



The links between gold, oil prices and Islamic stock markets in a regime switching environment ”

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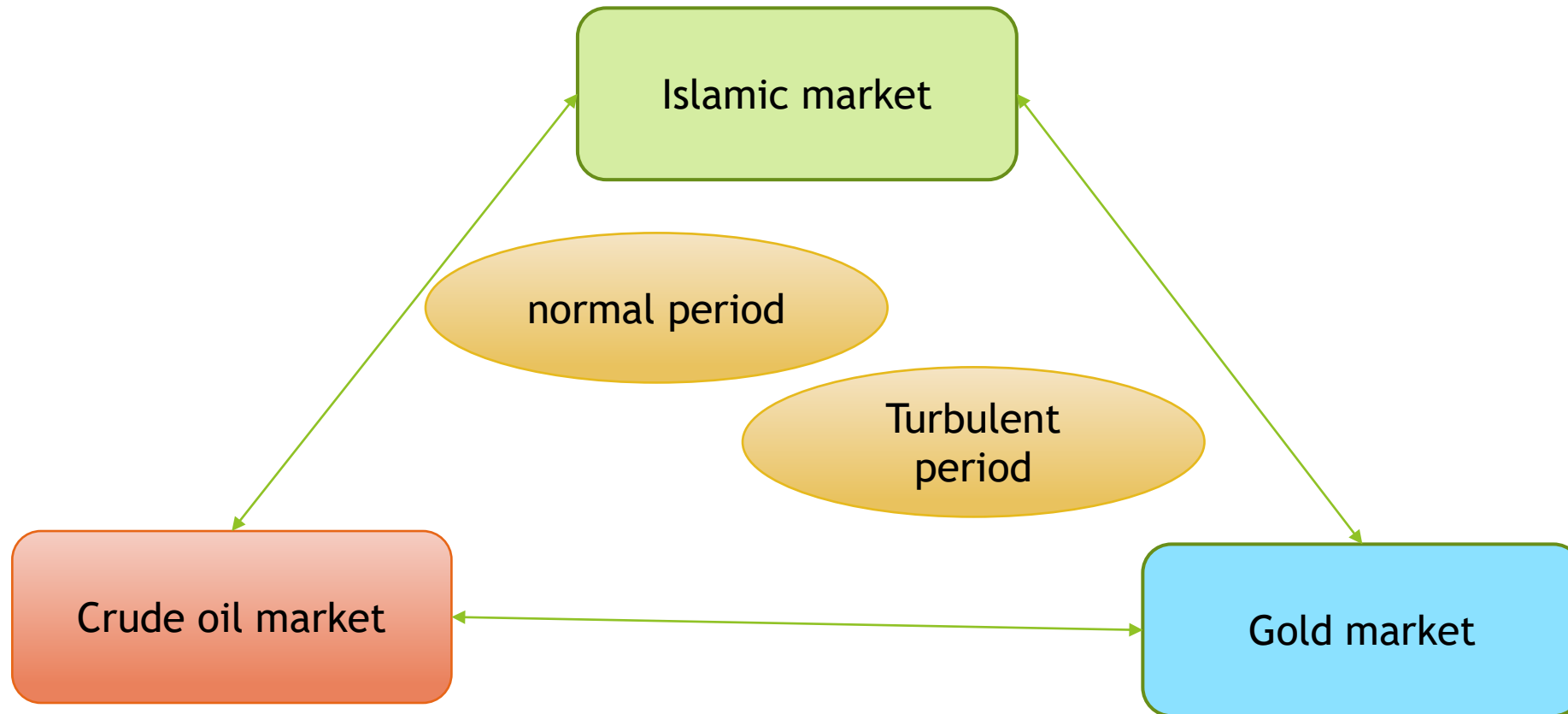
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Outline of the presentation

1. Introduction
2. Literature Review
3. Methodology
4. Data
5. Empirical results
6. Conclusion

1. Introduction

- ❖ We investigate the Relationship between Islamic stock market and commodity market for normal and turbulent periods.



1. Introduction

The main objective is :

- ❑ to verify on the one hand the financialization process of the crude oil market through the analysis of the correlation between the oil and Islamic index prices.
- ❑ On the other hand, to test the role of gold as a hedge and safe haven for oil and Islamic stock market movements.

