DOI: 10.20472/EFC.2017.007.012

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COMPARATIVE ANALYSIS OF ISLAMIC BONDS AND CONVENTIONAL BONDS IN THE CHOSEN COUNTRIES

Abstract:

Islamic bonds can be marked as one of the most succesful instruments of the Islamic financial sector, which is possible to define briefly as the attempt to connect the religious principles and financial entrepreneurship. At the beginning, Islamic bonds had the character of the specific instrument, that appeared occasionally at some local markets. By the time, Islamic bonds gained bigger and bigger market share. Nowadays, the market sukuk, has the raising number of foreign investors from banks and corporations. The organization AAOIFI defines sukuk as the certificates of the similar value, which, after the final underwriting, authorize to accept the nominal value of certificates and its usage for the planned investments to tangible assets, rights and services or to the sufficient capital for projects or other investment activities.
Another point that puts the accent on the knowledge of this instrument is the increasing population of muslim citizens in the european countries, what creates the basic assumptions for the growing demand for the instruments of islamic financial products, the need for the knowledge of the basic and also more detailed approaches and the philosophy of this financial market. On the other hand, this segment is obstructed by a number of problematic factors which restrict remarkably the future possible development.
The aim of this paper is to specify more closely the features of Islamic bonds (sukuk) and to perform on this theoretical basis the comparative analysis with the conventional bonds. For their comparison, we are going to use the calculations of the value at risk. The data used with the comparison consist of the monthly prices of the public and company sukuk and bonds taken from he database Bloomberg. Although the weekly prices are more exact in substituing the market prices, where the position of the portfolio can be liquid, despite of this fact, we used the monthly prices because of the restriction of availability of the daily time chains in the case of sukuk. We also had the limited number of countries, regarding the fact that the trading with sukuk is on the primary market in the majority of cases restricted. That is why we have chosen United Arab Emirates (Dubai) and Malaysia, as the countries from which we have chosen public and company sukuk and bonds for their analysis and comparison.

Keywords:

bond, sukuk, Value at Risk, factor

JEL Classification: G15, G24

Introduction

Seeing that Islamic bonds are not restricted only to the Islamic financial world, but they are issued as domestic and foreign bonds on the European and world stock exchange markets also by non-islamic issuers, the aim of this paper is to point out their characteristics, what is nowadays necessary for the good orientation on the world markets. Diametrical difference of the Islamic financial world from the western world and the continuous penetrating Muslim influence to the world markets brings new products, approaches and philosophies of financial market, that come also from the Islamic financial products. Therefore, the understanding of the basic principles of the Islamic financial products and its tools and methods is highly topical. From this reason, we consider the topic of Islamic bonds and its analysis very actual.

Over the time, Islamic bonds have gained more and more market share. Nowadays, the market sukuk enjoys the increasing number of foreign investors from banks and corporations. The other fact that underlines the knowledge of this instrument is the increasing population of Muslims in western countries, what creates the basic assumptions for the growth of demand for the instruments of the Islamic financial products including bonds. On the other hand, this segment is held back by many problematic factors that significantly restrict the possible future development.

Theoretical background

Shari'ah is the basis of all Islamic religion and except of Qur'an and Sunnah stems from some other resources, hadís, ijima, qiyas and ijihad. Qur'an is the recording of God's words who talked to the prophet Muhammad. Sunnah is the second most significant source of the Islamic law. The word Sunnah identifies pathway. Metaphorically is then understood as the used way of behaving. From the point of view of law, it is the set of expressions, deeds and opinions of the Prophet. The name ijima is derived from the word ajimaa that is translated as "to state, to decide, to agree". From the point of view of law, the expression ijima is defined as the unanimous consent of mujitahids of the Muslim community in whatever question, by which the solution of consen was reached in the period after the death of the Prophet Muhammad (Potměšil, 2016). Qiyas depends on the consideration of individual. Ijtihad presents in the Islamic law the proper opinion, respectively the qualified use of the proper judgement and it is the most important source of Shari'ahs after Qur'an and Sunnah. (Kamali, 1991, p.336)

The problematic point of the Islamic law is the disunited explanation that negatively influences the Islamic financial sector. During the spreading of Islam, many different Islamic law schools were established, that more or less differed in their opinions. There are four main law schools (mazhab).

