
DOES MATURITY PERIOD ALTER THE DEGREE OF RISK ON SUKUK (ISLAMIC BOND) RETURN? A STUDY AMONG DOW JONES SUKUK INDEX

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ABSTRACT

This study attempted to examine the different types of risk embedded in the various maturity periods of sukuk structure and to determine the relationship between the risks and the returns of sukuk. Data were collected from the sukuk market period from 2005 to 2015 on a periodic monthly basis and analyzed using descriptive, correlation and multiple regressions analysis.

The test results confirm Dow Jones maturity base confirmed that four models explain 60% to 86 % of variation at 5% significance level. Dow Jones M3T sukuk return, Dow Jones M5T sukuk return, Dow Jones M7T sukuk return and Dow Jones M10T sukuk return are 60%, 69%, 72% and 86% exposed to risk respectively. The significant influence of market risk, credit risk, operational risk and liquidity risk on the sukuk returns in different ways. Further, the results of the analysis on the basis of maturity indicate that, long period of maturity based sukuk market, i.e. Dow Jones M10T sukuk return is highly exposed to risk. Conversely lowest maturity period sukuk is less exposed to risk. As such, it is possible to conclude that when the maturity period is increasing the risk impact also get increased in the sukuk structure. The findings of this study would suggest that maintaining optimal level of inflation, hedging their interest- rate risk and to avoid maturity risk and to promote secondary market for sukuk. Implications, limitations and areas for future research also discussed.

Keyword: *Sukuk market, performance, return, risk, liquidity, maturity.*

Introduction

Literally, sukuk means Islamic bonds that can be accurately known as an Islamic investment certificate. A bond is a contractual debt obligation which is obliged by the issuer to pay the bondholder on a specified date, interest and principle. However, under sukuk structure, the sukuk holder hold undivided ownership in the underlying assets. Asaria and Mohammed (2005)

indicated that consequently, sukuk holders are entitled to obtain a share in the realization of the sukuk assets. Sukuk instruments play vital role in GCC countries. The GCC countries are a group of countries in the Arabian Peninsula that includes Bahrain, Kuwait, Oman, Qatar, Saudi Arabia (KSA) and the United Arab Emirates (UAE). GCC is an acronym for Gulf

Cooperation Council. For the GCC countries, sukuk can play an important role in financing. Because, large-scale infrastructure projects are planned (Dawson, 2013).

The reason for the upsurge in the capital market is due to the availability of liquidity in the Middle East brought by surplus oil income and returning of billions of dollars in investment in the West since September 11, 2004 including in the USA. In the Middle East region, the capital market is dominated by equities and bank assets representing 94.4%, while debt securities are made up just 5.6% (Saidi, 2009). Therefore, the debt market needs to formulate international best practices for the sustainable growth in the regional financial market. The development of sukuk market, as an alternative to the conventional debt market, is expressed to be the main force for securing funds to finance infrastructure in the Muslim world and outside.

Ameinfo (2008) expressed that, despite the uncertainty in the world financial market, the capital market in the Middle East keeps growing. According to a report by Ernst & Young, the total capital raised by initial public offering (IPO's) in the first part of 2008 was US\$ 8.69 billion compared to US\$ 4.83 billion during the same period of 2007. The conventional market in the Arab region is still in their developing stages. The trend in GCC economies is privatized with an aim to encourage public private partnership (PPP). As such, both private and public sectors will be looking for long term secondary markets for liquidity. In the secondary market, bonds are illiquid because the buy-and-hold culture is still there. Investors (banks), social security and

insurance companies usually hold bonds until they become mature as observed by Azzam (2004). Even though situations improved recently, the market is not liquid enough to allow real secondary market transactions.

Dusuki and Mokhtar (2010) identify three types of risks in Islamic finance, namely permissible risk or essential risk, prohibited risk, and manageable risk. Al-Amine (2012), in this research expressed that, like any other financial instruments, sukuk also involves the country risks and the sector or assets risks. From a different angle, the risks face by sukuk credit risks, counterparty risks, operational risks, market risks, legal risks, taxation risks and the liquidity risks.

Risk regarding the poor regulations of the sukuk mechanism is another type of risk. Sukuk is not commonly tradable in the secondary market hence there is a risk of liquidity and of course, the most important is the Shari'ah compliance risks (Mehmood, 2010; Razaq, 2010; Haral, 2010). For Razaq (2010) that the most important risk to the sukuk market is the legal risk and it needs to be dealt urgently otherwise it will be very bad for the growth of sukuk market.

