

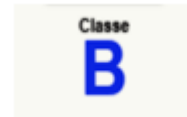


# Islamic banking and its role on financing investments, an econometric study case of Saudi Arabia

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## Islamic banking and its role on financing investments, an econometric study case of Saudi Arabia

### La finance islamique et son rôle dans le financement des investissements, étude économétrique cas de l'Arabie Saoudite

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#### Abstract :

This study aims to estimate and test the role of Islamic banking in financing investment, case of the Saudi economy, using quarterly data during the period from the fourth quarter of 2013 to the second quarter of 2021. Some forms of Islamic financing have also been implemented, such as musharak financing, Murabaha, and financing with Islamic Sukuk The least squares approach was used to estimate the regression model. the results obtained confirm the positive relationship between the independent variables and the investment, Also, through the autoregressive vector model VAR , it was confirmed that there is a causal relationship between Islamic finance and investment as a dependent variable, The Variance decompositions test also confirmed that Murabaha financing is the most important Endogenous variable

**Key words:** *Islamic banking, investment, VAR model, causalrelationship,*

**JEL classification:** *G21 O16 C32*

#### RESUME

Cette étude vise à estimer et tester le rôle de la finance islamique dans le financement de l'investissement, cas de l'économie saoudienne, en utilisant des données trimestrielles durant la période du quatrième trimestre 2013 au deuxième trimestre 2021. Certaines formes de financement islamique ont également été mises en place., tels que le financement musharak, Murabaha et le financement avec Sukuk islamique La méthode des moindres carrés a été utilisée pour estimer le modèle de régression. Les résultats obtenus confirment

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la relation positive entre les variables indépendantes et l'investissement, Aussi, à travers le modèle VAR, il a été confirmé qu'il existe une relation causale entre la finance islamique et

**Mots-clés** : finance islamique , investissement modele VAR , causalité ,

## INTRODUCTION

Saudi Arabia plays a leading role in the field of Islamic banking at the Arab and global levels, in a banking system, in accordance with the principles of Islamic law (Shari'ah).

Saudi Arabia today, with greater openness to new economic activities that did not exist in the previous period, is considered a great opportunity, especially for Islamic financial institutions, which are interested in investing directly in economic activities.

Saudi Arabia might be a global leader in the Islamic financial services business, according to kingdom's enormous potential and distinct competitive advantages.

Through this study, the role of Islamic banking in financing investments in the Saudi economy will be analyzed by studying and testing the relationships between the types of financing in Islamic banking and investment using econometric models, where the problematic of the research paper may be presented as follows:

- What is the role of the Islamic banking sector in Saudi Arabia investment financing?

In response, we will attempt to answer the following sub-questions:

- Is there a link between Islamic banking indicators and investment in Saudi Arabia?
- Is there a causal relationship between Islamic banking indicators and investment in Saudi Arabia?

### **The study hypotheses:**

To answer the problems of the study and the above questions, the following hypotheses can be proposed:

- Islamic Banking can be considered as a determinant of investment in Saudi Arabia economy

- There is a statistical and significant relationship between Islamic banking variables (Elmurbh , Sukuk and Musharaka) and investment in Saudi Arabia economy

**The study method:**

Autoregressive vector model and Granger causality test , will be used to estimate the relationship between investments in Saudi Arabia and Islamic banking variables.

**Literature Review**

- **The study** (ahmed, 2020) entitled: “Islamic Banking's Role in Economic Development”, This study shows the benefits and effectiveness of Islamic banks in carrying out economic development and their role in financing investments. This is the result of a field study that demonstrated the effective contribution of Islamic banks to the attraction of capital for productive projects,

- **Study** Yousef(2020) ‘entitled “Islamic Finance and its contribution to the financing of infrastructure projects Case Study: Saudi Arabia”, This study aimed to identify the extent of the contribution of Islamic finance as one of the sources of financing for projects, and to apply this to the Kingdom of Saudi Arabia as a case study, The results showed that Islamic finance is an important source and an appropriate way to finance infrastructure projects, and that the Kingdom of Saudi Arabia's experience in using Islamic finance as a financing tool for infrastructure projects has confirmed the success of this kind of financing. through its effective contribution to the financing of a number of these projects.

- **Study:** (lakhchin, april2020): entitled “Islamic banks' role in financing SMEs.” The aim of the research paper is to present various forms of financing offered by Islamic banks that can be adapted to the characteristics of SMEs and the nature of their financing needs.

