

The Impact of The Use of Sukuk as A Financing Tool on Small and Micro Projects in Egypt



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ABSTRACT: The research aims to investigate and study the impact of using sukuk as a financing tool on small and micro projects in Egypt by testing the hypothesis that there is a statistically significant impact of the value of Egyptian sukuk on the loans to small and micro enterprises during the period (2011-2022). The data were collected from the Central Bank of Egypt, Central Agency for Public Mobilization, World Bank, Economic Reports for Egypt and Statistics of annual reports during the period, and were subsequently analyzed using descriptive analytical method. Accordingly, the findings indicated that the impact of the independent variable of the value of the Egyptian sukuk on the dependent variable of loans to small and micro enterprises was significant at the level of 0.01. and It was found that whenever the value of Egyptian sukuk increased by 1%. The loans to small and micro projects increased by 0.006392%.

KEYWORDS: Sukuk financing, financial tools, small and micro projects loans, SMEs

INTRODUCTION

The financial landscape in Egypt has witnessed significant changes in recent years, particularly in the realm of Islamic finance. One prominent instrument within Islamic finance is the sukuk, which represents an alternative form of investment based on the principles of Shariah law. Sukuk issuance in Egypt has gained momentum, attracting both local and international investors looking for ethical and compliant investment opportunities. This surge in sukuk issuance raises questions regarding its potential impact on various sectors of the economy, including the provision of loans to small and micro enterprises (SMEs).

SMEs play a crucial role in the economic development of any country, as they contribute to job creation, innovation, and overall economic growth. However, access to financing remains a persistent challenge for these enterprises, limiting their ability to expand operations, invest in new technologies, and create employment opportunities. In this context, exploring how the value of Egyptian sukuk impacts the availability of loans to SMEs becomes an essential research area.

The value of sukuk in Egypt refers to the market price or yield of these Islamic instruments. Understanding the relationship between the value of sukuk and the availability of loans to SMEs is critical for policymakers, financial institutions, and market participants. The value of sukuk can affect financial institutions' willingness to extend credit to SMEs as it may influence their risk appetite, cost of funding, and overall portfolio management strategies. Additionally, the value of sukuk can also impact investor sentiment and confidence, potentially influencing their investment decisions and allocation of funds.

In recent years, there has been a growing interest in Sukuk financing in Egypt, driven by the country's efforts to diversify its sources of financing and promote the development of the Islamic finance industry. One of the key areas where Sukuk financing can be applied is in the financing of small and micro projects, which represent a significant portion of the Egyptian economy.

Many developed and developing countries of the world have been interested in establishing and supporting Small and Micro projects, which are the main and important field for absorbing many products of large projects, in order to achieve a kind of the mutual intertwining between the two types of projects. At the present time, Small and Micro projects, especially industrial ones, are receiving the attention of economic and social policy makers in various countries of the world.

This research aims to investigate the relationship between the variable of the value of Egyptian sukuk and the variable of loans to small and micro enterprises. By examining this relationship, we seek to shed light on the potential impact of sukuk value fluctuations on SME financing. This research will contribute to the existing body of knowledge by providing empirical evidence on the dynamics between sukuk value and SME lending, specifically in the Egyptian context.

To achieve the research objectives, a mixed-methods approach will be employed. Initially, a comprehensive review of relevant literature on sukuk, SME financing, and the Egyptian financial market will be conducted. This literature review will help identify existing theories, frameworks, and empirical studies related to the impact of sukuk value on SME lending. Subsequently, quantitative

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analysis will be conducted using historical data on sukuk values and SME loan disbursements to explore potential correlations, trends, and patterns.

The findings of this research will have important implications for policymakers and financial institutions in Egypt. Understanding the impact of sukuk value on SME lending can guide policymakers in formulating effective strategies to enhance SME financing and promote economic growth. Financial institutions can benefit from the insights gained by adjusting their lending practices, risk management frameworks, and product offerings to better cater to the financing needs of SMEs.

In conclusion, this research aims to investigate the impact of the variable of the value of Egyptian sukuk on the variable of loans to small and micro enterprises. By examining the relationship between sukuk value and SME lending, this study seeks to provide valuable insights into the dynamics of Islamic finance and its role in supporting the growth of SMEs in Egypt.

RESEARCH PROBLEM

This research problem addresses the potential of Sukuk financing in supporting the growth and development of small and micro projects in Egypt and the effect of the use of banks and credit institutions for financial instruments in financing small and micro projects as one of the non-traditional solutions, through which the financial and financing capabilities of small and micro projects can be increased. Increasing its ability to expand its production and achieve a competitive advantage contributes to increasing its market capabilities and achieving high rates of market share.

RESEARCH QUESTIONS

1. What are the potential benefits of using Sukuk in financing small and micro projects in Egypt?
2. What is the impact of the value of Egyptian sukuk on loans to small and micro enterprises?

RESEARCH OBJECTIVES

The main objective of the research is to investigate the impact of using Sukuk in financing small and micro projects in Egypt from 2011-2022.

