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Market Index Return and Volatility Spillovers Evidence from Arabian Stock Markets

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ABSTRACT

Objectives: This study aims to examine the variation in index returns caused by shock transmissions among six Arabian stock markets, namely the Amman Stock Exchange, Casablanca Stock Exchange, Dubai Financial Market, Egypt Capital Market, Saudi Stock Market, and Palestine Securities Exchange, during the period from January 2, 2017, to January 2, 2020.

Methods: This study adopted the spillover methodology proposed by Diebold and Yilmaz (2009), which is based on the notion that the initial spillover index directly follows the usual idea of variance decomposition (VD) combined with an N-variable VAR model.

Results: The results showed weak returns and volatility spillovers within the Arabian stock markets. Specifically, the overall spillover index of returns indicates that only 3.38% of the variations are caused by cross-market shocks, while 96.62% are attributed to market-specific shocks. Similarly, the overall volatility spillover index suggests that only 2.4% of the variations are due to cross-market shocks, with 97.6% resulting from market-specific shocks.

Conclusions: The study recommended conducting further research on all Arabian markets, especially in light of the ongoing conditions of the COVID-19 crisis**.**

Keywords: Arabian stock markets, Market index, Return and Volatility Spillover.

1. Introduction

Over the past thirty years, increased financial liberalization, developments in international equity markets, and the consequences of globalization have removed barriers to investment. Cross-border trades are not only enhancing investor returns but also leading to greater correlation, connection, and integration among different financial markets, potentially causing catastrophic losses. For example, the stock market crash of October 1987 triggered a widespread domino effect across global financial markets.

Markowitz (1952) analytically demonstrated that diversification advantages depend on the correlation coefficient between portfolio components' risk and return. Consequently, investors began to seek international investments wherever they could achieve higher profits.

As a result, analyzing the nature and strength of relationships and correlations among different markets, especially those with similar trading environments, has gained significant interest from investors, financial institutions, and governments worldwide. This focus has

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also stimulated academic research into stock market integration. Integrated markets do not offer the same portfolio diversification benefits (Jebran & Iqbal, 2016), and spillover effects across markets can cause volatility shocks in other markets (Kargin et al., 2018).

Early studies primarily concentrated on the relationships among developed countries' markets, with relatively little attention given to Arabian stock markets (ARSM).

In this context, this study aims to examine the return and volatility spillovers (RVS) among six ARSMs. Specifically, this study seeks to answer the following questions:

- Is there a return spillover across ARSM indices?
- Is there a volatility spillover across ARSM indices?

By adopting the spillover methodology of Diebold and Yilmaz (2009), this study contributes to and distinguishes itself from the existing literature in three key ways. Firstly, it applies the methodology to daily closing prices over a recent period, specifically from January 2, 2017, to January 2, 2020. Secondly, it utilizes a precise measurement of volatility. Finally, to our knowledge, it is the first study to examine return and volatility spillovers (RVS) among Arabian stock markets (ARSMs).

The results of this study are expected to enrich the scant literature on stock market relationships in the Arabian context. The practical implications may benefit both institutional and individual investors, as well as policymakers, by aiding in the forecasting of market behavior and informing portfolio decisions.

The remainder of this paper is organized as follows: Section 2 provides a brief overview of ARSM, Section 3 reviews relevant literature and previous studies, Section 4 describes the study methodology, Section 5 presents the empirical results and discussion, and Section 6 offers conclusions and recommendations.

2. Arabian stock markets: An Overview

The Arab states comprise 22 countries, with a gross domestic product (GDP) of $2.782 trillion as of 2018 and a per capita GDP of $6,647 (World Bank data). The market capitalization (MC) of the Arabian stock markets (ARSM) was $3.161 trillion at the end of 2019 (AMF Annual Report, 2019). The number of listed corporations is 1,542 (AMF database). Table 1 presents the sample characteristics.

