The Philippine Review of Economics
57(1): 71-100. DOI: 10.37907/4ERP0202J

By his words alone: the economic consequences of Rodrigo Duterte

Elain Brianne O. Balderas*
Alyanna Maria Belen S.D. Bernardo
University of the Philippines

Philippine President Rodrigo Duterte has gained worldwide notoriety for his foul-mouthed statements, particularly for his threats directed towards the nation's largest businesses and their powerful owners. Such pronouncements, which may be mistaken for shifts in government policy, may inadvertently provoke the business sector to react negatively. This paper examines whether President Duterte's negative business-related pronouncements have an appreciable effect on the Philippine Stock Exchange Index (PSEi). We apply an interrupted time series model on PSEi data for the period June 30, 2016 until December 31, 2019 to determine Duterte's impact on stock prices under six different intervention scenarios. Specifically, we test different classifications of business pronouncements—initial business pronouncements, anti-oligarch statements, personal attacks, and combinations of the three. The results show a significant relationship between Duterte's negative business-related pronouncements on the PSEi closing price, with the biggest changes occurring during the first times he brought up a particular issue or addressed a certain personality. We aggregated the losses for the period 2018-2019 resulting from these pronouncements. For the five pronouncements, we estimate the combined losses to rise from ₱1 million on the day they were made to ₱47 million within five days and, as the market continues to adjust, up to ₱441 million within ten days.

JEL classification: C23, G12, G14, G41
Keywords: political communication, stock markets, efficient market hypothesis, event studies

1. Introduction

History has borne witness to the catastrophic consequences of concentrated power. Even when extensive decision-making capabilities are democratically

* Please address all correspondence to elainbalderas@gmail.com.

accorded to a single person, the potential for disastrous consequences compels the average citizen to stand watch and demand accountability. There is a long-standing tradition among scholars and pundits to scrutinize the actions of such leaders. In his famous essay "The economic consequence of Mr. Churchill", John Maynard Keynes criticized then Britain's Chancellor of the Exchequer for his decision to return Britain to the gold standard [Keynes 1925]. While Winston Churchill went on to become Britain's Prime Minister for two terms, Keynes, remained vigilant in critiquing Churchill's policies until his death in 1946 [Arndt 2011].

The past few years have witnessed the rise of populist strongmen democratically elected to highest state positions—most notably Donald Trump in the United States, Jair Bolsonario in Brazil, and Rodrigo Duterte in the Philippines. Since then, these personalities consistently dominate international news headlines for what seems to be a penchant for swift, illiberal patterns of decision making and tactless, foul-mouthed statements that have shocked markets worldwide. In this study, we echo Keyne's warning bells by looking into Rodrigo Duterte's presidency to examine for tangible economic consequences of some of his seemingly inconsequential words.

Ever since his election in 2016, President Duterte has gained notoriety locally and internationally, not least for peppering his speeches with curses and crass statements in attempts to assert, ridicule, and make a point. Most notably, he has made statements that are directly anti-investor and anti-business, with seemingly little regard for their potential adverse economic effects. Many times he threatened to shut down a major broadcasting corporation (and has since succeeded) and to rescind the long-standing government contract of a private water utility company. He has directed his ire to some of the country's top business oligarchs such as the Ayalas, Ongpins and Manny Pangilinan. Insofar as such pronouncements fuel doubts about the stability of government regulations or contractual commitments, they potentially harm the business and financial sectors and could deter local and foreign investors from participating in the domestic stock market.

The importance of a healthy stock market to a country cannot be discounted. Levine and Zervos [1991] along with Bencivenga et al. [1995] find it a possible avenue towards growth, as the act of distributing company ownership shares fosters an efficient allocation of resources and the ability to pursue long-term projects. Greenwood and Smith [1997] also note that a well-developed stock market, by reducing the cost of mobilizing savings, can lead to an increase in the country's level of investments.

To date, the relevant research on the Philippine stock market is sparse. Among the few, Tang et al. [2007] find empirical evidence of the tendency of Philippine stock market indices and growth indicators to move together in the long run. As an emerging market, the Philippine financial sector is reportedly more susceptible to external shocks (Guigindo [2009]; Sy and Hofilena [2014]). Given these observations, one would assume a well-minded government chief executive would avoid dangerous rhetorics so as not to incite the financial market or provoke a sudden outflow of short-term capital.

Time and again, President Duterte has claimed that his cursing is "not a crime". He and his numerous spokepersons have made light of his past statements as jokes, and even offered the excuse that his outbursts were merely a manner of self-expression. Activists, religious leaders, and even international media have brought to wider attention the offensiveness of his slurs, and called his verbal slights conduct unbecoming of his exalted position. While these protests were provoked by the political and moral implications of Duterte's elocution, do his words also have an economic effect? Do they have an adverse consequence on the country's wealth?

In this study, we examine whether or not President Duterte's business-related pronouncements have had appreciable effects on the Philippine Stock Exchange Index (PSEi). We first tracked and classified his daily pronouncements in 2018 and 2019 and then, using interrupted time series model, tested for their effects on stock prices. Consistently across six different ways we classified his pronouncements, we find a statistically significant relationship between Duterte's negative business-related statements and the PSEi closing prices, especially on the days he first brought up a particular issue. We also estimated the resulting aggregate wealth losses in 2018 and 2019.

2. Review of related literature

The relationship of political communication to investor sentiment, and how it eventually contributes to stock price fluctuations is a relatively new topic in financial economics. The extant relevant literature is therefore limited. However, interest has started to grow in recent years following the election of strongmen around the world. Unlike typical high-ranking politicians who are often diplomatic and refined in their public demeanor, these strongmen can at times appear brash and uncouth. Commanding enormous political, military and fiscal powers, these strongmen can make pronouncements that many will inadvertently take as signals of impending changes in government policies.

This review will first delve into the theory and evidence of the efficient market hypothesis, and how its predictions have been validated for all sorts of shocks. We then review the evidence of how the stock market reacts to political events, with a focus on political communication, political news, and media coverage of the stock market.

2.1. The Efficient Market Hypothesis

The efficient market hypothesis is a theory in financial economics that states how asset prices immediately reflect all available information, thereby making a market efficient [Fama 1970]. This means that it would be impossible for an investor to predict future prices by examining previous ones, as it is assumed that the market has already incorporated all relevant information [Fama 1991].

Although the extensive empirical evidence on the efficient market hypothesis has been mixed, it has no rival hypothesis that is at least equally successful.

Fama's [1970] classification of semi-strong market efficiency pertains to how present stock prices represent both historical and recent information. This would imply short-term fluctuations in the market arise after an unanticipated event, which are information shocks that can be exploited as potential short-run arbitrage opportunities that allow market players to recalibrate their investment decisions. Due to its nature of daily trading, the stock market has been used historically to measure short-term reactions to information shocks. In this market, investors can quickly readjust their portfolios following the release of new critical information [Titan 2015].

In his analysis of the Philippine stock market for the period 1998-2014, Aquino [2006] has found that PSEi displayed weak-form efficiency, but incorporated information immediately. Chen and Diaz [2014] contend that PSEi reactions have relatively improved in terms of market efficiency after the 2008 Global Financial Crisis.

2.2. Political communication and asset pricing

Research interest on the relationship of political communication (especially those relating to a country's head of state) to asset prices is relatively recent. The available empirical findings on the topic are still limited. Most studies explore the effects of US President Donald Trump's tweets on the US stock market, which gained prominence in mainstream media after Bloomberg News created the *Volfefe Index* to measure abnormal returns on US Treasury Bonds every time the president tweeted [Alloway 2019]. Born et al. [2018], in assuming the efficient market hypothesis, found that the stock prices of publicly traded firms had a positive (negative) reaction to Trump's positive (negative) tweets in the short-term.