The motives, aims moving the Islamic financial system have to be good for the society. The economic activities should be directed by religion. Man should not forget the responsibility for others and should use the natural resources thoughfully. If we look at the conventional economy that is directed by offer and demand, we can come to the question how to satisfy our unlimited needs by limited sources Every Muslim, who crosses defined limit of wealth has to pay zakat (زكاة *zakat)* that is a tax. By means of zakat, there is a division of wealth for one for the stated purpose. It is possible to say then, that the social justice is the cornerstone of the Islamic financial sector. (Jamaldeen, 2012, p.12-14).

Sukuk (صكوك *ṣukūk*) belongs into the debt Islamic products. It is the plural of the Arabic word sakk (صك *ṣakk*) that means certificate. Participants-Securities or Trust-Certificate are defined as Sukuk, as well. Sukuk have the similar characteristics as the conventional bonds with the main difference by its support by an asset. Islamic bonds are then investment certificates that represent the ownership claim of investor to underlying assets. However, overview of underlying assets should not contain only liabilities from the Islamic financial contracts, but also the real assets should be included in the portfolio whereby, underlying asset can not be burdened by debts or other liabilities (Rothmatunnisa, 2008). Sukuk are then securities that are in conformity with the Islamic law Shari'ah and its rules of investment policy that bans paying interest. (LMC, 2008). From this reason, there is a restricted use of sukuk in financing some projects or sectors. It is not possible to invest into some sectors or projects, if its performance is in the conflict with the Islamic law Shari'ah or with the ethic or moral criteria. Sukuk are based on securization of underlying asset. Securization is the process where the chosen underlying assets are transformed to securities. Sukuk are issued by means of Special Purpose Vehicle (SPV), that buys underlying assets from the owner and then it performs securization. Revenues from the issue are sent to the payer. (Kreichen, 2013, p.650).

The basic division of sukuk is to those that are marketable on the secondary markets and to those that are non-marketable. Marketable sukuk have to fullfil the set of conditions, for example, they have to represent tangible assets or adequate ownership of the company or investment porfolio. For example, sukuk al-ijiara, sukuk al musharaka, sukuk al-mudaraba belong into marketable sukuk. Non-marketable sukuk, that represent liability in cash or in goods are for example: sukuk al-salam, sukuk al-murabaha. Non-marketable sukuk can be transferred only for the nominal value.

According to the structure, sukuk can be divided into two types: asset-based structure and asset backed structure. Asset based structure is based on the principle that the issuer (SPV) buys underlying asset that consequently rents or sells on the behalf of the sukuk owner to agents. This structure is in practice used much more than the previous one, in spite of the strong controversion, as the revenues from these sukuk are not bound to underlying asset but come from the cash flow of an agent. Asset - backed structure consists of the real sale of underlying assets and its removal from the agent's balance sheet. Accordingly, underlying assets are not the property of agent but its ownership is transferred to the sukuk holder. (IIFM, 2013).

Table 1: Asset-Backed Sukuk versus Asset-Based sukuk

	Asset-Backed sukuk	**Asset-Based sukuk**
Sale	The real sale of asset (with ownership rights) SPV	„Sale“ of asset SPV
Security	Underlying asset	Without binding to underlying asset
Potential buyers	Can be sold to the third party	The creator is the only possible buyer
Purchasing price	Market price of asset in repayment term	Residual (amortized) value of certificate
Profile	Growth potential of *sukuk* in the increasing value of asset	Investors do not participate in the increasing value of asset
Risk type	Secured by collateral	Without security
Rating	Company rating of issuer	Cash-flow strength

Source: Own processing according to Islamic Capital Markets: A Comparative Approach (Bacha – Mirakhor, 2013) a Fundamentals of Islamic Money and Capital Markets (Omar – Abduh- Sukmana, 2013)

Conventional bonds have arisen from the need for negotiation with debts. They belong into debt securities that require debt relationship between the security owner (creditor) and its issuer (debtor), who receives funds by issuing bonds. Bond has a limited lifetime, resp. exactly stated repayment term till the console that is a bond with the ulimited, resp. repayment term that is not determined.

