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Islamic Capital Markets and Economic Growth: A Comparative Study of Pakistan, Malaysia and UAE

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Abstract

This research was conducted to find out whether Islamic capital markets (ICMs) have any effect on economic growth (EG). The study also made a comparison between three countries including Pakistan, Malaysia and UAE in this regard. Quantitative research technique was used in this study, where secondary and time series data was collected on a quarterly basis for the period 2009-2017. The effect of independent variables (IVs) on the dependent variable (DV) was examined. Co-integration and ARDL test were applied in Eviews 9 and Microfit 5.0. A growth model was developed for the selected countries separately in order to see whether IVs had any effect on DV. GDP was the DV of study while IMCAP, TNI and TNL were its IVs. It was found that in case of Pakistan and Malaysia, all the IVs had a significant effect on EG in the short run, while in the long run only IMCAP and TNI have a significant impact. In case of UAE, only two IVs (IMCAP and TNL) had a significant effect on EG in the short run, while in long run only one IV (IMCAP) has a significant impact. Further, it was found that IVs jointly had a significant effect on EG of the selected countries. So, this study concluded that ICMs do have a significant effect on EG of Pakistan, Malaysia and UAE. Considering the importance of ICMs in EG, regulators and policy makers are likely to benefit from the results of the current study which acts as a guide for developing and reforming the ICMs of Pakistan, Malaysia and UAE.

Keywords: Islamic capital markets (ICMs), economic growth (EG), TNI, TNL, Pakistan, Malaysia, UAE

Introduction

Worldwide, capital markets (CMs) are considered as positive indicators of economic growth (EG) and development (Bekaert & Harvey, 1998). The theory of economic development states that financial markets fundamentally support

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genuine financial development (FD) and advancement. It also states that FD positively affects GDP growth because it results in increased productivity and innovative change. Moreover, according to the theory, financial markets in fact help to bring significant monetary development and improvement. The theory also indicates that the development of financial institutions affects GDP positively because of its impact on technological change and growth in productivity. On a fundamental level, CM is relied upon to quicken FD by giving a lift to household reserve funds and expanding the amount and nature of investment (Schumpeter, 1912).

The market is relied upon to strengthen reserve funds by providing people with an extra financial tool that can better cope with the risks and needs of liquidity. The availability of better reserve finances can extend the saving rate. CM also provides an opportunity for creating associations to raise capital and to cut down expenses. Moreover, organizations in countries with a develop securities trade are less dependent on bank financing which can diminish the risk of credit crunch. CM can strongly affect monetary development through developing speculative assets among individuals and also through offering ways to firm financing (Yartey, 2008). Transactions in Islamic capital markets (ICMs) are carried out in ways which don't contradict the conscience of Muslims and the religion of Islam. ICMs are authenticated by the *Shari'ah* law with the objective that they are free from practices forbidden by it, for instance, usury (*riba*), betting (*maysir*) and uncertainty (*gharar*) (Herzi, n.d.). In Pakistan and UAE, ICMs are a part of the overall CM and they function as an equivalent market to the conventional CMs. ICMs work as a fundamental part of the Islamic banking system in growing and expanding the Islamic financial market in Pakistan, Malaysia and UAE. In Pakistan, ICMs started issuing *Sukuk* in 2005, in Malaysia they were issued in 1990, while in UAE they were issued in 2004.

This research was carried out with the intention to examine the effect of ICMs on EG of Pakistan, Malaysia and UAE. CMs play an important role in the development and growth of the economy because they provide capital to organizations which need funds and simultaneously provides good investment opportunities to investors. ICMs work parallel to their conventional counterparts and need to be strengthened and developed quickly / widely in countries under study because of Muslim population in majority. A considerable amount of literature is available on conventional financial institutions proving that they have a significant effect on EG, while few studies have been conducted to find out the effect of Islamic financial institutions on EG. Hence, this study can help in their quick development which will not only play a positive role in EG but will also

provide a broad area of investment opportunities for Muslims. Further, it will also help to eliminate the practice of *riba*.

Keeping in view the said problem, this study has the following objectives.