The ultimate goal of the research is to provide insights into the potential of Sukuk in financing small and micro projects in Egypt and inform policymakers and financial institutions on the need to promote Sukuk financing and address how it would support these projects and by consequence promote the market productivity and development of country Economy.

STUDY METHODOLOGY

The research uses the descriptive analytical method, which is concerned with identifying and describing variables related to the study and using statistical methods in order to analyze the study data obtained through the study tool represented by financial reports to reach results through which the objectives of the study can be achieved.

STUDY POPULATION AND SAMPLE:

The study population is represented by data related to the study variables, which include value of sukuk, value of small and micro enterprise loans, value of foreign direct investment, inflation rate, Unemployment rate in Egypt and the study selected a sample of this data during the period (2011-2022) in order to test the study hypotheses.

First: Descriptive analysis results

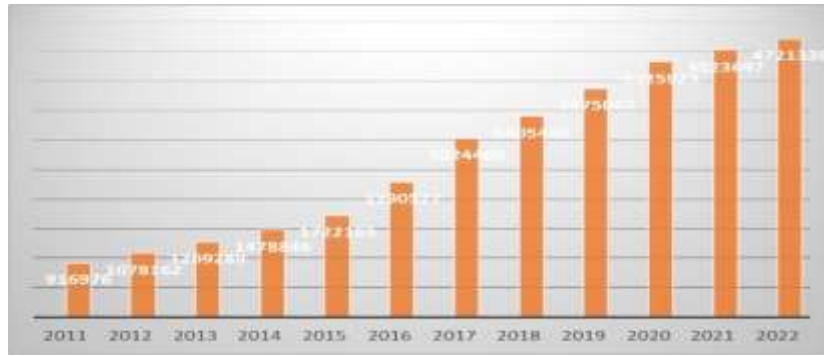
Descriptive statistics measures, represented by the arithmetic mean, standard deviation, highest value, lowest value, shapes, graphs, and rate of increase or decrease, were used to describe the study variables, which are (value of sukuk, value of gross domestic product, value of small and micro enterprise loans, value of foreign direct investment, inflation rate, Unemployment rate) during the period (2011 - 2022) and the results were as follows:

1- The value of Egyptian sukuk during the period (2011-2022):

It is clear from Table (1) that the mean of the value of the Egyptian Sukuk during the study period amounted to 2719320.2500 million pounds, with a standard deviation of 1430381.14561 The highest value reached 4721336.00 million pounds in 2022, and the lowest value reached 916976.00 million pounds in 2011, as shown in figure (1) and the value of the increase rate reached 16.3% during the period (2011-2022).

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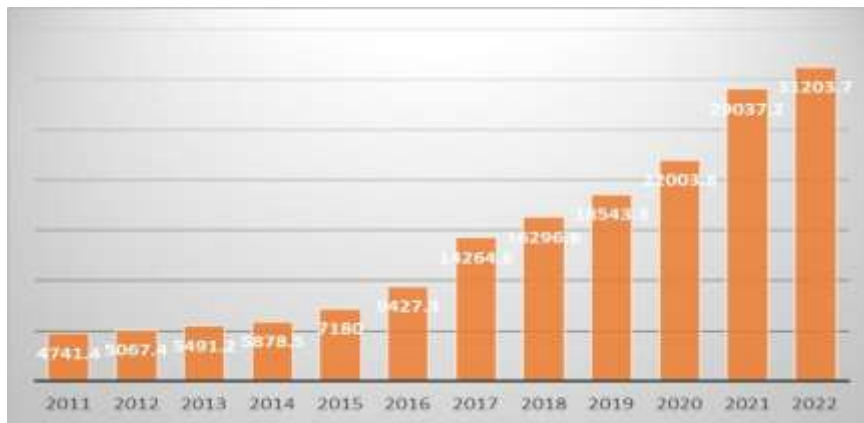
Figure (1) Development of the value of Egyptian Sukuk during the study period (2011-2022)



2- Value of small and micro enterprise loans

It is clear from Table (1) that the mean of the value of the small and micro enterprise loans during the study period amounted to 14094.5833 million pounds, with a standard deviation of 9454.76090. The highest value reached 31203.70 million pounds in 2022, and the lowest value reached 4741.40 million pounds in 2011, as shown in figure (2) and the value of the increase rate reached 2..1% during the period (2011-2022).

