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Exchange*

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Abstract

This research attempts to explore the block trading impact on the Moroccan stock market functioning and performance. The economic literature identifies two types of effects, the temporary and the permanent. Indeed, the influence of the block market relates to the liquidity, supply and demand, and to the informational content of these financial transactions reserved for large and institutional investors. Theoretical and empirical lessons have inspired the application of the ARDL econometric methodology, to the stock market data, to measure the blocks effects on the Moroccan financial. The main results of this empirical exploration do not confirm the permanent impact on any Moroccan Financial Market Indicator. In other words, the liquidity effect is weak and limited, while the informational effect is almost zero and insignificant.

Keywords: Moroccan Stock Market, Block Trading, Informational Effect, ARDL Model

Introduction

Macroeconomic and fundamental factors influence the stock price formation and determine the overall performance of the financial market. Also, the multiplicity of the stock exchange compartment and the proliferation of financial instruments reveal that the transactions types and sizes can have a significant impact on the asset behavior and consequently on the global market performance.

In this sense, Scholes, Holthausen (1972) et Leftwich, Mayers (1990) have demonstrated the existence of a block trades impact on stock market performance. These authors distinguish between the short-term effect and the long-term effect (permanent effect). To explain this impact, the financial literature on stock market functioning announces three theories related to liquidity, supply and demand, and to the information content of block trades. The overall effect depends on the content of private information held by the implementers of these operations (Easley, O'Hara, 1987). Also, block deal provides significant informational signals that determine the price formation process (Easley, O'Hara, 1992). "Informed" investors, the main initiators of this type of transaction, are often big institutional investors—who have high-performance expertise and financial analysis. Their trade-offs make prices more revealing the value and the subject of these financial operations.

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In the Moroccan financial market, the configuration of the Casablanca stock exchange reserves adapted organization and regulations to the block compartment. Therefore, it is essential to develop a global approach to assess the effects of this financial operations on the stock price formation and on the Casablanca Stock Exchange performance. Consequently, an empirical approach in order to provide some answers to this question.

To provide some answers to this financial problem, we first explore the economic literature on the block market around the world while attempting to assess its impact on the markets in order to identify the links between block trades and other indicators of the Moroccan stock exchange.

Therefore, the Casablanca stock exchange configuration and its financial statistical enables to grasp the block transactions weight compared to conventional operations in the central stock market. In addition, the empirical study allows to quantify the blocks effects on the Central Stock Market and on the overall performance of the Moroccan Stock Market. To achieve this aim, we explore the economic literature to identify the possible impacts. Also, the financial statistics analysis can reveal some information about the block market sizes within the Moroccan Stock Market. All of these steps contribute to design an econometric model to accomplish the empirical study, and ultimately, to quantify the magnitude of a potential effects.

Literature Review

Theoretical contributions

Financial history reveals that stock prices are influenced by the organization and the development degree of the financial system. Thus, the transition of all stock exchange trades through the same market would theoretically cause liquidity problems on the market after completion of block order. In practice, the realization of these transactions on the central market presents a high price risk, through several mechanisms linked to liquidity and the contained information. To overcome this difficulty, the structure of financial markets is in constant movement to neutralize the effects of these large dealing's sizes, and to ensure an optimal functioning of the stock markets.

In this sense, the initial objective of establishing a block compartment, dedicated to large transactions, is to avoid an adversely influence on the price formation process of the assets through discretion in these

operations (Campbell et al. 1991). The block market has, therefore, become the privileged place for big investors (institutional investors) to carry out transactions and to reallocate their portfolios in large amounts of securities without destabilizing and significantly impacting the stock market. This objective assigned to the block market is not automatically guaranteed, because the fragmentation can affect transparency linked to the problems of asymmetry of information between the protagonists of the various stock market operations.

Interpretation and perception of block trades by the market would then have an impact on the asset, object of the contract, and on the functioning of the market as a whole. To distinguish the nature of the effects induced by blocks, theoretical and empirical papers have focused on the effect of large trade volume on the price formation process. For instance, Kraus & Stoll (1972) assert that block transactions produce effects on the stock market and on the asset's prices.

Volumes effect on Price volatility

Volume of trade is one of the main determinants of the stock market. It influences the direction of the stock prices and amplifies behavior. Moreover, the economic literature of financial markets shows that the manner new information disseminated in the stock market creates a relationship between the transaction size and volatility. In other words, the dissemination of new information has an influence on the volume and volatility of prices (Girard, Biswas, 2007). In addition, the varied behavior of investors is affected despite the wide diffusion of this information on the stock market. Investors find themselves significantly dependent on their own interpretation of the information and on their investment strategies.