1. To investigate the impact of ICMs on the GDP of Pakistan, Malaysia and UAE.
2. To investigate the impact of the TNIs on the GDP of Pakistan, Malaysia and UAE.
3. To investigate the impact of TNLs on the GDP of Pakistan, Malaysia and UAE.

CMs are considered to have an influential role in EG, especially ICMs; however, to the best of the researchers' knowledge no study has so far been conducted on the impact of ICMs in Pakistan in comparison with Malaysia and UAE. So, this study is a knowledge contribution about the impact of ICMs on EG of the selected countries. It will be helpful in developing and strengthening ICMs that will in turn help investors to invest in a wider market, especially catering to Islamic banks which cannot invest in conventional CMs.

2. Literature Review

Abduh and Sukmana (2015) conducted a study titled "Participation of Malaysian Islamic and conventional stock markets in promoting economic growth". The study revealed that the Islamic stock market has a co-mix relationship with EG, while the conventional stock market does not have any relationship of co-joining with EG.

Likewise, Smaoui and Nechi (2017) researched the encouragement of EG through the development of the *Sukuk* market. The study covered the period 1995-2015 and the results explained that there is a solid and vigorous confirmation that *sukuk* advancement is helpful for monetary development, even in the wake of adjusting for different measures of money related market improvement, organizational excellence, as well as other traditional elements of FD. Further, Echchabie and Idriss (2016) conducted a study on whether or not EG is encouraged by the financing of *Sukuk*? Those countries which issue more *Sukuks* were selected for the study. Their findings indicated that if all the countries selected for the study were grouped together then the issuance of *Sukuk* had an impact on gross capital formation and GDP, while generally there was no impact. Likewise (Yusof, Shabri and Majid, 2008) found that in Malaysia the securities advertise is the most noteworthy market in drawing Foreign Direct Investment (FDI) into the economy. This suggests that to a specific degree that the

administration's efforts in advancing Malaysia as the universal center for ICMs have been fruitful.

Nordin and Nordin ([2016](#)) conducted a research on the increase in EG because of the influence of CM from the Malaysian perspective using Johansen and Juselius' ([1990](#)) co-integration test known as VECM. The data collected for the study covered the years 1981-2014. They concluded that CM significantly affected the economy. The research demonstrated that money markets have shown significant impact on the Malaysian economy.

Nazir, Nawaz and Gilani ([2010](#)) conducted a study on the development of the relationship of stock markets with GDP growth of Pakistan using the data from 1986 to 2008. Their study found that the size of the market has a more grounded impact on FD as compared to the liquidity of securities exchange. Further, their study showed that human capital advancement and FDI have a significant positive impact on monetary development in Pakistan. Similarly, Ahmad, Khan and Tariq ([2012](#)) investigated the relationship between GDP growth and the development of securities markets of Pakistan and Bangladesh for which data was collected for the years 1990-2009. They analyzed that Pakistan Stock Exchanges added to monetary development as far as the extensive size of its stock exchange was considered, whereas Bangladeshi stock exchanges added to FD as far as the liquidity of its Stocks Exchange was considered. Bangladesh's financial development was observed to be similarly superior to the monetary development of Pakistan. Similarly Shahbaz, Ahmed and Ali (2008) led an investigation on stock market advancement and financial development, that is, ARDL causality in Pakistan. The data was taken for the period extending from 1971 to 2006. The researchers utilized two new tests DF-GLS and Ng-Perron to obtain the results of the connections in both the long run and the short run; they used causality test of Engle-Granger and Autoregressive Distributed lag test. Their findings showed that there exists an extremely solid relationship of advancement between Stock Exchange and growth of an economy. The causality test in the long run confirmed that there exists a two-way relationship between Stock Exchanges advancement and growth of the economy, while for the short run one-way causality exists which leads from the development of security exchange to the development of the economy.

From the above mentioned studies, it is clear that most of them focused on the conventional side of CMs. On the other hand, there are few studies available on ICMs, most of which are related only to Malaysian Jurisdiction. So, there is a clear gap in the previous literature. Hence, a comparative study was undertaken based on three countries which adds to the existing literature in this area.