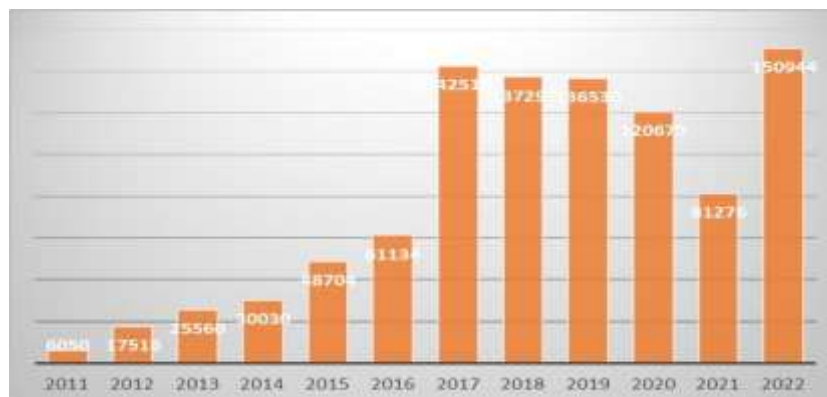
Figure (2) Development of the value of small and micro enterprise loans during the study period (2011-2022)



2- Value of foreign direct investment

It is clear from Table (1) that the mean of the value of the foreign direct investment during the study period amounted to 79852.1667 million pounds, with a standard deviation of 54974.33727. The highest value reached 150944.00 million pounds in 2022, and the lowest value reached 6050.00 million pounds in 2011, as shown in figure (3) and the value of the increase rate reached 14% during the period (2011-2022).

Figure (3) Development of the value of foreign direct investment during the study period (2011-2022)

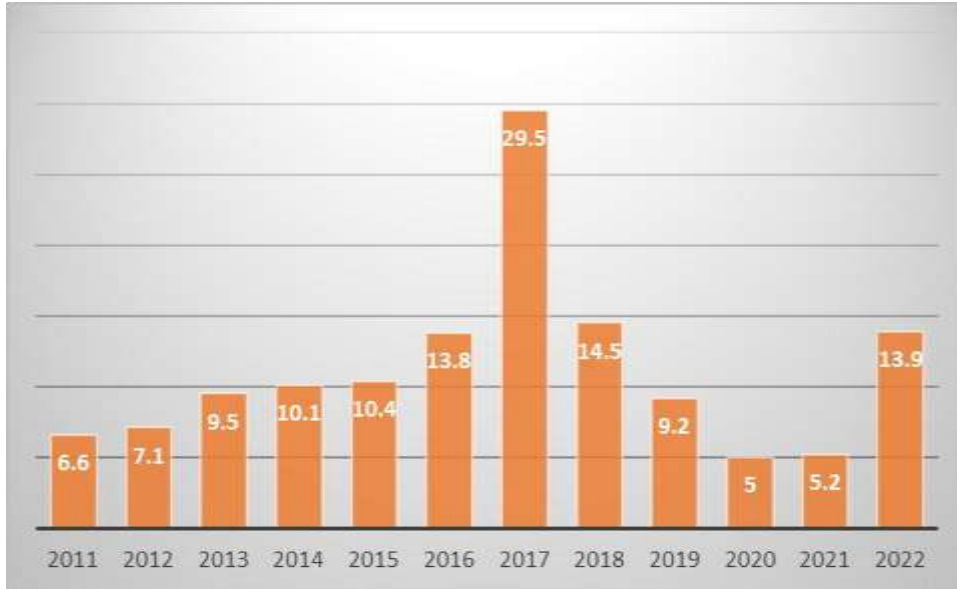


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3- Inflation rate

It is clear from Table (1) that the mean of the value of the inflation rate during the study period amounted to 11.2333,% with a standard deviation of 6.61243 the highest value reached 29.50 % in 2021, and the lowest value reached 5.00 % in 2010, and the value of the increase rate reached 0.0 % during the period (2011-2022) as shown in figure (4).

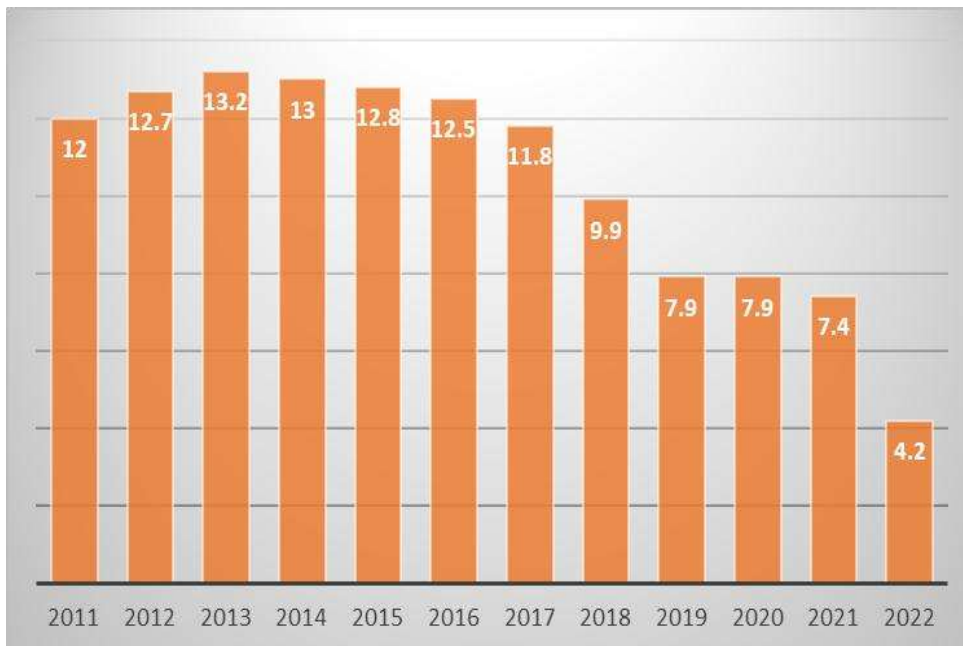
Figure (4) Development of the value of inflation rate during the study period (2011-2022)