Thus, the volume of supply or demand is often considered to be the financial translation of the information contained in the blocks (Harris, Raviv, 1993). Therefore, the effect of the large transactions depends on the information diffusion method on the stock market. The informational content of these financial actions influences liquidity and volume in the stock market through the fueling of volatility. In fact, block trades represent a tool to reallocate financial resources for liquidity reasons, or following the procession of private information.

Technically, block exchanges convey the impact on prices over many horizons and different forms. The final short or long-term effect is channeled through liquidity or the volume of blocks (Scholes, 1972) and

(Leftwich, Mayers, 1990). In sum, the temporary short-term impact results from a liquidity effect, while the permanent effect is induced by the contained information in the block exchange.

The temporary effect: The liquidity effect

The temporary effect is the result of the liquidity cost related to the difficulty of finding takers for the large assets of blocks. This almost obligatory passage through the block market guarantees the outcome of the transaction motivated by liquidity (Seppi, 1990). To ensure the completion of their decisions and to avoid unpleasant surprises, the initiators of these transactions must make price adjustments for the securities covered by the block. This configuration inspires changes in the price of the underlying asset and produces temporary price changes.

The short-term effect on the stock market, also, results from the choices of liquidity allocation by the counterparties of the blocks (Holthausen et al, 1987). Concretely, the big trade increases the demand of the assets and produces a certain temporary risk premium on the price of the asset in question, due to the perception of this transaction as a transitory recommendation (Shleifer, 1986).

The Permanent effect: Informational content

The analysis of the permanent impact focuses primarily on the information content on blocks. This effect stems from the non-existence of perfect substitutes for the asset, object of these transaction (Scholes, 1972). Also, the initiation of this kind of financial operation announces an implicit arrival of new stock market information (Chan, Lakonishok, 1993).

According to Grossman and Stiglitz's (1972) model of information circulation in financial markets, it can be argued that the exclusive holding of information by big and institutional actors reduces the number of informed investors, and makes information asymmetry a crucial determinant of the permanent effect of the block trades on the asset and the stock market. Thus, the stock market efficiency determines the magnitude of the block trading impact.

Indeed, the effect is more pronounced in inefficient markets as institutional investors and holders of private and new information increase volatility through block dealings. These operations become informed

transactions. On the contrary, in an efficient stock market, the information is available to all investors and has a limited or neutral effect on the prices of the asset or on the stock market overall.

Ultimately, the realization of block trades requires the consideration of new information elements in the financial decision process of investors. Therefore, it requires investors to revise their evaluation of the asset being traded and adjust their expectations accordingly.

The theoretical analysis of the impact of blocks on the stock market must be supplemented by the empirical side of the question. In this sense, the next point focuses on exploring empirical tests of the impact of block trades on the stock market.

Empirical Studies

To test, empirically, the impact of informed block trades on the stock market, Smith et al, (2001) have analyzed the Toronto Stock Exchange data and proved the existence of complementarity, or even mutual influence between the central stock market and the block stock market. This complementarity is materialized by a positive and significant effect of the block volume on the stock market assets prices (Martikainen et al, 1994). Based on data between 1962 and 1988 in the New York Stock Exchange and the American Stock Exchange Campbell et al, (1993) have analyzed the securities prices behavior and confirmed the existence of a linear relationship between volume and asset prices. Also, In the Egyptian market, El- Ansary et al, (2012) have found a strong and delayed link between the block trade volume and the stock market assets prices. In addition, Foucault (1994) argues that the transactions of the informed actors have an impact on the price because of their informational content. The author also demonstrates the impact of the non-competitive behavior of the informed agent on the balance properties of the stock market. Moreover, when the informed investor has a strategy, they place finished orders even when they are neutral to risk or have perfect information. Accordingly, the balance does not perfectly reveal efficient functioning of the stock market. As the noise decreases, the informed person reduces their investments. Ultimately, when the noise disappears, the informed investor stops trading.

