	18.73856	0.618383	0.5386
R-squared	0.947589	Mean dependent var		606.2355
Adjusted R-squared	0.940827	SD dependent var		63.62837
SE of regression	15.47794	Akaike info criterion		8.434685
Sum squared resid	14853.13	Schwarz criterion		8.721503
Log likely	-290.4313	Hannan-Quinn criter.		8.548743
F-statistic	140.1211	Durbin-Watson stat		2.136298
Prob(F-statistic)	0.0000000			
*Note: p-values and any subsequent tests do not account for model				

Source: The table is prepared by researchers based on program outputsViews.10.

Table (7) shows us that a modelARDL automatically determines the degrees of temporal deceleration for the variables. The results of the (Adjusted R-squared) test showed that (X1,X2,X3,X4,X5,X6,X7X,8X,X9) as independent variables explained (94%) of the changes occurring In the dependent

variable (Y), and that (6%) is due to other factors not included in the model. As for the (F-statistic) test, it indicates the overall significance of the model from a statistical point of view at a probability level of about (Prob = 0.000000), less than 5% , And the statistics of (DW) indicate that it reached its peak (2.136298), and this explains that the model is free from the problem of autocorrelation.

2- The results of the boundary test for cointegration Bound Test

To test the existence of a long-run equilibrium relationship (the existence of co-integration) between (X1,X2,X3,X4,X5,X6,X7X,8X,X9) as the independent variables and (Y) as the dependent variable, the Bound Test must be conducted, as in the following table: -

Table (8): Boundary Test Results Bound Test.

Statistical test used Test Statistic	Calculated value Value	The number of independent variables K
F-statistic	2.952649	9
(Critical Value Bound)		
morale level	I0 Bound	I1 Bound
10%	2.89	1.92
5%	3.21	2.17
2.5%	3.51	2.43

Source: The table is prepared by researchers based on program outputs Views.10.

It is noted from the above table (8) that the value of (The calculated F-statistic reached (2.952649), which is greater than the maximum and

minimum tabular value, as it reached (3.21) (2.17) at a significant level (10%), which means that we reject the null hypothesis and accept the alternative hypothesis, and this means that there is a joint integration relationship between (X1,X2,X3,X4,X5,X6,X7X,8X,X9) , (Y), i.e. the existence of a long-term equilibrium relationship.

3- Estimated parameters test (short term).

This test shows the estimation of the short-term parameters in order to detect the degree of influence of the independent variable on the dependent variable, and this test shows the error correction coefficient (UECM), which measures the speed of the model's return to equilibrium in the long term, and the table below shows this.

Table (9) Results of estimating the error correction model and the short-term relationship

Conditional Error Correction Regression				
Variable	Coefficient	std. Error	t-Statistic	Prob.
C	11.58761	18.73856	0.618383	0.5386
market price index (-1)	-0.019828	0.031467	-0.630109	0.5309
previous closing price	-21.80832	25,54470	-0.853732	0.3965
current closing price	26.01141	15.33788	1.695893	0.0949
current opening price	12.40426	26.70091	0.464563	0.6439
the highest price	9.143091	12.88687	0.709489	0.4807
lowest price	-29.82880	15.37488	-1.940100	0.0569

The number of shares traded	9.92E-10	2.70E-10	3.672659	0.0005
stock turnover ratio	-1.674695	0.511819	-3.272046	0.0017
Current Opening Price - Previous Closing Price	-4.735181	28.5969	-0.166090	0.8686
Maximum margin and lowest price	-2.232442	5.390361	-0.414154	0.6801
CointEq(-1)*	-0.019828	0.003620	-5.477474	0.0000
* p-value incompatible with t-Bounds distribution.				
** Variable interpreted as $Z = Z(-1) + D(Z)$.				

Source: Table of numbers of researchers based on program outputsViews.10.

We note through Table (9) the results of estimating the parameters of the interpreted variables in the short term, as the table shows the existence of an inverse relationship with statistical significance between the dependent variable (Y), and the independent variables X1, X5, X7, X8, X9)), and there is a direct statistically significant relationship between the dependent variable (Y) and the independent variables X2, X3, X4, X6) and the dependent variable (Y).

The estimated relationship also showed that the unconstrained error correction coefficient (UECM) has a negative and significant value of (0.019), with a probability of (0.0000 = Prob), and this indicates the existence of an equilibrium relationship in the short term between the variables (X1,X2,X3,X4,X5,X6,X7X,8X,X9) and (Y) with a direction An equilibrium relationship in the long run, and the value of the error correction coefficient means that the equilibrium imbalance (short-term imbalance) in (Y) in the

previous period (t-1) can be corrected in the current period (t) towards the long-term equilibrium relationship due to any Shock or change in the independent variable, and the error correction coefficient is relatively high, meaning that (Y) takes approximately (1.30) a month and a half towards the equilibrium value due to any shock in the model or change in the independent variable.

4- Estimated parameters test (long term).