On the basis of the literature review, the following hypothesis were framed.

2.1 Research Hypotheses

H1: Islamic market capitalization (IMCAP) in Pakistan has a substantial effect on the GDP of Pakistan.

H2: Islamic market capitalization (IMCAP) in Malaysia has a substantial effect on the GDP of Malaysia.

H3: Islamic market capitalization (IMCAP) in UAE has a substantial effect on the GDP of UAE.

H4: TNI in Pakistan has a substantial effect on the GDP of Pakistan.

H5: TNI in Malaysia has a substantial effect on the GDP of Malaysia.

H6: TNI in UAE has a substantial effect on the GDP of UAE.

H7: TNL in Pakistan has a substantial effect on the GDP of Pakistan.

H8: TNL in Malaysia has a substantial effect on the GDP of Malaysia.

H9: TNL in UAE has a substantial effect on the GDP of UAE.

3. Research Methodology

3.1 Research Design

Quantitative research design was used because the study intended to examine impact of ICMs on EG for which different tests were run to explain their mutual relation in the best possible manner.

3.2 Data Type and Sources

Secondary data was used which was collected from the annual and quarterly reports obtained from the websites of Securities and Exchange Commission of Pakistan (SECP), Securities and Commodity Authority (SCA) of UAE and Securities Commission (SEC) of Malaysia. Further, the Pakistan Stock Exchange (KMI 30 index) and Bursa Malaysia (EMAS, Hijrah & DJIM Titans 25), the annual and quarterly reports of Abu Dhabi Security Exchange and Dubai financial market were accessed through their respective websites. The time series data was collected quarterly from 2009 to 2017. GDP data was collected from the World Bank's website for the selected countries.

3.3 Method of Data Analysis

Johnson co-integration and ARDL tests were applied to see whether ICMs have any impact on EG of Pakistan, Malaysia and UAE? The procedure followed for

analyzing the data was econometric procedure. The normality of data was checked using descriptive statistics in Eviews 9. The stationarity of data was checked through unit root test. Johnson co-integration test was applied to check co-integration among the variables in model 2. Error correction model was employed through Eviews to check both the long run and short run relationship between the growth model 2 and IVs for Malaysia. ARDL test, selected using Schwarz Bayesian Criterion, was applied on model 1 and 3 to check both the long run and short run relationship between EG and IsV of the study. ARDL test was applied using Microfit 5.0.

3.4 Model Specification

$$Log(GDP_{t)\ (Pak)} = \alpha + \beta_1 * log(IMCAP) + \beta_2 * log(TNI) + \beta_3 * log(TLS) + \mu i \ \ldots\ldots\ldots(1)$$

$$Log(GDP_{t)\ (Malaysia)} = \alpha + \beta_1 * log(IMCAP) + \beta_2 * log(TNI) + \beta_3 * log(TLS) + \mu i \ \ldots\ldots\ldots(2)$$

$$Log(GDP_{t)\ (UAE)} = \alpha + \beta_1 * log(IMCAP) + \beta_2 * log(TNI) + \beta_3 * log(TLS) + \mu i \ldots\ldots\ldots\ (3)$$

a= constant term
GDP = Gross domestic product
β= the regression coefficient of the model
IMCAP= Islamic market capitalization of Islamic stock market + *Sukuk* market
TNI= Total amount of newly issued securities
TNL= Total number of listed securities
μi= random error term which is independently and identically distributed

4. Results and Discussion

4.1 Pakistan

Table 1
Collinearity Statistics

	LNIMCAP	LNTNI	LNTNL	TOLERANCE	VIF
LNIMCAP	1.000000			.233	4.291
LNTNI	0.504568	1.000000		.256	3.937
LNTNL	0.721716	0.536051	1.000000	.362	2.762

Table 1 explains the correlation and VIF of IVs. The results show a moderate positive relationship between the variables IMCAP and TNI. IMCAP and TNL also have a positive relationship and TNI and TNL too have a moderate positive relationship. The VIF results explain that none of the values of each variable is greater than 10, so there is no issue.

