

MPRA

Munich Personal RePEc Archive

What Do Foreign Exchange Markets Say About Election Outcomes? A Comparison Between Malaysia, Singapore and Philippines

Hui, Hon Chung

HELP University

17 December 2019

Online at <https://mpra.ub.uni-muenchen.de/98148/>

MPRA Paper No. 98148, posted 16 Jan 2020 08:54 UTC

What Do Foreign Exchange Markets Say About Election Outcomes? A Comparison Between Malaysia, Singapore and Philippines

Hui Hon Chung

Department of University of London Programmes, HELP Academy
Level 3, Block E, Kompleks Pejabat Damansara,
Jalan Dungun, Damansara Heights,
50490, Kuala Lumpur
Email: hc.hui@help.edu.my/huihonchung@gmail.com
ORCID: 0000-0003-0738-6535

Abstract:

In this paper, Event Studies are conducted to examine the effects of political events on foreign exchange returns in Malaysia, Singapore and Philippines. The political events of interest in this paper cover the general elections in all three countries. Some of the salient findings are as follows. First, the 13th General Election in Malaysia led to a mostly negative response from the foreign exchange market, with a sharper than expected Ringgit depreciation. Second, the 14th Malaysian General Election elicited a rather positive reaction from the foreign exchange market – there was far less depreciation of the Ringgit than what was previously believed. Third, both the 2011 and 2015 General Elections in Singapore were followed by positive reactions from the market. Fourth, presidential elections in the Philippines produced contrasting results – the election of Benigno Aquino III was greeted with optimism, whereas his successor, Rodrigo Duterte received a less welcoming reception from the foreign exchange market, with the Philippine Peso depreciating more than the predicted amount in the market model.

Keywords: general election, event studies, exchange rate, confidence

JEL Classification: F31, D72, D73, O38

Introduction

The volatility and predictability of asset returns have been the subject matter of a mounting number of studies in the central banking and policy-making circles. Starting from Mishkin (2001), and later extended by the likes of Gali (2013), Blot, Hubert and Labondance (2017), Dong, Miao and Wang (2018), the concern centers around whether a central bank should use monetary policy as a device to restrain runaway asset market booms. Shedding light on the behaviour of asset markets thus become a matter of paramount importance.

To facilitate better understanding of the determinants of asset price behaviour, and how political risks may have a role to play, a burgeoning literature has emerged. One strand of the literature focuses on how political events affect stock market returns and volatility (Bialkowski, Gottschalk and Wisniewski, 2008; Durnev, 2010; Lean, 2010; Kollias, Papadamou and Stagiannis, 2011; Chesney, Reshetar and Karaman, 2011; Nazir et al, 2014; Yusoff et al, 2015; Liew and Rowland, 2016). Another strand of the literature examines the effects of political events on the foreign exchange markets (Lobo and Tufte, 1998; Mpofu and Peters, 2017). Taken together, these studies have implications for the efficiency of asset markets and the rationality of the investment community.

In the light of the literature, we intend to examine the nexus of politics and asset markets, with a particular focus on how general elections affect the foreign exchange markets in the ASEAN region. In this paper, we focus particularly on the impact of general elections and political scandals on foreign exchange returns in Malaysia, Singapore and the Philippines. There are compelling reasons why this research makes sense. In the context of the current topic, the countries covered here do not receive much attention in the literature. Moreover, the ASEAN

area was the epicenter of the 1997 Asian Financial Crisis. The Crisis was touted by many observers to be a result of fundamental macroeconomic weaknesses partly arising from political-economic factors (IMF, 1997). There has been very little change since the Crisis, so the politics-asset market nexus is still relevant (Sen and Tyce, 2017). More importantly, both Malaysia, Singapore and Philippines have experienced political regime changes in recent years. From a foreign investor's perspective, there remains little understanding of how an investor can time her entry/exit strategies in the light of certain political events. How the asset markets respond to the political environment remains a highly relevant and interesting problem area, and we intend to make contributions to this end. The study produces some stylised facts and detailed observations of exchange rate movements resulting from particular political episodes.

In this paper, we assess the Malaysian foreign exchange market responses to the 13th and 14th General Elections. For Singapore, we analyse how foreign exchange markets in Singapore responded to the 2011 and 2015 General Elections. Finally, in the case of the Philippines, we assess foreign exchange market reactions to the 2010 and 2016 General Elections. We would have liked to cover Thailand and Indonesia as well, but for the poor fit between the data and the model estimates – as such, the latter two countries would have to be covered in another study. Foreign exchange returns in each country are proxied by the bilateral nominal exchange rates, expressed as the value of US Dollar in terms of the domestic currency. We deploy event studies as our methodology. In this framework, we first estimate ‘market models’ of the returns for spot Ringgit/US Dollar (RM/USD) exchange rate, spot Singapore Dollar/US Dollar (SGD/USD) exchange rate and spot Philippine Peso/US Dollar (PHP/USD) exchange rate. The data spans daily observations from 13 February 2012 to 2 April 2013, in the case of Malaysia. For Singapore, data covers 5 February 2010 to 29 March 2011. Meanwhile, the data for Philippines are from 14 July 2008 to 17 March 2010. In all market models, we use a 250-day

estimation window. The event day is defined as the polling day of the general election. For the event, we set 20 pre-event days, one event day and 60 post-event days giving a total of 81 days in one event window. Next, the Abnormal Returns (ARs) and Cumulative Abnormal Returns (CARs) are calculated for each of the event. Parametric statistical tests are then applied on the ARs and CARs to determine their statistical significance.

The salient findings of the paper are as follows. First, the CARs after the 13th Malaysian General Elections are statistically significant, positive and trending up, indicating unfavourable market response. Second, in the aftermath of the 14th Malaysian General Election, the CARs are statistically significant and mostly in negative territory, signs of a positive market response. These foreign exchange fluctuations coincide closely with conventional beliefs that the regime of Najib Razak, which retained power in the 13th general election, was unpopular. However, the collapse of this regime was greeted with exuberance in the 14th general election. For Singapore, the foreign exchange market responses to both the 2011 and 2015 General Elections are largely positive, characterised by negative and declining CARs. The elected governments have performed well historically, so the market reaction could serve as confirmation of this fact. Meanwhile, in the Philippines the market responded positively to the election of Benigno Aquino III in the 2010 election. In contrast, market response to the election of Rodrigo Duterte in 2016 has been unequivocally negative. As a controversial figure, Duterte's subsequent policies have been criticised as extreme and unwarranted. Interestingly, foreign exchange markets were able to sound off similar sentiments.

The paper is organised in the following manner. In the next section, we summarise the literature that motivate our research design and methodologies. This is followed by an overview of the

data and methodologies followed by the results, findings and further discussions. The paper concludes thereafter.

Literature review

(i) Political events and financial markets – scope of study and key findings

This study contributes to the literature on political events and how they affect the mean and volatility of returns in asset markets. We identify some of the studies that are relevant this area including Lobo and Tufte (1998), Bialkowski, Gottschalk and Wisniewski (2008), Durnev (2010), Lean (2010), Kollias, Papadamou and Stagiannis (2011), Chesney, Reshetar and Karaman (2011), Nazir et al (2014), Yusoff et al (2015), Bin (2015), Liew and Rowland (2016), Wong and Hooy (2016), Mpofu and Peters (2017), Bowes (2018), Chia (2018) and Hou and Li (2019). Most studies focus on the effects of political events on the stock and foreign exchange markets, except for Chesney et al (2011) who also covered commodity and bond markets. There is no unique definition of what constitutes a political event. The ones which are frequently assessed include general elections, political news and power struggles in the government. For example, Hou and Li (2019) examined how anti-corruption campaigns in China affected stock returns. Others focus on the effects of terrorist attacks (Chesney et al 2011; Kollias et al 2011) and the style of governance (Nazir et al 2014).