Table (1): Sample characteristics:

Country	Jordan	Morocco	UAE	Egypt	Saudi Arabia	Palestine
Market	Amman stock exchange	Casablanca stock exchange	Dubai financial market	Egypt Capital Market	Saudi Stock Market	Palestine Securities Exchange
Est.date	1999	1929	2000	1903	1985	1995
INDEX	AMGNRLX	MASI	DFMGI	EGX30	TASI	PLE
listed com. (2019)	191	75	67	248	204	48
Market capitalization (MC) (Billion U.S. $)						
2018	23.1	60.5	93.5	41.8	496.3	3.7
2019	21.02	64.2	102	42.4	2406.9	4.2
Web site	ase.com.jo	casablanca-bourse.com	dfm.ae	egx.com.eg	tadawul.com.sa	pex.ps

Source: Official AMF and market website.

It can be observed from the table that the Egyptian Capital Market is the oldest, having been established in 1903, while the most recent is the Dubai Financial Market, which was established in 2000. The number of listed companies varies significantly, from 48 in the Palestine Securities Exchange to 248 in the Egyptian Capital Market. Regarding market capitalization value (as of the end of 2019), it ranges from $4.2 billion in the Palestine Securities Exchange to $2,406.9 billion in the Saudi Stock Market.

3. Literature review and previous studies:

3. 1. Literature review

The study of inter- and intra-stock market associations from the perspective of portfolio theory suggests that international portfolio diversification can reduce risk and increase returns if the markets are weakly or negatively correlated (Markowitz, 1952). Conversely, integrated markets are vulnerable to the exact opposite, as crises can propagate among them (Jebran & Iqbal, 2016; Baele, 2005).

The transmission of variability from market to market is commonly referred to as "volatility spillover." This phenomenon occurs when price changes in one market cause a lagged impact on volatility in both that market and other markets (Hassan et al., 2019). Meanwhile, the transmission of returns is often termed "return" or "mean spillover" (Natarajan et al., 2014).

The literature on volatility spillover can be categorized into three types: unidirectional, bidirectional, and non-persistent volatility spillover among stock markets (Hung, 2018). According to Natarajan et al. (2014), volatility spillovers are further divided into: own volatility spillovers, which refer to a unidirectional causal relationship between past and current shocks of volatility within the same market; and cross-volatility spillovers, which describe a unidirectional causal relationship between past volatility in market A and current volatility in market B.

3.2. Previous studies

Early studies focused on the relationships among developed countries' markets. For example, Hamao et al. (1990) reported volatility transmissions of price movements from New York to Tokyo and London, and from London to Tokyo.

The finance literature includes numerous studies on the connectedness across national stock markets, with recent empirical research further exploring these connections.

Hassan et al. (2019) examined the possibility of volatility transmission between the KSE100 index (Pakistan) and the S&P500 index (USA) using GARCH models. Their results indicated an absence of spillover effects between these indices.

Hung (2019) studied the daily returns and volatility spillover impacts between China and four Southeast Asian countries (Malaysia, Thailand, Vietnam, and Singapore) using vector autoregression. The study found a significant effect of Chinese volatility on the other sample markets.

Purbasari (2019) investigated the effects of volatility spillover from the USA and Japan to the ASEAN-5 equity markets using the bivariate GARCH (1,1) model. The results showed a volatility spillover from the U.S. and Japan to the ASEAN-5 markets, as well as a unidirectional internal volatility spillover among the ASEAN-5 countries.

Alrabadi (2018) examined the dynamic adjustment of stock prices toward fundamental values on the Amman Stock Exchange using daily data from 2004 to 2013. The study confirmed an asymmetric relative mean reversion process in both the short and long runs.

Alrabadi, Dima, and Alrabadi, Hanna (2018) investigated whether individual stock volatility co-moves with overall market volatility. Their sample consisted of daily observations of 105 companies listed on the Amman Stock Exchange (ASE) from 2006 to 2015. The results revealed strong evidence of commonality in volatility within the ASE.