Moreover, Xun's [2017] work finds that, historically, presidential candidate speeches have demonstrated the capability to affect investor expectations, particularly in response to government-spending information. Tilmann's [2020] study analyzes all of Trump's avenues of communication pertaining to the Federal Reserve and showed that these statements seemed to affect long-run interest rates.

2.3. Media coverage and asset pricing

Media coverage plays the role of distributing relevant information and decreasing information asymmetries among corporations, governments and investors. Studies that examined the relationship between media coverage and stock returns report mixed evidence. Yang et al.'s [2019] findings in China suggest that companies that garner higher media attention tend to obtain higher sustainable stock returns; meanwhile, Fang and Peress [2009] disagree, and write that firms that receive fewer media coverage tend to expect higher returns than those that do in the United States. A recent analysis on media coverage, however,

has been more qualitative than quantitative; for example, Wu and Lin [2017] utilize textual analysis to assess the relationship of stock price fluctuations and how media is covered. They find that news that is positively (negatively) framed by the media tends to increase (decrease) stock trading volume.

Moreover, it has been noted that online and social media have increasingly influenced investor sentiment, while traditional news media has relatively less impact on stock market volatility [Jiao et al. 2018].

2.4. Political news and asset pricing

There is more supporting empirical evidence of the relationship between political news and the stock market, starting with Niederhoffer's [1971] proof of the relationship between stock market returns and headline news from two major US publications. In the case of emerging markets, Onder and Simga-Mugan's [2006] research in Argentina and Turkey finds that news undoubtedly affects stock price fluctuations in varying degrees. Suleman [2012] tests the relationship of news on political risk to the Karachi Stock Exchange and finds evidence that good information positively affects the Karachi Stock Exchange Index, and vice-versa. Bad news also poses a stronger effect on volatility than good news. Meanwhile, Zach's [2013] research testing the Israeli Stock Exchange shows that stock market returns vary more after political events than after trading days that had none.

3. Conceptual framework

In formulating our hypothesis, we employ Pastor and Veronesi's [2013] theoretical model for evaluating the relationship between political uncertainty and risk premia. According to their model, stock prices are predominantly affected by three types of shocks, which include "political shocks". Political shocks refer to political news that lead investors to assume potential policy changes and their implications, and then act on the news by adjusting their portfolios accordingly. The model assumes the political shocks are unrelated to economic ones, and as such, they induce investors to demand a compensation for the extra risks resulting from exclusively political events. The resulting "political risk premium" incorporated in asset prices are then the direct economic outcomes of such political events.

Further, Pastor and Veronesi [2013] contend that these so-called political risk premiums are context-dependent. While there would be a higher political risk premium demanded when there is more political uncertainty, clear political signals (e.g., if the president expresses plans to close down a major business) could also induce a negative reaction from investors. In general, stable economic conditions supported by a strong, predictable policy regime would reassure investors and thus lead to small political risk premium. Meanwhile, mixed political signals

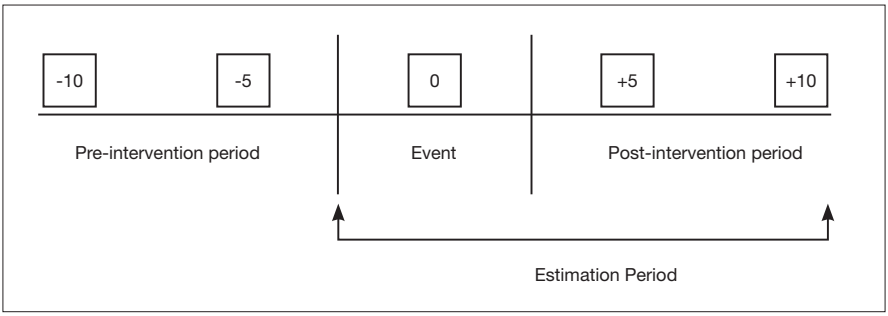
along with abrupt and drastic policy changes and weak economic conditions would discourage investors and thus lead to high political risk premium.

The available empirical evidence generally support the implications of Pastor and Veronesi's [2013] model. Kelly et al. [2014], in examining the effects of the political risk premium on expected events such as national elections, discover that options are generally priced more expensive the longer they live through different political events. Gao et al. [2012] find that risk premiums in the bond market are higher during recessions and close elections, and lower for states with restrictions on budget balances and financial disclosure.

Our framework also builds on Fama's [1970] semi-strong form of efficiency which assumes that stock prices instantaneously incorporate all historical and publicly available information. Investors adjust their portfolios in response to unanticipated events that can affect the market.

We consider Duterte's pronouncement as an unanticipated event and attempt to measure its repercussions (if any). To systematically do so, we employ an event study framework (Figure 1) that isolates the event, along with its pre- and post-intervention period. An unanticipated event is expected to disrupt the trend experienced by the market during the pre-intervention period and cause an anomaly that is manifested after the event happens. Isolating the event allows us to differentiate its effects from the market's general movement, and other factors that routinely cause its fluctuations.

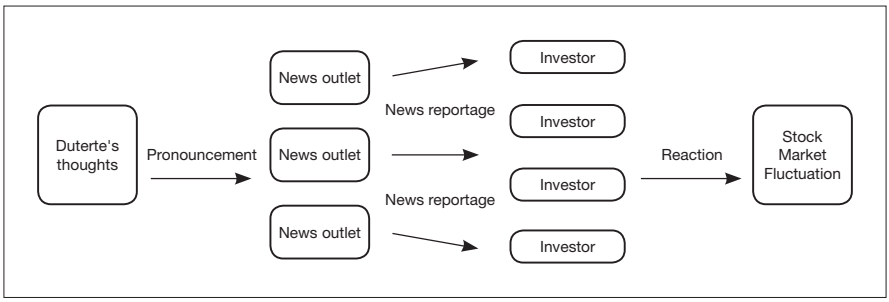
FIGURE 1. Event study framework



We keep in mind that Duterte's pronouncements undergo a process of information dissemination before it reaches investors. Figure 2 illustrates how Duterte's thoughts or ideas eventually affect asset prices. When the president expresses his ideas verbally, reporters and media outlets cover the event and often report his pronouncements as headline news. In doing so, they filter his speeches, consciously or not, through various methods. These may include highlighting some of the President's words or phrases, or topics and issues, or excluding some information they deemed unnecessary, or narrating the occasion that casts the president in a positive or negative light. Consequently, investors will receive the

news from different sources with their own slants and interpretations of the same event. Some investors will react negatively, others positively, and maybe a few will do nothing with their existing portfolios. In general, though, the stock market can be expected to be perturbed, and the stock prices can be expected to change. When that happens, a causal relationship between Duterte's pronouncements and the stock market can be said to exist.

FIGURE 2. Information transmission process



To justify the investor's seeming overreaction to political news, we draw from the burgeoning research in behavioral finance. This new field in financial economics builds on the key insights of Kahneman and Tversky's [1979] prospect theory, among others. According to this theory, people are more averse to losses than they like gains. When applied in finance, the theory implies that real-world investors are not like the perfectly rational, utility maximizers assumed in the efficient market hypothesis, but rather decision makers with emotional tendencies and cognition limitations. In the present study, we take it that the investors' reactions to unanticipated political events are driven by their loss-aversion and desire to obtain higher returns.