Table 2
Testing for Unit Root

Approach through ADF Test							
Variables	Lags	Prob. Values	Decision	Variables	Lags	Prob. Value	Decision
At level				At First difference			
GDP	8	0.3585	Non-stationary	ΔGDP	6	0.0000	Stationary
IMCAP	1	0.0001	Stationary	ΔIMCAP			
TNI	4	0.0001	Stationary	ΔTNI			
TNL	8	0.3553	Non-stationary	ΔTNL	6	0.0000	Stationary
Approach through PP Test							
At Level				At First Difference			
Variables	Prob. Value	Band-width	Decision	Variables	Band width	Prob. Value	Decision
GDP	0.3552	7	Non-stationary	ΔGDP	9	0.0000	Stationary
IMCAP	0.0000	4	Stationary	ΔIMCAP			
TNI	0.0011	1	Stationary	ΔTNI			
TNL	0.4721	11	Non-stationary	ΔTNL	12	0.0000	Stationary

The unit root test results in Table 2 explain the stationarity of data. The results explain the probability value of GDP at level in ADF and PP tests, which is greater than 5% and shows that the variable is non-stationary at level. However, at first difference both values are less than 5% that shows that the variable is stationary at first difference. The probability value for IMCAP is less than 5% at level in both tests showing that the variable is stationary at level. The value for TNI is less than 5% at level in both ADF and PP tests reflecting that the variable is stationary at level. The value for TNL at level in both ADF and PP tests is greater than 5% which means that the variable is non-stationary at level. However, at first difference both the values are less than 5% which means that it is stationary at first difference. The non-stationary hypothesis is rejected for all the variables.

Table 3
ARDL Bound Testing Approach

ARDL test			
LNGDP is the dependent variable of the study			
Lag length	1		
F-statistic	5.8339		
	(Critical bound for F statistics)		
Level of significance	LCB	UCB	
10 percent	3.7684	4.8503	
5 percent	4.5404	5.7410	
Diagnostic Test			p-values
R^2	.99567	Serial Correlation	.058/.105
Adjusted - R^2	.99455	Functional Form	.178/.244
F-Statistics	.000	Normality	.183
Durbin - Watson sta	1.9742	Heteroscedasticity	.223/.235

The R-squared value is .99567 which shows the fitness of the model.
The DW-statistic value is 1.9742 which explains that there is no serial correlation in the sample.

Table 4
Short Run Results Using ARDL Test

LNGDP is the dependent variable of the study				
Variable	Coefficient	Standard Error	t-ratio	P-value
LNIMCAP	0.1509	0.059289	2.5461	.017
LNTNI	-0.20617	0.043105	-4.7829	.000
LNTNL	1.4562	0.17264	8.4348	.000
CONSTANT	2.6671	0.90282	2.9541	.006

In Table 4, the probability value of IMCAP confirms the statistically strong and substantial impact of IMCAP on DV (GDP) at 5% significance level, so H1 is accepted and H0 is rejected. The coefficient value of IMCAP shows the positive relationship between the variables IMCAP and GDP, which means that if IMCAP increases or decreases by 1.00 unit then GDP will increase or decrease by 0.1509 units.

The probability value of TNI shows a strong and substantial impact of TNI on EG at 1% significance level, so H4 is accepted and H0 rejected. The coefficient value reflects the negative relationship between TNI and GDP, so if TNI increases

or decreases by 1.00 unit then GDP will increase or decrease by 0.20617 units, accordingly.

The probability value of TNL shows a strong and substantial impact of TNI on EG at 1% significance level, so H7 is accepted and H0 is rejected. The coefficient value proves a positive relationship between TNI and GDP, so if TNI increases or decreases by 1.00 unit then GDP will increase or decrease by 1.4562 units.