Bhowmik et al. (2018) studied the extent of interdependence across six Asian emerging markets (Bangladesh, China, India, Malaysia, the Philippines, and South Korea). Their results revealed that return and volatility spillovers behaved quite differently over time, across pre-crisis, crisis, and post-crisis periods. Notably, Asian emerging stock market interactions were less pronounced before the international financial crisis.

Kargin et al. (2018) examined the volatility spillover effects of French, German, and American stock market indices on the Turkish stock market index BIST 100. The study used the VAR (TVAR) model and the E-GARCH (1,1) method. Their findings revealed that the S&P 500 was the most influential index affecting the BIST 100 in both high and low-risk regimes.

Oliveira and Maranhao (2017) investigated volatility spillovers in the Brazilian stock market. Using GARCH multivariate conditional correlations and Granger causality, the study found spillovers from exchange rate shocks and financial markets to the Ibovespa index. These correlations had temporal dynamics, with spillovers consistently directed towards the Ibovespa index.

Kim and Ryu (2015) studied volatility transmission and return spillover between the U.S. and Korean stock markets. Their results showed significant volatility transmission between the markets, with return spillover effects from the U.S. market to the Korean market.

In the Arabian context, Kirkulak and Ezzat (2017) investigated volatility spillovers of stock returns among Egypt, Israel, Saudi Arabia, and Turkey stock markets, covering the period from 2007 to 2013. Their results showed strong shock transmission from Egypt to Israel, Saudi Arabia, and Turkey.

Finally, Ibrahim (2009) examined the long-term relationship between three major North African stock markets: Morocco, Tunisia, and Egypt. The results indicated both multivariate and bivariate nonlinear long-term relationships between stock prices in these markets. This suggests that portfolios in these markets were inefficient, as price movements were linked to a predictable direction but exhibited nonlinearity.

4. Study methodology

4.1. Data

The dataset used in this empirical study includes daily closing stock market index returns from January 2, 2017, to January 2, 2020, for five trading days each week. The study covers indices from six Arabian stock markets (ARSM), with a total of 765 usable observations for each market index. All secondary data were obtained from the official website of the AMF database and the respective stock markets.

4.2 Study Variables:

Market Index Return (MIR):

In line with the previous studies (see, e.g., Modi et al., 2010; Natarajan et al., 2014; Singh & Kaur, 2015; Uludag & Ezzat, 2017 and Hung, 2019), this study computes the daily MIR using the following formula:

$$R_{i,t} = \ln (P_{i,t} / P_{i,t-1}) \quad \text{………………………………(1)}$$

Where: $R_{i,t}$ is market i index return for day t, P_t and P_{t-1}: market i index closing prices of at time t and (t-1), respectively.

i: AMGR, MASIR, DFMR, EGX R, TASIR and PEX R: Amman Stock Exchange, Casablanca Stock Exchange, Dubai Financial Market’s, Egypt Capital Market, Saudi Stock Exchange, and Palestine Exchange index return.

Return Volatility (RV):

Following (Yarovaya et al. 2016) this study used the volatility estimator of (Rogers and Satchell, 1991), which was found to be more efficient than traditional volatility estimators (Shu and Zhang, 2006) by using the following formula:

$$\delta 2RS = h_t (h_t - C_t) + L_t (L_t - C_t) \quad \text{…………………(2)}$$

Where: ht: The high daily price, Lt: The low daily price, Ct: The closing daily price.

AMGV, MASIV, DFMV, EGXV, TASIV and PEXV: Amman Stock Exchange, Casablanca Stock Exchange, Dubai Financial Market's, Egypt Capital Market, Saudi Stock Exchange, and Palestine Exchange index return volatility.

4.3 Hypotheses

Based on the literature and previous studies, the study hypotheses are as follow:

H01: There is no return spillover among the ARSM index return.

H02: There is no volatility spillover among the ARSM index return.