In most of the studies mentioned above, general elections and negative political news tend to lead to lower mean asset returns (Lean 2010; Liew and Rowland 2016) and increased volatility (Lobo and Tufte 1998; Bialkowski, Gottschalk and Wisniewski 2008, Bowes 2018). However, Wong and Hooy (2016) and Chia (2018) are exceptions to the norm as asset market reactions may be muted. Similarly, Yusoff et al (2015) found that stock returns in politically-connected firms do not respond as expected to negative news. Making sense of all the findings, it seems

that the extent of uncertainty resulting from political events is a rather important condition. If things are seen to be under control, reactions from asset markets would be milder, as discovered by Nazir et al (2014). The idea that asset markets do not react uniformly is also echoed in Hou and Li (2019) particularly in the context of China and Chesney et al (2011) in the case of European countries. A decline in the market could be followed by varying degrees of recovery.

All in all, we are able to extract three theoretical explanations for observed asset market reactions to political events. Firstly, political events induce uncertainty, leading to negative reactions by investors ((Hou and Li, 2019, Chesney et al. 2011, Kollias et al 2011). Secondly, market reactions could signal the degree of approval in regard to a particular political event (Nofsiner, 2004). Thirdly, investors may display too much optimism initially but eventually make corrections in their expectations when the newly elected regime performs below expectations (Booth and Booth, 2003).

(ii) Methodologies

The literature cited above favours three methodologies. The first is the specification and estimation of time series models with rate of return on a financial asset as the dependent variable, and proxies of political risks as explanatory variables (Lean 2010), Bin 2015), Liew and Rowlands 2016, Bowes 2018). To capture the effects of such events on returns and volatility of returns, dummy variables are usually used in either a linear regression or a GARCH (Generalised Autoregressive Conditional Heteroskedasticity) family of models.

The second methodology is event studies (Bialkowski et al 2008, Nazir et al 2015, Yusoff et al 2015, Mpofu and Peters 2017, Hou and Li 2019). Event studies has been commonly used in empirical finance to assess the qualitative and quantitative effects that financial securities have

in reaction to shocks (Kliger and Gurevich 2014). In Event Studies, econometric models of the first methodology are used to estimate benchmarks for normal asset returns or volatility in the sample period before the event whose effects are being examined. Parameter estimates of the empirical models are ‘extrapolated’ to a future period in which political events are occurring. Actual asset returns (volatility) are then compared with the extrapolated values to calculate abnormal returns (volatility). By adding up the abnormal returns (volatility), one obtains the cumulative abnormal returns (volatility). Importantly, the first methodology is distinguished from the second by the set-up of the estimation window. The estimation window precedes the event window in event studies whereas in econometric models, the estimation window covers the event being studied. Finally, there are researchers who combine the first two methodologies in a single paper (Chesney et al 2011), Kollias et al 2011, Chia 2018).

(iii) Implications for research

In this paper, we analyse how foreign exchange markets respond to shocks from the general elections in Malaysia and Singapore. To our knowledge, this is the first paper to attempt such an enterprise. Methodologically, we apply the event study toolkit frequently used in the literature (more details in next section). We compile and analyse a set of data that has not been analysed in previous studies. We highlight this as the main value and contribution to the literature. In the next section, we explain our data and methodology in further detail.

Data and Methodology

(i) Data

This study attempts to assess the reaction of the returns for spot Ringgit/US Dollar (RM/USD) exchange rate, the spot Singapore Dollar/US Dollar (SGD/USD) exchange rate and the spot Philippine Peso/US Dollar (PHP/USD) exchange rate in response to general elections. Before

this can be carried out, we must first estimate a market model of exchange rate behaviour for each country as per the event study literature in the previous section. We estimate the market model of spot RM/USD exchange rate for Malaysia with daily data covering 13 February 2012 to 2 April 2013, and also estimate a market model of daily spot SGD/USD exchange rate for Singapore, covering 5 February 2010 to 29 March 2011. For Philippines, our data cover 14 July 2008 to 17 March 2010. For all countries, the estimation window is 250 days in line with the practices in the empirical literature for event studies. Daily data for both exchange rates are collected for the estimation window. We use daily data because it leads to a higher degree of accuracy (Brown and Warner 1985).

For the Malaysia market model, the dependent variable is the returns on spot RM/USD exchange rate (source: Bank Negara Malaysia Monthly Statistical Bulletin), while the independent variables are interest rate differentials between domestic (overnight interbank rate, obtained from Bank Negara Malaysia Monthly Statistical Bulletin) and foreign interest rates (proxied by US 3-month Treasury Bill rate from Federal Reserve Economic Data (FRED)), returns on the spot exchange rates of US Dollar/Euro (USD/EUR) (source: ECB), Yen/US Dollar (Y/USD) (source: Bank of Japan) and Chinese Yuan/US Dollar (RMB/USD) (source: FRED).

The market model for Singapore and Philippines follow a similar set-up. For the Singapore market model, the dependent variable is the returns on spot SGD/USD exchange rate (source: Monetary Authority of Singapore). The independent variables include interest rate differentials between domestic (average overnight rate, sourced from Monetary Authority of Singapore) and foreign interest rates (proxied by US 3-month Treasury Bill rate from Federal Reserve Economic Data (FRED)), and the returns on the spot exchange rates of US Dollar/Euro

(USD/EUR) (source: ECB), Yen/US Dollar (Y/USD) (source: Bank of Japan) and RM/USD (source: Bank Negara Malaysia Monthly Statistical Bulletin).

Meanwhile, the Philippines market model has the returns on the Peso/USD (PHP/USD) exchange rate as dependent variable. The independent variables are interest rate differentials between domestic (interbank call loan rate, obtained from Central Bank of Philippines) and foreign interest rates (proxied by US 3-month Treasury Bill rate from Federal Reserve Economic Data (FRED)), returns on the spot exchange rates of US Dollar/Euro (USD/EUR) (source: ECB), Yen/US Dollar (Y/USD) (source: Bank of Japan) and Chinese Yuan/US Dollar (RMB/USD) (source: FRED).

More descriptions of the market model are found in the next section on Methodology. Meanwhile, the dates of the events covered in this paper have to be spelled out clearly. Event day is defined as the polling day of the particular general election. In the case of Malaysia, the polling day for the 13th General Election was 5 May 2013, whereas the polling day for the 14th General Election was 9 May 2018. For Singapore, the polling day for the 2011 election was 7 May 2011, while the 2015 election commenced on 11 May 2015. In Philippines, the 2010 election took place on 10 May 2010, while the 2016 election was on 9 May 2016.

.

(ii) Methodology

In an event study, there are two important procedures. The first is the identification of the event window and its size. MacKinlay (1997) recommends the use of a 41-day event window, which covers 20 pre-event days, the event day and 20 post event days. However, as the foreign exchange market could be inefficient, we allow the use of 60 post-event days instead (Wong and Hooy, 2016), giving a total of an 81-day event window. This is the convention used in our

analysis for Malaysia, Singapore and Philippines. The second procedure is to set the estimation window over which a market model will be estimated – the estimation window size has already been discussed in the previous section on ‘Data’.