Haider and Azhar (2011) states that, with time, experience and expertise, one can better identify the risks exposures. However, there is no proper standardised regulation yet and is in the developing phase. Shari'ah scholars are also not competent. There is no final decision regarding the Shari'ah compliance problem for any Islamic product. People are confused which is right and which is wrong as in case of the article of Taqi Usmani which opens a new

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discussion (Razaq, 2010; Cheema, 2010).

Cheema, (2010) quoted that the greatest problem for investors is liquidity risks. On the other hand, some respondents said that, like the traditional bond, sukuk also has some market risks, for example, in case of fixed rate asset based sukuk, the interest rate and credit risk emerges (Haral, 2010).

This study might also contribute to develop the forecast model in sukuk market as developed by other previous studies. A number of studies emphasized this point of view. For example, Rusgianto (2013) studied about the volatility behavior of sukuk market under consideration of structural breaks and puts forward a risk-return forecasting model incorporating the volatility behavior of sukuk market.

The main focus of this study is to know about the relationship between different types of risks and return this section outlined about the relationship between different types of risks and the return. On this basis, clear demarcation is based on the risk- return relationship between in the sukuk. In this study outlines the impact of each type of risk on sukuk return. The risk of sukuk market varies between market, countries, maturity, currency, rating, sectors and structures of the sukuk. However, this study focus on risk related to the sukuk instruments directly. For instance, interest rate risk, inflation rate risk and the dollar rate risk, consumer confidence risk, Shari'ah compliance risk, credit risk, maturity risk and liquidity risk. Empirical evidences are used to raise several research questions in this study. Many scholars emphasized the impact of risk on sukuk returns (eg: Haral, 2010; Al-

Amine, 2012; Nanaeva, 2010; Firoozye, 2012; Alaswsat, 2008; Cheema, 2010; Khan, 2012). Based on the above argument the objective of this study is to determine to what extent, different types of risks (market risk, credit risk, operational risk and liquidity risk) impact on the return of sukuk in different maturity period.

Methodology

Four important groups of risk are identified from the literature presented in previous section. They are market risk, operational risk, credit risk and liquidity risk. Different risk dimensions of each group of risk also synthesized based on the literature. The models have been constructed and used to explain variability of excess returns on sukuk with different maturities market. A model is employed to determine the excess return variability of the sukuk return index. The explanatory variables are libor 6-month certificate of deposit rate (IRD), consumer price index (CPI), U.S. dollar trade weighted index (DOR), consumer confidence rate index (CCI), higher quality rate index (HQR), maturity period rate index (MPR), size risk factor (SMB) and reinvestment index (RIR).

Data were collected from the secondary sources such as Daw Jones sukuk price index and other independent risk factors are obtained from each country which are dominated by sukuk market period from January 2005 to December 2015 on Monthly basis. For this purpose, the data were converted into average and variance. Second, logs are found for converting data. Third, ordinary least squares (OLS) analysis is applied for analyzing data.

Data Presentation, Analyses and Discussion of Findings

This study first presents descriptive analyses which have been conducted using descriptive statistics mean and standard deviation for dependent variables into two main data stream of maturity based Dow Jones sukuk index. Their descriptive statistics are presented in Table 1

variables. Thus, the mean values for ΔIRD , ΔCPI , ΔDOR , ΔCCI , ΔHQR , ΔMPR , ΔSMB , and ΔRIR are 0.0431, 0.1089, 0.0819, 0.0985, 0.1096, 0.0965, 0.1198 and 0.1077 respectively. This refers to that average sukuk return for these variables vary between 0.0431 and 0.1198. They have the standard deviation between 0.0046 and 0.0142.

Table 1 Descriptive Analysis for Dow Jones Sukuk Return and Variables

Dow Jones Sukuk Return	Dependent variable	Mean	Standard Deviation	Minimum	Maximum
Maturity Basis	$\Delta M3TRsRf$	0.1204	0.0205	-0.0810	0.1538
	$\Delta M5TRsRf$	0.1144	0.0188	-0.0840	0.1456
	$\Delta M7TRsRf$	0.1136	0.0195	-0.0811	0.1456
	$\Delta M10TRsRf$	0.1254	0.0211	-0.0754	0.1622
	Independent variable	Mean	Std. Deviation	Minimum	Maximum
	ΔIRD	0.0431	0.0111	-0.0118	0.0564
	ΔCPI	0.1089	0.0059	-0.0989	0.1200
	ΔDOR	0.0819	0.0046	-0.0721	0.0927
	ΔCCI	0.0985	0.0096	-0.0749	0.1140
	ΔHQR	0.1096	0.0078	-0.0800	0.1214
	ΔMPR	0.0965	0.0128	-0.0500	0.1170
	ΔSMB	0.1198	0.0142	-0.0989	0.1444
	ΔRIR	0.1077	0.0117	-0.0705	0.1241