Table 5

Long Run Results Using ARDL Test

LNGDP is the dependent variable of the study				
Variable	Coefficient	Standard Error	t-ratio	P-value
LNIMCAP	0.35453	0.16236	2.1836	.038
LNTNI	-0.23726	0.08373	-2.8334	.009
LNTNL	0.72938	0.48806	1.4944	.147
CONSTANT	6.2636	1.6128	3.8838	.001

Source: Author Compilation from Eviews 9

Table 5 explains the long run relationship between IVs and DV. The probability value of IMCAP in the above table is .038, which means that IMCAP significantly affects EG in the long run at 5% significance level. So, H1 is accepted and H0 is rejected. The results further explain that if IMCAP increases or decreases by 1.00 unit then GDP will increase or decrease by 0.35 units. TNI value is .009 which shows a substantial impact of TNI on EG in the long run at 1% significance level, so H4 is accepted and H0 is rejected. The results further explain that if TNI increases or decreases by 1.00 unit then GDP will increase or decrease by 0.23 units. TNL value is .147 which shows that TNL doesn't have any substantial effect on EG in the long run, so H7 is rejected and H0 is accepted.

Table 6

Error Correction Representation for Model 1

Variable	Coefficient	Standard Error	T-Ratio	P-value
ecm (1)	-0.4258	.12972	-3.282	.003
dLNIMCAP	0.1509	0.59289	2.5461	.016
dLNTNI	-0.2061	0.04310	-4.7829	.000
dLNTNL	1.4562	0.17264	8.4348	.000
dCONSTANT	.00386	0.00281	1.3715	.181

Source: Author Compilation from Eviews 9

In the above table, it is shown that the coefficient value of error correction model has the right level between zero and one and also the right negative sign at 5% level of significance, so statistically it is significant. Since the error correction model is significant, it further explains that a long run relationship exists between DV and IVs.

4.2 Malaysia

Table 7
Collinearity Statistics

	LNIMCAP	LNTNI	LNTNL	TOLERANCE	VIF
LNIMCAP	1.000000			.279	3.584
LNTNI	0.185	1.000000		.300	3.333
LNTNL	-0.792	-0.011	1.000000	.283	3.533

Table 7 explains the correlation and VIF of the IVs of data. The results explain that there is a weak positive relationship between variables IMCAP and TNI. The variables IMCAP and TNL also have a strong negative relationship and TNI and TNL have a weak negative relationship. The VIF results explain that none of the values of each variable is greater than 10 so there is no issue.

Table 8
Testing for Unit Root

Approach through ADF test

Variables	Lags	Prob. Value	Decision	Variables	Lags	Prob. Value	Decision
At level				At First difference			
GDP	0	0.1165	Non-stationary	ΔGDP	0	0.0000	Stationary
IMCAP	0	0.7078	Non-stationary	ΔIMCAP	0	0.0000	Stationary
TNI	0	0.2818	Non-stationary	ΔTNI	0	0.0000	Stationary
TNL	0	0.7367	Non-stationary	ΔTNL	0	0.0000	Stationary

Approach through PP Test

At Level (with intercept)				At First Difference (with intercept)			
Variables	Prob. Value	Band-width	Decision	Variables	Band-width	Prob. Value	Decision
GDP	0.1162	34	Stationary	ΔGDP	2	0.0000	Stationary
IMCAP	0.5911	20	Non-stationary	ΔIMCAP	33	0.0000	Stationary
TNI	0.2818	0	Non-stationary	ΔTNI	1	0.0000	Stationary
TNL	0.7367	0	Non-stationary	ΔTNL	2	0.0000	Stationary

Source: Author Compilation from Eviews 9

Table 8 includes results about the stationarity of data. The greater probability value of GDP, IMCAP, TNI and TNL at level in both ADF and PP tests than 5% means that the variables are not stationary at level; however, at first difference both the values are less than 5% which means that the variables are stationary at first difference. The non-stationary hypothesis is rejected for all the variables.