Moreover, pronouncements carry signals that depend not just on the message, but also on language expression and word use [Xun 2017]. Emotional outbursts, curses, and outright attacks on major businesses incite worries and could signal instability. Of course, language and expression are subjective phenomena that cannot be easily quantified; this study does not measure the emotion imbibed in Duterte’s speeches. Nonetheless, we keep in mind that his strong outbursts and threats can possibly upend investors' already fragile sentiments, and that would manifest as wider market fluctuations.

The main hypothesis to be tested here is that President Duterte's negative or adversarial pronouncements against business have an immediate negative impact on the Philippine stock market (as proxied by the Philippine Stock Exchange Index).

4. Methodology

4.1. Data

4.1.1. Philippine Stock Exchange Index

The PSEi, otherwise known as the Philippine Stock Exchange Index, is an index composed of the top 30 common stocks in the national market. PSEi daily data was sourced online from Yahoo Finance, as it features daily stock data worldwide spanning several years [Yahoo Finance 2019].

4.1.2. Duterte's business-related pronouncements

We collected information about Duterte's daily pronouncements for the period starting from his inauguration on 30 June 2016 until 31 December 2019. We did this initially through a combination of Google searches on notable keywords (i.e. "Duterte [date]"), and then cross-checked the reported news about Duterte against the available information in the websites of selected top news agencies. We adopt the following selection criteria: First, the pronouncement must have been specifically quoted and made into headlines. We therefore assume business players are more concerned with headline news than less prominent ones. Second, we only recorded whether or not Duterte made a negative business-related pronouncement regardless of the number of times he has spoken of the same or different topic on the same day.

The dates of these pronouncements were chosen selectively, but we made sure to test an almost equal number of statements for each year of Duterte's term to gain a general sampling of the effects within his administration. Pronouncements were also chosen based on their classification, guaranteeing a similar number of statements tested per category and per iteration.

Pronouncement data were collected online from major news outlets, namely Rappler, ABS-CBN News, GMA News, Inquirer.net, The Philippine Star, BusinessWorld, and The Manila Bulletin. Online news sites are assumed to be a source of information for active investors within the country. To corroborate this partially, we cite the results of a survey conducted in 2019 by the Social Weather Stations, to wit: around 21 percent of adult Filipinos (roughly 14 million) consume news mainly through Facebook.

4.1.3. Monetary and price variables

Aside from Duterte's pronouncements, the Philippine stock market is also influenced by the domestic monetary policy, inflation rate and global interest rates. To account for the direct effects of these factors, we introduce proxy indicators in the estimation model. To proxy for monetary policy, we use the daily reverse

repurchase rate (*Reverse Repurchase Rate*) of the Bangko Sentral ng Pilipinas (BSP). It is the predetermined rate at which the BSP borrows from banks with government securities as collateral and is an open market operation that the BSP primarily uses to control the money supply. Monetary policy is incorporated in the estimation model since when the BSP contracts the money supply it is often followed by a higher discount rate and lower expected returns. These in turn alter investor expectations and tend to deflate stock prices.

There is some empirical evidence of the significant relationship between money supply and stock prices [Bordo and Wheelock 2007]. In the Philippine context, Sy and Holifena [2014] find that an announcement of contractionary monetary policy decreases the PSEi index sharply in the short-term before the effect starts to taper off. They attribute the resulting stock market losses to the economic uncertainties induced by speculations about monetary policy, and the demonstrated sensitivity of Filipino investors to movements in policy rates.

Also obtained from the BSP, the daily inflation rate (*Inflation Rate*) is included since inflation reduces the purchasing power of investment returns. So, a rising inflation will discourage investments. When the BSP is unable to curve excessive inflation, this can also foster economic uncertainty.

Fama [1981] finds a significant positive relationship between inflation and stock market pricing in the United States, while Sathyanarayana and Gargesa [2018] report similar in seven out of 13 countries they assessed.

Since financial markets are globally integrated, global interest rates will also matter to the level and movement of domestic stock prices. We use daily US interest rates as a proxy (labelled as *Global Interest Rate*) and collect the information from the BSP. Sy and Holifena [2014] find that the Philippines market is sensitive to exogenous shocks. The BSP's inflation-targeting scheme also takes into consideration the US Federal Reserve's interest rate hikes and cuts to avoid excessive capital inflows and outflows [Tetangco 2014].

4.2. Interrupted time series model

In testing the effect of Duterte's pronouncements on stock prices, we examine for implications of the efficient market hypothesis: that is, unanticipated events such as Duterte's outbursts have a short-run effect on the market.

We examine our data using the interrupted time series analysis (ITSA) model, which is specifically designed to estimate the effects of exogenous interventions in a time-series framework. In applying the ITSA model, we considered six intervention scenarios and a single group of participants. Effectively, this group comprises all market players in the Philippine Stock Exchange during the period June 31, 2016 to December 31, 2019. We abstract from the fact that the size and composition of market participants may have changed during the period.

Following the exposition in Linden [2015], we estimate an equation of the following form:

$$Y_t = \beta_0 + \beta_1 T_t + \beta_2 X_t + \beta_3 X_t T_t + \boldsymbol{Z}_t \boldsymbol{\gamma} + \varepsilon_t \qquad (1)$$

where Y_t is the value of the dependent variable in time t, T_t is the length of time since the start of the study up to t, X_t is the intervention indicator, $\boldsymbol{Z}_t$ is a vector of control variables, β_0, β_1, β_2, β_3 and $\boldsymbol{\gamma}$ are parameters to be estimated, and ε_t is the error term. In our empirical implementation, the dependent variable is the closing price of the PSEi (or *PSEi close*), and X is a dummy indicator that is equal to 0 for all times before the intervention and 1 beginning the time of the intervention and thereafter. In the above equation, the starting level of *PSEi close* is represented by the intercept (β_0), the trends of the *PSEi close* before and after the intervention represented by the slopes β_1 and β_2, respectively, and the difference in the preintervention and postintervention trends is captured by β_3, Thus, the key parameters of interest are the estimates of β_2 and β_3, which capture the intervention's immediate and long-term effects, respectively. In this paper, an intervention is operationally defined as a particular business pronouncement of President Duterte.

4.3. Period of analysis and intervention scenarios

Our period of analysis starts from June 30, 2016 up to December 31, 2019. This period starts on the day Rodrigo Duterte was sworn to office until the end of 2019. The dataset contains 907 observations, which include only the formal stock trading days and exclude weekends and national holidays. Since Duterte's statements and stock prices are dated only for business calendar days, we transform them into a daily series by deleting the gaps due to weekends and holidays and thus make them amenable for time series analysis.

Applying the ITSA model to the data, we test for the effects of Duterte's business pronouncements under six intervention scenarios. Under each scenario, we estimate the effect on the changes in the PSEi closing prices. Table 1 shows the list of pronouncements.

