Do regional and global uncertainty factors affect differently the conventional bonds and sukuk? New evidence

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ABSTRACT

In this paper, we contribute to the on-going discussion on whether Islamic bonds (sukuk) are different from conventional bonds. We investigate the impact of regional and global uncertainty factors including financial and economic uncertainty on conventional bonds and sukuk returns dynamics. Using quantile regression approach for the period from January 2010 to December 2014, empirical results show independence between sukuk returns and global and regional economic policy uncertainty for all the quantiles, but causality relationship when the market is bearish. However we find co-movement and causality relationship between conventional bond market and global financial and economic uncertainty factors. For comparison purpose, we examine the impact of global and regional uncertainty factors on the sukuk returns in the case of the largest country sukuk market in the world which is for Malaysia. Our findings confirm that sukuk are different than conventional bonds in term of co-movement with global and regional uncertainty factors and these two assets are complementary and not substitutes.

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1. Introduction

Islamic finance is not only fast-growing field but has now officially moved into the mainstream financial markets. Islamic bonds (referred to sukuk) comprise one of the fastest growing segments in both the Islamic and global financial industries. Sukuk[1] was defined officially by the Auditing and Accounting Organization of Islamic Financial Institutions (AAOIFI) in May 2003 as "the certificates of equal value representing undivided shares in ownership of tangible assets, usufruct and services or in ownership of the asset of a particular project or special investment activity". There is an on-going discussion on whether the dynamics of sukuk returns are different from conventional bonds. This paper contribute to the debate by investigating the impact of global and regional financial and economic uncertainty factors on conventional and sukuk returns dynamics using a quantile regression (QR) approach which provides specific insights on the impacts of uncertainty factors on conventional and sukuk returns under different market circumstances. QR allows information to

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be inferred on co-movement (Mensi et al., 2014) and the causality (Chuang et al., 2009) effects of global risk factors in bearish (lower quantile), bullish (upper quantile) and normal (intermediate quantile) market circumstances.

The main motivation for this study arises from the perception that the Islamic bonds may provide a cushion against economic and financial uncertainty, particularly in the wake of the recent major financial crisis. Uncertainty is a characteristic of the real world that affects the decision making process of all economic agent. Moreover, there is a strong motivation for many investors of different beliefs to use faith in investing. We contribute to the on-going discussion on whether sukuk are different from conventional bonds in two ways. First, we analyze how dependence and causality between both conventional and sukuk returns and global and regional uncertainty factors changes over different quantiles. Second, we report evidence that the characteristics of sukuk are different to those of conventional bonds, as this has implications for investors in terms of diversification and hedging. Using data from January 2010 to December 2014, our results show: (a) independence and causality relationship (in the upper quantiles) between global sukuk returns and regional financial uncertainty factor, but co-movement (in the upper quantiles) and no-causality relationship with global financial uncertainty factor, (b) independence between sukuk returns and global and regional economic policy uncertainty for all the quantiles, but causality relationship when the market is bearish, (c) independence between Asian conventional bonds and regional financial and economic uncertainty factor, but co-movement and causality relationship with global financial and economic uncertainty factors, (d) independence and no-causality between Malaysian sukuk market and global financial and economic uncertainty factors and (e) co-movement between Malaysian conventional bond market and regional and financial uncertainty.

A considerable body of literature examines the impact of economic policy uncertainty on conventional financial markets returns and volatility (e.g. Sum (2012), Baker et al. (2013), Liu and Zhang (2015), Ko and Lee (2015), Li et al. (2015) among others). Over the last few years, the VIX index - the Chicago Board Options Exchange (CBOE) Volatility Index - has become the benchmark for measuring stock market uncertainty. A substantial body of empirical literature examines the impact of financial uncertainty on conventional stock markets returns and conventional bonds (e.g. Connolly et al. (2007), Antonakakis et al. (2013), Mele et al. (2015), Bansal et al. (2015) among others). Recently, many empirical studies examine the impact of global risk and uncertainty factors on Islamic securities dynamics (e.g. Ajmi et al. (2014), Hammoudeh et al. (2014), Naifar et al. (2016)).