4.4. Statistical method:

To examine the proposed return and volatility spillovers (RVS), several steps were undertaken in this study. The daily data series were first subjected to descriptive statistics to ascertain central tendency, dispersion, and normality distribution.

Next, stationary tests of the study variables were conducted using standard methods such as the Dickey-Fuller ADF (1979) test and Perron (1988) test to ensure that the results of the analysis are not spurious. These tests were performed to confirm that the series is stationary at level.

Following several previous studies (e.g., Bhowmik et al., 2018; Kargin et al., 2018), this study adopted the spillover methodology proposed by Diebold and Yilmaz (2009). This methodology is based on the concept that the initial spillover index follows the standard idea of variance decomposition (VD) combined with an N-variable VAR model. The total spillover index is defined as the total contribution of shocks to a market index from all other market indices and is calculated as (Singh and Kaur, 2015):

$$S = \frac{\sum_{h=0}^{H-1}\sum_{i,j=1}^{N} a_{h,ij}^{2}}{\sum_{h=0}^{H-1} trace\,(A_h A'h)} * 100 \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (3)$$

Where: S: Spillover index, N: variables, i, markets, H; step-ahead forecasts, a forecast error variation, trace (AhA'h) is the total forecast error variation. In our study, this study used second-order 6 index VARs with 10-step-ahead forecasts.

5. Results and discussion

5.1. Descriptive statistics:

Table 2 presents the descriptive statistics for the daily index returns of the six ARSMs.

Table (2): Descriptive Statistics Results

Variable	Mean	Med.	Std. Dev.	kew.	Kurt.	J.B
Return (R)						
AMGR	-0.02	-0.04	0.40	0.05	6.85	471.6*
MASIR	0.01	0.01	0.56	0.34	6.46	396.4*
DFMR	-0.03	-0.03	0.80	0.16	5.93	277.4*
EGXR	0.02	0.05	1.04	-0.61	5.35	223.8*
TASIR	-0.03	-0.05	0.86	-0.14	7.31	594.7*
PEXR	0.00	-0.03	0.37	-0.47	8.14	870.1*
Volatility (V)						
AMGV	-0.006	-0.007	0.03	-0.00	5.62	218.9*
MASIV	-0.005	-0.007	0.06	0.05	4.18	44.6*
DFMV	-0.0002	-0.0003	0.07	-0.07	4.96	123.6*
EGXV	0.008	0.007	0.10	0.42	4.86	133.2*
TASIV	-0.0106	-0.006	0.08	-0.64	7.07	579.1*
PEXV	0.091	0.10	0.17	-0.74	6.77	521.5*

Note: Significance at the 0.01 level.

The means of returns and volatilities are around zero. Specifically, the returns range from -0.03 for DFMR to 0.02 for EGXR. Among the six markets, three (AMGR, DFMR, and TASIR) exhibited negative returns, while two (MASIR and EGXR) had positive returns, and PEXR had a return of zero.

These results align with those of Hung (2019), who reported mean returns in Hungary (0.02), Poland (0.02), Czech Republic (-0.00), Romania (0.01), and Croatia (-0.02) during the post-crisis periods. However, they are lower compared to those reported by Modi et al. (2010), which indicated returns of 0.11% for RTS Russia, 0.10% for BVSP Brazil, 0.10% for Mexico, and close to 0.02% for FTSE 100 UK, 0.03% for Hang Seng, 0.04% for NASDAQ USA, and 0.05% for BSE India.

During the same period, the means of volatility are lower than the means of return, ranging from -0.0002 for DFMR to 0.09 for PEXV, with AMGV, MASIV, DFMV, and TASIV appearing on the lower end of the graph.

The values of kurtosis, skewness, and the Jarque-Bera (JB) test are also shown in Table 2. All indices exhibit high leptokurtosis, indicating deviations from a normal distribution.

Figures 1 and 2 plot the movements and time-varying variability of index returns and volatilities for all series. The charts suggest that the return volatility series is stationary, with fluctuations occurring both above and below the horizontal zero axis.