TABLE 1. Pronouncements and Dates used in the study

Date	Intervention Scenarios	Subject of Pronouncement Made	Direct Quote
August 1, 2016	Scenario 2 and 6	Duterte's anti-oligarch sentiments	"Oligarchs…. get rich at the expense of our native land." [GOVPH 2016].
			"Destroy the oligarchs that are embedded in government. I'll give you an example, publicly – Ongpin, Roberto" [Ranada 2016]
August 3, 2016	Scenario 1, 3, and 4	Duterte calls out Roberto Ongpin as an oligarch	"Destroy the oligarchs that are embedded in government. I'll give you an example, publicly—Ongpin, Roberto" [Ranada 2016]
March 30, 2017	Scenario 3, 5 and 6	Duterte tells 'rude' media: Beware of 'karma'	"You stink, you Prietos, Lopezes. You're full of shit." [Ranada, 2017]
September 27, 2017	Scenario 3	Duterte to Lucio Tan: Pay PAL arrears	"Bayaran mo. Pag hindi mo bayaran, eh di sarhan ko.' Wala nang airport. So what?" [Corrales, 2017]
August 3, 2018	Scenario 2 & 5	Duterte threatens ABS-CBN franchise renewal	"But if I had my way, I would not give it [the franchise] back to you," [Ranada, 2018]
April 17, 2019	Scenario 1, 2 & 4	Duterte threatens Manila Water and Maynilad over price hike Duterte	"Why do you have to cause problem for the people when there are things that you can do at once" [CNN PH, 2019]
October 28, 2019	Scenario 1	Duterte slams Lopez group anew for past DBP loans	"The Lopez Group of Companies never paid a single centavo." [ABS-CBN News, 2019]
September 18, 2019	Scenario 1, 3, & 5	Duterte warns of 'takeover' amid looming water crisis	"I will go and operate it myself. I will take over and I will direct what to do." [Ranada, 2019]
December 3, 2019	Scenario 2	Duterte on ABS Franchise Renewal	"Ang inyong franchise mag-end next year [Your franchise will end next year]. If you are expecting na ma-renew 'yan [a renewal], I'm sorry. You're out." [CNN PH, 2019]

The six intervention scenarios are as follows:

- Initial Pronouncement
  This scenario considers the negative business pronouncements that are directed to the business sector at large. The test therefore allows us to examine how the President's negative remark about the business sector can impact the stock market.
- Against Oligarch
  This scenario shows the effects of Duterte's pronouncements that are considered here as "anti-oligarch". His "anti-oligarch" statements are based on instances when he specifically referred to some business owners or big business companies as "oligarchs", or when he singled out particular industries dominated by a few players (such as water utilities and broadcasting).

- Personal Attack
  This intervention scenario shows the effects of Duterte's pronouncements that are considered here as "personal attacks". For this study, personal attacks refer to Duterte's statements that either mention the names of the business leaders or talk about them negatively. The business leaders he has famously named in his tirades include Roberto Ongpin, Lucio Tan, the Prieto family, and the Lopez family.
- Interaction Scenarios
  To test whether a combination of Duterte's pronouncement would also have effects, we examine three "interaction" scenarios, namely: interactions between initial business pronouncements and statements against oligarchs, between initial business pronouncements and personal attacks, and between those made against oligarchs and personal attacks.

4.4. Regression variables

The names, definitions, and summary statistics of our variables are shown in Table 2. Corresponding to the six interventions scenarios mentioned above, the table includes six dummy variables, namely: *Initial Pronouncement, Anti-Oligarch, Personal Attack, Initial Pronouncement & Anti-Oligarch Interaction, Initial Pronouncement & Personal Attack Interaction,* and *Anti-Oligarch & Personal Attack Interaction.* The list also includes lagged values, namely: *Lagged_Anti-Oligarch, and Lagged_Personal Attack.* The other indicators are *Reverse Repurchase Rate* (for BSP's reverse repurchase rate), *Inflation Rate* (for daily inflation rate), and *Global Interest Rate* (for the US daily interest rate).

TABLE 2. Summary statistics of the regression variables

Variable	Observations	Mean	Std. Deviation	Minimum	Maximum
PSEi close	902	7785.378	434.6617	6563.67	9058.62
PSEi close detrended	902	7785.443	425.6489	6696.965	8946.499
Initial Pronouncement	902	0.0321508	0.1764983	0	1
Anti-Oligarch	902	0.0266075	0.1610227	0	1
Personal Attack	902	0.0088692	0.0938098	0	1
Reverse Repurchase Rate	902	3.59867	0.7083562	3	4.75
Inflation Rate	902	3.270621	1.536168	0.8	6.7
Global Interest Rate	902	4.5902	0.6785543	3.5	5.5
Lagged_Anti-Oligarch	902	0.0266075	0.1610227	0	1
Lagged_Personal Attack	902	0.0088692	0.0938098	0	1
Initial Pronouncement & Anti-Oligarch Interaction	902	0.0266075	0.1610227	0	1
Initial Pronouncement & Personal Attack Interaction	902	0.0088692	0.0938098	0	1
Anti-Oligarch & Personal Attack Interaction	902	0.0088692	0.0938098	0	1

4.5. Estimation issues

We detrend our dependent variable *PSEi_close* to rid it of extreme values and other unrelated trends in the data. *PSEi_close* is detrended through the computation of a simple moving average over the period of two trading weeks or ten days. The calculations are done in STATA using Interrupted Time Series Analysis (ITSA) and *Posttrend* was used to determine the effects and price trend estimates following Duterte's statements. We perform the Cumby-Huizinga test to examine for serial correlation in the time series, particularly among lagged values. The *varsoc* command through the lowest Akaike information criterion was used to determine the optimal-lag order selection. Due to the detrending and that some variables are lagged, the estimation sample is reduced to 902 observations.

5. Analysis of results

In this section, we discuss the test results that indicate the impact of President Duterte's business pronouncements on the stock market through the changes in the PSEi closing prices. We test 12 iterations in total: six separate intervention scenarios and their detrended versions. All 12 tests include the same control variables.

Scenario 1: Initial Business Pronouncements

Table 3 shows the results of Duterte's initial business pronouncements between August 2016 and April 2019. On August 3, 2016, the results show a stark decrease post-intervention of 586 points, as well as a decrease of 0.56 point overall as a trend post-intervention. The results show similar magnitudes in regression values for detrended prices. Overall, we can see that a negative business pronouncement by Duterte has significant and negative effects on stock prices immediately after a single intervention. The initial pronouncement dummy in both iterations (using close and detrended close) is shown to be insignificant in the regression.

On October 28, 2019, Duterte's statement led to an increase of 571 points. There is also a relative increase of 10 points compared to the former price trend and an increase post-intervention of 7.68 points. The results using detrended PSEi close show similar magnitudes. The initial pronouncement dummy, in this case, is significant in the detrended iteration.

On September 18, 2019, there is a 292-point decrease after the intervention, and a relative decrease of 14.44 points compared to the former price trend. The post-intervention trend, in this case, is insignificant, but significant in the detrended version. There is a very small difference with the detrended values. For both PSEi close and its detrended version, the initial dummy pronouncement is insignificant.

On April 17, 2019, the pre-intervention trend, post-intervention trend, and the difference between them are insignificant in this iteration. After the intervention, we see an instant decrease of 366 points. The results of the detrended iteration show that the trends are significant. The initial pronouncement dummy remains insignificant in both iterations of this test.