Regarding the horizon and the nature of the effect, Gordon (1996) attempts to verify the effects of block transactions on the London Market according to the evolution of the rules of organization and to the control of these financial position. The author has studied the relationship between block size and prices, and has

noticed a significant influence of transactions' size on short-term price movements. He also argues that the size of the "purchase" blocks has a permanent effect. However, the size of a "sale" block does not produce a significant drop in prices. On the contrary, the volume of a "sale" block also has a permanent effect. The author conclude that the size of the purchase or sale trade has permanent effects, while the short-term liquidity effect results only from buying blocks. On the Australian Stock Exchange, Ball, Finn (1989) demonstrate that the blocks induce a permanent effect on stock prices with no possibility of a return to the initial price, because of the increase in volatility prices following block transactions.

Similarly, by analyzing investor behavior, Campbell et al, (1993) have found that the yield on assets is low on high volume days compared to low volume ones. They explain this by the fact that uninformed traders have an aversion to risk and are wary of market conditions when there are volumes. Investors consider these volumes to contain private information. The authors conclude that there is an informational impact of block trades on asset returns.

In an empirical study on the most liquid assets on the Paris stock exchange, Oriol (2008) proves the existence of permanent and temporary effects of blocks within the Paris financial center. The impact produced by this operation differs depending on the purchase or sale nature of the financial operation. Block purchase trade have a higher permanent effect than sales, which validates the hypothesis of a greater informational content of block transactions on the Paris market (Oriol, 2008).

In addition to theoretical lessons, empirical work confirms the influence of block trades on the stock market at different magnitudes and horizons. To assess the impact of the block market on the Moroccan stock market, the following section presents the Casablanca Stock Exchange before attempting to quantify the impact of block market compartment on the Moroccan stock market.

An Empirical Study: Materials and Methods

To conduct an empirical study of the block trade weight and effect on the Casablanca Stock Exchange, it is useful to expose the structure and the characteristics of this Moroccan Stock Exchange.

Organization and evolution of the Moroccan Stock Market

The Moroccan financial system has significantly evolved since the application of the Structural Adjustment Program (SAP) recommendations in 1983. It has benefited from a better positioning on the international scene. Under these impulses, the sector has experienced a remarkable movement of liberalization, deregulation and modernization.

The Casablanca Stock Exchange (CSE) has gone through a long process of reform and modernization. The management of CSE has been entrusted since 1995 to a public limited company, wholly owned in equal shares by stock exchange companies approved by the Ethics Council for Securities. In addition, the collective investment institutions in transferable securities started their activities in 1995. The central depository "MAROCLEAR" was created to guarantee the transparency of the rules of operations and the transactions security. Meantime, the authorities have launched a vast privatization program which has allowed the Casablanca Stock Exchange to be considerably dynamic.

The Casablanca Stock Exchange is not driven by prices, but by orders that pass through the central market and the block market which governs large transactions. The central market receives orders for sale and purchase of securities, generally expressed in small or low volume. The block market only accepts trade involving quantities of securities exceeding a minimum threshold, set by the Market regulator. This segment is reserved for large investors and institutional players.

As part of the electronic quotation system, the holder of a securities account delivers a stock market order (purchase or sale). Orders can be denominated at market price or with a limited price. The order is then placed on the market by the intermediary brokerage firm. The order can be issued outside the trading session, but the execution takes place during the trading session.

Trading hours are generally between 9 a.m. and 3:30 p.m. We distinguish a pre-opening phase, characterized by the collection of orders without execution, and the pre-closing phase where orders continue to be received but without execution. These last orders are used to calculate the closing price (fixing) and to determine the opening price for the next day. In the block market, trading is over-the-counter and has conditions based on size and execution. The size and frequency of blocks can be sources of information that can influence transactions and investor behaviors in the central market. Measuring the weight of the

block market in the Casablanca Stock Exchange may implicitly reveal the weight of the block market effect on the stock market.

Weight of the block market on the Casablanca stock exchange

Financial statistics from the Casablanca Stock Exchange show that the block market volume represents a significant portion in the Moroccan market size 2017-2018-2019 (figure 1). This share exceeds 20% on more than half of the monthly statements of the transaction volume.