5.2. Empirical Results

5.2.1. Unit Root Test

Each stock market index is checked for stationarity using ADF and PP tests. Table (3) present the Stationarity test results.

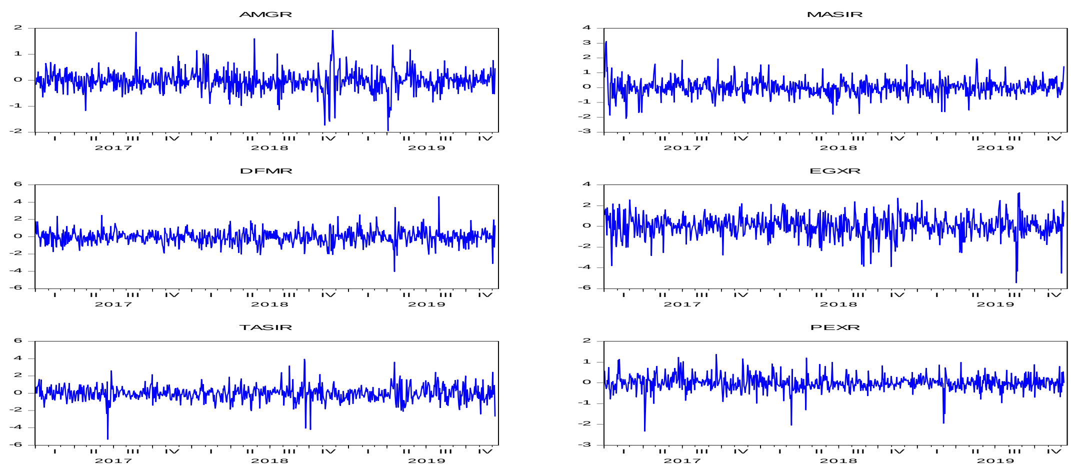

Figure1. The daily indices return clustering

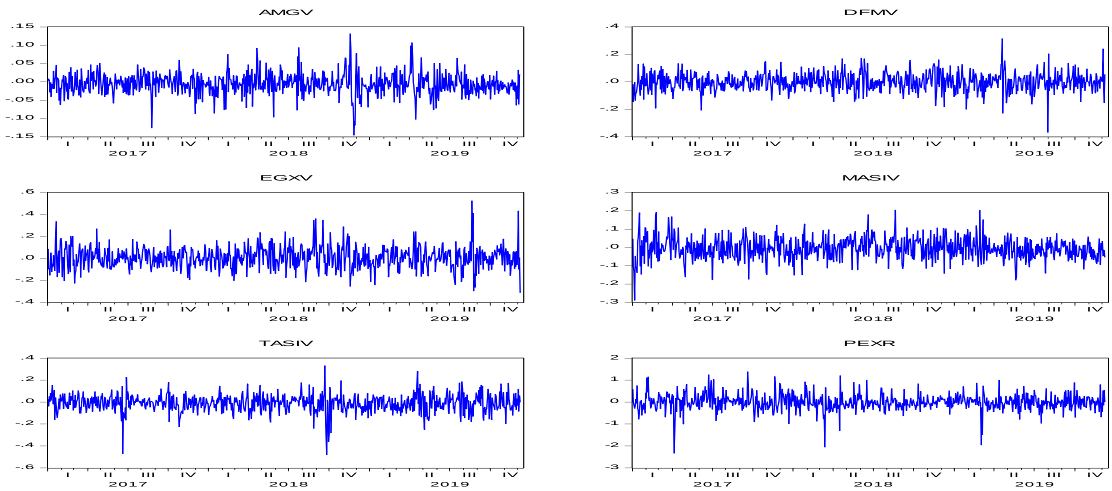

Figure 2 The daily indices return volatility clustering

Table (3): Stationarity test results

H0: X_i has a unit root	**ADF t. sta.**	**PP t.sta.**	**H0: X_i has a unit root**	**ADF t. sta.**	**PP t.sta.**
AMGR	-16.49*	-22.79*	AMGV	-17.13*	-24.54*
MASIR	-12*	-22.9*	MASIV	-7.08*	-25.29*
DFMR	-25.15*	-25.27*	DFMV	-26.10*	-26.17*
EGXR	-23.15*	-22.92*	EGXV	-17.03*	-22.87*
TASIR	-10.42*	-22.71*	TASIV	-11.36*	-24.99*
PEXR	-17.3*	-26.22*	PEXV	-27.31*	-27.32*
Test critical values:	0.01, 0.05 &0.10 level: -3.97,-3.416 &-3.13				

*MacKinnon (1996) one-sided p-values.

*Denote statistical significance at the 0.01 level.

Table 3 indicates that all calculated values are more negative than the critical values, and all p-values of the ADF and PP tests are less than 0.05 for all series. This implies that we reject all null hypotheses, concluding that all series are stationary at level (i.e., I(0)).

5.2.2. Return and volatility Spillover analysis results

To calculate the Return and Volatility Spillover (RVS) index based on the technique proposed by Diebold and Yilmaz (2009), Tables 4 and 5 present the variance decomposition for a 10-day forecasting horizon (h) using a VAR model of order 2. The order was identified using Cholesky factorization results for returns and volatility. The (x,y)th value in these tables represents the estimated contribution to the variance of the 10-day-ahead forecast error for stock returns in country x, coming from innovations to stock returns in country y (Diebold and Yilmaz, 2009).