TABLE 3. Scenario 1: Initial pronouncement regression results

	August 3, 2016		October 28, 2019		September 18, 2019		April 17, 2019	
Variables	PSEi close	PSEi close detrended	PSEi close	PSEi close detrended	PSEi close	PSEi close detrended	PSEi close	PSEi close detrended
Initial Pronouncement	-54.21	-74.56	-90.44	-102.19**	-61.47	-70	-3.61	-9.08
	(54.39)	(53.91)	(51.76)	(51.25)	(51.01)	(51.11)	(58.78)	(58.12)
Reverse Repurchase Rate	-747.83***	-745.80***	-775.00***	-771.05***	-767.20***	-760.37***	-687.43***	-681.86***
	(64.58)	(61.49)	(64.6)	(61.47)	(64.39)	(61.02)	(61.45)	(57.78)
Inflation Rate	-173.08***	-164.89***	-217.81***	-201.99***	-215.85***	-197.85***	-234.08***	-227.79***
	(13.24)	(12.95)	(16.07)	(15.83)	(16.09)	(15.76)	(17.53)	(17.23)
Global Interest Rate	1160.39***	1092.31***	1711.48***	1557.93***	1601.03***	1374.05***	813.49***	419.40*
	(91.36)	(82.7)	(135.71)	(127.81)	(164.55)	(160.75)	(254.86)	(249.6)
Pre-Intervention Trend	13.87***	18.27***	-2.06***	-1.68***	-1.75***	-1.56***	0.77	1.99***
	(2.08)	(1.83)	(0.25)	(0.25)	(0.36)	(0.38)	(0.75)	(0.76)
Immediate Effect	-586.06***	-577.83***	571.61***	398.72***	-292.92***	-340.92***	-366.46***	-318.22***
	(60.17)	(57.08)	(115.51)	(113.72)	(84.28)	(94.15)	(67.24)	(61.59)
Difference (Pre- and Post-Intervention Trends)	-14.44***	-18.69***	9.74***	6.57***	16.10***	13.26***	-2.4	-5.54**
	(2.08)	(1.82)	(3.12)	(3)	(2.07)	(2.06)	(2.09)	(2.08)
Post-Intervention Trend	-0.56***	-0.42***	7.68**	8.25***	14.35	12.10***	-1.62	-3.55***
	(0.16)	(0.14)	(3.05)	(3.06)	(1.81)	(1.8)	(1.38)	(1.34)
Constant	6186.77***	6453.40***	4326.74***	4782.72***	4669.81***	5361.65***	7061.97***	8341.51***
	(218.32)	(196.24)	(349.47)	(338.6)	(461.45)	(467.54)	(801.52)	(798.59)
F-statistic	59.84	92.48	46.77	49.13	48.4	49.05	43.84	48.71
Prob>*F*	0	0	0	0	0	0	0	0

***significant at the 1-percent level, **significant at the 5-percent level, *significant at the 10-percent level
Figures in parenthesis are standard errors.

Scenario 2: Anti-Oligarch Statements

The results of Duterte's statements against oligarchs between August 2016 and December 2019 are presented in Table 4. On August 1, 2016, the results show a decrease of 560 points after the intervention, as well as a decrease of 0.58 point overall as a trend post-intervention. This results in a relative decrease of 15.19 points compared to the former price trend. The detrended values exhibit similar results.

On October 3, 2018, we see an immediate price decrease of 188.40 points, followed by an overall decrease in the price trend of 3.90 points daily. The same results are found using detrended prices, only differing slightly in value but identical in terms of significance.

On April 17, 2019, both post- and pre-intervention trends, as well as their difference produce insignificant results. Despite this, post-Duterte's statement, there is a price decrease of 366.72 points. Using detrended PSEi prices, all the trend-related variables become significant. The control variables are still significant in the model.

On December 3, 2019, pre-intervention and post-intervention trends, together with their differences are insignificant to the model. In addition to this, Duterte's statement leads to an increase of 476 points. Pre-intervention trends become significant in the detrended variables, while the other two trend variables remain insignificant.

For all four dates, the dummy variable *Anti-Oligarch* is insignificant.

TABLE 4. Scenario 2: Against oligarch statements regression results

Variables	August 1, 2016		August 3, 2018		April 17, 2019		December 3, 2019	
	PSEi close	PSEi close detrended	PSEi close	PSEi close detrended	PSEi close	PSEi close detrended	PSEi close	PSEi close detrended
Anti-Oligarch	-6.8	-7.52	48.25	64.18	10.52	28.69	-76.78	-65.75
	(66.43)	(65.54)	(72.89)	(72.07)	(66.4)	(66.41)	(59.71)	(60.54)
Reverse Repurchase Rate	-743.97***	-741.95***	-330.30***	-256.60***	-687.37***	-681.75***	-739.96***	-741.40***
	(64.43)	(61.35)	(103.23)	(94.43)	(61.4)	(57.74)	(63.31)	(60.54)
Inflation Rate	-174.15***	-165.97***	-345.63***	-364.71***	-234.21***	-228.12***	-198.49***	-184.29***
	(13.26)	(12.99)	(35.18)	(33.29)	(17.52)	(17.24)	(14.61)	(14.33)
Global Interest Rate	1163.39***	1096.80***	459.91***	262.63*	812.39***	415.95*	1353.26***	1245.24***
	(91.91)	(83.13)	(155.89)	(145.17)	(254.87)	(249.65)	(119.69)	(109.61)
Pre-Intervention Trend	14.60***	19.13***	2.43***	3.19***	0.78	2.01***	-1.15	-0.88***
	(2.52)	(1.31)	(0.59)	(0.57)	(0.75)	(0.76)	(0.23)	(0.22)
Immediate Effect	-560.87***	-541.25***	-188.40*	-247.78**	-366.72***	-318.86***	476.12***	404.32***
	(63.1)	(54.28)	(117.14)	(106.98)	(67.12)	(61.45)	(93.83)	(87.92)
Difference (Pre- and Post-Intervention Trends)	-15.19***	-19.59***	-6.32***	-7.45***	-2.42	-5.60***	-0.57	-3.4
	(2.52)	(1.3)	(1.25)	(1.2)	(2.1)	(2.08)	(3.66)	(2.94)
Post-Intervention Trend	-0.58***	-0.45***	-3.90**	-4.26***	-1.64	-3.59***	-1.72	-4.37
	(0.16)	(0.15)	(0.74)	(0.7)	(1.39)	(1.35)	(3.62)	(2.9)
Constant	6159.94***	6422.63***	7331.28***	7799.23***	7065.03***	8351.53***	5396.70***	5721.64***
	(220.94)	(197.9)	(433.84)	(420.71)	(801.68)	(798.88)	(311.55)	(290.71)
F-statistic	55.34	90.71	54.18	66.9	43.79	48.73	43.88	47.07
Prob>*F*	0	0	0	0	0	0	0	0

***significant at the 1-percent level, **significant at the 5-percent level, *significant at the 10-percent level
Figures in parenthesis are standard errors.

Scenario 3: Personal Attack Statements

Table 5 shows the estimated impacts of Duterte's statements of personal attack made between August 2016 and September 2019. On August 3, 2016, we see a decrease of 570 points post-intervention, with the trend being at -0.57 point following Duterte's remark. After August 3, we see a decrease of 561 points, and a post-intervention decrease of 0.44 point. The control variables on the other hand show significant results.

On March 30, 2017, despite the pronouncement that day, pre-intervention prices increased by 846 points. Even with the increase, there was a 0.69 -point decrease in prices post-intervention.

On September 27, 2017, we see an increase of 674 points immediately following Duterte's remarks, contrary to the expectation. Despite this, we see a post-intervention decrease of 2.25 points daily, and an overall 3.32 -point decrease in pre- and post-intervention trends. Similar results are shown in the iteration using detrended values as well.

On September 18, 2019, there is a drop of 298.76 points immediately following intervention. Despite this price decrease, there is a post-intervention increase of 14.27 points. Regressions utilizing detrended PSEi close show similar results, with the exception of a significant pre-intervention trend. In addition to this, the immediate price decrease following the September 18th statement results in a much larger drop compared to that of the regular PSEi close regression—a 346.38-point price decrease.

For all three dates, the three dummy variable *Personal Attack* is insignificant.