-**Study** (Mulham, 2019)Entitled “The Economic Importance of Islamic Banking Finance in Jordan” , by measuring its impact on savings , investment , unemployment, inflation and Gross Domestic Production during 2001-2016, using simple linear regression analysis to measure this

impact, one of the most important statistically result of the study is the no significant impact of financing at unemployment, inflation and Gross Domestic Production, Although the financing of the Islamic Bank of Jordan has a statistically significant effect on the general trade, and construction sector.

**-Study** (Al-Fawwaz, M., & N., 2015) aims to clarify the impact of Islamic finance at the Islamic Bank of Jordan on some macroeconomic variables from 2001 to 2011, using The method of regression to test the hypotheses, he found a positive relationship with statistical significance of Islamic banking, financing on : GDP, domestic investments and economic growth, and a negative relationship with statistical significance between Islamic finance and inflation rate, this means that Islamic finance enhances the production of goods and services in the economic sphere, which leads to a decrease in the general price level.

## **1. Theoretical framework**

### **1.1. the financial formulas of the Islamic finance,**

Islamic banks are unique in using many different kinds of financing, the most important of which are Murabaha, Musharaka, Mudaraba, Sukuk, Istisna', and Ijarah. It is necessary that clients, individuals or companies, familiarize themselves with these forms, through which their financial needs are satisfied.

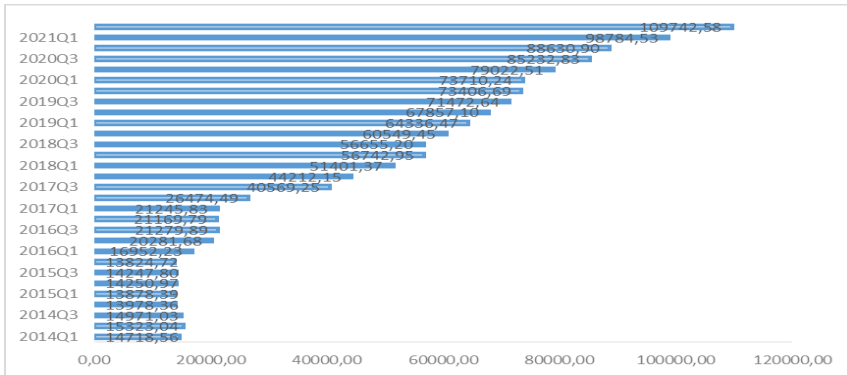
The Saudi banking sector has proven that it meets its responsibility and expectations,

And allow it to enhance its operational and administrative efficiency in order to contribute to the realization of the objectives of the vision of the Saudi Arabia for the year 2030. according to the objectives of the Financial Sector Development Program through the size of funding formulas used.

#### **1.1.1. SUKUK**

The Kingdom of Saudi Arabia is the country that issues the largest number of Islamic Sukuk and contributes to the pooling of funds to finance capital projects and obtain the required liquidity. As the Kingdom is interested in the issuance of Islamic Sukuk as a tool to diversify sources of income and obtain the necessary financing to improve the economic situation,

Figure 1 : Value of Sukūk holdings to capital



Source: Prepared by The Researcher on the site :  
[https://www.ifsb.org/psifi\\_03.php](https://www.ifsb.org/psifi_03.php)

According to the figure 1 we can see that values are constantly rising, increasing from 13877,799(Million Ringgit) in the first quarter of 2014 to the value of 109742,57(Million Ringgit) in the second quarter of 2021. In 2012, Kingdom issued \$10.5 billion in Sukuk, while it issued \$14.5 billion in 2013 , which put it in second place in the world after Malaysia.

In the first half of 2017, the Kingdom of Saudi Arabia issued its first sukuk in US dollars worth \$9 billion, This is the most important issuance of Islamic bonds.

Sukuk issuance and its success in the Kingdom may increase the chances of more issuances by international companies that see the Saudi market as the most attractive option for obtaining financing.