Methodology

The main aim of this paper is to define the specific characters of Islamic bonds and to perform on this theoretical basis their comparison with conventional bonds. The first partial aim is the characteristics of conventional bonds and Islamic bonds on the basis of chosen theoretical starting-off points. The sukuk characteristic is based on theoretical and legal aspects of Islamic bonds that stems from Qur'an and Islamic law Shari'ah that covers the theory related to Islamic financial operations. The focus is mainly on the analysis and description of every type of structures of sukuk.

The analysis of the Islamic bonds sukuk market is the second partial aim, where the market with sukuk is analyzed in the period from 2001 till July 2014. It is necessary to mention here, the influence of the financial crisis that influenced also the Islamic bonds in the period from 2007 till 2009, where the significant decrease was recorded.

On the basis of calculations VaR, it is possible to analyze the differences between the particular chosen bonds and to reach certain conclusion of the research.

The data used in comparison of Islamic and conventional bonds consist of the monthly prices of public and company sukuk and bonds obtained from Bloomberg. Although, weekly prices are more exact in substituting the market prices, where the position of portfolio can be liquid, in spite of this fact we have used monthly prices from the reason of the restriction of accessibility of the daily time lines in the case of sukuk. Moreover, we had the limited choice of the countries, regarding the fact, that negotiating with sukuk on the primary market is in the majority of cases restricted. Therefore we have chosen United Arab Emirates and Malaysia as the countries, from which we have selected public and company sukuk and bonds for its analysis and comparison.

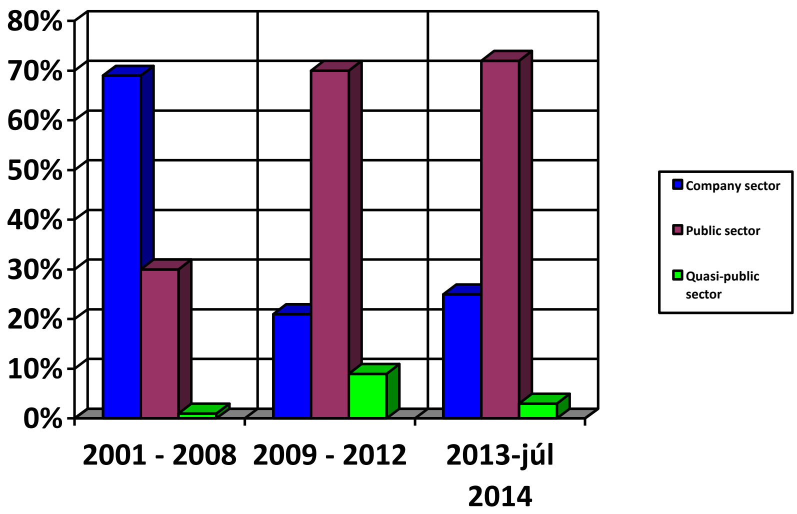
Results

We can say for sure, that the growth of the global market sukuk, that undoubtly have the very important role in the financial system of Islamic economies, will continue, mainly if we look at the development of the market in the period of years 2001-2014 where we will find out that the total global sukuk reached very significant issue with the total amount of 668 billion dollars. This growth is displayed in the significant increase of the sukuk issue of more than 10 times from the year 2011, from 1172 million of USD to 138 billion of USD in 2013. (IIFM, 2013).

The global financial crisis in 2007 caused the decrease in demand for company sukuk, by which the demand for public and quasi-public sukuk was decreased.