Table 9

Co-integration Test

Hypothesized No. of CE(s)	Eigen Value	Trace Statistics	0.05 Critical Value	Prob.	Hypothesized No. of CE(s)	Max-Eigen Statistics	0.05 Critical Value	Prob.
None*	0.996872	229.5702	40.17493	0.0001	None*	184.5605	24.15921	0.0001
At most 1*	0.674566	45.00967	24.27596	0.0000	At most 1*	35.92306	17.79730	0.0000
At most 2	0.205070	9.086611	12.32090	0.1640	At most 2	7.344056	11.22480	0.2211
At most 3	0.052999	1.742555	4.129906	0.2196	At most 3	1.742555	4.129906	0.2196

Source: Author Compilation from Eviews 9

The results of co-integration test were obtained using Johnson's co-integration test in order to determine whether the variables included in the study have any co-integration between them or not. For this purpose, the critical values were compared with their corresponding Eigen values and trace statistics. If the critical value is less than the Eigen value or trace statistics, then the critical value indicates a co-integrated series. Moreover, it also acknowledges the existence of at least one co-integrated equation which signifies that there is a long run and the presence of at least two co-integrated equations signifies that there is a long run stability relationship between the variables of the study in at least one way (Engle

and Granger, 1987). The co-integration test results in Table 10 direct that the maximum Eigen value of 184.560 and trace statistics of 229.570, 35.9230 and 45.00967 explain the existence of two co-integrated equations at 1% significance level for the maximum Eigen value and trace statistics, respectively.

This further explains that there is a long run equilibrium relationship among the variables selected for the study.

Table 10
Long Run Coefficient Estimates

Normalized Co-integrating Coefficients (Standard Error in Parenthesis)

LNGDP	LNIMCAP	LNTNI	LNTNL
C	0.136029	-0.175085	-0.239515
-11.73651	(0.03247)	(0.03405)	(0.67845)
	[4.18932]	[-5.14268]	[-0.35303]

Source: Author Compilation from Eviews 9

Table 10 explains the normalized co-integration coefficients of the variables of a co-integrated equation with respect to standard error and t-statistics results associated with each variable. The result of the normalized co-integrated relationship reveals a significant relationship between IMCAP, TNIs and EG in Malaysia. The results explain that there is a significant relationship between IMCAP and EG at 5% significance level, so H2 is accepted and H0 is rejected. The results further explain that a 1% change in IMCAP will result in 0.136% change in EG. The elasticity approximations clarify that the level of the responsiveness of FD to change per time in market capitalization is less than one and hence it is inelastic. It explains that market capitalization plays a significant role in GDP in Malaysia.

TNIs have a significant long run relationship with EG at 5% significance level, so H5 is accepted and H0 is rejected. The results also explain that 1% change in TNIs result in 0.175% change in EG. This further shows that the degree of the responsiveness of EG to change per time in TNIs is less than one and, therefore, remains inelastic. TNLs do not have any significant impact on EG, so H8 is rejected and H0 is accepted. Two IVs namely IMCAP and TNI show a significant impact on EG, while one IV namely TNL does not show any significant impact on EG. The R-squared value is 0.884798 which shows that the overall the model is fit.

Table 11
Vector Error Correction Estimates

Variable	D(LNGDP)	D(LNIMCAP)	D(LNTNI)	D(LNTNL)
ECM (-1)	-0.254931	0.408838	0.734193	-0.28819
Standard Error	0.07061	0.04623	0.34701	0.16223
t-statistics	-3.61058	8.84323	2.11579	-2.46311

Source: Author Compilation from Eviews 9

The results in Table 11 explain that the coefficient value of error correction model has the right level between zero and one and also the right negative sign at 5% significance level, so statistically it is significant. Since the error correction model is significant it further explains that a long run relationship exists between DV and IVs.

Moreover, Table 11 also explains the short run significance and correlation between EG and IVs. The results identify that there is a significant impact of IMCAP on EG at 5% significance level, so H2 is accepted and H0 is rejected. Moreover, the results explain that if there is an increase or decrease of 1.00 unit in IMCAP, it will increase or decrease EG by 0.4088 units. TNIs also have a significant impact on EG at 5% significance level, so H5 is accepted and H0 is rejected. Moreover, if there is one unit change in TNI it will increase or decrease EG by 0.7341 units. TNLs also have a significant impact on EG at 5% significance level, so H8 is accepted and H0 is rejected. Moreover, if there is one unit change in TNL it will increase or decrease EG by 0.2881 units.