Today, Saudi Arabia has become the most attractive country for Islamic finance investments, particularly sukuk, which have grown exponentially. This has enabled the Kingdom to lead in the volume of Islamic sukuk issuance, occupying the most important position for Islamic finance

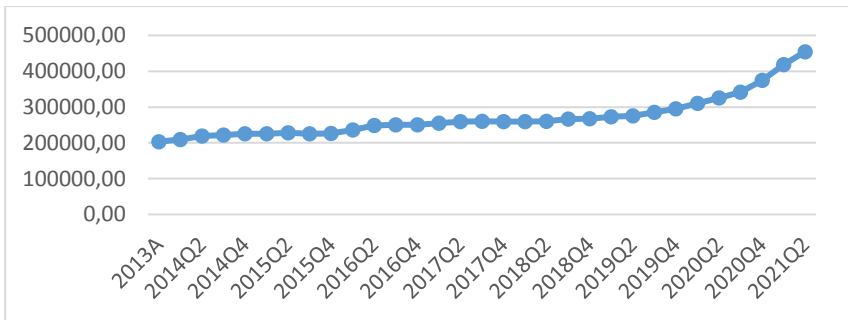
### 1.1.2 MURABAHA

This form is the most widely used of the intervention modes in use in Islamic banks. Its relative weight is estimated at over 70% of all financing provided by Islamic banks.

The term Murabaha is derived from the word ribh . which means in Islamic jurisprudence, benefits. This means the sale at cost plus a profit margin.

Murabaha as practiced by Islamic banks is legal and consisting of a promise to purchase and sell and a Murabaha sales contract. As long as the goods subject to the sale are not in the possession of the bank, the transaction always remains within the framework of a promise by the customer to purchase on the terms agreed to before, and by the bank to conclude the sale on the same terms.

**The Figure 2 : The volume of Murabaha financing in Saudi Arabia**



**Source: Prepared by The Researcher on the site:  
[https://www.ifsb.org/psifi\\_03.php](https://www.ifsb.org/psifi_03.php)**

The figure 2 shows the volume of Murabaha financing in Saudi Arabia, where there is a gradual increase in this financing system from the year 2012, the value of 203207.33 (million ringgit) to reach the value of 454638.06 (million ringgit) in the second quarter of 2021 we also note that Murabaha financing is on the rise, reaching a maximum value of 50 000 in the second quarter of 2021

One of the objectives of the Murabaha Fund is to maintain capital while achieving reasonable returns in the short and medium term through investing in Murabaha operations. Providing an investment channel that is committed to Shariah regulations. (Shalhoub, 03-10-2020)

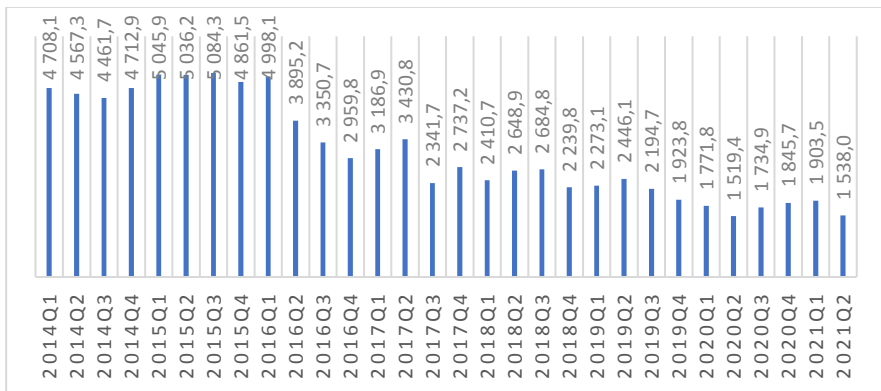
### 1.1.3 Musharakah

Musharakah, as a method of financing, is based on an equitable distribution of risk among the partners. It is one of the most common

forms of participatory financing. It can be conceived as follows: one, two, or more entrepreneurs approach the Islamic bank and ask it to finance a project on the basis of Musharaka. (Mutwali, 2008 05 05)

The bank, with the help of the other partners, provides the total financing required for the project. All partners, including the bank, have a say in the management of the project. Each partner, including the bank, reserves the right to monitor the progress of the operation and to withdraw if the prospects are not satisfactory. ( SAUDIT BLOOM INVEST, 2021

**The volume of Musharaka financing in Saudi Arabia Figure 3 :**



**Source: Prepared by The Researcher on the site:  
[https://www.ifsb.org/psifi\\_03.php](https://www.ifsb.org/psifi_03.php)**

According to the figure 3 , we can see a decrease in Musharakah from one year to the next, which was the lowest year is 2021.

A study of the Saudi market revealed that the use of Musharakah is limited. The recent study showed that only 11.56% of bank financing was financed from Musharakah in the Islamic Bank in 2010. The highest percentage was in the first quarter of 2016. It declined to its lowest level in Q2 2021.

## 1.2 Islamic Finance Opportunities in the Saudi Economy

### 1.2.1. Investment earnings from Islamic finance.

Today, Islamic finance is developing significantly, and statistics indicate that its size is increasing every year. They still have the opportunity to agriculture more because of growing demand for funding.