4- Unemployment rate

It is clear from Table (1) that the mean of the value of the unemployment rate during the study period amounted to 10.4417 % with a standard deviation of 2.93489 the highest value reached % 22.10in 2023, and the lowest value reached 3.10 %in 2012, as shown in figure (5) and the value of the decrease rate reached 0.1 % during the period (2011-2022).

Figure (5) Development of the value of unemployment rate during the study period (2011-2022)



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Table (1): The development of the study variables during the period (2011-2022)

Years	Sukuk) million pound)	small and micro enterprise loans) million pound)	foreign direct investment) million pound)	inflation rate %	unemployment rate %
2011	916976	4741.4	6050	6.6	12
2012	1078162	5067.4	17516	7.1	12.7
2013	1269289	5491.2	25560	9.5	13.2
2014	1478846	5878.5	30030	10.1	13
2015	1722165	7180.0	48704	10.4	12.8
2016	2290527	9427.3	61134	13.8	12.5
2017	3024480	14264.6	142516	29.5	11.8
2018	3405440	16296.6	137291	14.5	9.9
2019	3875002	18543.3	136530	9.2	7.9
2020	4325923	22003.8	120675	5	7.9
2021	4523697	29037.2	81276	5.2	7.4
2022	4721336	31203.7	150944	13.9	4.2

Source:

- Central Bank of Egypt, annual report, various issues during the period (2011-2022)
- Central Agency for Public Mobilization and Statistics, annual report, various issues during the period (2011-2022)
- World Bank, Economic Reports for the Arab Republic of Egypt, various issues during the period (2011-2022)

Second: Studying the standard relationships between the independent variables (value of sukuk, value of foreign direct investment, inflation rate and Unemployment rate) and dependent variable (value of small and micro enterprise loans) during the study period (2011 - 2022)

In order to measure and analyze the relationships between the independent variables (value of sukuk, value of foreign direct investment, inflation rate and Unemployment rate) and the dependent variable (value of small and micro enterprise loans) during the study period, the standard relationships between the independent variables and the dependent variable were calculated during the study period using a set of standard tests such as the expanded DickeyFuller test, the causality test, the cointegration test to test the relationship between the variables, and the interval test. Time lag and an error correction model were used to determine the type of relationship between variables in the long and short-term using the E-Views program and the results were as follows:

The standard relationship between the value of Egyptian sukuk and the dependent variables (value of small and micro enterprise loans) during the study period (2011 - 2022)

• Unit root test:

To measure the stability of the model variables, the developed Dickey-Fuller test (ADF) was used, and it was found that the Egyptian Sukuk value chain (X1) was unstable at its level, and stability occurred after taking the second difference, so the series became integrated of the second order, and it was also shown that the value of small and micro enterprise loans was unstable. (Y2) at its

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level and stabilization occurred after taking the second difference, so the series becomes integrated of the second degree. Because the two series are integrated at the same degree, Ardel cointegration is used in order to conduct the cointegration test between them.

2) Results of the developed Dickey-Fuller (ADF) test for the relationship between value of Egyptian sukuk and value of small and micro enterprise loans

Variables	Level			1 st Difference			2 nd Difference		
	ADF	Sig.	Result	ADF	Sig.	Result	ADF	Sig.	Result
X1	21.1.0	211.0	No stationary	-0.6654	0.403	No stationary	-3.014	0.007	stationary
Y2	4.886	0.999	No stationary	-1.068	0.238	No stationary	-3.682	0.002	Stationary

Source: E-views calculation results

• Causality Test

It is clear that there are no two-way or one-way causal relationships between the value of Egyptian sukuk and the value of small and micro enterprise loans at a significance level of 0.05 during the period (2011-2022)

Table (3) Causality Test between value of Egyptian sukuk and value of small and micro enterprise loans

Null Hypothesis:	Obs	F-Statistic	Prob.
	10		
Y2 does not Granger Cause X1		0.57404	0.5965
X1 does not Granger Cause Y2		1.84754	0.2507

Source: E-views calculation results

• Bounds Test

It turns out that there is a cointegration between the value of Egyptian sukuk and the value of GDP at a significance level of 0.05 during the period (2011-2022)

Table (4) Co-integration test between value of Egyptian sukuk and value of small and micro enterprise loans