Number of observations=132

Source: Analysis output

Table 1 shows that the mean, standard deviation, minimum value and the maximum values of sukuk return for $\Delta M3TRsRf$, $\Delta M5TRsRf$, $\Delta M7TRsRf$ and $\Delta M10TRsRf$ are 0.1204, 0.1144, 0.1136 and 0.1254 respectively. This refers to that average sukuk return for $\Delta M3TRsRf$, $\Delta M5TRsRf$, $\Delta M7TRsRf$ and $\Delta M10TRsRf$ values vary between 0.1136 and 0.1254. They have the range of standard deviation between 0.0188 and 0.0211.

The Table 1 also presents results of the descriptive analyses of the independent

Following this, correlations are carried out to know the strength of association between sukuk returns and its related risks in support of the results of the descriptive analysis. This type of maturity based Dow Jones sukuk returns and risk variables are analyzed on the basis of four maturity periods such as 1 to 3 years, 3 to 5 years, 5 to 7 years and 7 to 10 years.

Values of correlation between return of DJM3T sukuk and interest rate, inflation rate risk, dollar rate risk, consumer confidence rate risk, maturity risk, credit risk Shari'ah compliance

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risk, and liquidity risk range between -0.250 and 0.745. In case of DJM5T sukuk, those between the return of DJ sukuk and other independents stated above range between -0.266 and 0.725. Pearson correlation values of DJM7T sukuk vary between -0.300 and 0.755. In case of DJM10T sukuk, correlation values of interest rate risk, inflation rate risk, dollar rate risk, consumer confidence risk, credit risk, Shari'ah compliance risk and liquidity risk range between -0.424 and 0.873. The DJM10T sukuk return has shown association than other maturity periods.

sukuk return. Then, mechanisms for reaching research objectives are also outlined along with regression analyses.

Regression Analysis

Data screening of auto correlation, multicollinearity and heteroscedasticity reveal that the values of TOL vary between 0.123 and 0.600. Further, VIF varies between 1.668 and 8.139. These values reflect that there is no multicollinearity at all four maturity sukuk. The value of Durbin-Watson (d) is 2.068.

Table 2: Correlation between Dow Jones Sukuk Returns and Risk Variables

	ΔM3TR SRF	ΔM5TR SRF	ΔM7TR SRF	ΔM10T RSF	ΔIRD	ΔCPI	ΔDOR	ΔCCI	ΔMPR	ΔSMB	ΔHQR	ΔRIR
ΔM3TRS RF	1											
ΔM5TRS RF	.715**	1										
ΔM7TRS RF	.734**	.984**	1									
ΔM10TR SF	.763**	.776**	.800**	1								
ΔIRD	.255**	.380**	.364**	.267**	1							
ΔCPI	.734**	.725**	.755**	.872**	.084	1						
ΔDOR	-.250**	-.266**	-.300**	-.424**	.064	-.335**	1					
ΔCCI	.581**	.608**	.633**	.700**	-.014	.734**	-.191*	1				
ΔMPR	.745**	.716**	.754**	.873**	.104	.901**	-.451**	.658**	1			
ΔSMB	.563**	.598**	.597**	.602**	.307**	.526**	.003	.406**	.540**	1		
ΔHQR	.655**	.669**	.698**	.840**	.021	.873**	-.465**	.698**	.854**	.509**	1	
ΔRIR	.237*	.403**	.384**	.257**	.555**	.047	-.138	.118	.090	.240*	.060	1

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Source: Analysis output

According to Table 2 correlation values proved the strengths of the association between Dow Jones maturity based index and their risk variables. Almost all the independent variables have strengths of association with

Thus, data explain no autocorrelation. Residual analysis white heteroscedasticity test results indicate p value of 0.969 which is more than 0.05. This ensures that the variance of the residual is constant. This indicates absence of

Table 3: OLS Regression Results for DJ M3T Sukuk Returns and Its Related Independents