To explain the calculation process further, Tables 4 and 5, known as spillover tables according to Diebold and Yilmaz (2009), provide detailed information. The (x,y)th entry in the table shows the estimated contribution to the forecast error variance of market x (returns in Table 4, volatility in Table 5) from innovations in market y. The column labeled "Contribution from Others" indicates which market is most sensitive to external shocks, showing spillovers from all foreign markets to a domestic market. The "Sum" columns display the total spillovers from all markets y in a specific region to market x (Yarovaya et al., 2016). Additionally, the rows labeled "Contribution to Others" (horizontal entries) demonstrate the reverse direction of spillovers, capturing the total spillovers from domestic market x to all markets y.

The analysis of these contributions provides a comprehensive picture of cross-market information transmission. The overall spillover index is calculated by dividing the total value of contributions from other markets by the number of markets included in the study (Singh and Kaur, 2015). Tables 4 and 5 report the spillover indexes for returns and volatility in the lower right corners.

Table (4): Return spillover across stock markets:

TO →	**From ↓**						**C.f.o***
	AMGR	**MASIR**	**DFMR**	**EGXR**	**TASIR**	**PEXR**	
AMGR	98.47	0.15	0.17	0.37	0.12	0.72	1.53
MASIR	0.89	98.87	0.02	0.05	0.08	0.10	1.13
DFMR	0.87	0.72	97.56	0.66	0.16	0.02	2.44
EGXR	0.78	0.56	2.13	96.05	0.01	0.47	3.95
TASIR	0.20	1.07	6.21	0.44	91.89	0.19	8.11
PEXR	0.64	0.69	0.35	0.50	0.95	96.88	3.12
Cont. To own	98.47	98.87	97.56	96.05	91.89	96.88	20.29
Cont. To other	3.38	3.19	8.88	2.03	1.31	1.51	3.38%
Cont. including own	101.8	102.1	106.4	98.1	93.2	98.4	
Return Spillover index value = 20.29%/3 =							

* C.f.o: Contribution From other

The first row of Table 4 exhibits the contribution of shocks towards AMGR arising from the AMGR itself (98.47%) and other stock markets.

In details, MASIR, DFMR, EGXR, TASIR and PEXR are responsible for only (0.15, 0.17, 0.37, 0.12 and 0.72) of AMGR forecast error variance, respectively. So, the greatest magnitude of AMGR spillovers is being from PEXR, while the sum of the contribution from others to AMGR is (1.53%).