Test Statistic	Value	k
F-statistic	6.706525	1

Critical Value Bounds		
Significance	I0 Bound	I1 Bound
10%	4.04	4.78
5%	4.94	5.73
2.5%	5.77	6.68
1%	6.84	7.84

Source: E-views calculation results

• Test the number of time lags

It turns out that the optimal number of time lag periods is one time period for the value variable of the small and micro enterprise loans, and there is no time lag period for the value variable of the Egyptian Sukuk during the period (2011-2022)

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Table (5) Testing time lag periods between value of Egyptian sukuk and value of small and micro enterprise loans

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
Y2(-1)	0.739636	0.164831	4.487238	0.0020
X1	0.002496	0.000975	2.559215	0.0337
C	-1526.567	1192.381	-1.280268	0.2363
R-squared	0.981540	Mean dependent var	14944.87	
Adjusted R-squared	0.976925	S.D. dependent var	9422.752	
S.E. of regression	1431.354	Akaike info criterion	17.59763	
Sum squared resid	16390186	Schwarz criterion	17.70615	
Log likelihood	-93.78696	Hannan-Quinn criter.	17.52922	
F-statistic	212.6864	Durbin-Watson stat	2.284471	
Prob(F-statistic)	0.000000			

Source: E-views calculation results

• Long-run and short-run error correction vector model:

In order to determine the value of the relationship parameters in the long run and the short run, the error correction vectors were estimated, and it turns out that the error term correction factor is not significant at a significance level of 0.05, meaning that there is no correction from the short run to the long run, while the long run equation indicates that there is an effect of the correction in the long run. Because X1 is significant at a significance level of 0.01

6) Error correction vector test results between value of Egyptian sukuk and value of small and micro enterprise loans

Cointegrating Form				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(X1)	0.002496	0.000975	2.559215	0.0337
CointEq(-1)	-0.260364	0.164831	-1.579584	0.1529
Cointeq = Y2 - (0.0096*X1 -5863.1983)				

Long Run Coefficients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
X1	0.009587	0.002839	3.377423	0.0097
-	5863.19834			
C	4 4264.959593		-1.374737	0.2065

Source: E-views calculation results

The standard relationship between the value of foreign direct investment and the dependent variables (value of small and micro enterprise loans) during the study period (2011 - 2022)

• Unit root test:

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To measure the stability of the model variables, the developed Dickey-Fuller test (ADF) was used, and it was found that the value of foreign direct investment (X2) was unstable at its level, and stability occurred after taking the first difference, so the series became integrated of the first order, and it was also shown that the value of small and micro enterprise loans was unstable. (Y2) at its level and stabilization occurred after taking the second difference, so the series becomes integrated of the second degree. Because the two series are not integrated at the same degree, Ardel cointegration is used in order to conduct the cointegration test between them.

Table (7) Results of the developed Dickey-Fuller (ADF) test for the relationship between value of foreign direct investment and value of small and micro enterprise loans

Variables	Level			1 st Difference			2 nd Difference		
	ADF	Sig.	Result	ADF	Sig.	Result	ADF	Sig.	Result
X2	219312	21122	No stationary	-2.735	0.012	stationary			
Y2	4.886	0.999	No stationary	-1.068	0.238	No stationary	-3.682	0.002	Stationary

Source: E-views calculation results

• Causality Test

It is clear that there are no two-way causal relationships between the value of foreign direct investment and GDP at a significance level of 0.05, as the one-way causal relationship goes from the value of GDP to the value of foreign direct investment at a significance level of 0.05.

Table (8) Causality Test between value of foreign direct investment and value of small and micro enterprise loans

Null Hypothesis:	Obs	F-Statistic	Prob.
Y2 does not Granger Cause X2	10	10.6023	0.0159
X2 does not Granger Cause Y2		0.22806	0.8039

Source: E-views calculation results

• Bounds Test

It turns out that there is no cointegration between the value of value of foreign direct investment and the value of GDP at a significance level of 0.05 during the period (2011-2022).

Table (9) Co-integration test between value of foreign direct investment and value of small and micro enterprise loans

Test Statistic	Value	k
F-statistic	2.276759	1

Critical Value Bounds		
Significance	I0 Bound	I1 Bound
10%	4.04	4.78
5%	4.94	5.73
2.5%	5.77	6.68
1%	6.84	7.84

Source: E-views calculation results

• Test the number of time lags

It turns out that the optimal number of time lag periods is one time period for the value variable of the small and micro enterprise loans, and there is no time lag period for the value variable of the foreign direct investment during the period (2011-2022)

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Table (10) Testing time lag periods between value of foreign direct investment and value of small and micro enterprise loans

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
Y2(-1)	1.098348	0.107643	10.20365	0.0000
X2	0.008238	0.016787	0.490726	0.6368
C	459.3897	1186.110	0.387308	0.7086
R-squared	0.967408	Mean dependent var		14944.87
Adjusted R-squared	0.959260	S.D. dependent var		9422.752
S.E. of regression	1901.898	Akaike info criterion		18.16609
Sum squared resid	28937721	Schwarz criterion		18.27461
Log likelihood	-96.91351	Hannan-Quinn criter.		18.09769
F-statistic	118.7301	Durbin-Watson stat		2.278690
Prob(F-statistic)	0.000001			