A bigger concern is the specification of the market model, over which there is the lack of consensus. In this regard, there are two approaches in the literature. Firstly, there is the Frenkel (1981) (as cited by Mpfu and Peters 2017) ‘News Model’ of exchange rates and the model developed by Adam, Kozinsky and Zielinski (2013). In Frenkel (1981), the spot exchange rate was regressed on lagged forward rate and expected interest rate differential. Adapting this news model, Mpfu and Peters (2017) substituted the lagged spot exchange rate for the lagged forward rate. The market model of Adam, Kozinsky and Zielinski (2013) regressed the EUR/PLN exchange rate on EUR/USD (proxy for global factor), EUR/CZK and EUR/ HUF (proxies of regional factors). We initially experimented with each of these model types individually and found that the fit of the model was quite poor. Hence, we decided to combine both the elements of Frankel (1981) and Adam, Kozinsky and Zielinski (2013). This hybrid model for Malaysia, Singapore and Philippines are specified in Equations (1), (2) and (3) respectively:

$$R_t(MAL) = f[(i - i^*) - E(i - i^*), r(USD / EUR), r(RMB / USD), r(Y / USD)] \quad (1)$$

$$R_t(SIN) = f[(i - i^*) - E(i - i^*), r(USD / EUR), r(RM / USD), r(Y / USD)] \quad (2)$$

$$R_t(PHIL) = f[(i - i^*) - E(i - i^*), r(USD / EUR), r(RMB / USD), r(Y / USD)] \quad (3)$$

where R_t represents exchange rate returns at time ‘t’ modelled as a function of the variables in the parenthesis. The dependent variables for the Malaysia, Singapore and Philippines market models use the RM/USD, SGD/USD and PHP/USD spot exchange rate returns respectively. In terms of the independent variables, all three models use as global proxies returns on

USD/EUR ($r(\text{USD}/\text{EUR})$) and returns on Y/USD ($r(\text{Y}/\text{USD})$) and a country-specific expected interest rate differential ($(i-i^*) - E(i-i^*)$)¹. In addition, each model has a regional proxy, which is the returns on RMB/USD ($r(\text{RMB}/\text{USD})$) for Malaysia and Philippines, and returns on RM/USD ($r(\text{RM}/\text{USD})$) for Singapore². To better fit the high-frequency data, the ARDL model structure is adopted here.

In the event study methodology, the residuals from the market model regressions, i.e. ε_t is also defined as abnormal returns (ARs). When the ARs are aggregated across time, we obtain the cumulative abnormal returns (CARs). Typically, the statistical significance of ARs and CARs need to be tested via t-tests. The null hypotheses are specified as follows:

$$H_0 : AR_t = 0 \quad (4)$$

$$H_0 : CAR_t = 0 \quad (5)$$

Meanwhile, the t-statistics are calculated as the ratio of abnormal or cumulative abnormal returns over the standard deviation:

$$t(AR) = \frac{AR_t}{\sigma(AR)} \quad (6)$$

$$t(CAR) = \frac{AR_t}{\sqrt{T_1} \sigma(AR)} \quad (7)$$

In the t-statistic for abnormal returns (Equation (4)), the denominator is the standard deviation of the regression residuals of the market model. In Equation (5), T_1 represents the size of the event window.

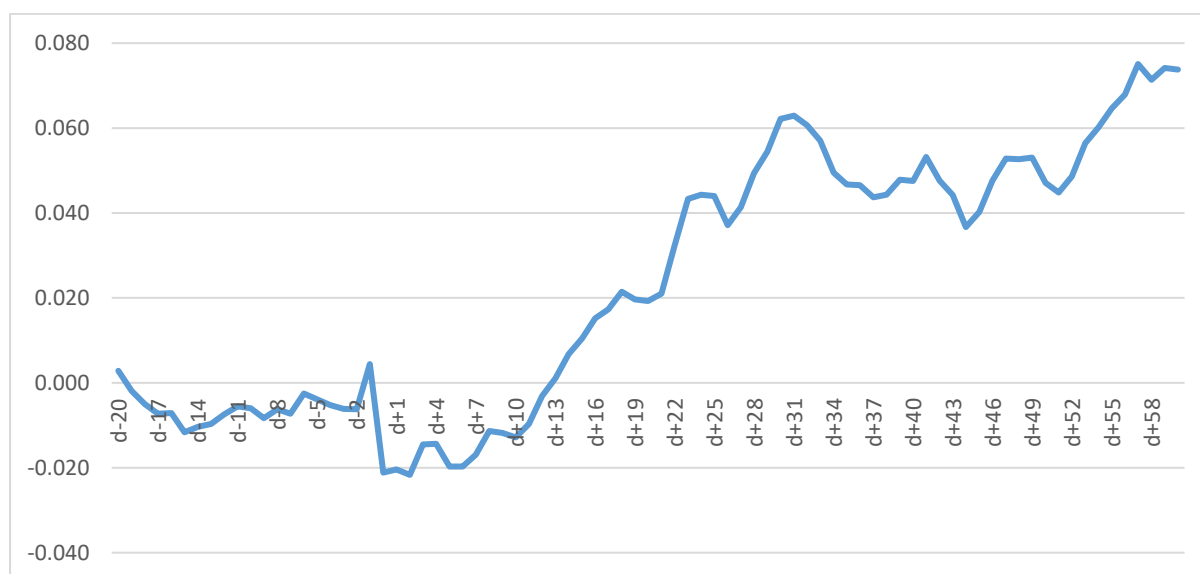
¹ Expected interest rate differential between domestic interest rate and a foreign interest rate is obtained by taking the residuals of a regression of Interest rate differential on a constant, two lagged values of interest rate differentials and one lagged spot exchange rate.

² BIS (2016, 2019) identify the EUR/USD and Y/USD to be the first and second most widely used exchange rate parities, respectively. The Chinese Yuan (RMB) is used here as a regional proxy for Malaysia and Philippines because China was the largest trade partner for both countries in terms of total trade (imports plus exports) during the estimation window. By a similar reasoning, the Ringgit is the chosen regional proxy for Singapore because Malaysia was its largest trade partner.

Results and Findings

We regressed the market model specified in the previous section using an ARDL framework. Prior to running the regression, preliminary unit root tests were applied to each series to confirm that they are indeed stationary. Given the large number of estimates and to conserve space, the unit root tests, summary statistics and estimated models for the three exchange rates are not reported but are available upon request. We only briefly mention here that the estimated models are well-specified³, passing the standard diagnostics tests such as the Box-Pierce and Ljung-Box tests (at various lags) and the CUSUM and CUSUMSQ tests for structural stability, while also demonstrating that there is no strong evidence of heteroskedasticity (the Breusch-Pagan-Godfrey test) and ARCH effects. Using the estimated parameters of the model, we proceed to calculate the Abnormal Returns (ARs) and Cumulative Abnormal Returns (CARs) for the three events mentioned in the earlier part of the paper. In the interest of preserving space, we show only the charts depicting the CARs (Figures 1-6).

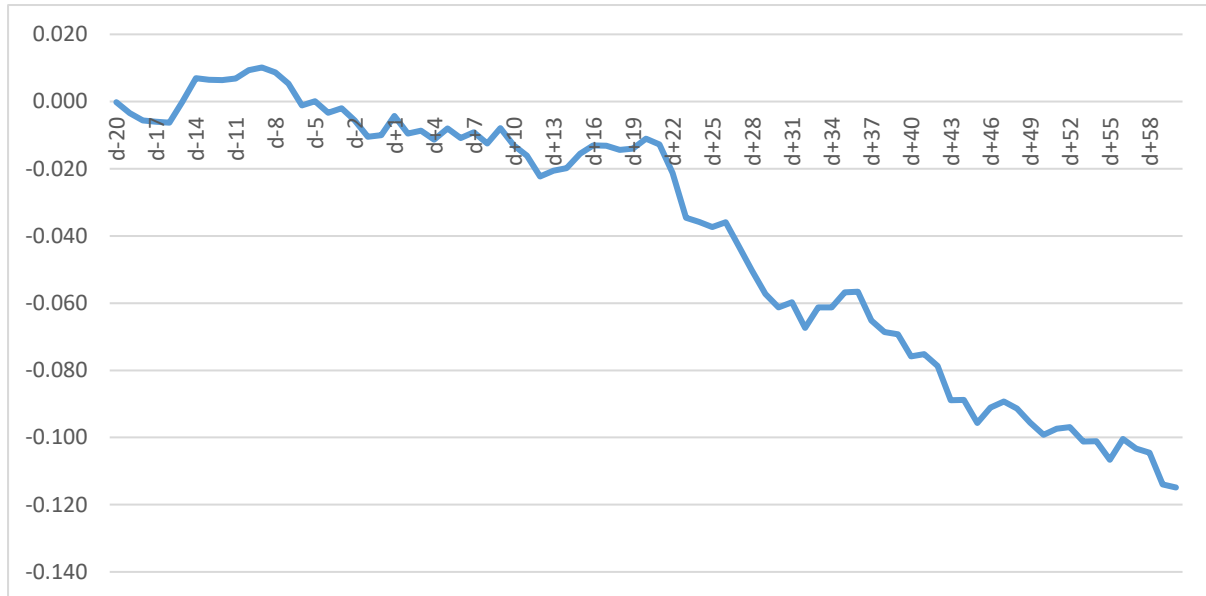
Figure 1 - CARs for RM/USD exchange rate returns in response to the 13th General Election



