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Oil Prices Fluctuations and Stock Market Performance: Does Uncertainty Matter?

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INTRODUCTION

Bloomberg reported that Malaysia is one of the most 'boring' stock market where it is the only market losing out in Asia and stock market remained 'bearish' since "… there is nothing to be positive about over the next 12 months" (Bloomberg, 15 April 2019). In the first quarter of 2019, the Malaysian stock market saw an exodus of more than USD500 million. It is alleged that changes in the ruling party in the 14th General Election followed by unclear policy directions being one of the contributing factors. The first week after the 14th General Elections witnessed the normal downturn of 75 points to 1,841 points, as foreign investors start to sell the shares and continued to plunge down to 1,660 points when investors start to make 'technical corrections', account for the risks following announcements of cancellation of projects under previous government and other policy uncertainties. The fluctuations did not dissipate and up to March 2019, KLCI continue to trade at 1,679.9 point despites predictions that the market should hit 1,900 point. The reasons cited were external shocks perpetuating to Malaysia such as China's export slump, lower Euro Zone economic growth and inflation forecast and overall fall in the world's major stock markets. Despite the upward movement of crude oil prices in the first quarter of 2019, the stock market remained gloomy. Changes in oil price directly affect other macroeconomic variables. An increase in oil price may lead to increases in the production costs stemming from increments in transport and raw material costs. Consequently, inflation, interest rates and terms of trade will follow suit which later affects investments and economic growth. Meanwhile, the government revenue is expected to fall due to changes of taxation system from GST to SST. The overestimated oil prices revenue in the last year's budget of around USD70 per barrel poses a possibility of higher deficit, all of which leads to uncertainty in the market.

PURPOSE/AIM & BACKGROUND

Whether the reasons cited really contribute to the gloomy outlook of the stock market has yet to be empirically tested. Hence, this study tries to scrutinize whether such assertions are valid or otherwise. The primary objective of this study is to examine how uncertainties affect stock market returns. Specifically, this study examines whether uncertainties emanating from oil price fluctuations, external factors and uncertainties arising from news affect the stock returns in Malaysia. This paper helps to better comprehend how long policy uncertainty and oil price movements are transmitted to the stock market in a small open economy. We rely on the Markov switching model to understand the interaction of the variables in a nonlinear framework. The estimated transition and duration of regime changes would provide some guidance to investors to manage their funds more effectively.

METHODOLOGY

We rely on Markov regime switching model for the analysis. Markov regime switching models enables estimation of the parameters of the different regimes whilst allowing for intercept term, slope of coefficient and variance to be state-dependent. Data for stock market and oil price series were obtained from International DataStream. To ensure robustness of the results, we used different data on crude oil price which include West Texas Intermediate (wti), Brent ICE, Dubai Crude, Tapis Crude and OPEC Reference Basket. The sign and significance for oil price were similar despite using different proxies. To conserve space, we only report results for wti only. Data are in logarithm except interest rates (t-bill). Monthly data for price (cpi), interest rates (t-bill) and money supply (m2) were obtained from Monthly Statistical Bulletin, Bank Negara Malaysia (various issues). Data starts from March 1999 to March 2019 with 241 observations, except for technology data which starts from July 2000.

Uncertainty is captured using two proxies. First, we rely on implied stock price volatility index of S&P500 (vix). Second, we use the index proposed by Baker et al. (2016) to capture economic policy uncertainty (EPU). The index is based on newspaper text search which is advantages for studies in small countries with fewer data sources and could stretch back to several decades enabling us to capture or do comparison studies

over a long time period. The EPU index for US consists of eleven (11) category specific indices where eight (8) indices are policy-related categories – fiscal policy (tax, government spending & others), monetary policy, healthcare, national security, regulation (financial regulation), sovereign debt and currency crises, entitlement programs and trade policy. However, for other non-US countries, the definition of economic policy uncertainty is limited to reports containing triple terms on economic (E), policy (P) and uncertainty (U) and accommodates native versions of the triple terms. The economic policy uncertainty (EPU) data consists of three different indices – EPUcurrent, EPUppp and EPUwui-mal, all of which measures economic policy uncertainty based on current, purchasing power parity and the latter, specifically in the case for Malaysia.

FINDINGS/RESULTS

Results show negative and significant effect for interest rates (t-bill) and external uncertainties (vix) whilst oil price changes have positive and significant impact on stock returns. The negative impact is aggravated during high volatility periods in all variance switching models except for Model 1 where only the intercept is allowed to switch. The value of the log likelihood statistics is larger than the critical value suggesting the adequacy of the Markov switching model for the intended estimation. Uncertainty captured by news and newspaper reports have negative impact on the stock market but estimated results are not significant despite using three different proxies.

Uncertainties emanating from external environment (vix) plays an important role in the Malaysian stock market.

Keywords: Stock Market Volatility, Duration, Markov-Regime Switching Model, General Election