Source: E-views calculation results

• Long-run and short-run error correction vector model:

In order to determine the value of the relationship parameters in the long run and the short run, the error correction vectors were estimated. It turns out that the error term correction factor is not significant at a significance level of 0.05, meaning that there is no correction from the short run to the long run, while the long run equation indicates that there is no effect of the correction in the run. Long because X1 is not significant at a significance level of 0.04

Table (11) Error correction vector test results between value of foreign direct investment and value of small and micro enterprise loans

Cointegrating Form				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(X2)	0.008238	0.016787	0.490726	0.6368
CointEq(-1)	0.098348	0.107643	0.913653	0.3876
Cointeq = Y2 - (-0.0838*X2 -4671.0575)				
Long Run Coefficients				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
X2	-0.083761	0.245599	-0.341046	0.7419
-	4671.05748	14211.03056		
C	5	5	-0.328692	0.7508

Source: E-views calculation results

The standard relationship between the inflation rate and the dependent variable (value of small and micro enterprise loans) during the study period (2011 - 2022)

□ Unit root test:

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To measure the stability of the model variables, the developed Dickey-Fuller test (ADF) was used, and it was found that the inflation rate (X3) was unstable at its level, and stability occurred after taking the first difference, so the series became integrated of the first order, and it was also shown that the value of small and micro enterprise loans was unstable. (Y2) at its level and stabilization occurred after taking the second difference, so the series becomes integrated of the second degree. Because the two series are not integrated at the same degree, Ardel cointegration is used in order to conduct the cointegration test between them.

Table (12) Results of the developed Dickey-Fuller (ADF) test for the relationship between inflation rate and value of small and micro enterprise loans

Variables	Level			1 st Difference			2 nd Difference		
	ADF	Sig.	Result	ADF	Sig.	Result	ADF	Sig.	Result
X3	211.00	21122	No stationary	-3.2338	0.005	stationary			
Y2	4.886	0.999	No stationary	-1.068	0.238	No stationary	-3.682	0.002	Stationary

Source: E-views calculation results

• Causality Test

It is clear that there are no two-way or one-way causal relationships between the inflation rate and the value of small and micro enterprise loans at a significance level of 0.05.

Table (13) Causality Test between inflation rate and value of small and micro enterprise loans

Null Hypothesis:	Obs	F-Statistic	Prob.
Y2 does not Granger Cause X3	10	1.72745	0.2689
X3 does not Granger Cause Y2		0.17497	0.8444

Source: E-views calculation results

• Bounds Test

It turns out that there is no cointegration between the value of inflation rate and the value of GDP at a significance level of 0.05 during the period (2011-2022)

Table (14) Co-integration test between inflation rate and value of small and micro enterprise loans

Test Statistic	Value	k
F-statistic	1.668937	1
Critical Value Bounds		
Significance	I0 Bound	I1 Bound
10%	4.04	4.78
5%	4.94	5.73
2.5%	5.77	6.68
1%	6.84	7.84

Source: E-views calculation results

• Test the number of time lags

It turns out that the optimal number of time lag periods is one time period for the value variable of the small and micro enterprise loans, and there is no time lag period for the value variable of the inflation rate during the period (2011-2022)

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Table (15) Testing time lag periods between inflation rate and value of small and micro enterprise loans

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
Y2(-1)	1.143684	0.072495	15.77605	0.0000
X3	70.97595	87.33103	0.812723	0.4399
C	-223.2102	1546.421	-0.144340	0.8888
R-squared	0.968988	Mean dependent var		14944.87
Adjusted R-squared	0.961235	S.D. dependent var		9422.752
S.E. of regression	1855.241	Akaike info criterion		18.11642
Sum squared resid	27535340	Schwarz criterion		18.22493
Log likelihood	-96.64029	Hannan-Quinn criter.		18.04801
F-statistic	124.9808	Durbin-Watson stat		2.227133
Prob(F-statistic)	0.000001			

Source: E-views calculation results

• Long-run and short-run error correction vector model:

In order to determine the value of the relationship parameters in the long run and the short run, the error correction vectors were estimated. It turns out that the error term correction factor is not significant at a significance level of 0.05, meaning that there is no correction from the short run to the long run, while the long run equation indicates that there is no effect of the correction in the run. Long because X1 is not significant at a significance level of 0.04

Table (16) Error correction vector test results between inflation rate and value of *small and micro enterprise loans*

Cointegrating Form				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(X3)	70.975954	87.331032	0.812723	0.4399
CointEq(-1)	0.143684	0.072495	1.981985	0.0828
$Cointeq = Y2 - (-493.9732 * X3 + 1553.4820)$				
Long Run Coefficients				
Variable	Coefficient	Std.	t-Statistic	Prob.
Error				
X3	493.973204	629.388429	-0.784846	0.4552
1553.48200	10258.36206			
C	2	4	0.151436	0.8834