According to Baur and McDermott (2010):

- ▶ A **hedge** is defined as an asset that is negatively correlated (uncorrelated) with another asset or portfolio on average.
- ▶ A **safe haven** is defined as an asset that is negatively correlated (uncorrelated) with another asset or portfolio during extreme market movements

2. Literature review

Study	Period	Commodity	Model	Results
Nagayev et al. (2016)	1999-2015	various commodities	DCC-GARCH Wavelet approach	<ul style="list-style-type: none">▪ The correlation between the two markets is time-varying and high volatile.▪ Benefits of diversifications vary with commodities.
Shahzad et al. (2017)	1996-2015	Crude oil	Copula approach	<ul style="list-style-type: none">▪ An asymmetric risk spillover from oil to Islamic equity market and vice versa.▪ The relationship is more greater after the Global financial crisis.
Chkili (2017)	2003-2015	Gold	Markov switching	<ul style="list-style-type: none">▪ gold can serve as a hedge and a safe haven for extreme Islamic market conditions.
Maghyereh et al. (2019)	2005-2018	Gold	DCC-GARCH	<ul style="list-style-type: none">▪ gold is a good diversifier for Islamic equity portfolio in the short-run.

3. Methodologies

Two approach are used:

- ❖ VAR: Vector autoregression:

For the whole period : each variable is a linear function of its own lagged values and the lagged values of the two other variables.

- ❖ Markov switching MS-VAR

The relationship between the considered markets is analyzed for:

- Normal periods
- Volatile periods

4. Data

❖ Markets

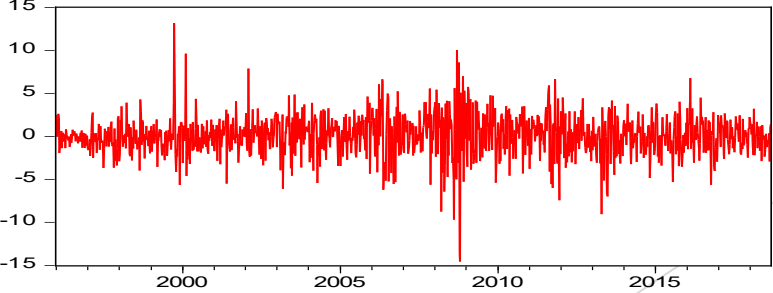
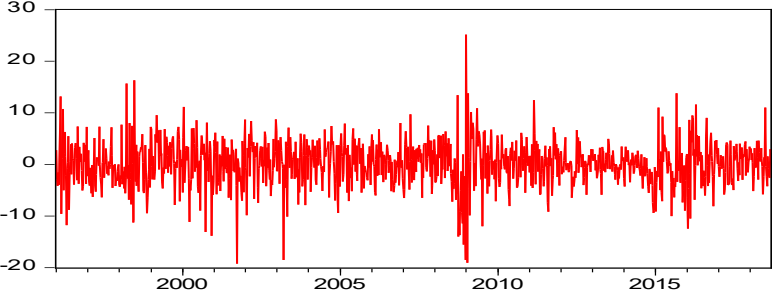
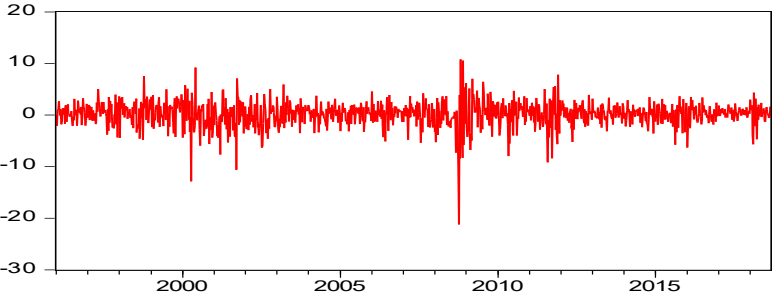
- Islamic stock market : Dow Jones Islamic World Market index
- Crude oil market : WTI prices
- Gold market : Gold prices

❖ **Period** : January 1996-August 2018

❖ Descriptive statistics

	Mean	SD	Skewness	Kurtosis	JB	LB²	ADF
RDJI	0.1266	2.3685	-1.0257	10.922	3300.91**	288.63**	-35.312**
Roil	0.1079	4.2794	-0.2002	5.6302	348.91**	373.71**	-18.105**
Rgold	0.0962	2.3455	-0.2666	6.9067	766.33**	511.98**	-26.017**

Fig. 1. Prices (left panel) and returns (right panel) for Islamic stock, oil and gold markets



- The Islamic market is the most profitable: exhibits the highest average return.
- The oil market appears as the most volatile market while the gold market is the most stable.
- The Skewness, Kurtosis and JB tests reject the null hypothesis of normality
- The Augmented Dickey-Fuller test results indicate that all the return series are stationary at conventional level

5. Empirical results

□ VAR model results

- Negative coefficient relating Islamic market to Gold



Gold can serve as a strong hedge for Islamic equity market fluctuations

- Oil price return are positively affected by Islamic returns



This underlines the financialization process of the commodity market

Table 2

Estimation results of VAR approach

	RDJI	Roil	Rgold
constant	0.135** (1.956)	0.071 (0.577)	0.090* (1.820)
RDJI _{t-1}	-0.021 (-0.698)	0.185*** (3.483)	0.023 (0.793)
Roil _{t-1}	-0.001 (-0.075)	0.129*** (4.375)	-0.022* (-1.812)
Rgold _{t-1}	-0.058** (-1.960)	-0.023 (-0.441)	0.034 (1.163)
std. dev.	1.775	3.352	1.858

□ Regime shifts in the relationships between markets

- Two types of regime are detected : low volatility regime and high volatility regime.
- the high volatility regime mostly coincides with the periods of the major political and economic events : the Asian financial crisis, the Global financial crisis and the European debt crisis.