Model	Coefficients		t	Sig.	Multicollinearity	
	B	Std. Error			TOL	VIF
Constant	-.165	.048	-3.435	.001		
ΔIRD	.171	.145	1.178	.241	.597	1.675
ΔCPI	1.022	.592	1.726	.088	.123	8.139
ΔDOR	.071	.364	.194	.847	.558	1.791
ΔCCI	.198	.204	.965	.337	.402	2.485
ΔMPR	1.053	.418	2.516	.013	.146	6.832
ΔSMB	.231	.132	1.747	.084	.540	1.851
ΔHQR	-.120	.209	-.566	.572	.176	5.690
ΔRIR	.172	.137	1.257	.212	.600	1.668
R	.799					
R Square	.638					
Adjusted R Square	.609					
F	21.838		.000			

Number of Observation= 132; Durbin-Watson (d)= 2.068

Source: Analysis output

heteroscedasticity issue in the data. Table 3 shows the coefficient values for developing the model.

Regression Results of 1 – 3 Year Maturity Period Sukuk (DJ M3T)

Results from the value of R, R square, and adjusted R square indicate that the interest rate, inflation rate risk, dollar rate, consumer confidence risk, maturity risk, credit risk, Shari’ah compliance risk and liquidity risk explain 60% to 79% of the variation on the DJM3T sukuk return. Unexplained variation ranges between 21% and 40%. Results of ANOVA show a value of F statistics, which indicates that the model is significant at the 5% level and the variables taken in this study explain the model. Results are presented in the Table 3. Since the value of F statistics is less than 0.05, the alternative hypothesis is accepted. This refers to that there is a relationship between

interest rate risk, inflation rate risk, dollar rate risk, consumer confidence risk, maturity risk, credit risk, Shari’ah compliance risk and liquidity risk and DJM3T sukuk return.

For 3 year maturity period sukuk, HQR has a negative relationship with return. IRD, CPI, DOR, CCI, MPR, SMB and RIR have a positive relationship with return. Of these risks, CPI and SMB have the highest positive relationships. But, DOR has the least positive relationship with return. In case of HQR, it has a negative beta coefficient. When investors have lack of confidence in Shari’ah compliance risk there are chances for fluctuated return. It can be argued that beta values may vary between different types of risks and total DJM3T sukuk returns.

According to the results, MPR has a significant impact at the 5% level and CPI and SMB have

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significant impact at the 10% level on DJM3T sukuk return. Justifications could be made that more than 50% of investors prefer to invest in the short term sukuk that has a maturity period of 3 to 5 years. Despite the slight recovery in the global market, investors prefer fixed rate so as to benefit from the return of short term. If it's a longer term, there is no guarantee for the return. So, investors prefer short term sukuk to avoid the credit risk (Thompson Reuters, 2013).

Regression Results of 3 – 5 Year Maturity Period Sukuk (DJ M5T)

The value of Durbin-Watson (d) is 2.077. Thus, data explain no autocorrelation. Results of residual analysis white heteroscedasticity test have shown a p value of 0.066 which is more than 0.05. This ensures that the variance of the residual is constant. That means there is no heteroscedasticity issue in the data. Results

from the value of R, R square, and adjusted R square indicate that interest rate, inflation rate risk, dollar rate, consumer confidence risk, maturity risk, credit risk, Shari'ah compliance risk and liquidity risk explain 69% to 84% of the variation on the DJM5T sukuk return. Unexplained variation ranges between 16% and 31%. Results of ANOVA show that the value of F statistics is 31.504. This indicates that the model is significant and the variables taken in this study explain the model. Since the value of F statistics is less than 0.05, the alternative hypothesis is accepted. This refers to that there is a relationship between interest rate risk, inflation rate risk, dollar rate risk, consumer confidence risk, maturity risk, credit risk, Shari'ah compliance risk and liquidity risk and DJM5T sukuk return at the 5% of significant level. Table 4 presents these results. Table 4: OLS Regression Results for DJ M5T Sukuk Returns and Its Related Independents

Table 4: OLS Regression Results for DJ M5T Sukuk Returns and Its Related Independents

Model	Coefficients		t	Sig.	Multicollinearity	
	B	Std. Error			TOL	VIF
Constant	-.141	.039	-3.623	.000		
ΔIRD	.285	.117	2.432	.017	.597	1.675
ΔCPI	.990	.478	2.071	.041	.123	8.139
ΔDOR	-.066	.294	-.224	.823	.558	1.791
ΔCCI	.280	.165	1.699	.092	.402	2.485
ΔMPR	.420	.337	1.247	.215	.146	6.832
ΔSMB	.227	.107	2.125	.036	.540	1.851
ΔHQR	.057	.169	.337	.737	.176	5.690
ΔRIR	.354	.111	3.195	.002	.600	1.668
R	.847					
R Square	.718					
Adjusted R Square	.695					
F	31.504			.000		