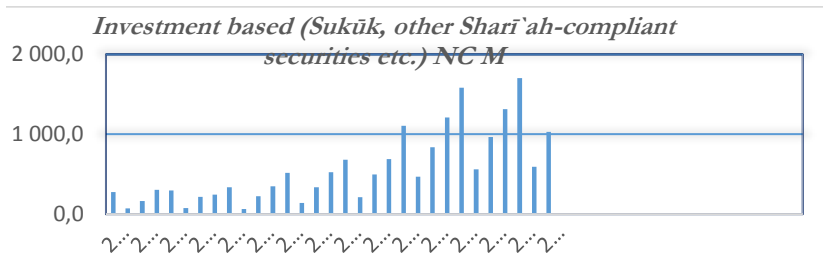
With regard to the Saudi economy, opportunities can concentrate on several important aspects:

- Continuous growth in GDP, which can improve the Kingdom's center as one of the most important economic centers in the world
- Initiatives by the Kingdom

in promoting and strengthening the Kingdom's Islamic Finance Center through the development of the financial market and encouraging versions such as Islamic instruments, as well as the mortgage system or the jurisdiction, which depends on its structure on funding compatible with Sharia.

It must be noted that local investments are growing significantly in the field of Islamic finance, especially with regard to the issuance of Islamic sukuk, in addition to general investments in relation to investment funds, which have a major role in enhancing the attractive environment for Islamic finance to invest in the Kingdom.

**Figure 4 : Total income based on investments (sukuk, murabahah**



**Source: Prepared by The Researcher on the site:  
[https://www.ifsb.org/psifi\\_03.php](https://www.ifsb.org/psifi_03.php)**

Saudi Arabia leads the Gulf in the Islamic banking sector with a share of \$240.1 billion, accounting for 49% of the total share of the Gulf States.

The volume of Sharia-compliant assets was estimated at about 1.87 trillion Saudi Riyals (\$290 billion) in 2014, with the value of these assets expected to jump to 2.56 trillion Riyals (\$683 billion) by 2019. As a result, Saudi Arabia is the biggest contributor to total Islamic banking assets worldwide, followed by Malaysia with 15.5%, then the United Arab Emirates with 15.4%

There are currently four Saudi Islamic banks: Al-Rajhi Bank, Alinma Bank, Al-Jazira Bank, and Al-Bilad Bank. It is worth noting that two Islamic banks, Al-Rajhi Bank and Alinma Bank, are among the top 10 banks operating in Saudi Arabia. Al-Rajhi Bank is considered the second largest Saudi bank, and the largest bank in compliance with Islamic law, as it controls about 60% of the total assets of Saudi Islamic banks and 70% of their profits.

While Al Jazeera Bank is in second place with \$16 billion in assets, slightly more than the third “Bank El Elinmaa”, the “Bank El Bilad” has assets of approximately \$9.6 billion, in fourth place.

In the Saudi market, it is remarkable that there are traditional banks with active Islamic arms and high financial assets, primarily the Al-Ahli Bank, the Saudi British Bank, the Saudi French Bank and the Bank of Saudi Arabia.

The size of the assets of the four Islamic banks operating in Saudi Arabia at the end of the second quarter of 2018 amounted to about \$160.9 billion, or about 26% of the total banking assets in Saudi Arabia. The volume of customer deposits in Saudi Islamic banks amounted to about 106.2 billion dollars, or about 29% of the total deposits. As for the volume of loans, it amounted to about 125.1 billion dollars, or 23% of the total loans.

### **1.2.2. Plans on attracting investment for Islamic finance into the Kingdom.**

The opportunities that the Kingdom can offer to attract investments in Islamic finance can be through:

- Allocation of special meetings for representatives of Islamic banks and financial institutions in the Kingdom and investors from outside the Kingdom.
- invite companies interested in Islamic finance throughout the world to attract investment,
- Organize periodical conferences that could have a positive role in attracting more investment in Islamic finance to the Kingdom.

The conclusion is that the Kingdom is in a phase of major economic transformation involving multiple aspects, and by reading "Vision 2030", linking investment to Islamic finance is important in this transformation.