4.3 UAE

Table 12
Collinearity Statistics

	LNIMCAP	LNTNI	LNTNL	TOLERANCE	VIF
LNIMCAP	1.000000			.119	8.403
LNTNI	0.589254	1.000000		.197	5.076
LNTNL	0.518001	0.660584	1.000000	.148	6.756

Table 12 explains the correlation and VIF of the IVs of data. The results explain that there is a moderate positive relationship between the variables IMCAP and TNI. The variables IMCAP and TNL also have a positive relationship. Furthermore, TNI and TNL have a moderate positive relationship. The VIF results explain that none of the values of each variable is greater than 10, so there is no issue.

Table 13
Testing for Unit Root

Approach through ADF Test							
Variables	Lags	Prob. Value	Decision	Variables	Lags	Prob. Value	Decision
At level				At First difference			
GDP	0	0.2960	Non-stationary	ΔGDP	0	0.0000	Stationary
IMCAP	0	0.9223	Non-stationary	ΔIMCAP	0	0.0000	Stationary
TNI	0	0.8627	Non-stationary	ΔTNI	0	0.0000	Stationary
TNL	3	0.0002	Stationary	ΔTNL			
Approach through PP Test							
At Level (with intercept)				At First Difference (with intercept)			
Variables	Prob. Value	Band-width	Decision	Variables	Band-width	Prob. Value	Decision
GDP	0.2747	8	Non-stationary	ΔGDP	3	0.0000	Stationary
IMCAP	0.9292	4	Non-stationary	ΔIMCAP	3	0.0000	Stationary
TNI	0.8645	1	Non-stationary	ΔTNI	2	0.0000	Stationary
TNL	0.0001	10	Stationary	ΔTNL			

Source: Author Compilation from Eviews 9

The unit root test results in Table 13 explain the stationarity of data. The results explain that the probability value of GDP, IMCAP, TNI and TNL at level in both ADF and PP tests is greater than 5% which means that the variables are not stationary at level; however, at first difference both the values are less than 5% which means that the variables are stationary at first difference. The non-stationary hypothesis is rejected for all the variables.

In Table 15 the probability value of IMCAP explains that there is a statistically strong and significant impact of IMCAP on DV, that is, GDP at 5% significance level. So, H3 is accepted and H0 is rejected. The coefficient value of IMCAP explains that there is a negative relationship between the variables IMCAP and GDP and if IMCAP increases or decreases by 1.00 unit, then GDP increases or decreases by 0.18254 units.

The probability value of TNI explains that there is no significant impact of TNI on EG, so H6 is rejected and H0 is accepted.

Table 14
ARDL Test

LNGDP is the Dependent Variable of the Study			
Lag length	1		
F-statistic	5.2258		
	Critical Bound for F statistics		
Level of Significance	LCB	UCB	
10 percent	3.7684	4.8503	
5 percent	4.5404	5.7410	
(Testing for Diagnostics)			p-values
R^2	.92165	Serial Correlation	.179/.294
Adjusted - R^2	.90486	Functional Form	.034/.087
F-Statistics	.000	Normality	.121
Durbin - Watson stat	2.1226	Heteroscedasticity	.590/.603

Source: Author Compilation from Eviews 9

Table 15
Short Run Results Using ARDL Test

LNGDP is the Dependent Variable of the Study				
Variable	Coefficient	Standard Error	t-ratio	P-value
LNIMCAP	-.18254	0.83429	-2.1879	.037
LNTNI	.074886	0.047135	1.5887	.123
LNTNL	.68000	0.22684	2.9977	.006
CONSTANT	1.4521	1.3732	1.0575	.299

Source: Author Compilation from Eviews 9

The probability value of TNI explains that there is a strong and significant impact of TNI on EG at 1% significance level, so H9 is accepted and H0 is rejected. The coefficient value explains that there is a positive relationship between TNI and GDP and if TNI increases or decreases by 1.00 unit, then GDP increases or decreases by 0.68000 units.

The R-squared value is .92165 which shows the fitness of the model. The DW-statistic value is 2.1226 which explains that there is no serial correlation in the sample.