Number of Observation=132; Durbin-Watson (d)=2.077

Source: Analysis output

Table 5: OLS Regression Results for DJ M7T Sukuk Returns and Its Related Independents

Model	Coefficients		t	Sig.	Multicollinearity	
	B	Std. Error			TOL	VIF
Constant	-.147	.038	-3.866	.000		
ΔIRD	.293	.115	2.557	.012	.597	1.675
ΔCPI	.965	.468	2.062	.042	.123	8.139
ΔDOR	-.162	.288	-.561	.576	.558	1.791
ΔCCI	.325	.161	2.010	.047	.402	2.485
ΔMPR	.584	.330	1.767	.080	.146	6.832
ΔSMB	.212	.105	2.027	.045	.540	1.851
ΔHQR	.036	.165	.216	.829	.176	5.690
ΔRIR	.330	.108	3.042	.003	.600	1.668
R	.865					
R Square	.749					
Adjusted R Square	.729					
F	36.909			.000		

Number of Observation =132; Durbin-Watson (d) =2.188

Source: Analysis output

For the 5 year maturity period, DOR has the negative relationship. While, IRD, CPI, CCI, MPR, SMB, HQR and RIR have the positive relationship with return. Of these positiveness, CPI has the highest positive relationship. The least positive relationships exist for HQR. Albeit, IRD, CPI, SMB and RIR significantly impact return at the 5% level and CCI significantly impact at the 10% level. Coefficient values show that interest rate risk, inflation rate risk, consumer confident risk, credit risk and liquidity risk have significantly impact DJM5T sukuk return. Beta values for different varieties of returns differ. These differences in beta values could be justified by indicating the following justifications. This table shows that the dollar rate represents the negative sign which means when the dollar rate rises rate of return declines or vice versa. When the dollar rate rises in other investment than sukuk return there are chances for a reduced return in sukuk. In an expectation, preference mismatches the

majority of the issuers expecting tenure to be between 5 and 10 years while the majority of the investors prefers their tenure to end within 3 to 5 year range. Investors prefer to invest in medium term sukuk to avoid interest rate risk, maturity risk, credit risk and liquidity risk. Most outstanding international sukuk are expected to mature within the next 3 to 5 years (Thompson Reuters, 2013).

Regression Results of 5 – 7 Year Maturity Period Sukuk (DJ M7T)

The value of Durbin-Watson (d) 2.188 explains that data has no autocorrelation. Results of residual analysis white heteroscedasticity test have shown a p value of 0.476 which is more than 0.05. This indicates that the variance of the residual is constant. Therefore, it is possible to say that there is no heteroscedasticity issue.

In terms of the results from the value of R, R square, and adjusted R square, 72% to 86% of

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the variation is explained by interest rate risk, inflation rate risk, dollar rate risk, consumer confidence risk, maturity risk, credit risk, Shari'ah compliance risk and liquidity risk on DJM7T sukuk return. Unexplained variation ranges between 14% and 28%. The model is significant at the 5% level and the variables taken in this study are appropriate. This is because the results of the ANOVA show value of F statistics is 36.909. Since value is less than 0.05, the alternative hypothesis is accepted. Coefficient values show that maturity risk, interest rate risk, consumer price rate risk, and credit risk have significant impact on DJM7T sukuk returns. These results are presented in the Table 5.

Similar results have been observed for the 7 year maturity period as for the 5 year maturity period. But, IRD, CPI, CCI, SMB and RIR significantly impact return at the 5% level and MPR at the 10% level. The Table 5 shows that

there is a negative value in the dollar rate that represents when the dollar rate rises rate of return declines or vice versa. The results also show that different risk variables have different beta values. Different beta values can be accounted by several reasons. Investors could face the future maturity risk and interest rate risk once the maturity period is longer. Fixed income instruments are usually structured to see long term investors yet most sukuk are still trapped in the medium terms turnover of 5 to 10 years. Very few international sukuk serve the long term. This is because investors preferred to avoid maturity risk, inflation risk, interest rate risk, credit risk and liquidity risk.

Regression Results of 7 - 10 Year Maturity Period Sukuk (DJ M10T)

The value of Durbin-Watson (d) is 1.948 which indicates that the data has no autocorrelation.