## 2 Econometric study

### 2.1. Empirical Model, Data and Index

According to several earlier studies, the following model may be suggested:

$$inv = f(ELMURBH, ELMUSHRK, suku)$$

$$inv_t = \alpha_0 + \alpha_1 * ELMURBH_t + \alpha_2 * ELMUSHRK_t + \alpha_3 * suku_t + \varepsilon_t$$

<i>inv</i>	investment
ELMURBH	Murababah
<i>suku</i>	sukuk
ELMUSHRK	musharaka
$\varepsilon_t$	Résidus

#### 2.1.1 Statistical description of the study variables and The correlation matrix:

Table 01: The correlation matrix

	ELMURBH	ELMUSHRK	INVES	SUKU
ELMURBH	1	0.75358	0.68472	0.83956
ELMUSHRK	0.75358	1	0.51159	0.90777
INVES	0.68472	0.51159	1	0.77307
SUKU	0.83956	0.90777	0.77307	1

Source: eviews 9 Outputs

Table 02: Descriptive statistics of study variables

	ELMURBH	ELMUSHRK	SUKU	INVES
Mean	273545.8	3150.452	0.444000	1055448.
Median	259209.1	2711.010	0.425000	1050347.
Maximum	454638.1	5084.300	0.870000	1183848.
Minimum	209599.6	1519.430	0.170000	939433.3
Std. Dev.	58371.80	1249.974	0.247199	71277.82
Skewness	1.644903	0.382762	0.227174	0.165137
Kurtosis	5.269456	1.624654	1.425847	1.771317
Jarque-Bera	19.96656	3.097004	3.355487	2.023428
Probability	0.000046	0.212566	0.186795	0.363595

Source: eviews 9 Outputs

**2.1.2. Estimation Equation:**

$INVES = 482982.030 * SUKU + 0.109 * ELMURBH + 61.38 * ELMUSHRK + 617630.29$			
0.0000***	0.5781	<b>(0.0000)***</b>	<b>(0.0000)***</b>
significant 1%	Non significant	significant 1%	significant 1%

**Table 03: OLS REGRESSION RESULTS**

variable	coefficient	Std .error	T Statistic	Prob
<b>c</b>	617630.3	70860.86	8.716100	0.0000
<b>ELMURBH</b>	0.109557	0.194494	0.563292	0.5781
<b>SUKUK</b>	482982.0	71972.54	6.710643	0.0000
<b>ELMUSHRK</b>	61.38968	11.76332	5.218736	0.0000
<b>R<sup>2</sup></b>	0.805600	<b>F.Static</b>	35.91505	
<b>DW</b>	2.089053	<b>Pro-F.stat</b>	0.000000	

Source: eviews 9 Outputs

**It is clear that**

**R-Squared:** It's the degree of the variation in the dependent variable invest that is explained in independent variables (SUKU, ELMURBH ,ELMUSHRK) . in our case, 80.56% of variance is explained by the model . It also means that the variation in investment in Saudi Arabia can be explained by islamic banking finance (sukuk,murabahah,musharaka)

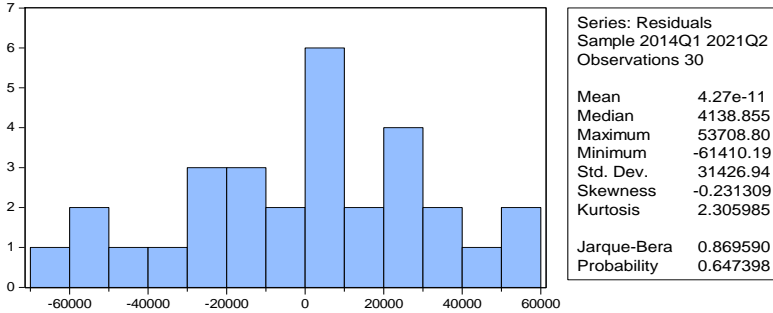
A value of **Durbin-Watson:** is 2.08 implies that the variance of errors is constant. and we conclude that the data does not have autocorrelation.

From the model , there is a positive relationship between independent variables (SUKU ELMURBH ,ELMUSHRK) and dependent variable(INVES )

The probability of the t-statistic of both variables (SUKUK, ELMUSHRK) are statistically significant at 1% confidence level. We conclude that the above variables significantly affect investment in Saudi Arabia.