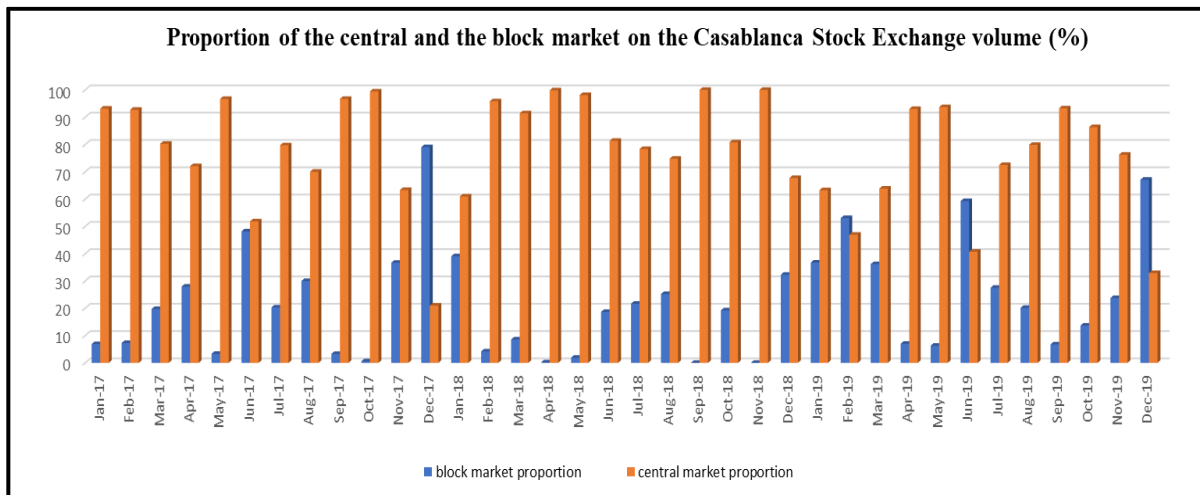


Figure 1: Central and block market proportion on the Casablanca Stock Exchange

Over the entire period 2012-2019 (Figure 2), trades in the block market represent an average of 52% of the transactions volume in the central market. In only 10% of the periods (31 months), the block market volume represents less than 10% of the central market volume.

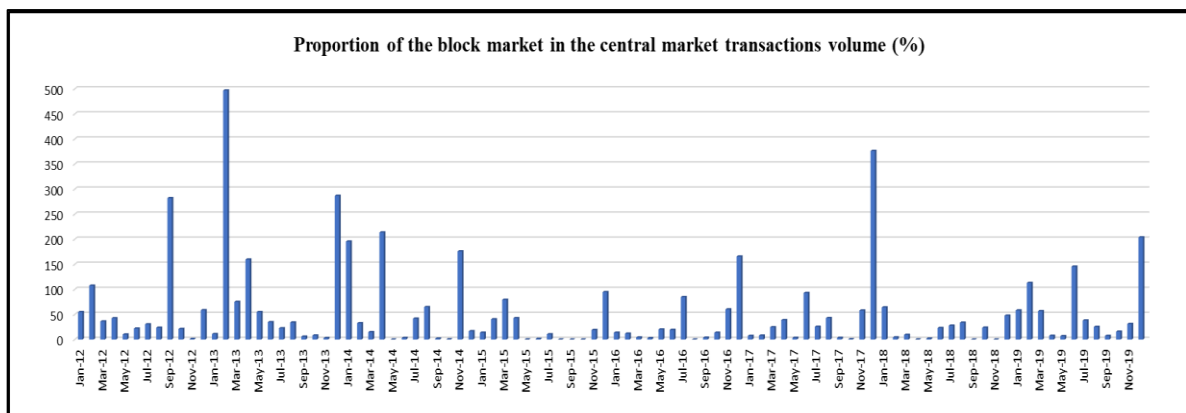


Figure 2: The block market proportion in the central market volume (%)

Regarding the block market volume link with the Moroccan All Shares Index (MASI), the data in figure 3 show that the evolution of the global index of the Casablanca Stock Exchange does not reveal any reaction to the volume evolution of blocks trades. However, a detailed reading of the statistics reveals that each peak in block trading volume is followed by a rise in the MASI.