Concerning the recent literature on Islamic markets, Alam et al. (2013) analyze the comparative wealth effects of sukuk and conventional bond announcements on the stock returns in the case of Malaysia, Indonesia, Singapore, Pakistan, UAE, Bahrain and Qatar. They find that the stock markets' reactions to the announcements of sukuk in those countries are negative before and during the global financial crisis. Godlewski et al. (2014) examine stock market reactions to types and characteristics of sukuk. Using a sample of 131 sukuk in eight countries, they find that the Ijara sukuk exert a positive influence on the stock prices of issuing firms. Aloui et al. (2015a) study the co-movement between the Sharia-compliant stocks and sukuk in the Gulf Cooperation Council (GCC) countries. They find a strong dependence between the Sharia stock and sukuk indices in those countries. Aloui et al. (2015b) investigate the volatility spillovers between the sukuk and Sharia-compliant stocks in the GCC countries, using the DCC-GARCH model. They find a time-varying negative dependence between the sukuk indices and the Sharia-compliant stocks in those countries. Naifar et al. (2016) investigate the dependence structure with Archimedean copulas between sukuk yields (in the case of Malaysia, United Arab Emirates and Saudi Arabia) and national, regional and global stock market returns and conditional volatility. They find that sukuk yields exhibit significant dependence but only with the volatility of the considered stock markets. Dimitris et al. (2016) study the contagion effects of the global financial crisis and Eurozone sovereign debt crisis on sukuk and Islamic equity. They find that sukuk were decoupled from the Euro bonds during the global turmoil period. Moreover, the sukuk index was unaffected by the U.S. T-bill during the global financial crisis, supporting its insulation from the crisis. Naifar and Hammoudeh (2016) study the dynamics of the co-movement and causal relationship of the GCC sukuk returns with global financial distress and various uncertainty factors. They find that global financial, economic and oil uncertainties have negative impacts and causality effects on the GCC sukuk returns in the case of bearish GCC sukuk markets. Maghyereh and Awartani (2016) study the returns and volatility spillovers of sukuk and global bonds with equities 30th for the period September 2005 to the 24th of February 2014. They find different transmission mechanisms of sukuk compared to conventional bonds. Sukuk market are the higher transmission of information from equities, and the weaker transmission of information from the sukuk market to other markets.

In this paper, we contribute to the ongoing debate by analyzing the impacts of global and regional uncertainty factors on the sukuk returns and conventional bonds. More precisely this paper tries to answer the question, are sukuk "really" different than their conventional bonds in term of co-movement with regional and global uncertainty factors? The remainder of the paper is organized as follows: Section 2 advances the QR methodology. Section 3 presents data and preliminary statistics. Section 4 presents and discusses results. Section 5 presents the robustness check of the empirical results. Section 6 concludes the paper.

2. Quantile regression methodology

To account for the linearity in the relationship and causality between bonds (Islamic and conventional) indices dynamics and financial and economic policy uncertainty, we rely on the QR model for the τ quantile of the distribution of bond indices dynamics (y_t), $Q_{y_t}(\tau | y_{t-1}, x_t, x_{t-1})$ that is specified as:

$$Q_{y_t}(\tau | z_t) = \alpha(\tau) + \beta(\tau) y_{t-1} + \gamma(\tau) x_t + \eta(\tau) x_{t-1} = \theta(\tau) z_t, \tag{1}$$

where y_{t-1} is the lagged value of the dependence variable, x_t and x_{t-1} are $(k \times 1)$ dimensional vectors of explanatory variables at time t and t − 1, respectively, and $z_t = [1 \ y_{t-1} \ x_t \ x_{t-1}]'$. The vector $\theta(\tau) = [\alpha(\tau) \ \beta(\tau) \ \gamma(\tau) \ \eta(\tau)]$ is a $2(k + 1)$-dimensional