(Source: Author's calculations)

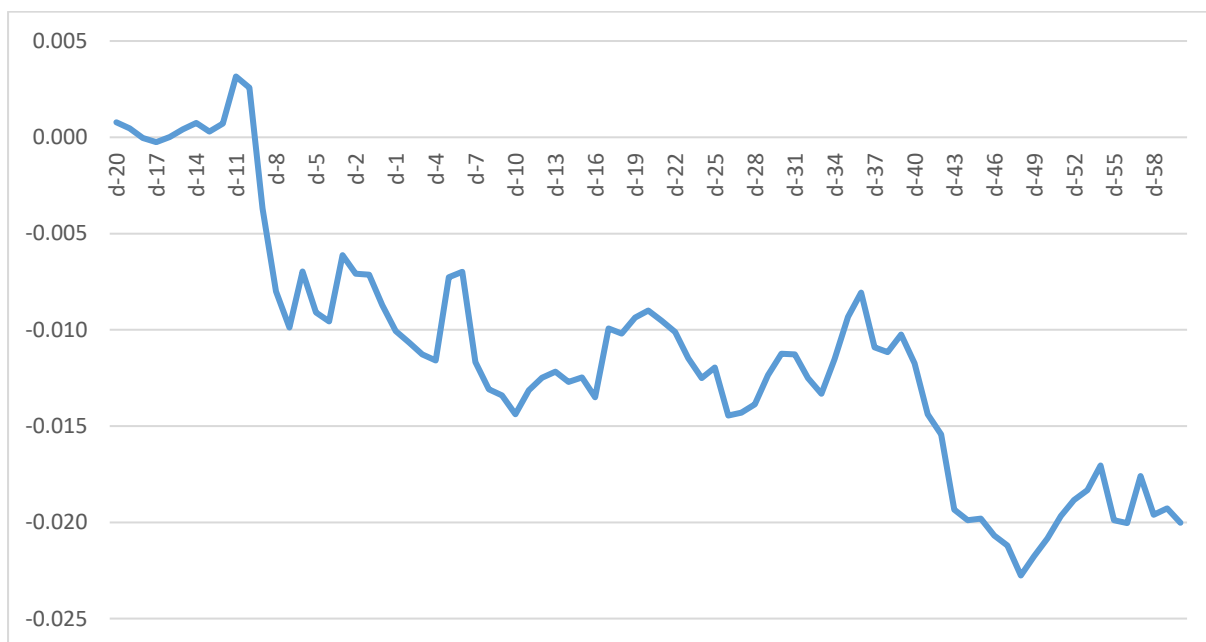
³ The RM/USD, SGD/USD and PHP/EUR market models have R² of 0.31, 0.78 and 0.30, respectively

Figure 2 - Figure 2: CARs for RM/USD exchange rate returns in response to the 14th General Election



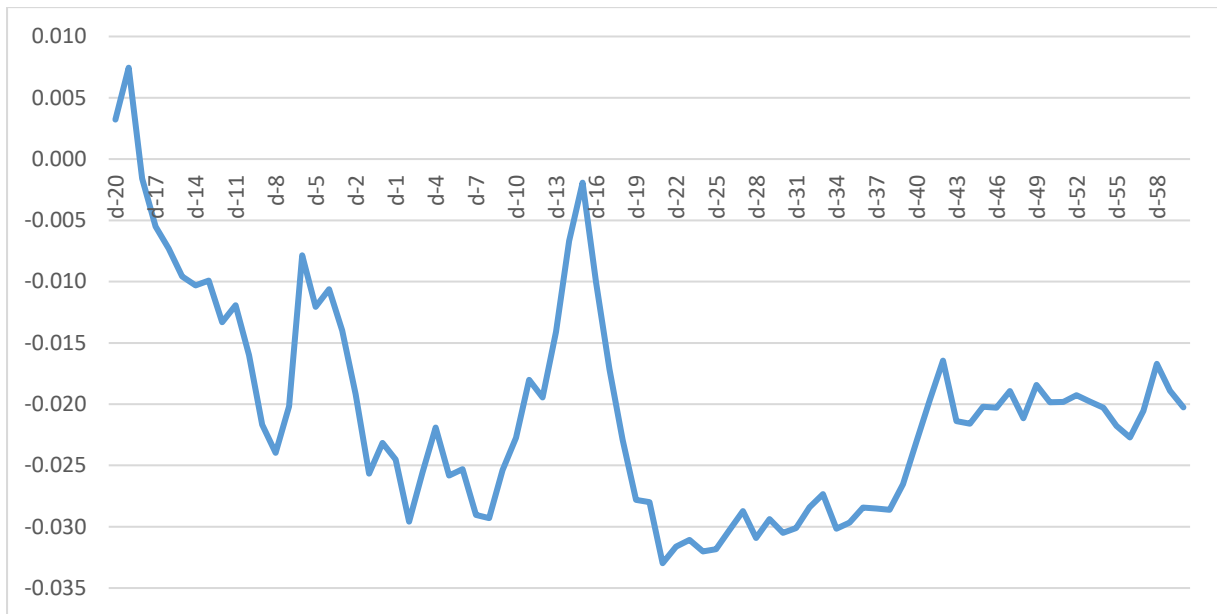
Source: Author's calculations

Figure 3: CARs for SGD/USD exchange rate returns in response to the 2010 General Election