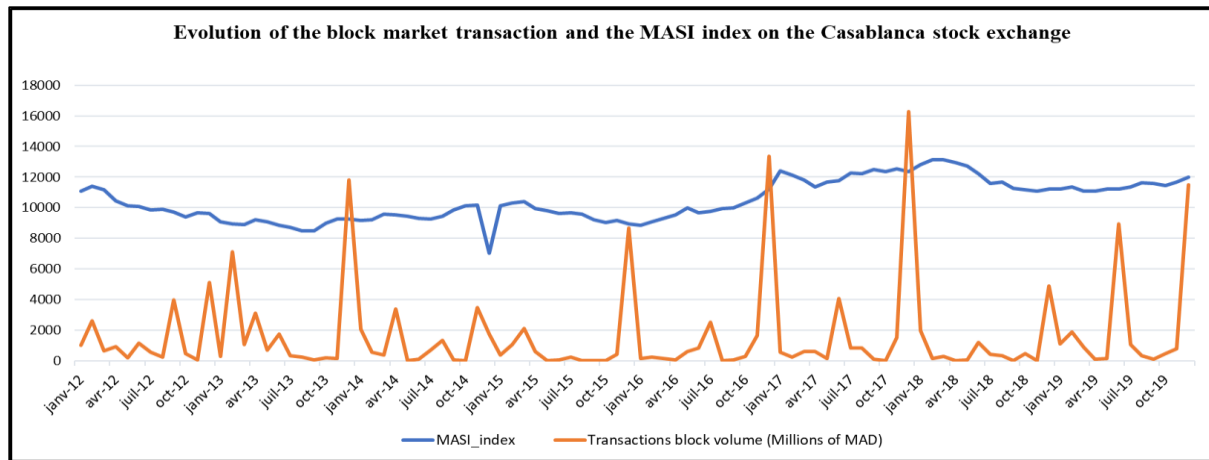


Figure 3: Block trades evolution and the Moroccan All Shares Index (MASI)

The financial statistics of the Casablanca Stock Exchange illustrate a significant weight of the block market transactions and announce the existence of an effect on the indicators of this financial market. The empirical study of the link between block market indicators and Casablanca stock market indicators will reveal the nature of these relationships and the extent of an impact of blocks on the Moroccan financial market functioning.

Methodological Approach

In order to explore the block market impact on Casablanca Stock Exchange indicators, an empirical approach that consists on studying the links between the variables representing the axes of this problem is adopted. According to the hypothetico-deductive approach, the exploration of models and theoretical concepts related to the problematic of the organization of financial markets and the structure of the Moroccan Stock Exchange permits to formulate hypotheses that would provide response regarding the impact of block trades on the performance of the Casablanca Stock Exchange. To refine this methodological approach the variables needed to design our econometric models have to be selected.

Selection of variables; To explore the influence of block trading on the information circulation, the price formation process and on the investor behavior, it is important to study the relationship between the indicators of the block market and the central market, and the index of the Casablanca stock exchange.

In the block market, the transactions volume seems to be the most suitable by default indicator to represent all of the activity in this market. For variables that may be impacted by the block market, the use of a big size placement on the central market allows to directly study the volume and the liquidity effect on the central market, while the use of the stock market index will offer the possibility to grasp the overall impact on the Moroccan stock market. The identification of the variables to be used in the empirical study gives the opportunity to formulate the hypotheses that must be studied in order to explore the issue of the impact of block trades on the Moroccan Stock Market.

Hypotheses; The theoretical and empirical lessons, and the Moroccan Stock Market configuration permits to predefine the expected effect and the possible links between the different variables through the following assumptions:

In accordance with Gordon (1996), we assume that block transactions influence the volume in the central market. In other words, the rational players use, in principle, the information offered by the block market to initiate "unusual" sales or purchase trades on the security subject to the transaction or on the securities of the branch of activity. This behavior induces, undoubtedly, an increase in the central market volume, place of regular exchanges. The distinction between a temporary and permanent impact on financial transactions contribute to identify two hypotheses:

Hypothesis 1: The block market has a temporary impact on the central market volume of the Casablanca Stock Exchange.

Hypothesis 2: The block market has a permanent impact on the central market volume of the Casablanca Stock Exchange.

To assess the impact of the block market on the performance of the Casablanca financial market, we formulate the following hypothesis:

Hypothesis 3: The block market influences the MASI index evolution of the Casablanca Stock Exchange. In order to test these hypotheses empirically and provide answers to our query, the data series used are monthly and cover the period between January 2012 and December 2019. The series

are represented as: Block Market Volume (Block_Market), Central Market Volume (Central_Market) and Monthly average of the MASI Index of the Casablanca Stock Exchange (MASI_Index). The series charts, below, reveal different stochastic properties and indicate a risk of non-stationarity.