Source: E-views calculation results

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The standard relationship between the unemployment rate and the dependent variable (value of small and micro enterprise loans) during the study period (2011 - 2022)

□ Unit root test:

To measure the stability of the model variables, the developed Dickey-Fuller test (ADF) was used, and it was found that the unemployment rate (X4) was unstable at its level, and stability occurred after taking the second difference, so the series became integrated of the second order, and it was also shown that the value of small and micro enterprise loans was unstable. (Y2) at its level and stabilization occurred after taking the second difference, so the series becomes integrated of the second degree. Because the two series are integrated at the same degree, Ardel cointegration is used in order to conduct the cointegration test between them.

Table (17) Results of the developed Dickey-Fuller (ADF) test for the relationship between unemployment rate and value of small and micro enterprise loans

Variables	Level			1 st Difference			2 nd Difference		
	ADF	Sig.	Result	ADF	Sig.	Result	ADF	Sig.	Result
X4	-1.5657	21.21	No stationary	0.6412	0.832	No stationary	-4.5788	0.001	stationary
Y2	4.886	0.999	No stationary	-1.068	0.238	No stationary	-3.682	0.002	Stationary

Source: E-views calculation results

• Causality Test

It is clear that there are no two-way causal relationships between the unemployment rate and the value of small and micro enterprise loans at a significance level of 0.05, as the one-way causal relationship goes from the value of small and micro enterprise loans to the unemployment rate at a significance level of 0.02

Table (18) Causality Test between unemployment rate and value of small and micro enterprise loans

Null Hypothesis:	Obs	F-Statistic	Prob.
Y2 does not Granger Cause X4	10	43.6150	0.0007
X4 does not Granger Cause Y2		0.07081	0.9326

Source: E-views calculation results

• Bounds Test

It turns out that there is no cointegration between the value of unemployment rate and the value of small and micro enterprise loans at a significance level of 0.05 during the period (2011-2022)

Table (19) Co-integration test between unemployment rate and value of small and micro enterprise loans

Test Statistic	Value	k
F-statistic	1.764559	1
Critical Value Bounds		
Significance	I0	Bound II Bound
10%	4.04	4.78
5%	4.94	5.73
2.5%	5.77	6.68
1%	6.84	7.84

Source: E-views calculation results

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• Test the number of time lags

It turns out that the optimal number of time lag periods is one time period for the value variable of the small and micro enterprise loans, and there is no time lag period for the value variable of the unemployment rate during the period (2011-2022)

Table (20) Testing time lag periods between unemployment rate and value of small and micro enterprise loans

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
Y2(-1)	1.886227	0.447361	4.216345	0.0029
X4	2033.337	1201.177	1.692788	0.1290
C	-29650.29	17948.53	-1.651963	0.1371
R-squared	0.975281	Mean dependent var	14944.87	
Adjusted R-squared	0.969101	S.D. dependent var	9422.752	
S.E. of regression	1656.329	Akaike info criterion	17.88960	
Sum squared resid	21947418	Schwarz criterion	17.99811	
Log likelihood	-95.39278	Hannan-Quinn criter.	17.82119	
F-statistic	157.8200	Durbin-Watson stat	2.153566	
Prob(F-statistic)	0.000000			

Source: E-views calculation results

• Long-run and short-run error correction vector model:

In order to determine the value of the relationship parameters in the long run and the short run, the error correction vectors were estimated, and it turns out that the error term correction factor is not significant at a significance level of 0.05, meaning that there is no correction from the short run to the long run, while the long run equation indicates that there is an effect of the correction in the long run. Because X4 is significant at a significance level of 0.01

Table (21) Error correction vector test results between unemployment rate and value of small and micro enterprise loans

Cointegrating Form				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(X4)	2033.33730			
	7 1201.176829		1.692788	0.1290
CointEq(-1)	0.886227	0.447361	1.981012	0.0829
Cointeq = Y2 - (-2294.3762*X4 + 33456.7820)				

Long Run Coefficients				
Variable	Coefficient	Std.	t-Statistic	Prob.
Error				
	-			
	2294.37616		-8.582573	0.0000
X4	0 267.329632			
	33456.7819			
C	81 3866.047320		8.654002	0.0000

Source: E-views calculation results

Testing the study hypotheses

There is a statistically significant impact of the value of Egyptian sukuk on loans to small and micro enterprises during the period (2011-2022)

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Table (22) impact of the value of Egyptian sukuk on the loans to small and micro enterprises during the period (2011-2022)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-3287.805	1620.162	-2.0293070	0.0699
X1	0.006392	0.000532	12.012550	0.0000
R-squared	0.935192	Mean dependent var		14094.58
Adjusted R-squared	0.928711	S.D. dependent var		9454.761
S.E. of regression	2524.423	Akaike info criterion		18.65642
Sum squared resid	63727118	Schwarz criterion		18.73724
Log likelihood	-109.9385	Hannan-Quinn criter.		18.62650
F-statistic	144.3013	Durbin-Watson stat		0.615301
Prob(F-statistic)	0.000000			

Source: E-views calculation results

The significance of the model as a whole was revealed, as the value of F was significant at the level of 0.01, and the impact of the variable of the value of the Egyptian sukuk on the variable of loans to small and micro enterprises was significant at the level of 0.01. It was found that the independent variable (the value of the Egyptian sukuk) explains 92.9% of the dependent variable (loans to small and micro enterprises). It was found that whenever the value of Egyptian sukuk increased by 1%. The loans to small and micro enterprises increased by 0.006392%.

