UNIVERSITI PUTRA MALAYSIA

PERFORMANCE AND TERM STRUCTURE OF PROFIT RATE OF SUKUK BONDS IN MALAYSIA

GANIYAT ADEJOKE ADESINA-UTHMAN

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PERFORMANCE AND TERM STRUCTURE OF PROFIT RATE
OF SUKUK BONDS IN MALAYSIA

By

GANIYAT ADEJOKE ADESINA-UTHMAN

Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia, in
Fulfilment of the Requirements for the Degree of Doctor of Philosophy

JUNE 2011
Dedicated to my late Father, my Mother
My love, Ibrahim Olatunde
   My boys
Irishadullah al-Akbar
Ubaydullah al-Hassan
Abdulmuqsit al-Muhsin
Mohd rasheed al-Miqdad
And my Princess
Al-Jannat

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Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfillment of the requirement for the degree of Doctor of Philosophy.

**PERFORMANCE AND TERM STRUCTURE OF PROFIT RATE OF SUKUK BONDS IN MALAYSIA**

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GANIYAT ADEJOKE ADESINA-UTHMAN

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Chairman: Professor Shamsher Mohammad Ramadili, PhD
Faculty: Economics and Management

Efficient functioning of financial system serves both as catalyst to deepen the domestic financial market and facilitates fair valuation of financial instruments. Financial institutions world-wide offer various financing solutions tailored to wide ranges of long and short term investment and financing needs. Bonds have been a key instrument in the financial system of developed and developing economies in meeting these needs. *Sukuk* or Islamic bonds surfaced in the Islamic Financial Market in the year 2000 to fulfill the needs of investors for long term investment financing that is *Shariah* compliant. Unlike conventional bonds that have an established infrastructure and yield-curve to forecast expected changes in yields and hence prices, the *Sukuk* lacks this facilities and have to rely on conventional yield curve for its pricing. This research fills this gap by constructing yield and credit curves based on a profit rate that is *Shariah* compliant to help both lenders and borrowers using *Sukuk* in making objective and religiously acceptable investment decisions. Hence, yield and credit curves for Government and corporate *Sukuk* as well as Spot and forward profit curves for government *Sukuk* were
constructed using the one-factor CIR Model (1985) and Sukuk two-factor HJM model with no-arbitrage restrictions; that allows the term structure to vary with the profit rate; with time-dependent drift rate. Sukuk data was sourced for the period 2001 to 2009.

The evidence from the two models showed that 89 percent of Malaysia Sukuk (Government and corporate) were not given a fair yield and therefore the bonds were mispriced. From the 89 percent that were mispriced, 44.4 percent were overpriced, 66.6 percent were underpriced. All the underpriced Sukuk were corporate Sukuk. It was observed that all the Government and corporate yield curves were humped. This is consistent with the Market Segmentation Hypothesis explanation for the curves. The non-monotonic yield curves indicates that there is uncertainty in the direction of the future spot profit rate. The upward slope of the curve implies in-built liquidity premium. The findings from OLS regression of spot and forward rates as well as inflation and forward rates showed that the forward profit rates had a very weak predictability power to forecast future spot profit rate and inflation. The findings on forward rate predictability to forecast future spot profit rates is not in support of the pure expectation hypothesis. The practice of benchmarking IFIs’ profit rate to available interest rate for better competition is therefore a distortion to true market value of underlying assets and hence, their returns was buttressed by the pricing pattern observed in the study, consistent with Muhammad Al-Bashir’s (2008) conclusions. A comparative analysis of Malaysian Government Sukuk and three different credit classes of corporate Sukuk; of which two are high investment grades and one low grade bonds showed that for the high grade the corporate Sukuk performed better than the government Sukuk. The low grade Sukuk gave high yield relative to the GII benchmark rate. A comparison of yields of both
government and corporate *Sukuk* with similar characteristics showed an upward sloping curve implying in-built liquidity premium to compensate investors for taking extra risk.