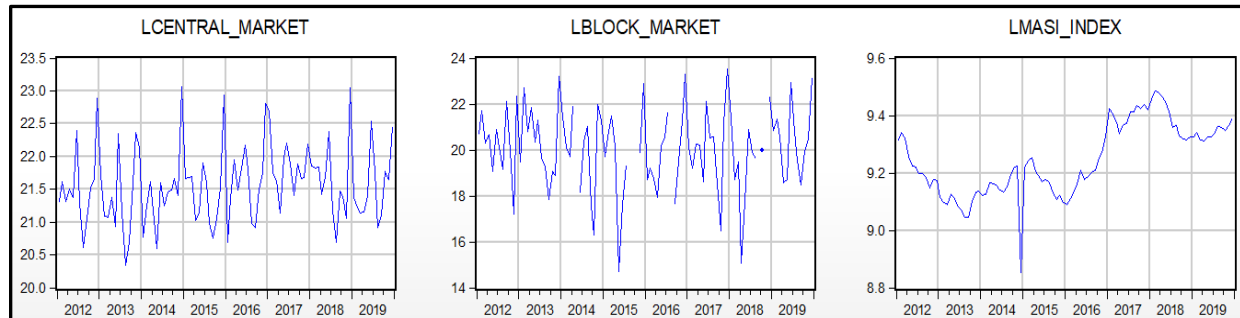


Figure 4: Graphic representation of the series

Studying the stochastic properties of the series confirms that the series do not follow the same order of integration. Indeed, the block market series (LBlock_Market) is stationary in level while the two other series LCentral_Market and LMASI_Index are stationary in first difference (table 1).

Table 1: Results of the series stationarity test

ADF Test		Model 3		Model 2		Model 1		Decision
		t-Statistic	Probabiliy	t-Statistic	Probabiliy	t-Statistic	Probabiliy	
Central Market	Level	-1,78	0,70	-1,51	0,52	0,00	0,68	NS
	1st difference	-6,86	0,00	-6,94	0,00	-6,99	0,00	S (T & Intercept)
Block Market	Level	-5,75	0,00	-5,76	0,00	-1,05	0,25	S (T & Intercept)
	1st difference	-3,96	0,02	-3,73	0,00	-6,95	0,00	S (T & Intercept)
MASI Index	Level	-3,24	0,08	-1,01	0,74	0,28	0,76	NS
	1st difference	-7,79	0,00	-7,72	0,00	-7,76	0,00	S (T & Intercept)

S : Stationarity - (T & Intercept) : Trend & Intercept - NS : Not stationary

Models Specification; The reaction of the stock market indicators following the completion of block trades needs to be studied in order to quantify block transaction shocks on the central market volume and the stock exchange index. These operations are considered in the econometric sphere as shocks that impact the functioning and the indicators of the stock market. Therefore, to analyze these effects on the central market volume and the MASI evolution, VAR modeling can be used (Sims, 1980).

However, the difference in the degree of integration of the used series could indicate the existence of a long-term relationship between the block market and the overall trend of the MASI stock index, and invalidate the use of VARs. For these configurations, Pesaran, Shin, Smith (2001) defined the Auto Regressive Distribution Lag (ARDL) approach as the most suitable model for studying the relationships between series that display different stochastic properties (Nelson, Plosser, 1982). In addition, the technical specificity of these models allows to understand and to measure the propagation of the impact beyond the day of the transaction's outcome by taking into account the lags in the estimates. Henceforth, the future impact of block trades can be forecasted.

Using the ARDL model allows to quantify the influence degree of the block market on the stock market in the short term, and to estimate the degree of cointegration between the variables of our models in the long term. Our empirical study is represented by two bivariate model (1 and 2), placing the block market with the central market volume and then with the MASI index.

Model (1): Impact on the Central Market

LCentral_Market / LBlock_Market

$$(1) D L_{\text{Central_Market}}_{j,t} = \beta_{j,0} + \sum \beta_{1j} D L_{\text{Central_Market}}_{j,t-i} + \sum \beta_{2j} D L_{\text{Block_Market}}_{t-i} + \varphi_{j,1} L_{\text{Central_Market}}_{j,t-1} + \varphi_{j,2} L_{\text{Block_Market}}_{t-1} + \varepsilon_{j,1t}$$

$$* (1.1) D L_{\text{Central_Market}}_{j,t} = \sum \beta_{1j} D L_{\text{Central_Market}}_{j,t-i} + \sum \beta_{2j} L_{\text{Block_Market}}_{t-i} + \mu_{j1} ECT1_{j,t-1} + \varepsilon_{j,2t}$$