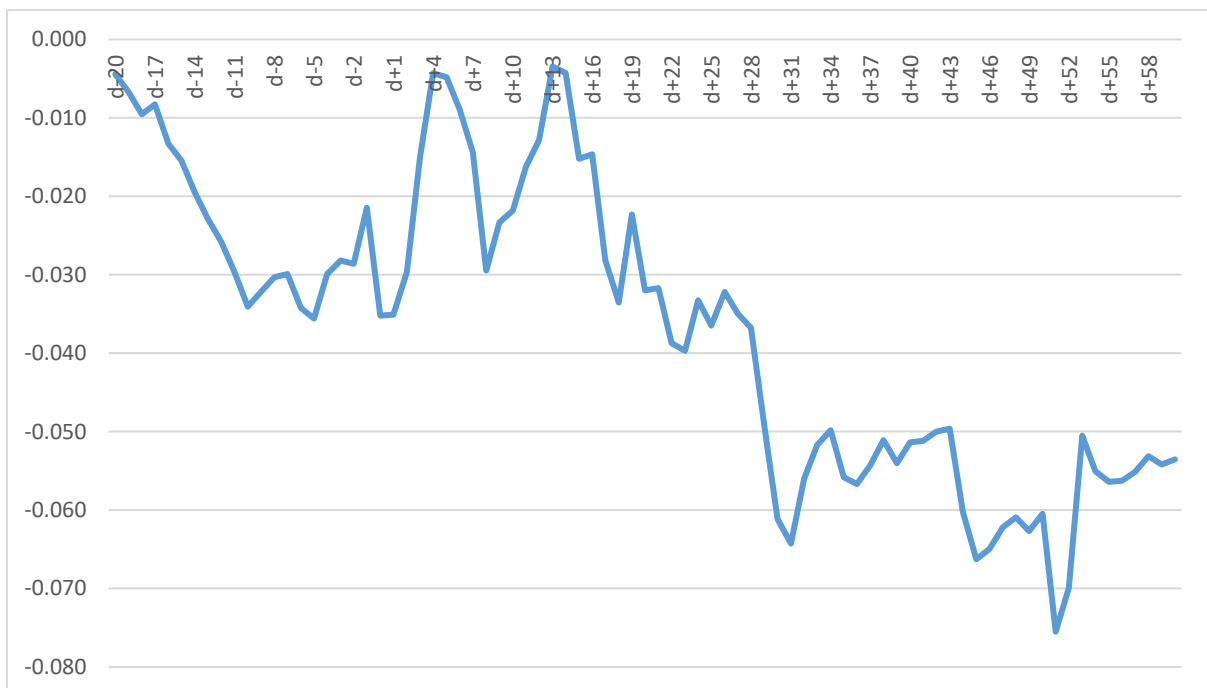
Source: Author's calculations

Figure 4: CARs for SGD/USD exchange rate returns in response to the 2015 General Election



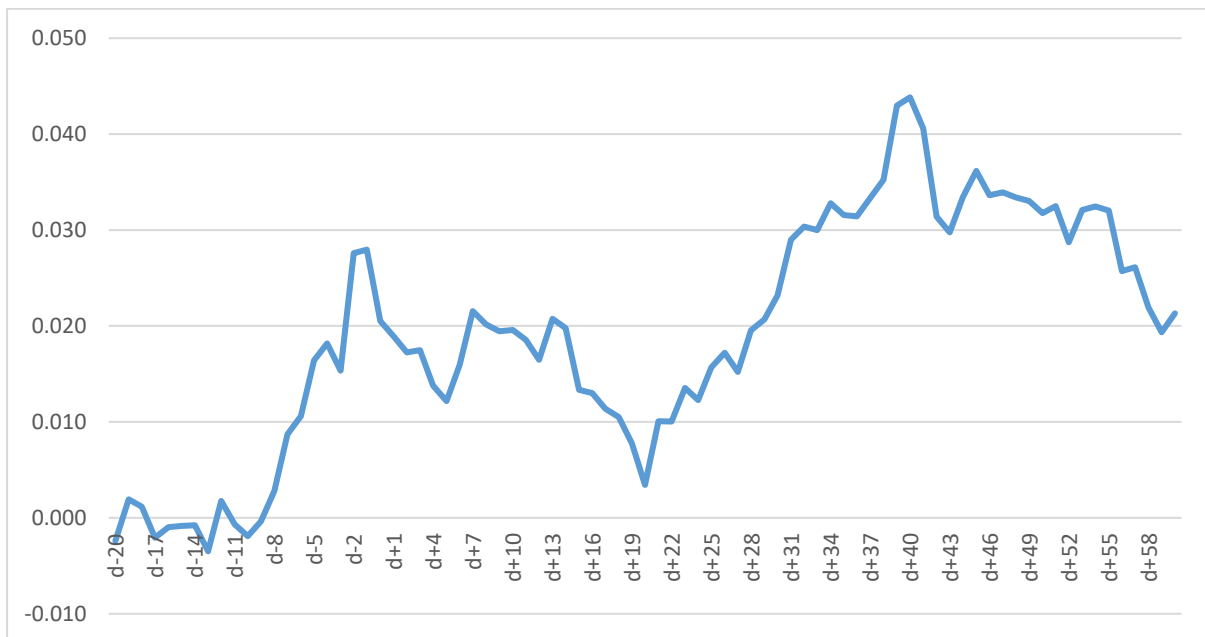
Source: Author's calculations]

Figure 5: CARs for PHP/USD exchange rate returns in response to the 2010 Presidential Election



Source: Author's calculations

Figure 6: CARs for PHP/USD exchange rate returns in response to the 2016 Presidential Election



Source: Author's calculations

Figure 1 shows that the CARs were initially negative in response to the outcome of the 13th General Election (GE13). This implies that the Ringgit had been depreciating at a rate that was less than that predicted by the market model – a favourable response by the market. Almost two weeks after GE13 however, the CARs became positive, signifying that Ringgit had depreciated more quickly than expected, which is an unfavourable market response. The observed reactions here call to mind the third theoretical explanation for exchange rate behaviour in relation to political events mentioned in the literature review. Particularly, the newly elected government was able to emerge to move the country forward, indicating approval by the public, but the lack of subsequent political reforms dampened the enthusiasm for the new government (Nadzri, 2018)⁴. In contrast, Figure 2 projected a rather favourable image for the newly elected government in the aftermath of the 14th General Election (GE14)

⁴ Given the definitions of the dependent variable (price of foreign currency in terms of RM), an increase in the dependent variable implies a sharper rate of RM depreciation – investors dumping RM in favour of a foreign currency.

– the event had resulted in a depreciation in the Ringgit that was less severe than that predicted by the market model. Apparently, this also fits closely with the second theoretical explanation for exchange rate responses, namely that the market is in approval of the newly formed government. Given that this was the first change in political regime in approximately 60 years, there was a chance for much-needed reforms to be pushed through.

Figures 3 and 4 depict the outcomes of the 2011 and 2015 Singapore General Elections. Both elections led to rather similar outcomes i.e. negative and somewhat declining CARs. This implies that the Singapore Dollar had depreciated far less than the prediction of the market model (or similarly, the Singapore Dollar had appreciated more than the prediction of the market model). The market had responded quite favourably to the election outcomes. While there has been no regime change in the manner experienced by Malaysia in their GE14, the retention of power by the People's Action Party (PAP) signifies not just approval from the voting public but also the investors in foreign exchange markets, in line with the second theoretical explanation.

Meanwhile in the Philippines, the CARs behaved rather differently in each of the Presidential Elections. In Figure 5, the 2010 election brought about a rather positive market response, since the CARs were declining to indicate that the event had resulted in a depreciation of the Philippine Peso less severe than the predictions of the market model, in a manner similar to the GE14 event in Malaysia. The election of Benigno Aquino III was heralded as a positive event – as the Aquino family enjoys good reputation, this reputation effect could have carried forward to some of the asset markets. A stark contrast can be seen in Figure 6, when the election of controversial politician Rodrigo Duterte was met with a negative market response, with CARs ascending across the event window. This indicates that the election outcome triggered a greater

Peso depreciation that what would have been predicted by the market model. As President Duterte had a reputation as a maverick with an unconventional leadership style prior to being elected to hold the presidential office⁵, his rise to power could bring about greater political uncertainty in line with the first theoretical explanation for exchange rate behaviour highlighted in the literature.

Results of the statistical t-tests of ARs and CARs in both countries are reported in Tables 1, 2 and 3. Importantly, we are unable to utilise the standard critical t-values due to the presence of non-normality in the regression residuals. To overcome this problem, we calculate bootstrap critical values in a manner similar to Bialkowski et al (2008). With these new critical values, we are able to proceed with the tests of statistical significance. It can be seen that a number of ARs and CARs are statistically significant at the 5% level, particularly on the post-event days.