In summary, the upward sloping profit yield curves of corporate and government *Sukuk* of different credit risk is consistent with the Liquidity Preference Theory (Biased Expectation Theory) and Market Segmentation Theory but inconsistent with the Pure Expectation hypothesis also known as Unbiased Expectation Theory. That is, the forward profit rates are not good predictor of future spot profit rates. Similar to the conventional bond market, the *Sukuk* market is dominated by risk-averse investors who require term premium to compensate for the risk involved in lending long. Thus the forward profit rate will exceed the forecasted spot rate by the liquidity or term premium and the forward rate will become a biased predictor of forecasted future spot rate. The predictability power of the forward rates to forecast future inflation was weak. These findings are similar to those reported by Gerlash (2003) for the conventional bond market in Hong Kong.
Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Doktor Falsafah.

PRESTASI DAN STRUKTUR TEMPOH KADAR-KADAR KEUNTUNGAN BON-BON SUKUK DI MALAYSIA

Oleh

GANIYAT ADEJOKE ADESINA-UTHMAN

JUN 2011

Pengurus: Profesor Shamsher Mohammad Ramadilii, PhD

Fakulti: Ekonomi dan Pengurusan


Bukti dari dua model menunjukkan yang 89 peratus Malaysia Sukuk (Kerajaan dan korporat) tidak diberikan satu hasil adil dan oleh itu bon-bon ialah mispriced. Dari 89 peratus yang mispriced, 44.4 peratus terlalu mahal, 66.6 peratus harga rendah. Semua Sukuk harga rendah ialah Sukuk korporat. Ia telah diperhatikan yang semua Kerajaan dan keluk-keluk hasil korporat memikul. Ini konsisten dengan penjelasan Market Segmentation Hypothesis untuk lengkung. Tidak berekanada keluk-keluk hasil menunjukkan yang terdapat ketakpastian dalam arah kadar keuntungan tempat akan datang. Cerun meningkat lengkung menandakan premium kecairan terbina dalam. Penemuan-penemuan dari regresi OLS tempat dan kadar mara serta inflasi dan kadar mara menunjukkan yang kadar-kadar keuntungan ke hadapan telah kuasa kebolehramalan yang sangat lemah untuk forcast kadar keuntungan tempat akan datang dan inflasi. Penemuan-penemuan pada kadar hadapan predictability meramalkan kadar-kadar keuntungan tempat akan datang bukan dalam sokongan hipotesis jangkaan tulen.

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I certify that an examination Committee has met on 2nd June, 2011 to conduct the final examination of Adesina-Uthman Ganiyat Adejoke on her thesis entitled “Performance and Term Structure of Profit Rate of Sukuk Bonds in Malaysia” in accordance with Universities and University Colleges Act 1971 and the Constitution of the Universiti Putra Malaysia [P.U.(A) 106] 15 March 1998. The Committee recommends that the student be awarded the Doctor of Philosophy in Economics.

Members of the Examination Committee were as follows:

**Alias Radam, PhD**  
Associate Professor  
Faculty Economics and management  
Universiti Putra Malaysia  
(Chairman)

**Mohd Ariff, PhD**  
Professor,  
Bonds University  
Australia  
(Internal Examiner)

**Cheng Fah Fan, PhD**  
Associate Professor  
Graduate School of Management  
Universiti Putra Malaysia  
(Internal Examiner)

**M. Kabir Hassan, PhD**  
Professor  
University of New Orleans  
United States of America  
(External Examiner)

---

NORITAH OMAR, PhD  
Associate Professor and Deputy Dean  
School of Graduate Studies  
Universiti Putra Malaysia

Date: 26 July 2011
This thesis was submitted to the Senate of Universiti Putra Malaysia and has been accepted as fulfillment of the requirement for the degree of Doctor of Philosophy. The members of the Supervisory Committee were as follows:

**Shamser Mohd Ramadili Mohd, PhD**
Professor
Faculty Economics and Management
Universiti Putra Malaysia
(Chairman)

**Annuar Md Nasir, PhD**
Professor
Faculty Economics and Management
Universiti Putra Malaysia
(Member)

**Taufiq Hassan, PhD**
Associate Professor
Faculty Economics and Management
Universiti Putra Malaysia
(Member)

_______________________________
HASANAH MOHD. GHAZALI, PhD
Professor and Dean
School of Graduate Studies
Universiti Putra Malaysia

Date:
DECLARATION

I declare that the thesis is my original work except for the quotations and citations which have been duly acknowledged. I also declare that it has not been previously and is not concurrently, submitted for any other degree at Universiti Putra Malaysia or at any other institution.

______________________________
GANIYAT ADEJOKE ADESINA-UTHMAN

Date: 2 June 2011
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