Model (2): Impact on the MASI index evolution

LMASI_Index / LBlock_Market

$$(2) D L_{\text{MASI_Index}}_{j,t} = \beta_{j,0} + \sum \beta_{1j} D L_{\text{MASI_Index}}_{j,t-1} + \sum \beta_{2j} D L_{\text{Block_Market}}_{t-i} + \varphi_{j,1} L_{\text{MASI_Index}}_{j,t-1} + \varphi_{j,2} L_{\text{Block_Market}}_{t-1} + \varepsilon_{j,1t}$$

$$* (2.2) D L_{\text{MASI_Index}}_{j,t} = \sum \beta_{1j} D L_{\text{MASI_Index}}_{j,t-i} + \sum \beta_{2j} L_{\text{Block_Market}}_{t-i} + \mu_{j1} ECT1_{j,t-1} + \varepsilon_{j,2t}$$

Equations (1) and (2) are composed of a linear combination of differentiated and lagged variables to express the short-term dynamics and a set of level lagged variables to represent the long-term relationship.

In equations (1.1) and (2.2): $\mu ECT1_{j,t-1}$: designates the Error Correction Term. With: $-1 < \mu \leq 0$; The absolute value of μ (speed of convergence) determines how quickly the balance will be established.

In the presence of a cointegrating relationship, the short-term effects will be estimated from equations (1.1) and (2.2).

Findings and Discussions

According to the ARDL method, the estimation results of models (1) and (2) are reported in the tables 1 and 2.

Table 2: Model estimation results (1)

Long term relationship		
Bounds-Test ⁴	F-Statistic	26,79
	I1 Bound (5%)	5,75
LBlock_Market	Coefficient	0,038
	P-value	0,37
Short term relationship		
D(LCentral_Market)	Coefficient	0,20
	P-value	0,03
D(LBlock_Market)	Coefficient	0,11
	P-value	0,00
ECT _{t-1}	Coefficient	-0,99
	P-value	0,00
Model validation test		
White Test	F-Statistic	0,92
	P-value	0,53
LM Test	F-Statistic	0,07
	P-value	0,92
Ramsey RESET Test	F-Statistic	0,38
	P-value	0,67

Table 3 : Model estimation results (2)

The results of the various tests shows that the two models are statistically validated. Indeed, the probability of the White test ² is greater than 5%; thus, the hypothesis of homoscedasticity of errors is accepted. The estimates obtained by ordinary least squares are, then, optimal.

² White test: Ho: homoscedastic model; H1: heteroscedastic model. The model is homoscedastic if the probability is greater than 5%. The model is heteroscedastic if the probability is less than or equal to 5%.

Long term relationship		
Bounds-Test ⁵	F-Statistic	0,71
	I1 Bound (5%)	5,73
LMASI_Index	Coefficient	-0,07
	P-value	0,65
Short term relationship		
D(LMASI_Index (-1))	Coefficient	-0,36
	P-value	0,00
D(LBlock_Market)	Coefficient	0,00
	P-value	0,91
D(LBlock_Market (-1))	Coefficient	-0,01
	P-value	0,01
D(LBlock_Market (-2))	Coefficient	-0,00
	P-value	0,76
D(LBlock_Market (-3))	Coefficient	0,01
	P-value	0,01
ECT _{t-1}	Coefficient	-0,06
	P-value	0,25
Model validation test		
White Test	F-Statistic	1,21
	P-value	0,29
LM Test	F-Statistic	1,03
	P-value	0,36
Ramsey RESET Test	F-Statistic	1,08
	P-value	0,28

Established by the author from the estimates of the EViews 9

Regarding the autocorrelation of errors, the results of the LM test³ indicate that the probability of the test is greater than the significance level of (5%). We, then, conclude that the model's residuals are not correlated.

For the specification of the models, the probability of the Ramsey RESET Test⁴ is greater than 5%, and the Ho hypothesis is accepted; the models are well specified. The statistical validity of the models allows an analysis of the impact of the block market on the Casablanca Stock Exchange.

³ LM test (Breusch-Godfrey Serial Correlation LM Test): The assumptions are: Ho: uncorrelated errors; H1: correlated errors. We accept the hypothesis if the value of the probability is greater than 5%. We accept if the value of the probability is less than or equal to 5%.