Table 1: t-values of Abnormal Returns (AR) and Cumulative Abnormal Returns (CAR) in response to the 13th (GE13) and 14th (GE14) General Elections in Malaysia

Event days	Event 1: GE13		Event 2: GE14	
	CAR	AR	CAR	AR
d-20	0.919	0.102	-0.055	-0.006
d-19	-1.534	-0.068	-1.049	-0.123
d-18	-1.018	-0.181	-0.714	-0.202
d-17	-0.721	-0.262	-0.126	-0.216
d-16	0.046	-0.256	-0.104	-0.228
d-15	-1.474	-0.420	2.048**	0.000
d-14	0.427	-0.373	2.261**	0.251**
d-13	0.222	-0.348	-0.175	0.232
d-12	0.728	-0.267	-0.007	0.231
d-11	0.622	-0.198	0.154	0.248
d-10	-0.158	-0.216	0.795	0.336**
d-9	-0.744	-0.298	0.254	0.365**
d-8	0.676	-0.223	-0.471	0.312**
d-7	-0.358	-0.263	-1.086	0.192

⁵ See comments here: <https://www.theguardian.com/world/2016/jul/01/philippines-president-rodrigo-duterte-urges-people-to-kill-drug-addicts>

d-6	1.551	-0.090	-2.106	-0.042
d-5	-0.434	-0.139	0.407	0.003
d-4	-0.450	-0.189	-1.104	-0.120
d-3	-0.286	-0.221	0.431	-0.072
d-2	-0.023	-0.223	-1.178	-0.203
d-1	3.447**	0.160	-1.572	-0.377
d-0	-8.292**	-0.762**	0.168	-0.359
d+1	0.246	-0.734**	1.827	-0.156
d+2	-0.409	-0.780**	-1.678	-0.342
d+3	2.328	-0.521	0.275	-0.311
d+4	0.040	-0.517	-0.856	-0.407
d+5	-1.723	-0.708	1.076	-0.287
d+6	-0.001	-0.708	-0.929	-0.390
d+7	0.900	-0.608	0.554	-0.329
d+8	1.799	-0.408	-1.098	-0.451
d+9	-0.146	-0.424	1.501	-0.284
d+10	-0.330	-0.461	-1.681	-0.471
d+11	1.008	-0.349	-0.993	-0.581
d+12	2.131	-0.112	-1.992	-0.802
d+13	1.359	0.039	0.566	-0.739
d+14	1.839	0.243	0.242	-0.712
d+15	1.190	0.375	1.375	-0.560**
d+16	1.556	0.548	0.816	-0.469
d+17	0.666	0.622	-0.044	-0.474
d+18	1.345	0.771	-0.409	-0.519
d+19	-0.582	0.707	0.144	-0.503
d+20	-0.127	0.693	0.963	-0.396
d+21	0.560	0.755	-0.583	-0.461
d+22	3.679**	1.164	-2.730	-0.764
d+23	3.557**	1.559	-4.321**	-1.244
d+24	0.306	1.593	-0.413	-1.290
d+25	-0.095	1.582	-0.484	-1.344
d+26	-2.209	1.337	0.455	-1.293
d+27	1.352	1.487	-2.306	-1.550
d+28	2.593**	1.775	-2.339	-1.809
d+29	1.668	1.961	-2.266	-2.061
d+30	2.486	2.237	-1.294	-2.205
d+31	0.255	2.265	0.498	-2.150
d+32	-0.748	2.182	-2.456	-2.423
d+33	-1.175	2.051	1.949**	-2.206
d+34	-2.423**	1.782	0.017	-2.204
d+35	-0.916	1.680	1.442	-2.044
d+36	-0.057	1.674	0.072	-2.036
d+37	-0.919	1.572	-2.779	-2.345

d+38	0.200	1.594	-1.130	-2.470
d+39	1.135	1.720	-0.198	-2.492
d+40	-0.091	1.710	-2.139	-2.730
d+41	1.842	1.915	0.207	-2.707
d+42	-1.813	1.713	-1.114	-2.831
d+43	-1.111	1.590	-3.328**	-3.200
d+44	-2.436	1.319	0.037	-3.196
d+45	1.153	1.447	-2.230	-3.444
d+46	2.384	1.712	1.483	-3.279
d+47	1.692	1.900	0.611	-3.211
d+48	-0.041	1.896	-0.694	-3.288
d+49	0.107	1.908	-1.355	-3.439
d+50	-1.914	1.695	-1.173	-3.569
d+51	-0.728	1.614	0.579	-3.505
d+52	1.214	1.749	0.154	-3.488
d+53	2.529	2.030	-1.372	-3.640
d+54	1.207	2.164	0.014	-3.639
d+55	1.453	2.325	-1.796	-3.838**
d+56	1.051	2.442	2.010**	-3.615
d+57	2.334	2.702**	-0.905	-3.716**
d+58	-1.214	2.567**	-0.404	-3.760**
d+59	0.925	2.670**	-3.071**	-4.102**
d+60	-0.142	2.654**	-0.286	-4.133**

Note: To conserve space, the actual AR and CAR values are not reported, but are available upon request. ** indicates 5% level of significance based on bootstrapped critical values.

Table 2: t-values of Abnormal Returns (AR) and Cumulative Abnormal Returns (CAR) in response to the 2011 (GE2011) and 2015 (GE2015) General Elections in Singapore

Event days	Event 1: GE2011		Event 2: GE2015	
	CAR	AR	CAR	AR
d-20	0.407	0.045**	1.674	0.186**
d-19	-0.170	0.026	2.200	0.430**
d-18	-0.253	-0.002	-4.705**	-0.092
d-17	-0.118	-0.015	-2.037	-0.319
d-16	0.139	0.001	-0.925	-0.421
d-15	0.211	0.024	-1.192	-0.554
d-14	0.171	0.043	-0.372	-0.595
d-13	-0.229	0.017	0.202	-0.573
d-12	0.214	0.041**	-1.760	-0.768
d-11	1.270	0.182**	0.715	-0.689
d-10	-0.304	0.149**	-2.125	-0.925
d-9	-3.256**	-0.213	-2.945	-1.252
d-8	-2.240**	-0.462	-1.196	-1.385

d-7	-0.976	-0.571	1.971	-1.166
d-6	1.510	-0.403	6.410**	-0.454
d-5	-1.103	-0.525	-2.187	-0.697
d-4	-0.247	-0.553	0.750	-0.613
d-3	1.794**	-0.353	-1.750	-0.808
d-2	-0.500	-0.409	-2.703	-1.108
d-1	-0.026	-0.412	-3.366	-1.482
d-0	-0.821	-0.503	1.296	-1.338
d+1	-0.705	-0.581	-0.705	-1.417
d+2	-0.309	-0.616	-2.623	-1.708
d+3	-0.319	-0.651	2.084	-1.476
d+4	-0.162	-0.669	1.909	-1.264
d+5	2.248**	-0.419	-2.039	-1.491
d+6	0.143	-0.403	0.265	-1.462
d+7	-2.435**	-0.674	-1.940	-1.677
d+8	-0.737	-0.756	-0.136	-1.692
d+9	-0.161	-0.774	2.045	-1.465
d+10	-0.514	-0.831	1.364	-1.313
d+11	0.653	-0.758	2.462	-1.040
d+12	0.333	-0.721	-0.746	-1.123
d+13	0.163	-0.703	2.773	-0.815
d+14	-0.273	-0.734	3.860	-0.386
d+15	0.117	-0.721	2.467	-0.112
d+16	-0.535	-0.780	-4.214**	-0.580
d+17	1.858**	-0.574	-3.692**	-0.990
d+18	-0.133	-0.588	-2.996	-1.323
d+19	0.432	-0.540	-2.551	-1.606
d+20	0.189	-0.519	-0.094	-1.617
d+21	-0.277	-0.550	-2.589	-1.904**
d+22	-0.305	-0.584	0.698	-1.827**
d+23	-0.709	-0.663	0.288	-1.795
d+24	-0.539	-0.723	-0.488	-1.849**
d+25	0.292	-0.690	0.099	-1.838**
d+26	-1.295	-0.834	0.809	-1.748
d+27	0.074	-0.826	0.802	-1.659
d+28	0.224	-0.801	-1.133	-1.785
d+29	0.791	-0.713	0.795	-1.697
d+30	0.578	-0.649	-0.579	-1.761
d+31	-0.020	-0.651	0.202	-1.738
d+32	-0.637	-0.722	0.878	-1.641
d+33	-0.429	-0.770	0.565	-1.578
d+34	0.934	-0.666	-1.467	-1.741
d+35	1.144	-0.539	0.249	-1.713
d+36	0.656	-0.466	0.644	-1.642