Similarly, AMGR is responsible for only 3.38% of the error variance in forecasting 10-day-ahead ARSMIR. In details the contribution from AMGR to MASIR, DFMR, EGXR, TASIR and PEXR are (0.89, 0.87, 0.78, 0.20 and 0.64), respectively.

Based on that, AMGR is more sensitive to its internal previous lag than to external markets. Finally, the contribution from AMGR is less than the contribution to others.

As for MASIR, while the spillover transmitted by MASIR to all other markets is (3.38%), the spillover from other countries is (1.13%).

In detail, MASIR is responsible for only 3.19% of the error variance in forecasting 10-day-ahead ASNIR. Moreover, the contribution from MASIR to ASSR, DFMR, EGXR, TASIR and PEXR are (0.15, 0.72, 0.56, 1.07, and 0.69) respectively. The greatest magnitude of spillovers being from MASIR to TASIR (1.07%).

For DFMR, it is responsible for the highest contribution of 8.88% of the error variance in forecasting 10-day-ahead ARSMIR. It contributes to 6.21%, 2.13%

and 0.35 of the error variance in forecasting TASIR, EGXR and PEXR respectively.

For EGXR, TASIR, and PEXR, their contributions to the error variance in forecasting the 10-day-ahead returns of other markets are less than 1%.

In summary, the highest return spillover to all markets among the Arabian markets is detected from DFMR (8.88%), followed by AMGR (3.38%), MASIR (3.19%), EGXR (2.03%), and PEXR (1.50%). The lowest return spillover index is observed for TASIR (1.31%).

The total sum of contributions is 20.29, resulting in an overall return spillover index of 3.38%. This indicates that approximately 3.38% of the variation in returns is due to cross-market shocks, while 96.62% of the variation is attributed to shocks within the individual markets.

While these results are consistent with findings by Hassan et al. (2019) for Pakistan and the S&P 500, they are lower compared to the total return spillover of 35.5% reported by Diebold and Yilmaz (2009) for 19 global equity markets, and the 10% total return spillover reported by Singh and Kaur (2015) for the US, China, and India.

Volatility spillovers across stock markets are represented in Table 5.

Table (5): Volatility spillover across stock markets

TO →	**From ↓**						**C.F.O***
	AMGV	**MASIV**	**DFMV**	**EGXV**	**TASIV**	**PEXV**	
AMGV	97.51	0.66	0.50	0.73	0.21	0.37	2.49
MASIV	0.63	98.82	0.36	0.02	0.01	0.16	1.18
DFMV	1.21	0.11	98.38	0.23	0.03	0.04	1.62
EGXV	0.44	0.99	1.47	96.81	0.29	0.00	3.19
TASIV	0.22	0.70	2.00	0.40	96.06	0.60	3.94
PEXV	0.16	0.56	0.25	0.68	0.35	98.00	2.00
Cont. To own	97.51	98.82	98.38	96.81	96.06	98.00	14.42
C.F.O	2.66	3.02	4.59	2.07	0.90	1.19	2.4%
Cont. including own	100.2	101.2	103	98.9	97	99.2	
Volatility Spillover index value = 14.42%/3 =							

* C.F.O: Contribution from other

As shown in Table 5, AMGV is highly sensitive to its own previous lags (97.5%) and shows weak sensitivity to foreign information transmission. Specifically, AMGV accounts for only 2.66% of the error variance in forecasting the 10-day-ahead ARSMIR. The contributions from AMGV to MASIV, DFMV, EGXV, TASIV, and PEXV are 0.63%, 1.21%, 0.44%, 0.22%, and 0.16%, respectively. Conversely, MASIV, DFMV, EGXV, TASIV, and PEXV contribute 0.66%, 0.50%, 0.73%, 0.21%, and 0.37% to AMGV's forecast error variance. Among these, the largest magnitude of AMGV spillovers is from EGXV. Overall, AMGV’s total contribution to other markets (2.66%) exceeds the total spillovers from the Arabian markets (2.49%).