TABLE 5. Scenario 3: Personal attack statements regression results

Variables	August 3, 2016		March 30, 2017		September 27, 2017		September 18, 2019	
	PSEi close	PSEi close detrended	PSEi close	PSEi close detrended	PSEi close	PSEi close detrended	PSEi close	PSEi close detrended
Personal Attack	-33.2	-64.42	-59.51	-76.39	6.9	-17.24	-16.4	-41.89
	(75.57)	(76.6)	(88.37)	(80.98)	(86.55)	(76.13)	(76.03)	(77.92)
Reverse Repurchase Rate	-747.94***	-746.05***	-510.50***	-553.67***	-165.33**	-175.44**	-766.76***	-760.06***
	(64.68)	(61.6)	(78.38)	(77.72)	(74.65)	(69.82)	(64.5)	(61.08)
Inflation Rate	-173.11***	-164.90***	-163.96***	-152.45***	-256.61***	-246.59***	-215.56***	-197.45***
	(13.23)	(12.95)	(12.67)	(12.3)	(15.76)	(15.26)	(16.12)	(15.81)
Global Interest Rate	1163.98***	1096.94***	763.56***	2748.98***	509.13***	443.49***	1596.79***	1369.05***
	(91.4)	(82.7)	(100.25)	(95.32)	(118.35)	(108.13)	(164.82)	(161.09)
Pre-Intervention Trend	13.38***	16.67***	-4.87***	-5.40***	1.07**	1.14**	-1.74	-1.14***
	(2.15)	(1.66)	(0.51)	(0.54)	(0.48)	(0.48)	(0.36)	(0.38)
Immediate Effect	-570.50***	-561.12***	846.16***	835.51**	674.60***	705.83***	-298.76***	-346.48***
	(60.83)	(55.91)	(78.72)	(83.23)	(60.76)	(59.84)	(82.9)	(93.03)
Difference (Pre- and Post-Intervention Trends)	-13.95***	-17.10***	4.19***	4.91***	-3.32***	-3.23***	16.00***	13.14***
	(2.15)	(1.66)	(0.54)	(0.57)	(0.5)	(0.51)	(2.04)	(2.03)
Post-Intervention Trend	-0.57***	-0.44***	-0.69**	-0.49***	-2.25***	-2.09***	14.27***	11.99***
	(0.16)	(0.14)	(0.14)	(0.13)	(0.23)	(0.21)	(1.77)	(1.76)
Constant	6178.51***	6445.76***	7007.64***	7186.05***	6594.17***	6836.73***	4680.40***	5374.94***
	(217.6)	(195.24)	(190.62)	(174.03)	(255.98)	(228.57)	(462.7)	(469.01)
F-statistic	57.28	76.86	63.7	65.86	65.44	67.39	48.16	48.9
Prob>*F*	0	0	0	0	0	0	0	0

***significant at the 1-percent level, **significant at the 5-percent level, *significant at the 10-percent level
Figures in parenthesis are standard errors.

Scenario 4: Interaction between Initial Pronouncements and Anti-Oligarch statements made by Duterte

As shown in Table 6, on August 1, 2016, there is an immediate price drop of 567.84 points, followed by a price trend decrease of 0.61 point daily following Duterte's statements about business and oligarchs. For the dummy variables representing his statements, we see that all three show inconclusive and insignificant results. Regressing against the detrended closing prices, we see similar results of a price drop and price trend decrease. The three dummy variables remain insignificant.

On August 3, 2018, the immediate effect of this intervention is insignificant but still results in a significant post-intervention decrease of 4.05 points daily. We see similar results using detrended close prices, with the exception of the immediate effect, and the initial pronouncement and anti-oligarch interaction dummy. In this iteration, the dummy is significant. It is also seen that following the pronouncement made that day, there is a 251.14-point decrease.

On April 17, 2019, the pre-intervention trend, post-intervention trend, and the difference between them are insignificant. Despite this, there is a 362.33-point price drop after the statement was made. Using detrended prices, we see that the initial pronouncement and interaction dummy are now significant. Trends are also significant in this iteration, with a pre-intervention increase of 2.01 points daily and a post-intervention trend of a decrease of 3.67 points. The rest of the variables show similar values and significance.

TABLE 6. Effects of the interaction between initial pronouncement and anti-oligarch statements

	August 1, 2016		August 3, 2018		April 17, 2019	
Variables	PSEi close	PSEi close detrended	PSEi close	PSEi close detrended	PSEi close	PSEi close detrended
Initial Pronouncement	-178.78	-288.93	-91.75	-195.66	-83.81	-196.33***
	(98.33)	(56.41)	(128.32)	(86.17)	(111.29)	(62.26)
Lagged_Anti-Oligarch	73.35	53.57	116.64	106.64	84.89	76.86
	(71.12)	(66.55)	(71.39)	(66.86)	(71.19)	(67.26)
Initial Pronouncement & Anti-Oligarch Interaction	168.63	278.3	139.82	225.59*	94.73	221.55**
	(115.61)	(83.41)	(144.54)	(109.26)	(127.03)	(87.73)
Reverse Repurchase Rate	-746.61***	-745.02***	-327.67***	-256.24***	-691.37**	-684.31**
	(64.66)	(61.42)	(103.21)	(94.43)	(61.8)	(57.9)
Inflation Rate	-174.64***	-166.44***	-351.10***	-366.53***	-234.53***	-228.19***
	(13.22)	(12.86)	(35.14)	(33.1)	(17.52)	(17.18)
Global Interest Rate	1174.73***	1107.44***	445.26***	273.71*	773.53***	421.48*
	(92.79)	(83.42)	(144.43)	(145.81)	(256.07)	(249.26)
Pre-Intervention Trend	15.03***	19.13***	2.55***	3.19***	0.94	2.01***
	(4.94)	(1.31)	(0.59)	(0.57)	(0.76)	(0.76)
Immediate Effect	-567.84***	-544.47***	-185.49	-251.14**	-362.33***	-312.47***
	(70.68)	(54.14)	(116.95)	(106.36)	(67.15)	(60.98)
Difference (Pre- and Post-Intervention Trends)	-15.64***	-19.60***	-6.60***	-7.49***	-2.89	-5.68***
	(4.93)	(1.31)	(1.26)	(1.2)	(2.12)	(2.07)
Post-Intervention Trend	-0.61***	-0.47***	-4.05**	-4.30***	-1.95	-3.67***
	(0.16)	(0.15)	(0.74)	(0.7)	(1.39)	(1.34)
Constant	6197.82***	6395.18***	7374.40***	7757.59***	7196.31***	8336.15***
	(225.95)	(199.01)	(435.38)	(421.31)	(810.61)	(797.49)
F-statistic	42.78	72.3	42.51	53.91	34.6	38.79
Prob>*F*	0	0	0	0	0	0

***significant at the 1-percent level, **significant at the 5-percent level, *significant at the 10-percent level
Figures in parenthesis are standard errors.

Scenario 5: Interaction between Initial Pronouncements and Personal Attack statements made by Duterte

As shown in Table 7, immediately after Duterte's statement on August 1, 2016, there was a huge price drop of 588.95, and subsequently a price trend decrease of 0.57 points daily. Moreover, the global interest rates increased the stock prices by 1161.22 points, while reverse repurchase rates and inflation rates decreased stock prices by 747.59 points and 173.21 points, respectively. The three dummy variables representing Duterte's buiness pronouncements and personal attacks are insignificant in this iteration. Using detrended close prices in the second iteration, we see results of similar value and magnitude. The control variables show the same results as seen from using untreated prices.

On August 1, 2016, after Duterte's statements, there was a price decrease of 301 points, but a trend increase of 14.34 points daily. Pre- and post-intervention trends result in a difference of 16.05 points. Similar to the results derived using an earlier date, global interest rates contributed to a price increase, while reverse repurchase and inflation rates both contributed to a decrease. The dummy variables for Duterte's stamenents still show insignificant results. There is a minimal difference between the two iterations in the detrended version.