Public and quasi-sukuk payed an important role in supporting and adding the trust to the market, at the same time sukuk had dynamics to continue during the most critical period in the financial crisis. In 2001 till 2008 the company sector (69%) dominated in comparison with the public sector that reached only 30% of market share. Consequently, the change of the sector division of the domestic sukuk is clear. The big change happened on the basis of the financial crisis, where mainly in the GCC countries, there was the massive decrease in company sukuk's issues. On the other hand, the significant increase of public sector happened that increased its share of 50 percentual points. The share of quasi-public sector increased positively, as well, it was increased of 8 percentual points. This trend continued also in the next following period, where the public sector reached 72%, and the demand for the public sukuk started to increase, as well, although it reached only 25% in this period.

Figure 1: The division of domestic sukuk according to sectors



Source: Own processing according to IIFM. Sukuk report 3rd edition

While there is a bigger share of domestic sukuk in the area of Asia and Far East, the region GCC and the Middle East (73.09%) prevails in the international sukuk. The reason for this big share is the fact that in GCC countries issues of company sukuk dominate which are, as a rule, issued more frequently as international sukuk.

UAE has the biggest share of the total volume of international sukuk with the volume of 21,542 milion USD and the share of 39.35%. However, the biggest number of issues has Bahrain, but on the basis of the total volume that is low, it has only 5.84% share. Although Malaysia is the biggest world market, according to the global standard, it reaches only 16.339% share in case of international sukuk. Europe and others group with the volume of 7.400 milion USD owns 6.33% share. The biggest share is owned by Turkey (4.92%), but it is followed by USA (0.66%) and Great Britain (0.59%).

The comparison of bonds and sukuk

While bonds represent only the debt liability of issuer towards investors or bond-holders, sukuk represent the share of ownership of the defined asset. Bonds belong into the debt financial instruments, while sukuk authorize to ownership or usage of tangible assets, services, project, entrepreneurship or joint-venture. Costs connected to the property involved in the sukuk structure belong to certificate holders, i.e. investors, contrary to bond-holders.

The sale of sukuk at the same time means the sale of the part of underlying asset. By the bond sale only the sale of debt is realized. The price of sukuk is directed by the market powers and it is dependent on the change of market price of underlying asset. Sukuk can be issued on existing or future property. Sukuk investors do not get any interest payments.

Sukuk and the majority of the bond types are issued with the determined maturity date. Sukuk issuer buys back certificates from investors on maturity date. Investment is not guaranteed in the case of sukuk. Investors do not have to get back the nominal value. Sukuk holder shares the risk connected to underlying asset. If project or entrepreneurship is not successful, the holder of sukuk certificates has to bear the part of loss. Some certificates are issued with the guarantee of repurchase, much like conventional bonds. Many professionals on the Shari'ah law see the guarantee as unlawful. We can meet with the guarantee in the case of sukuk al-idžara, where the repurchase guarantee is provided.

Sukuk have the similar structure as conventional bonds but it enables to gain financial resources on capital markets in accordance with the Shari'ah principles to natural persons or corporate entities.

AAOIFI Standard, also distinguishes sukuk from stocks, bonds and conventional process of securization. Sukuk are not bonds with the financial demand on cash-flow, but they are similar to Trust-Certificate with the proportional or undistributed interest from an asset or groups of assets. AAOIFI assumes that the right to proportional part of cash-flow is derived from the proportionate ownership that bears risks and acquisition. (Mseddi – Naifar, 2013, p. 262 – 275).

Table 2: Comparison of conventional bonds and sukuk

Criterion	Bonds	*Sukuk*
Ownership rights	Do not enable investor proportionate ownership of property. It is the debt liability of issuer towards the bond holder.	Enable proportionate ownership of asset where sukuk are established on.
Investment criterion	Can be used on financing whatever intention in conformity with the local legislation.	Asset used in sukuk has to be compatible with Shari'ah.
Issue unit	Every bond represents the part of debt.	Every certificate represents part of underlying asset.
Issue price	Nominal value depends on the issuer's credit.	Nominal value depends on the market value of underlying asset.
Revenue and risks	Holders get interest payments during the whole period of life of a bond. The guaranteed principal is returned on maturity date.	Holders get the share of the revenue from underlying asset (includes share of the loss).