Table (23) impact of the independent variables on the loans to small and micro enterprises during the period (2011-2022)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	16586.10	3987.148	4.159892	0.0042
X1	0.006488	0.000740	8.772774	0.0001
X2	0.094888	0.017800	-5.330891	0.0011
X3	346.0520	79.83402	4.334643	0.0034
X4	-1574.812	269.5249	-5.842918	0.0006
R-squared	0.993266	Mean dependent var		14094.58
Adjusted R-squared	0.989418	S.D. dependent var		9454.761
S.E. of regression	972.5926	Akaike info criterion		16.89214
Sum squared resid	6621555.	Schwarz criterion		17.09419
Log likelihood	-96.35287	Hannan-Quinn criter.		16.81734
F-statistic	258.1294	Durbin-Watson stat		2.642180
Prob(F-statistic)	0.000000			

Source: E-views calculation results

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The significance of the model as a whole was shown, as the value of F was significant at the level of 0.01. It was shown that the independent variables explain 98.9% of the dependent variable (loans to small and micro enterprises). The significance of the impact of the variable of the value of the Egyptian sukuk on the variable of loans to small and micro enterprises was shown at a level of significance of 0.01. It was shown that the greater the value of the Egyptian sukuk by 1% the loans to small and micro enterprises increased by 0.006488%. The impact of the variable value of foreign direct investment on the variable loans to small and micro enterprises was also shown to be significant at a significance level of 0.01. It was found that whenever the value of foreign direct investment increased by 1%, the loans to small and micro enterprises increased by 0.094888%. It was also shown to be significant, the impact of the inflation rate variable on the loans to small and micro enterprises variable at a significance level of 0.01. It was found that whenever the inflation rate increased by 1%, the loans to small and micro enterprises increased by 346.0520%, It was also shown to be significant and The impact of the unemployment rate variable on the loans to small and micro enterprises variable at a significance level of 0.01. It was found that whenever the unemployment rate increased by 1%, the loans to small and micro enterprises decreased by 1574.812%

It is clear from the above that the hypothesis of the study is correct, which states that there is a statistically significant impact of the value of Egyptian sukuk on the loans to small and micro enterprises during the period (2011-2022).

CONCLUSION

- The impact of the variable of the value of the Egyptian sukuk on the variable of loans to small and micro enterprises was significant at the level of 0.01 and It was found that whenever the value of Egyptian sukuk increased by 1%. The loans to small and micro enterprises increased by 0.006392%.
- The significance of the impact of the variable of the value of the Egyptian sukuk on the variable of loans to small and micro enterprises was shown at a level of significance of 0.01. It was shown that the greater the value of the Egyptian sukuk by 1% the loans to small and micro enterprises increased by 0.006488% The impact of the variable value of foreign direct investment on the variable loans to small and micro enterprises was also shown to be significant at a significance level of 0.01. It was found that whenever the value of foreign direct investment increased by 1%, the loans to small and micro enterprises increased by 0.094888%. It was also shown to be significant. The impact of the inflation rate variable on the loans to small and micro enterprises variable at a significance level of 0.01. It was found that whenever the inflation rate increased by 1%, the loans to small and micro enterprises increased by 346.0520%, It was also shown to be significant. The impact of the unemployment rate variable on the loans to small and micro enterprises variable at a significance level of 0.01. It was found that whenever the unemployment rate increased by 1%, the loans to small and micro enterprises decreased by 1574.812%
- The hypothesis of the study is correct, which states that there is a statistically significant impact of the value of Egyptian sukuk on the loans to small and micro enterprises during the period (2011-2022).

Recommendations

- Working to organize the issuance of sukuk through which the necessary financing can be provided for small and micro projects, which contributes to providing the financial needs of these projects and addressing deficiencies in their financing process.
- Interest in increasing individuals' awareness of the importance of encouraging small and micro enterprises in achieving the required sustainable development
- Work to facilitate procedures related to financing small and micro projects and pay attention to setting appropriate interest rates for loans related to these projects.

Scope for Future Research

- Expanding the conduct of studies and research related to the importance of instruments in achieving sustainable development
- Expanding the conduct of studies and research related to the role of sukuk in providing financing for small and micro projects in all economic sectors.
- Expanding the conduct of studies and research related to identifying financing sources for small and micro projects and the factors affecting them.

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