d+37	-1.482	-0.631	-0.037	-1.646
d+38	-0.128	-0.645	-0.061	-1.653
d+39	0.476	-0.592	1.081	-1.533
d+40	-0.777	-0.678	1.805	-1.332
d+41	-1.375	-0.831	1.786	-1.134
d+42	-0.541	-0.891	1.655	-0.950
d+43	-2.032**	-1.117	-2.566	-1.235
d+44	-0.282	-1.148	-0.111	-1.247
d+45	0.041	-1.144	0.726	-1.166
d+46	-0.458	-1.194	-0.044	-1.171
d+47	-0.270	-1.224**	0.711	-1.092
d+48	-0.810	-1.315**	-1.157	-1.221
d+49	0.515	-1.257**	1.408	-1.065
d+50	0.481	-1.204**	-0.737	-1.146
d+51	0.612	-1.136	0.014	-1.145
d+52	0.429	-1.088	0.284	-1.113
d+53	0.268	-1.058	-0.266	-1.143
d+54	0.665	-0.984	-0.262	-1.172
d+55	-1.478	-1.149	-0.771	-1.258
d+56	-0.075	-1.157	-0.492	-1.312
d+57	1.268	-1.016	1.137	-1.186
d+58	-1.051	-1.133	1.995	-0.964
d+59	0.180	-1.113	-1.140	-1.091
d+60	-0.395	-1.157	-0.711	-1.170

Note: To conserve space, the actual AR and CAR values are not reported, but are available upon request. ** indicates 5% level of significance based on bootstrapped critical values.

Table 3: t-values of Abnormal Returns (AR) and Cumulative Abnormal Returns (CAR) in response to the 2010 (PGE2010) and 2016 (PGE2016) Presidential Elections in Philippines

Event days	Event 1: GE2011		Event 2: GE2015	
	CAR	AR	CAR	AR
d-20	-0.849	-0.094**	-0.190	-0.021
d-19	-0.439	-0.143	0.381	0.021
d-18	-0.541	-0.203	0.285	0.053
d-17	0.244	-0.176	0.228	0.078
d-16	-0.956	-0.283	0.131	0.093
d-15	-0.417	-0.329	-0.379	0.051
d-14	-0.784	-0.416	0.025	0.053
d-13	-0.647	-0.488	-0.350	0.015
d-12	-0.543	-0.548	0.176	0.034
d-11	-0.756	-0.632	-0.048	0.029
d-10	-0.835	-0.725	0.587	0.094
d-9	0.361	-0.685	-0.002	0.094

d-8	0.361	-0.645	0.855**	0.189
d-7	0.076	-0.636	0.450	0.239
d-6	-0.824	-0.728	0.047	0.244
d-5	-0.263	-0.757	1.153**	0.372
d-4	1.086	-0.636	0.872**	0.469**
d-3	0.332	-0.600	0.072	0.477**
d-2	-0.081	-0.609	-0.587	0.412**
d-1	1.370	-0.456	-0.142	0.396
d-0	-2.632**	-0.749	-0.316	0.361
d+1	0.024	-0.746	0.443	0.410**
d+2	1.037	-0.631	-0.826	0.318
d+3	2.795**	-0.320	-0.302	0.285
d+4	2.057**	-0.092**	0.173	0.304
d+5	-0.092	-0.102**	0.671	0.379
d+6	-0.794	-0.190	-0.023	0.376
d+7	-1.036	-0.305	-0.829	0.284
d+8	-2.895**	-0.627	0.453	0.334
d+9	1.172	-0.497	-1.605**	0.156
d+10	0.290	-0.465	-0.295	0.123
d+11	1.073	-0.345	0.211	0.147
d+12	0.644	-0.274	0.686	0.223
d+13	1.803	-0.073	-0.033	0.219
d+14	-0.161	-0.091	0.466	0.271
d+15	-2.095	-0.324	0.589	0.336
d+16	0.111	-0.312	0.423	0.383
d+17	-2.584**	-0.599	-0.859	0.288
d+18	-1.034	-0.714	0.411	0.334
d+19	2.151**	-0.475	-1.171	0.204
d+20	-1.856	-0.681	-0.407	0.158
d+21	0.057	-0.675	-0.386	0.115
d+22	-1.344	-0.824	-2.192**	-0.128
d+23	-0.189	-0.845	-0.277	-0.159
d+24	1.234	-0.708	-0.878	-0.256
d+25	-0.611	-0.776	-0.053	-0.262
d+26	0.816	-0.685	0.728**	-0.181
d+27	-0.532	-0.744	-0.485	-0.235
d+28	-0.346	-0.783	0.255	-0.207
d+29	-2.401	-1.049	0.208	-0.184
d+30	-2.259	-1.300	-0.263	-0.213
d+31	-0.606	-1.368	0.197	-0.191
d+32	1.584	-1.192	0.109	-0.179
d+33	0.825	-1.100	0.377	-0.137
d+34	0.357	-1.060	0.226	-0.112
d+35	-1.149	-1.188	-0.383	-0.155

d+36	-0.158	-1.205	0.380	-0.112
d+37	0.460	-1.154	-0.027	-0.116
d+38	0.604	-1.087	0.168	-0.097
d+39	-0.563	-1.150	-0.467	-0.149
d+40	0.513	-1.093	-0.817	-0.239
d+41	0.035	-1.089	-1.008**	-0.351**
d+42	0.231	-1.063	0.341	-0.314**
d+43	0.069	-1.055	0.000	-0.314**
d+44	-2.036	-1.282	0.361	-0.273
d+45	-1.152	-1.410**	0.584	-0.209
d+46	0.247	-1.382**	0.592	-0.143
d+47	0.531	-1.323	0.286	-0.111
d+48	0.246	-1.296	-0.837	-0.204
d+49	-0.338	-1.333	-0.395	-0.248
d+50	0.423	-1.286	0.507	-0.192
d+51	-2.878**	-1.606**	0.480	-0.138
d+52	1.068	-1.488**	0.126	-0.124
d+53	3.718**	-1.074	-0.278	-0.155
d+54	-0.870	-1.171	-0.372	-0.197
d+55	-0.255	-1.199	-0.670	-0.271
d+56	0.018	-1.197	0.062	-0.264
d+57	0.224	-1.172	0.241	-0.237
d+58	0.381	-1.130	-0.449	-0.287
d+59	-0.201	-1.152	-0.455	-0.338**
d+60	0.125	-1.139	-0.266	-0.367**

Note: To conserve space, the actual AR and CAR values are not reported, but are available upon request. ** indicates 5% level of significance based on bootstrapped critical values.