On March 30, 2017, the pre-intervention trend results in insignificant estimates. Despite Duterte's statement, there seems to be an immediate increase of 849.94 points to close prices, but a decrease in the price trend of 0.68 points. The three dummy variables are still insignificant in this iteration. In the second iteration using detrended data, the results are similar, except for pre-intervention trends. In this case, it is significant, and shows a 5.40 point decrease daily, before Duterte's statement.

For all three dates, the three dummy variables were insignificant.

TABLE 7. Effects of the interaction between initial pronouncement and personal attack statements

	August 3, 2016		September 18, 2019		March 30, 2017	
Variables	PSEi close	PSEi close detrended	PSEi close	PSEi close detrended	PSEi close	PSEi close detrended
Initial Pronouncement	-67.32	-79.12	-82.34	-81.86	-16.67	-38.76
	(66.86)	(66.2)	(62.35)	(62.99)	(52.57)	(48.98)
Lagged_Personal Attack	64.75	17.34	67.12	24.74	22.14	-7.28
	(97.76)	(99.38)	(103.21)	(104.11)	(91.49)	(95.73)
Initial Pronouncement & Personal Attack Interaction	32.93	12.59	65.01	37.5	-41.95	-38.57
	(95.22)	(95.82)	(94.34)	(97.13)	(97.16)	(89.41)
Reverse Repurchase Rate	-747.59***	-745.72***	-768.32***	-760.17***	-512.69**	-554.58**
	(64.65)	(61.57)	(64.62)	(61.09)	(78.72)	(77.82)
Inflation Rate	-173.21***	-164.93***	-215.15***	-198.01***	-164.02***	-152.41***
	(13.26)	(12.96)	(16.22)	(15.78)	(12.69)	(12.31)
Global Interest Rate	1161.22***	1092.51***	1592.78***	1374.40*	766.94***	748.00*
	(91.4)	(82.72)	(164.62)	(161)	(100.67)	(95.18)
Pre-Intervention Trend	13.94***	18.36***	-1.71***	-1.16***	-4.98	-5.40***
	(3.99)	(2.06)	(0.36)	(0.38)	(0.53)	(0.54)
Immediate Effect	-588.95***	-579.09***	-301.08***	-342.75**	849.94***	834.32***
	(66.06)	(58.76)	(83.56)	(93.62)	(79.64)	(83.5)
Difference (Pre- and Post-Intervention Trends)	-14.51***	-18.79***	16.05***	-13.30***	4.30***	4.92***
	(3.98)	(2.05)	(2.07)	(2.06)	(0.56)	(0.57)
Post-Intervention Trend	-0.57***	-0.42***	14.34**	12.14***	-0.68***	-0.48***
	(0.16)	(0.15)	(1.8)	(1.8)	(0.14)	(0.13)
Constant	6253.57***	6452.01***	4685.80***	5359.88***	6990.79***	7193.80***
	(221.79)	(196.55)	(464.41)	(468.37)	(192.25)	(174.7)
F-statistic	46.52	73.15	37.92	38.32	49.21	51.13
Prob>*F*	0	0	0	0	0	0

***significant at the 1-percent level, **significant at the 5-percent level, *significant at the 10-percent level
Figures in parenthesis are standard errors.

Scenario 6: Interaction between Anti-Oligarch and Personal Attack statements made by Duterte

We test the date March 30, 2017 in this intervention scenario. As shown in Table 8, following Duterte's statement, we see an increase of 851 points, contrary to our expectations. Despite this, there is a price decrease of 0.69 point post-intervention. Regression using detrended prices shows the same results in terms of similar values and magnitudes.

The three dummy variables were insignificant in both untreated and detrended iterations.

TABLE 8. Effects of the interaction between anti-oligarch and personal attack statements

	March 30, 2017	
Variables	PSEi close	PSEi close detrended
Anti-Oligarch	12.43	22.82
	(58.85)	(51.95)
Lagged_Personal Attack	16.9	-18.84
	(91.01)	(94.69)
Anti-Oligarch & Personal Attack Interaction	-70.56	-99.1
	(101.45)	(92.01)
Reverse Repurchase Rate	-512.04***	-553.11***
	(78.58)	(77.68)
Inflation Rate	-164.05***	-152.46***
	(12.68)	(12.31)
Global Interest Rate	767.60***	749.20***
	(100.65)	(95.02)
Pre-Intervention Trend	-4.98***	-5.39***
	(0.53)	(0.54)
Immediate Effect	850.85***	836.22***
	(79.48)	(83.18)
Difference (Pre- and Post-Intervention Trends)	4.29***	4.90***
	(0.56)	(0.57)
Post-Intervention Trend	-0.69***	-0.49***
	(0.14)	(0.13)
Constant	6985.38***	7182.45***
	(192.64)	(196.55)
F-statistic	49.21	51.26
Prob>*F*	0	0

***significant at the 1-percent level, **significant at the 5-percent level
*significant at the 10-percent level
Figures in parenthesis are standard errors.

Under the current intervention scenario, the reverse repurchase rate and inflation rate decrease the PSE closing price, while US interest rates increase it.

6. Discussion and Analysis

Using interrupted time series analysis, we confirm our hypothesis that Duterte's anti-business pronouncements indeed negatively impact stock prices. Throughout the six intervention scenarios and out of nine dates tested, five show immediate price decreases following President Duterte's statements on August 1 and 3 of 2016, August 3 of 2018, and April 17 and September 18 of 2019. The immediate effects are stark, ranging from 200-600-point decreases in PSEi close prices. Interestingly, of the four other dates when Duterte made a statement, only October 28, 2019 does not show any price drop. The three other dates—December 3, 2019; March 20, 2017; and September 27, 2017—also do not show price decreases immediately after the pronouncements, but instead, show a decrease in price trends post-intervention. The overall effects are summarized in Tables 9 and 10 below. We take a closer look at the specific dates and pronouncements tested in the model to shed more light on the effects they influence. On August 1st of his first year in office, the president made an announcement calling out oligarchs for "…getting rich at the expense of our native land" [GOVPH 2016]. Immediately after the statement was made, we see a drop of around 570 points, as well as a

decrease in price trends overall. We see the same trend on August 3rd, where the president targeted Roberto Ongpin, a Filipino businessman, and mentioned him in a plan to destroy the oligarchs embedded in the government [Ranada 2016]. In this case, prices dropped by around the same amount, followed by drops in price trends. Since the two statements were made in 2016, the president uttered them early in his term. The novelty of these statements could explain why led to price decreases that are greater than those that followed his later statements, as indicated by the results of the nine intervention dates tested here.