### 2.1.3 Normality Of The Residuals

Figure05: Test Jarque-Bera



Source: eviews 9 Outputs

Through the figure we note that the probability value is higher than 0.05 and this is why we accept the hypothesis of normal distribution of the Residuals

Table 04: Breusch-Godfrey Serial Correlation LM Test:

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	1.04520	Prob. F(2,24)	0.1872
Obs*R-squared	2.44558	Prob. Chi-Square(2)	0.2545

Source: eviews 9 Outputs

**Breusch-Godfrey (BG) from the LM test** we accept the null hypothesis of no serial correlation

Table 05: Heteroskedasticity Test: ARCH

Heteroskedasticity Test: ARCH			
F-statistic	0.2393	Prob. F(1,27)	1.448262
Obs*R-squared	0.2243	Prob. Chi-Square(1)	1.476351

Source: eviews 9 Outputs

From the ARCH Heteroskedasticity test, we conclude that the variance of residuals is stable at 5 % level of significance

## 2.2. Unrestricted VAR model

### 2.2.1. Co-integration Test

**Table 06: Co-integration Test**

Sample (adjusted): 2014Q3 2021Q2		Included observations: 28 after adjustments		
Trend assumption: Linear deterministic trend		Lags interval (in first differences): 1 to 1		
<b>Series: ELMURABAH ELMUSHRAK SUKU INVES</b>				
Unrestricted Cointegration Rank Test (Trace)				
Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None	0.570215	45.91451	47.85613	0.0752
At most 1	0.353537	22.26936	29.79707	0.2838
At most 2	0.289206	10.05464	15.49471	0.2765
At most 3	0.017566	0.496206	3.841466	0.4812
Trace test indicates no cointegration at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
<b>Source: eviews 9 Outputs</b>				

The null hypothesis of no cointegration relationship at the 5% level of significance is accepted in this case the VAR model is the more appropriate

**2.2.2 Granger Causality test**

**Table 07: Granger Causality test**

Null Hypothesis	F -Statistic	Prob
<b>Elmurbh</b> does not granger cause inves	4.40520	0.0240**
<b>Sukuk</b> does not granger cause inves	6.44558	0.0060***
<b>Musharaka</b> does not granger cause inves	6.11069	0.0074***

**Source: eviews 9 Outputs**

According to the Granger causality test, we can see the existence of significant causal relationships from Islamic banking variables (**Elmurbh**, **Sukuk and Musharaka**) to investment at 5% level of significance, we conclude that the investment in Saudi Arabia is influenced by Islamic finance in the short run, these results are consistent with theoretical background.

### 2.2.3 Variance decompositions

**Table 08: Variance Decomposition of INVES**

Variance Decomposition of INVES:					
Period	S.E.	INVES	SUKU	ELMURABAH	ELMUSHRAK
1	19031.50	100.0000	0.000000	0.000000	0.000000
2	23745.80	96.69316	0.886921	0.915240	1.504680
3	26653.22	94.27837	3.752326	0.750047	1.219253
4	28291.33	88.73727	9.374968	0.665745	1.222013
5	29770.58	80.52004	16.94322	0.603786	1.932957
6	31952.72	70.64232	25.14196	0.557939	3.657775
7	35416.12	61.77305	31.78015	0.556266	5.890539
8	40383.99	55.85785	35.54838	0.678618	7.915155
9	46822.72	52.95835	36.69361	1.000752	9.347291
10	54594.19	52.09286	36.14289	1.573566	10.19069
<b>Source: eviews 9 Outputs</b>					

The results **Variance Decomposition** indicate that **Musharakah financing** is the most important **Endogenous** variable in interpreting variations of investment in short-term. The contribution of this variable is about 33.23% to 34.51% in the medium and long term.

### Conclusion And Suggestions

#### Conclusion:

In this research paper, we focus on the Islamic bank's role in investment financing. A case study of the Saudi Arabia economy through econometric model that included investment as a dependent variable, Murabaha financing, Musharaka and financing with Islamic Sukuk as independent variables in the model, which are considered one of the forms of financing in Islamic banking.

The results of the econometric study proved the positive impact of these variables on investment financing in the Kingdom, and this was confirmed by studying the causal relationship and testing the analysis of variance of the autoregressive vector model. That's what the Kingdom is looking for through various Islamic banks and financial institutions.

**Results Obtained:** From the above, the following can be concluded::

- Islamic banking has an important role in financing investments in the Saudi economy.
- Validity of study hypotheses on the role of Islamic banking in financing investments in Saudi Arabia
- The Islamic Banking can be considered as a key factor in financing investment in the Saudi economy.
- Investment has a statistically significant relationship with Islamic banking indicators.

### **Suggestions**

- Establish a link between Islamic Sharia-compliant issuance programs in Arab countries and government project financing plans, particularly in countries with huge funding deficits.
- For an interest in training employees in the field of Islamic banking in Arab countries, which contributes to the continuous development of Islamic funding sources.

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