⁴ Ramsey RESET Test: Ho model is well specified; H1 model is incorrectly specified. We accept the Ho hypothesis if the value of the probability is greater than 5%. We accept H1 if the probability value is less than or equal to 5%.

According to the model (1) results, the Bounds Test indicates the presence of a long-term relationship. However, estimating this relationship does not confirm the significance of the long-term relationship. Therefore, block transactions have no long-term impact on the central market volume. The coefficient of the Error Correction Term (ECT) is indeed negative and significant, but cannot provide information on the return to balance in the financial block deal size following a shock affecting the block market.

Regarding the short part of the relationship, estimates suggest that a block market shock has a significant and immediate impact on the central market through the influence of transaction volume. In more detail, when the block trading volume increases by 1%, the central market trading volume increases by 0.11%.

About the link between block trades and the MASI evolution (model 2), the Bounds test results do not show a long-term relationship between the two series. The model estimate confirms this finding, since the coefficient of the long-term term is not significant. Also, the Error Correction Term is almost zero and is not significant.

On the short-term side, the effect of the block shock on the MASI stock index seems weak and dates back to a 3-months delay. Indeed, the econometric results show that despite the significant influence of the lagged block market on the evolution of the index, the magnitude of the impact is almost zero. These results prove the lack of impact of block market shocks on the MASI index of the Casablanca Stock Exchange. Overall, the results of this empirical study show that block trades have a limited effect on Casablanca Stock Exchange indicators. Indeed, hypothesis (1) of the existence of a short-term effect of block transactions on the central market volume is validated. On the contrary, hypothesis (2) cannot be accepted because of the lack of the long-term impact on the volume of the central market.

The shocks on the block market, therefore, exert a temporary impact on the central market. This effect gradually fades and disappears without having a permanent effect.

For the impact on the MASI index, the results support the rejection of hypothesis (3). In other words, the shocks on the block market do not have a significant impact on the movement of the MASI stock index. This result is logical in the sense that the weak impact on the central market implicitly announces a weakness or even an absence of the effect on the other indicators of the Casablanca Stock Exchange.

In conclusion, although the volume and weight of the block market in the Casablanca Stock Exchange is important, the analysis of the empirical links between the block trades variation and other stock market indicators reveals the existence of a limited short-term impact in the central market. The effect of the blocks seems to be neutralized and only influences the central market weakly and temporarily.

The separation between the central market and the block market within the Casablanca Stock Exchange seems efficient and offers a better drain of transaction between the stock markets compartment. The presence of the temporary effect signifies a limited liquidity effect in the market, while the absence of the permanent effect indicates poor information content, or even non-disclosure of information on large size operations.

The weakness of the temporary effect and the lack of the permanent effect can be explained by the efficiency of the Stock Market and the quality of the information circulation. This result would also mean that the effects of information leaks between the expression of the investor's intentions and the outcome of the transaction are not significant. This observation depends on the nature of the relationships between the stakeholders in the blocks, and the existence or absence of intermediaries, whose presence increases impact on market conditions through the information disclosure.

Also, the informational content of the placements can be weak insofar as the blocks are perceived by the market only within the framework of reallocation of funds because of the market deadlines.

This configuration proves a relative efficient functioning of the Casablanca Stock Market and seems to encourage financial investments. Indeed, stock market investors (small carriers) remain present on the market and do not desert it, as they are insured against the effects and impact of the block trades liquidity. While the low short-term impact mitigates the speculation effects on the stock price formation process, investors feel hedged at least in the long term against the effects of block-motivating information and its impact on the share prices.

Conclusions and Recommendations

Although the structure and market statistics of the Moroccan financial market announces the existence of an effect of the block trades on the Casablanca Stock Exchange indicators, the empirical analysis reveals a

temporary and limited impact on the central market and a neutral influence on the MASI index. The estimates do not confirm the existence of permanent impacts on any indicator of the Moroccan Stock Market. In other words, the liquidity effect is weak and limited on the stock market, while the informational effect is almost zero and insignificant.

The reactions of the stock market to block shocks could be explained by the organization and division of the Moroccan Stock Market. The absence of a permanent effect and the weakness of the temporary effect would mean a low information content, or even the absence of the effects of information leaks on large size transactions.

These results should be interpreted with caution, as they could depend on the nature of the data and the methodology applied. Thus, the use of intra-day data and statistics of blocks by asset while distinguishing the nature of the block (purchase or sale) could only provide more information about the block market effect on the various indicators of the Casablanca Stock Exchange.

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