

PREDICTING THE INFLATION RATE IN MALAYSIA USING *SUKUK* TERM STRUCTURE

(Peramalan Kadar Inflasi di Malaysia Menggunakan Struktur Tempoh Sukuk)

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ABSTRACT

The ability to forecast inflation rate accurately is vital since inflation has a big impact on both society and the country in general. One of the methods used to predict inflation rate is by observing the term structure. There have been many studies done on term structure of conventional bonds but hardly any on *sukuk*. Therefore, this study aims to test the viability of the term structure of *sukuk* on predicting the inflation rate in Malaysia, with and without taking into factor term premiums, and compare the predictions with those of the conventional bonds. The results are also compared to a benchmark autoregressive (AR) model of the inflation rate. The monthly interest rate data starting from October 2006 to March 2014 for Malaysian Government Securities (MGS), which is a conventional bond and Government Investment Issues (GII), which is an Islamic bond, were used in this study. Consumer Price Index data from the year 2005 until 2014 were also collected to calculate inflation rates. The one-month interest rate was used to observe the existence of term premium. An autoregressive distributed lag (ARDL) model was chosen to forecast six-month-ahead inflation rates using MGS and GII data with and without accounting for term premiums. The first part of the analysis revealed that term premiums are nonzero and not constant. Furthermore, forecasting results showed that without considering term premiums, neither MGS nor GII term structure was able to accurately predict the six-month-ahead inflation rate. However, incorporating term premiums into the term structure would result in a better forecast of the inflation rate compared to the benchmark AR model. As such, it is hoped that this will spur more interest in the development of *sukuk* and Islamic economics in terms of research.

Keywords: inflation rate; conventional bonds; *sukuk*

ABSTRAK

Keupayaan untuk meramal kadar inflasi secara tepat adalah penting kerana inflasi mempunyai impak yang besar kepada masyarakat dan negara secara amnya. Satu daripada kaedah yang digunakan untuk meramal kadar inflasi ialah dengan memerhatikan struktur tempoh. Terdapat banyak kajian yang dilakukan ke atas struktur tempoh bon konvensional tetapi hampir tiada kajian pada *sukuk*. Oleh itu, kajian ini bertujuan untuk menguji keupayaan struktur tempoh *sukuk* untuk meramal kadar inflasi di Malaysia, dengan dan tanpa mengambil kira faktor premium tempoh, dan membandingkan ramalan dengan yang digunakan oleh bon konvensional. Keputusan juga dibandingkan dengan penanda aras model autoregresif (AR) bagi kadar inflasi. Data kadar faedah bulanan yang digunakan dalam kajian ini bermula daripada Oktober 2006 hingga Mac 2014 bagi Sekuriti Kerajaan Malaysia (MGS), yang merupakan bon konvensional dan Terbitan Pelaburan Kerajaan (GII), yang merupakan bon Islam. Data Indeks Harga Pengguna daripada tahun 2005 hingga 2014 juga dikumpul untuk mengira kadar inflasi. Kadar faedah satu bulan telah digunakan untuk melihat kewujudan premium tempoh. Satu model lag autoregresif (ARDL) telah dipilih untuk meramal kadar inflasi enam bulan akan datang dengan menggunakan data MGS dan GII, dengan dan tanpa mengambil kira premium tempoh. Bahagian awal analisis menunjukkan bahawa premium tempoh adalah bukan sifar dan nilainya tidak tetap. Tambahan pula, keputusan ramalan menunjukkan bahawa tanpa mengambil kira premium tempoh, struktur tempoh MGS dan GII tidak dapat meramalkan kadar inflasi enam bulan akan datang dengan tepat. Walau

bagaimanapun, dengan menggabungkan premium tempoh ke dalam struktur tempoh, ramalan yang lebih baik bagi kadar inflasi berbanding dengan penanda aras model AR dapat diperoleh. Oleh itu, adalah diharapkan ini akan menarik minat yang lebih dalam pembangunan ekonomi dan sukuk Islam dari segi penyelidikan.

Kata kunci: kadar inflasi; bon konvensional; sukuk

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