Table 16
Long Run Results Using ARDL Test

LNGDP is the Dependent Variable of the Study

Variable	Coefficient	Standard Error	t-ratio	P-value
LNIMCAP	-0.99735	0.53950	-1.8487	.045
LNTNI	0.40916	0.29239	1.3994	.173
LNTNL	0.83023	1.5737	0.52756	.602
CONSTANT	7.9340	5.5011	1.4423	.160

Source: Author Compilation from Eviews 9

Table 16 explains the long run relationship between DV and IVs. The probability value of IMCAP shows that there is a significant relationship in the long run between EG and IMCAP at 5% significance level, so H3 is accepted and H0 is rejected. The probability value of TNI shows that there is no significant impact of TNI on EG in the long run, so H6 is rejected and H0 is accepted. The probability value of TNL shows that there is no significant impact of TNL on EG in the long run, so H9 is rejected and H0 is accepted.

Table 17
Error Correction Representation for Model 3

Variable	Coefficient	Standard Error	T-Ratio	P-value
ecm(-1)	-0.18302	0.084058	-2.1773	.038
dLNIMCAP	-0.18254	0.083429	-2.1879	.037
dLNTNI	0.074886	0.047135	1.5887	.123
dLNTNL	.68000	0.22684	2.9977	.006
dCONSTANT	-0.8154	0.0068982	-0.11821	.907

Source: Author Compilation from Eviews 9

The results in Table 17 explain that the coefficient value of error correction model has the right level between zero and one and also the right negative sign at 5% significance level, so statistically it is significant. It further explains that a long run relationship exists between DV and IVs.

The overall results of Pakistan, Malaysia and UAE based on their coefficients and P values explain that despite relatively low market capitalization, TNLs and TNIs of the ICMs of Pakistan showed a more significant impact on its EG as compared to Malaysia and UAE. Malaysian ICMs also showed significant results for its EG. However, despite greater market capitalization, TNLs and TNIs, it did not show better results. ICMs of UAE also impacted its EG significantly but did not influence it as significantly as in Pakistan and Malaysia.

5. Conclusion and Recommendations

This study examined the impact of ICMs on EG in Pakistan, Malaysia and UAE using quarterly time series data for the years 2009-2017. To achieve this objective, a specific model was created for each country. The results explained that the contribution of ICMs towards EG is positive. The results also revealed that IMCAP, TNIs and TNLs of Pakistan and Malaysia were significant factors influencing EG in the short run for the said period. In case of UAE, IMCAP and TNIs were significant factors affecting EG in the short run, while all the variables jointly had a significant impact on EG of model 1, 2 and 3.

The results also revealed that in the long run IMCAP and TNIs of model 1 and 2 were significant factors influencing EG, while in the case of UAE only IMCAP showed a significant impact on EG in the long run for the said period. From the results, we can argue that ICMs should be promoted to increase EG of a country.

Based on the results of this study, it is recommended here that the policy makers of Pakistan, Malaysia and UAE should focus on implementing policies which enhance the growth and size of IMCAP because it has a significant impact in both the long run and the short run. It can be enhanced by increasing the firm size registered on the Islamic stock markets and by increasing TNLs and TNIs of stocks and *sukuks*. The government of UAE should particularly focus on increasing TNI because it showed an insignificant/significant impact in both the long run and the short run. There is a need to implement the desired policies so that IMCAP show positive relationship towards EG.

As explained by the results of TNI, it is recommended that it should be issued in a large amount/number in Pakistan and Malaysia because it impacted EG significantly. In this way, it will help to enhance EG of Pakistan and Malaysia. It will also help in developing ICMs.

TNL impacted the EG of Pakistan, Malaysia and UAE significantly in the short run. Hence, it is recommended that the governments of Pakistan, Malaysia and UAE should strive to increase its size. Furthermore, the governments should

also take the necessary measures for its issuance because the total numbers listed did not show any impact on EG in the long run. So, the governments need to implement policies which will enhance its impact in the long run as well.

Islamic banks as well as individual investors who are reluctant to make investments in conventional CMs because of the violation of *Shari'ah* rules can benefit from ICMs.

The government should take steps to encourage more and more foreign investors to invest in ICMs. It should also take steps to educate local investors about ICMs so that they may gain knowledge about the investment process in ICMs and their profitability in order to increase the amount of investment in ICMs.

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