Costs	Holders mainly do not bear any costs connected to the asset. Asset performance do not have any influence on its revenue.	Holders bear costs bound to underlying asset. Higher costs can be reflected to lower profit.
Standardization	Standartized tools.	Lack of standartization.

Source: Own processing according to SUKUK: An Introduction to the Underlying Principles and Structure (SUKUK, 2006) a Rating methodology and evaluating the issuer of sukuk.

In this analysis, we use three equally worth, hypothetical portfolios with the various investment alternatives that are created with the value of 8 million USD. The first portfolio is purely conventional, whereas the second portfolio is the pure sukuk portfolio and the third one is mixed portfolio, which consists of sukuk and conventional bonds in the same number. Portfolios consist of public and company securities issued by the same issuer with the exception of Malaysian company sukuk and conventional sukuk, in consequence of the restricted accessibility of the same issuer for sukuk and also for conventional bonds. For that reason, sukuk and conventional bonds were chosen from the two different issuers in the same sector and with the same credit rating. We focus on measuring VaR portfolios with the fixed yield, with "the passive way", that means, following revenues from benchmark. The reason for the choice of the passive strategy of managing bond portfolios is the elimination of the strategies of portfolios management, that exist on the market with conventional bonds more than on the market sukuk with the aim to measure and compare the risks of built portfolios. The risk factor in this model is the covariable matrices of revenues from securities in portfolios.

Table 3: Portfolio composed only of conventional bonds

Name	Type of issuer	Type of security	Coupon	Date of issue	Maturity date
Dubai Government International Bonds	public	floating	2.03625	15/04/2008	23/04/2013
Malaysian Government	public	fixed	4.72	24/03/2005	30/09/2015
Emirates	company	fixed	4.62	15/06/2006	21/06/2016
Petroliam National Berhd	company	Fixed	7.625	09/10/1996	15/10/2026

Source: Bloomberg

Table 4: Portfolio composed only of Sukuk (sukuk al-ijiara)

Name	Type of issuer	Type of security	Coupon	Date of issue	Maturity date
Dubai DOF *Sukuk* ltd	public	Floating	0	28/10/2009	03/11/2014
Malaysia *Sukuk* global	public	fixed	0	27/05/2010	04/06/2015

Tamweel Funding ltd	company	fixed	0	13/12/2007	23/01/2013
Petronas global *Sukuk*	company	fixed	0	05/08/2009	12/08/2014

Source: Bloomberg

Table 5: Mixed portfolio composed of conventional bonds and sukuk al-ijiara

Name	Type of issuer	Type of security	Coupon	Date of issue	Maturity date
Dubai DOF *Sukuk* ltd	public	Floating	0	28/10/2009	03/11/2014
Dubai Govt international bonds/ conventional bond	public	Floating	2.03625	15/04/2008	23/04/2013
Malaysia *Sukuk* global	public	Fixed	0	27/05/2010	04/06/2015
Malaysian government/ conventional bond	public	fixed	4.72	24/03/2005	30/09/2015
Tamweel Funding ltd	company	fixed	0	13/12/2007	23/01/2013
Petronas global *Sukuk*	company	Fixed	0	05/08/2009	12/08/2014
Emirates/ bond	company	Fixed	4.62	15/06/2006	21/06/2016
Petroliam national berhd/ conventional bond	company	fixed	7.625	09/10/1996	15/10/2026

Source: Bloomberg

The chosen holding period is 3 years and the level of reliability is 95% for the determination of risk capital under this level of reliability. The choice of the level of reliability is set to prevent from undervaluating or overvaluating of VaR assessments.