Table 5 also shows that the total volatility spillovers from MASIV, DFMV, EGXV, TASIV, and PEXV to other markets are 3.02%, 4.59%, 2.07%, 0.90%, and 1.19%, respectively. DFMV has the highest magnitude of volatility spillovers compared to other markets, while TASIV has the lowest at 0.90%. The total volatility spillovers from AMGV, MASIV, DFMV, EGXV, TASIV, and PEXV to other markets are 2.49%, 1.18%, 1.62%, 3.19%, 3.94%, and 2%, respectively.

Finally, the overall volatility spillover index is 2.4%, indicating that 2.4% of the variations are due to cross-market shocks (spillovers from other markets), while 97.6% of the variations are attributed to market-specific shocks.

6. Conclusion and recommendations:

This study examines market index returns and volatility spillovers among six ARSM indices using the spillover methodology developed by Diebold and Yilmaz (2009). The results reveal that both return and volatility means are close to zero, and all series are stationary at the level.

The overall return spillover index is 3.38%, indicating that 3.38% of the fluctuations are due to cross-market shocks, while 96.62% are attributed to market-specific shocks. Similarly, the overall volatility spillover index is 2.4%, meaning that 2.4% of the fluctuations result from spillovers from other markets, with 97.6% due to market-specific shocks.

The findings suggest that the contribution of shocks from one market to the variation in the forecast error variance of other markets is relatively low. This implies that the returns and volatilities of these markets are primarily influenced by their own past shocks.

These results, indicating low interrelation between markets, are valuable for both individual and institutional investors seeking to construct efficient portfolios that can enhance returns and reduce risk.

The study recommends further research on all Arabian markets, particularly in light of the ongoing COVID-19 crisis.

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انتقال الأثر لعوائد وتقلبات مؤشر السوق: (دراسة على أسواق الأسهم العربية)

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ملخص

الهدف: تهدف هذه الدراسة إلى اختبار تباين عائد المؤشر الناجم عن انتقال الصدمات بين ستة من أسواق الأسهم العربية، وهي (بورصة عمان، وبورصة الدار البيضاء، وسوق دبي المالي، والبورصة المصرية، وسوق الأسهم السعودية، وبورصة فلسطين) للفترة الزمنية من الثاني من كانون ثاني 2017 إلى الثاني من كانون الثاني 2020.

المنهجية: اعتمدت هذه الدراسة منهجية الانتشار التي اقترحها (Diebold and Yilmaz, 2009) والتي تعتمد على فكرة أن مؤشر الانتشار الأولي يتبع مباشرة الفكرة المعتادة المتمثلة في تحليل التباين VD مجتمعة بواسطة متغيرات N-VAR.

النتائج: أظهرت النتائج ضعف انتقال الأثر للعوائد والتقلبات بين أسواق الأسهم العربية، إذْ تشير قيمة المؤشر العام لانتقال الأثر للعوائد إلى أن 3.38٪ فقط من الاختلافات ناتج عن انتقال الصدمات بين الأسواق، وأن 96.62٪ منها ناتج عن الصدمات في السوق نفسه. كما أظهرت النتائج أنَّ القيمة الإجمالية لمؤشر انتقال الأثر للتقلبات تشير إلى أنَّ 2.4٪ من الاختلافات ناتج عن الصدمات بين الأسواق، وأن 97.6٪ منها ناتج عن الصدمات الخاصة بالسوق نفسه،

الخلاصة: أوصت الدراسة بإجراء المزيد من الدراسات على جميع الأسواق العربية ولاسيما في ظل الظروف الحالية لازمة كورونا.

الكلمات الدالة: أسواق الأسهم العربية، مؤشر السوق، انتقال الأثر بين العوائد والتقلبات.

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