Table 6: OLS Regression Results for DJ M10T Sukuk Returns and Its Related Independents

Model	Coefficients		t	Sig.	Multicollinearity	
	B	Std. Error			TOL	VIF
Constant	-.121	.029	-4.215	.000		
ΔIRD	.280	.086	3.241	.002	.597	1.675
ΔCPI	1.101	.353	3.121	.002	.123	8.139
ΔDOR	-.538	.217	-2.480	.015	.558	1.791
ΔCCI	.290	.122	2.387	.019	.402	2.485
ΔMPR	.650	.249	2.613	.010	.146	6.832
ΔSMB	.191	.079	2.418	.017	.540	1.851
ΔHQQR	.221	.124	1.772	.079	.176	5.690
ΔRIR	.127	.082	1.554	.123	.600	1.668
R	.937					
R Square	.877					
Adjusted R Square	.868					
F	88.635			.000		

Number of Observation=132; Durbin-Watson (d)=1.948

Source: Analysis output

Residual analysis white heteroscedasticity test result has shown a p value of 0.999. Since it is more than 0.05 it is possible to say that there is no heteroscedasticity issue in the data. Since value is less than 0.05, the alternative hypothesis is accepted. This refers to that there is a relationship between interest rate risk, inflation rate risk, dollar rate risk, consumer confidence risk, maturity risk, credit risk, Shari'ah compliance risk and liquidity risk and DJM10T sukuk return. Coefficient values show that maturity risk, interest rate risk, consumer price rate risk, and credit risk have significant impact on DJM10T sukuk returns. These results are presented in the Table 6.

Results from the value of R, R square, and adjusted R square indicate that the interest rate risk, inflation rate risk, dollar rate risk, consumer confidence risk, maturity risk, credit risk, Shari'ah compliance risk and liquidity risk explains 86% to 93% of the variation on the DJM10T sukuk return. Unexplained variation ranges between 7% and 14%. The results of the ANOVA test show that the value of F statistics is 88.635 which indicate that the model is significant at the 5 % level and the variables taken in this study explain the model. Table 6 shows these results, including coefficient values for the variables.

Similar results have been observed for the 10 year maturity period as at 7 year maturity period. However, the impact of IRD, CPI, DOR, CCI, MPR and SMB are significant at the 5 % level and HQR is significant at the 10 % level. It could be observed that the longer period the more risk, the shorter period low risk. The results presented in the Table 6 reveal

that the coefficient of dollar rate is negative, which means when the dollar rate rises rate of return declines or vice versa. In addition, interest rate risk, inflation rate risk, dollar rate risk, consumer confident risk, maturity risk, credit risk and Shari'ah compliance risk are shown to have significant impacts on DJM10T sukuk return. The table also shows that the coefficient values differ from variable to variable. Conventional banks are the issuers of long term maturity period sukuk. They are the dominant parties who issue the longer term maturity issues, nearly 78 % of sukuk are issued by conventional banks (Thompson Reuters, 2013).

Conclusion and Recommendation

The results of these analyses of different sukuk market structures are outlined in the succeeding sections. Four models explain 60% to 86 % of variation at 5% significance level. Dow Jones M3T sukuk return, Dow Jones M5T sukuk return, Dow Jones M7T sukuk return and Dow Jones M10T sukuk return are 60%, 69%, 72% and 86% exposed to risk respectively. Results indicate that, although risks generally impact the sukuk returns, longer period of maturity based sukuk market i.e; Dow Jones M10T sukuk return is highly exposed to risk. Conversely lowest maturity period sukuk is less exposed to risk. As such, it is possible to conclude that the when the maturity period is decreasing the risk also decreasing. On the other hand, when the maturity period is increasing the risk also get increased in the sukuk structure.

This study focuses number of recommendations on the bases of research findings. Inflation rate

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risk and interest rate risk have been identified as the one important cause for this result. When inflation risk is present the time value of money declines. Thus, this type of risk is important for macro environmental reasons and purchasing power. Since most of sukuk were issued in a low interest rate environment during the financial crisis, investors may have been looking for high fixed rates, but, took advantage of low Libor rates to issue their fixed coupon sukuk in turn fixing their cost of funding. World economic fluctuation affects the dollar rate which causes currency risk in sukuk. To avoid such risk, it can be recommended that sukuk issuers should issue their sukuk in their own currency. Investors generally prefer short-term maturity period to avoid maturity risk. But, issuers prefer long term maturity period. This maturity period is main for investment decision for investors. The relevant authorities of Government of these countries should take necessary measures to provide a conducive environment to promote secondary market for sukuk.

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