Conclusion and implications

This paper is a contribution to the literature on the politics-asset markets nexus. We focus particularly on how political events, proxied by general elections, affect foreign exchange returns. Our study is conducted within an Event Study framework. Our main findings are as follows. First, the 13th General Election in Malaysia led to a mostly negative response from the foreign exchange market, with a sharper than expected Ringgit depreciation. Second, the 14th Malaysian General Election elicited a rather positive reaction from the foreign exchange market – there was far less depreciation of the Ringgit than what was previously believed. Third, both the 2011 and 2015 General Elections in Singapore were followed by positive

reactions from the market. Fourth, presidential elections in the Philippines produced contrasting results – the election of Benigno Aquino III was greeted with optimism, whereas his successor, Rodrigo Duterte received a less welcoming reception from the foreign exchange market, with the Philippine Peso depreciating more than the predicted amount in the market model.

These findings represent a contribution to the literature on political events and asset market responses, highlighted in the literature review section. Some practical implications follow from here. It can be seen from the tri-country experience in this paper that the market response to election outcomes depends very much on the reputation of the newly elected government. For Singapore, the governments formed by members of the PAP have always enjoyed good reputation historically – a re-election of the same political party simply means a continuity of policies that have benefited Singapore. In the same vein, political parties/candidates for election with poor reputation (the winner of the GE13 in Malaysia and the 2016 Presidential Election in Philippines) triggered negative reactions from the market.⁶ These findings would mean arbitrage opportunities for investors. Candidates with good track-record and spotless reputation would trigger either a larger than expected domestic currency appreciation or a smaller than expected domestic currency depreciation. Going long on the domestic currency prior to polling day may result in profit-taking. This suggestion is all the more valid given that foreign exchange markets in these countries take quite a long time to adjust in response to new events, suggesting market inefficiency in the manner of the Efficient Markets Hypothesis (EMH).

⁶ Malaysia had been ruled by the Barisan Nasional (BN) coalition for over 60 years with no break in continuity. The regime had become plagued by allegations of corruption and hence reforms are very much needed. The re-election of BN to power in GE13 meant that reforms would be shelved to preserve the status quo. The Duterte regime in Philippines is a similar case, with the newly elected President himself affected by a particular reputation for maverick behaviour.

Second, the fact that a political entity gets voted into power (voter popularity) does not automatically translate to acceptance by financial markets, which are more concerned about where the economy is heading. A populist leader may run counter to sound economic management. In this sense, fluctuations in exchange rates mirror closely the market sentiments in regard to whether the political leader is doing a good job. Since exchange rate movements are available on almost a real-time basis, exchange rate data offers more timely updates on the performance of the government of the day as compared to public opinion polls. A government could analyse exchange rate movements as a measure of how well they are performing.

References

- Adam, Michal, Kozinsky, Witold, Zielinski, Janusz, 2013. 'To what extent can central banks influence exchange rates with foreign exchange interventions? The case of Poland', BIS Papers No. 73
- Bowes, David R., 2018. 'Stock Market Volatility and Presidential Election Uncertainty: Evidence from Political Futures Markets', *Journal of Applied Business Research*, 34(1): 143-150
- Bialkowski, Jędrzej, Gottschalk, Katrin and Wisniewski, Tomasz P., 2008. 'Stock Market Volatility around National Elections', *Journal of Banking and Finance*, 32(9): 1941-1953
- Bin, Leo, 2015. 'Political Leadership Events and Stock Market Reactions: Evidence from the Greater China Region', *Journal of Accounting and Finance*, 15(8): 81-94.
- BIS (2016), Foreign Exchange Turnover in April 2016. Triennial Central Bank Survey, Bank for International Settlements
- BIS (2019), Global Foreign Exchange Market Turnover in 2019. Triennial Central Bank Survey, Bank for International Settlements
- Blot, C., Hubert, P. and Labondance, F. (2017). Monetary Policy and Asset Price Bubbles, *EconomiX Working Papers 2018-5*, University of Paris Nanterre, EconomiX.
- Brown, Stephen J. and Warner, Jerold B., 1985. 'Using daily stock returns: The case of event studies', *Journal of Financial Economics*, 14(1): 3.31.
- Chesney, Marc, Reshetar, Ganna and Karaman, Mustafa, 2011. 'The impact of terrorism on financial markets: An empirical study', *Journal of Banking and Finance*, 35(2): 253-267

- Chia, Ricky C.C., 2018. General Election and Political Uncertainty in the Malaysia Stock Market: Evidence from Stock Market Returns and their Volatility. Dissertation (PhD). Yokohama National University.
- Ding, Zhuangxin, Granger, Clive W. J. and Engle, Robert F., 1993. 'A Long Memory Property of Stock Market Returns and a New Model', *Journal of Empirical Finance*, 1: 83–106.
- Dong, F., Miao, J. and Wang, P. (2018). Meeting Papers 205, Society for Economic Dynamics
- Frenkel, Jacob A., 1981. 'Flexible Exchange Rates, Prices, and the Role of News: Lessons from the 1970s', *The Journal of Political Economy*, 89(4): 665-705.
- Gali, J., 2013. Monetary Policy and Rational Asset Price Bubbles, NBER Working Paper 18806
- Hou, Xiaohui and Li, Shuo, 2019. 'The price of official-business collusion: Evidence from the stock market reaction to "Hunting the Tigers" in China', *China Finance Review International*, forthcoming.
- IMF, 1997. World Economic Outlook: Crisis in Asia, Regional and Global Implication. Interim Assessment. Washington DC, December.
- Kliger, Doron and Gurevich, Gregory, 2014. *Event Studies for Financial Research: A Comprehensive Guide*, Palgrave Macmillan, US.
- Kollias, Christos, Papadamou, Stephanos and Stagiannis, Apostolos, 2011. 'Terrorism and capital markets: The effects of the Madrid and London bomb attacks', *International Review of Economics and Finance*, 20(4): 532-541
- Lean, Hooi-Hooi, 2010. 'Political General Election and Stock Performance: The Malaysian Evidence', in Mohd. Tahir Ismail (ed.), *Research in Mathematics and Economics*, USM Press: 111-120
- Liew, Venus K.S. and Rowland, Racquel, 2016. 'The effect of Malaysia general election on stock market returns', *SpringerPlus*, 5: 1-13
- Lobo, Bento J. and Tufte, David, 1998. 'Exchange rate volatility: Does politics matter?' *Journal of Macroeconomics*, 20(2): 351-365
- MacKinlay, A. Craig, 1997. 'Event Studies in Economics and Finance', *Journal of Economic Literature*, 35(1): 13-39
- Mishkin, F. 2001, *The Transmission Mechanism and the Role of Asset Prices in Monetary Policy*, NBER Working Paper 8617
- Mpofu Trust R. and Peters, Amos C., 2017. *The Impact of Monetary Policy Announcements and Political Events on the Exchange Rate: The Case of South Africa*. ERSA working paper 700
- Nadzri M.M.N. (2018) The 14th General Election, the Fall of Barisan Nasional and Political Development in Malaysia 1957-2018. *Journal of Current Southeast Asian Affairs*, 37(3), 139-171

Nazir, Mian S., Younus, Hassan, Kaleem, Ahmad and Zeshan, Anwar, 2014. 'Impact of political events on stock market returns: empirical evidence from Pakistan', *Journal of Economics and Administrative Sciences*, 30(1): 60-78

Wong, Wai-Yan and Hooy, Chee-Wooy., 2016. 'The Impact of Election on Stock Market Returns of Government-Owned Banks: The Case of Indonesia, Malaysia and Thailand', *Asian Journal of Business and Accounting*, 9(1): 31-58

Yusoff, Wan A., Salleh, Mohd F.M., Ahmad, Azlina and Idris, Fazli, 2015. 'Short-run Political Events and Stock Market Reactions: Evidence from Companies Connected to Malaysian bi-Power Business-political Elite', *Procedia - Social and Behavioral Sciences*, 211: 421-428