Table 6: Assessments of the results of delta normal method VaR for all portfolios

	Mixed portfolio	Conventional bonds portfolio	Portfolio *sukuk*
Delta normal methods VaR %	37.8	56.9	76.8

Delta normal method has shown that for the mixed portfolio (sukuk and conventional bonds) the loss of market value of portfolio in the period of 3 years must not exceed 37,8% from the value of portfolio with 95% certainty. Whereas, for the portfolio composed from purely conventional bonds, applies that the loss of market value of this portfolio must not exceed 56.9% of the value of portfolio and regarding the portfolio composed only from sukuk it is 76.8% also with the certainty of 95%. We can notice that in mixed portfolio, there is 39% decrease in VaR in comparison with the portfolio sukuk and 19.1% lower than the portfolio composed of conventional bonds. This decrease of risk of portfolio can be explained mainly by the low correlation between sukuk and conventional bonds during the period of holding portfolio. The highest correlation coefficient between sukuk and conventional bonds in mixed portfolio is 26.4% between Dubai Govt international bond and Petronas global Sukuk. Whereas correlation between Dubaj DOF sukuk a Malaysia Sukuk global and medzi Dubaj DOF sukuk and Malaysian government bond is -31% and -43.5%. Regarding the correlation between Tamweel funding Sukuk and Petroliam national berhd, this represents value of 4.5%.

This correlation numbers indicate that the prices sukuk and conventional bonds behave differently on the secondary market. It means that by investing into portfolio that is a composition of sukuk and conventional bonds, the market risk of portfolio decreases by means of diversification created by adding two different financial tools to one portfolio. Advantages of the diversification created from the common investment to sukuk and conventional bonds are independent on the rate of dependence of portfolio that leads to the decrease of the risk of portfolio without endangering the rate of return. On the other hand, the market risk of portfolio composed from sukuk only, is significantly high, because it is 19.9% higher than the market risk of portfolio composed purely only from conventional bonds. The assessed high VaR value for the portfolio sukuk shows that sukuk invested into the purely sukuk portfolio are more risky than conventional bonds invested to portfolio composed purely from the conventional bonds. On the basis of these facts, it is possible to say that the risk in investing into sukuk is higher in comparison with conventional bonds.

In correlation between sukuk that we have chosen, we found out that it is significantly higher than the correlation between conventional bonds. These high correlations between sukuk, result in bigger risks connected to investments into portfolio comsposed only from sukuk. The main reason of the high correlation between sukuk is the restriction in the sectors that have to be in conformity with the Shari'ah principles, and except of this fact it should be supported by real investments. For this reason, diversification among sectors on the sukuk market is restricted in comparison with the conventional bonds market.

Conclusion

The result of the analysis of the chosen standard bonds and sukuk and its following comparison is that in average, the Islamic bonds are more risky instrument, which is compensated by its higher revenue. However, the results of this analysis show that it is the product of the financial market that can be convincingly used in the well diversificated portfolio. Sukuk provide the advantages of diversification that stem from the different behaviour of prices on the secondary market, if they are included into portfolio together with the conventional bonds, what significantly decreases the portfolio risk. Except of this, the performed analysis shows that sukuk represent higher market and credit risk than conventional bonds because of the restrictions connected to Shari'ah. Moreover, sukuk is also connected to other risk items that come from the high correlation between sukuk bonds in the comparison with the correlation between the conventional bonds. The other risk factor is the conformity, resp. keeping the Shari'ah rules that do not exist in conventional bonds. These risk factors represent the main disadvantages of sukuk as the investment alternative to the conventional bonds on the world market. The already mentioned disadvantages could be removed by the way that the world market with sukuk will carry the radical institutional reform that will solve the conflict of attitudes of Shari'ah scholars that exposes sukuk to the risk of not obeying these rules. Except of other things, the sector sukuk should develop financial derivates as Islamic embedded options and floating/ fixed tariffs of swaps sukuk, that are compatible with the Shari'ah law, by means of Islamic developing financial engineering. These reforms and development could reinforce sukuk competitiveness and the growth of the sukuk global market could increase. Consequently, the market with sukuk would move from quantity increase to quality increase.

On the basis of the analysis of the market sukuk, it is possible to expect in the medium-term horizon, slight increase of the market with Islamic bonds that will be supported by the number of new issues, also outside the traditional regions of Europe and Africa. The risk of political-religious disputes can be considered as the biggest risk for the growth of this market that can lead to the downturn of the whole Islamic financial sector.

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