Regime 1 : low volatility regime

- Negative connection between gold prices and oil and Islamic markets for the normal period.



This confirms the role of gold as a hedge for both oil and Islamic markets.

Regime 2 : high volatility regime

- positive and significant link of oil to Islamic stock



This interdependence confirms the financialization mechanism of crude oil market.

- Negative and significant link between Islamic index and gold price changes

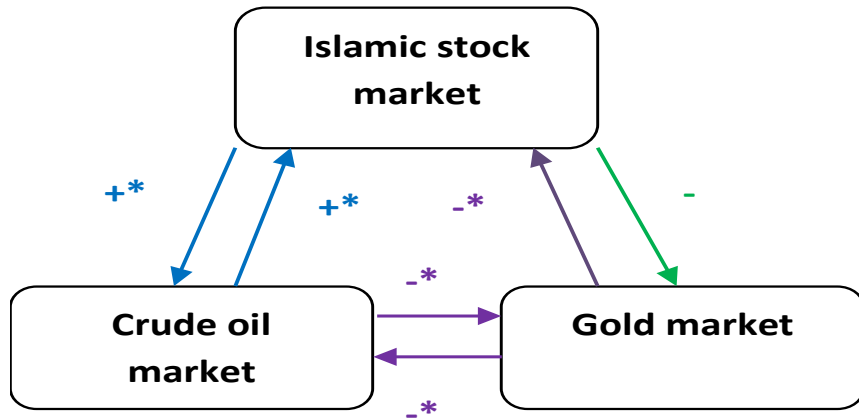


This suggests that gold can serve as a strong safe haven during extreme Islamic stock market conditions

Relation Islamic market - gold market - oil market

Low and high volatility regimes

Regime 1 : low volatility



Regime 2 : high volatility

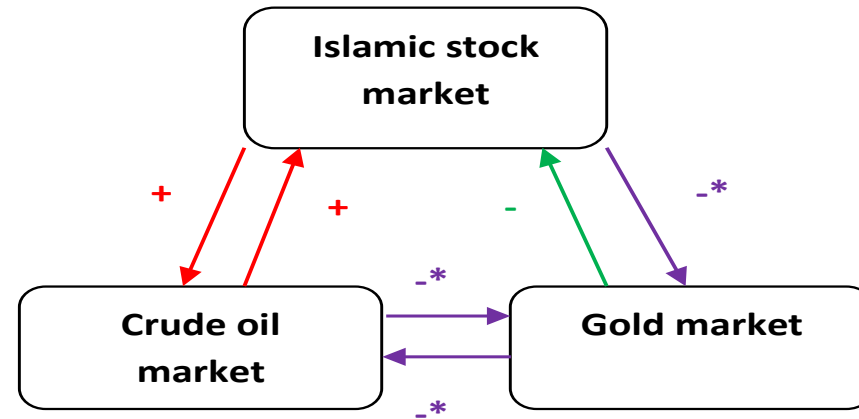


Fig. 3. Summary of the relationship between Islamic stock, oil and gold for low and high volatility regimes. Four types of link:

- positive and no significant (+*)
- negative and no significant (-*)
- positive et significant (+)
- negative and significant (-).

- the links between commodity and Islamic stock market varies through the regimes and across markets.
- The major conclusion provided is the processes of the financialization of crude oil markets with the reference to the links between oil and Islamic stock markets. This result has several implications for Islamic investors who want to share their wealth among several assets in order to reduce the risk of their portfolio.
- the negative links between gold prices and Islamic markets offer a better diversification opportunity given that gold can act as a strong hedge and safe haven against Islamic stock market volatility.

6. Conclusion

The findings of the paper can be summarized as follows:

- ❖ The relationship between the considered markets varies across the different regimes of volatility.
- ❖ We find a positive relationship between oil and Islamic markets: this confirms the processes of the financialization of the crude oil market.
- ❖ We reveal that gold can serve as a hedge and safe haven for Islamic stock markets movements.
- ❖ These results have several implications for Islamic investors in regards to portfolio diversification and hedging strategy of their investments.

thank you!