This test shows the estimation of the parameters in the long run in order to reveal the degree of influence of the independent variable on the dependent variable, as well as to determine the type of long-term relationship, as in the following table: -

Table (10) results of estimating long-term parameters

Levels Equation				
Case 2: Restricted Constant and No Trend				
Variable	Coefficient	std. Error	t-Statistic	Prob.
market price index (-1)	-1099.903	2256.179	-0.487507	0.6276
previous closing price	1311.885	2291.890	0.572403	0.5691
current closing price	625.6089	1789.233	0.349652	0.7278
current opening price	461.1318	978.6647	0.471185	0.6392
the highest price	-1504,416	2706.427	-0.555868	0.5803
lowest price	5.00E-08	7.86E-08	0.636136	0.5270

The number of shares traded	-84.46324	133.2050	-0.634085	0.5284
stock turnover ratio	-122.4758	734.1795	-0.166820	0.8680
Current Opening Price - Previous Closing Price	-57.74227	146.5175	-0.394098	0.6948
Maximum margin and lowest price	584.4209	159.6008	3.661766	0.0005
EC = Y - (-1099.9025 * X1 + 1311.8853 * X2 + 625.6089 * X3 + 461.1318 * X4				
-1504.4157*X5 + 0.0000*X6 -84.4632*X7 + 584.4209)				

Source: The table is prepared by the researcher, based on program outputsViews.10.

We note through Table (10) the results of estimating the parameters of the independent variable in the long term, as the table shows that there is an inverse relationship with statistical significance between the dependent variable (Y), and the independent variables X1, X5, X7, X8, X9), and there is a direct statistically significant relationship between the dependent variable (Y) and the independent variables (X2, X3, X4, X 6) and the dependent variable (Y).

Conclusions and suggestions:

The research reached a set of conclusions, perhaps the most important of which is:

1. The first period proved the existence of a long-term equilibrium relationship between the noise indicators and the recorded price indicators.
2. The second period, in which the noise indicators became clearer than the first period, which supports the rationale of what was stated in the theoretical side in terms of the necessity of dividing the study periods into two periods to show the effect more clearly.
3. The correction operations, despite their long period, were largely identical to the correction movements carried out by rational investors in the markets.
4. The number of traded shares and the turnover rate were among the most important indicators of noise with impact, regardless of the indicator's signal.

suggestions

Based on what was previously concluded, some suggestions can be formulated:

1. The necessity of following all performance indicators and trading for the market as a whole and not relying on indicators per se for intermittent periods.
2. Some of the market reports may be misleading in terms of their absolute and relative numbers, unless they rely on the time and historical series of these indicators.
3. It is possible to rely on discrepancies or differences in tracking noise indicators or noise traders more accurately than what happens with absolute or relative numbers.

Reference

1. Milton Friedman, 1953)) Quoted from Rabi'an Abdullah bin Khalid, and Al-Jarrah, Muhammad bin Abdullah, 1438 AH, The Behavior of Financial

Markets Understanding the Social, Cognitive and Economic Dimensions, authored by Edwin Burton and Sunit Shah, Institute of Public Administration, Saudi Arabia.

2. Alfonso, Simon, & Feruerriegel, Stefan, & Neumann, Dirk, 2020, Language Sentiment in fundamental and noise trading: Evidence from crude oil, SSRN.
3. Baghchi, Debasis, 2006, Effect Of Market Noise on stock price movement In an emerging market, research gate, Kolkata.
4. De long, J. Bradford, Shleifer, Andrei, Summers, Lawrence H., & Waldmann, Robert J, 1990, Noise trader Risk in financial market, Journal of political Economy, Vol. 98, no.4.
5. Fama, Eugene F, 1970, Efficient capital markets: A review of theory and Empirical work, the journal of finance, Vol 25, no.2.
6. Fang, Ming, & Chang, Chiu-lan, 2020, noise trading And Abnormal Return in stock market, Reinvista Argentina de clinica psicologica, Vol XXIX, N4 317-324.
7. Fang, W. vivain, Madsen, Joshua, & Shao, Xinyuan, 2019, Noise trading: An Ad-based Measure.
8. Feng, Jin, Lin, Dengpeng, & Yan, Xiangbin, 2014, Research on measure of Noise trading in stock market, based on EGARCH-M Model, 2nd. International Conference on information, Electronics and computer (ICIEAC), Atlanta press.
9. Greene, Jason & Smart, Scott. 1999, Liquidity provision and noise trading: Evidence from the "Investment Dartboard" column, the journal of finance, Vol LIV, No5.
10. Han, Jungsun, 2009, Informed Trading, predicate Noise trading Activities, London business school.
11. Hartmann, Carolina, Bughof, Hans-peter, & Marc Mehlhorn, 2006, An action-identifying noise traders entering the market with Google and twitter, SSRN.
12. Malik, Imran, Riaz, & Shah, Attaullah, 2020, Noise trading and single stock futures: Modifying sentana & Wadhwanis model, the Lahore journal of business.
13. Olivier, Jeanne, & Rose, Andrew K., 2000, Noise trading and exchange rate Regimes, Berkeley education.
14. Palomino, Frederic, 1994, Noise trading in small market, working paper ECO, No. 94/18.

14. Peress, Joel & Schmidt, Daniel, 2020, Noise traders incarnate: Describing a realistic trading process, European University Institution noise.
15. Shleifer, Andrei, & Summers, Lawrence H., 1990, Journal of economic perspectives, Volume 4, Number 2.

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