TABLE 9. Summary of regression variables Part 1 (significance & effects)

	August 3, 2016		October 28, 2019		September 18, 2019		April 17, 2019		August 1, 2016	
Variables	PSEi close	PSEi detrended	PSEi close	PSEi detrended	PSEi close	PSEi detrended	PSEi close	PSEi detrended	PSEi close	PSEi detrended
Initia Pronouncement	—	—	—	(—)	—	—	—	—	—	—
Anti-Oligarch							+	+	—	—
Personal Attack	—	—			—	—				
Lagged_Anti-Oligarch							+	+	+	+
Lagged_Personal Attack	+	+			+	+				
Initial Pronouncement & Anti-Oligarch Interaction							+	(+)	+	+
Initial Pronouncement & Personal Attack Interaction	+	+			+	+				
Anti-Oligarch & Initial Pronouncement Interaction										
Reverse Repurchase Rate	(—)	(—)	(—)	(—)	(—)	(—)	(—)	(—)	(—)	(—)
Inflation Rate	(—)	(—)	(—)	(—)	(—)	(—)	(—)	(—)	(—)	(—)
Global Interest Rate	(+)	(+)	(+)	(+)	(+)	(+)	(+)	(+)	(+)	(+)
Pre-Intervention Trend	(+)	(+)	(—)	(—)	(—)	(—)	+	(+)	(+)	(+)
Immediate Effect	(—)	(—)	(+)	(+)	(—)	(—)	(—)	(—)	(—)	(—)
Difference (Pre- and Post-Intervention Trends)	(—)	(—)	(+)	(+)	(+)	(+)	—	(—)	(—)	(—)
Post- Intervention Trend	(—)	(—)	+	(+)	+	(+)	—	(—)	(—)	(—)
Constant	(+)	(+)	(+)	(+)	(+)	(+)	(+)	(+)	(+)	(+)

( ) significant at the 10 percent level
+ indicates a price increase
— indicates a price decrease

Three other statements made later on in Duterte's presidency show immediate decreases in price as well post-intervention. On August 3, 2018, Duterte stated that if it were up to him, he would not renew the franchise of a major telecommunication company, ABS-CBN [Ranada 2018]. This particular remark would begin his many tirades and further pronouncements on the subject. Following his remark, there was an immediate dip of 188 points in the market. A bigger dip of 388 points happened on April 17, 2019 when he threatened Manila Water and Maynilad [CNN Philippines 2019], two of the country's main private water utility companies. His later remark made on the September 18, 2019, while related to his earlier pronouncement on August 3, targeted the Lopez family, owners of ABS CBN, one of the country's biggest broadcasting firms. He continued his attack of the Lopezes and stated how they have "never paid a single centavo" of their loans [Ranada 2019]. This particular tirade was followed by 301-point decreases in prices.

TABLE 10. Summary of regression variables Part 2 (significance & effects)

Variables	August 3, 2018		December 3, 2019		March 30, 2017		September 27, 2017	
	PSEi close	PSEi detrended	PSEi close	PSEi detrended	PSEi close	PSEi detrended	PSEi close	PSEi detrended
Initial Pronouncement	+	+	—	—	—	—		
Anti-Oligarch					+	+		
Personal Attack					—	—	+	—
Lagged Anti-Oligarch	+	+			+	—		
Lagged Personal Attack					+	—		
Initial Pronouncement & Anti-Oligarch Interaction	+	(+)						
Initial Pronouncement & Personal Attack Interaction					—	—		
Anti-Oligarch & Initial Pronouncement Interaction					—	—		
Reverse Repurchase Rate	(—)	(—)	(—)	(—)	(—)	(—)	(—)	(—)
Inflation Rate	(—)	(—)	(—)	(—)	(—)	(—)	(—)	(—)
Global Interest Rate	(+)	(+)	(+)	(+)	(+)	(+)	(+)	(+)
Pre-Intervention Trend	(+)	(+)	—	(—)	(—)	(—)	(+)	(+)
Immediate Effect	(—)	(—)	(+)	(+)	(+)	(+)	(+)	(+)
Difference (Pre- and Post-Intervention Trends)	(—)	(—)	—	—	(+)	(+)	(—)	(—)
Post- Intervention Trend	(—)	(—)	—	—	(—)	(—)	(—)	(—)
Constant	(+)	(+)	(+)	(+)	(+)	(+)	(+)	(+)

( ) significant at the 10 percent level
+ indicates a price increase
— indicates a price decrease

We take a further look into the four statements that did not make such an effect on PSEi close prices. On March 30, 2017, we note the president's angry sentiments about how he is portrayed in the media. He then ranted about the country's "oligarchs" and attacked prominent media company onwers, specifically, the Lopezes and Prietos. He remarked, unpresidentially, that they are "… full of shit" [Ranada 2017]. Despite his strong and shocking language, there was no immediate drop in PSEi close. His statement on December 3, 2019, once again targeted ABS-CBN but this time included a threat not to renew their franchise that was then ending [CNN Philippines 2019]. His pronouncement on September 27, 2017 found a new target in Lucio Tan, a wealthy businessman who owns Philippine Airlines. Duterte threatened to close the airport if Tan's debts to the government are not paid [Corrales 2017]. Then, during his talk about the water crises on October 28, 2019, he announced a veiled threat of a government takeover of the water utility services from private companies. [ABS-CBN News 2019].

In each intervention scenario, we classify these specific negative business pronouncements based on their content. We identify the three main dummy indicators in the study—*Initial Pronouncement, Anti-Oligarch,* and *Personal Attack*. We then used these dummy variables, both alone and its interaction with another, in the regression to tease out their independent and interaction effects. In almost all estimates, we find that the three dummy variables to be insignificant. In other words, our classification of the President's pronouncements are in themselves insignificant. However, we do find evidence of price drops following his negative business pronouncements (of one type or another).

Besides the interventions and dummies, we include other variables in the regression that may control for other phenomena concerning stock prices. Overall, the activity of the variables aligns with our expectations mentioned in Section 3. With reverse repurchase rate as a proxy for national monetary policy, its effect reflects in the regression results and is negative in almost all the iterations. The inflation rate finds itself significant but negatively related as well to stock prices. Lastly, global interest rates, as proxied by the US daily interest rate, is the only variable that is positively related with PSEi closing price. Overall, these control variables also have their own significant effect on the stock market, and help paint a better picture of investor expectations and behavior.

Another observation that can be made concerns the two dependent variables. The detrended PSEi prices are derived as simple moving averages of the normal prices. It is not surprising that they are affected in the same way by the regressors in our time series model. Essentially, the PSEi closing price or its detrended value can be used to determine the effects of the presidential pronouncements, and the differences in the results for using one rather than the other are shown here to be negligible.

6.1. Aggregate Loss Estimation

To further assess the economic consequences of Duterte's words, we calculate for the aggregate losses of the PSEi after the pronouncement, both instantaneously and after five-day and ten-day adjustment periods. Again, we use only the pronouncements made from 2018 to 2019 for which we have the required data. To calculate the instantaneous loss after a particular event, we apply the following formula:

$$(PSEi\ closing\ price - SMA) \times volume = instantaneous\ loss \quad (2)$$

where *PSEi closing price* refers to the actual price, *SMA* equals the standard moving average calculated within a five-day time horizon, and *volume* refers to the trading volume for that day.

Since our results also suggest that fluctuations in prices occur after a few days lag, we consider the aggregate loss after a five- and ten-day adjustment period to account for those cases when the market does not react instantaneously to Duterte's pronouncement. An adjustment period is taken to be the length of time from the announcement until the time when the PSEi goes to pre-intervention trend. We assume that the PSEi does not follow a new trend post-intervention for estimation purposes. Our formula for estimating the losses over five days after a pronouncement is:

$$\sum_{i=1}^{5} ((PSEi\ closing\ price - SMA_i) \times volume_i) = 5\ day\ loss \quad (3)$$

where *PSEi closing price* and *volume* are as defined above. As shown below, our formula for calculating the ten-day losses simply extends the five-day period in the previous formula to the next five succeeding days:

$$\sum_{i=1}^{10} ((PSEi\ closing\ price - SMA_i) \times volume_i) = 10\ day\ loss \quad (4)$$

We then individually add the values computed for the three types of losses, resulting in an aggregate value that shows the total instantaneous, five-day, and ten-day losses for all the pronouncements in question. This is the accumulated difference between the standard moving average within a five-day time horizon and the PSEi closing price, multiplied by the entire trading volume for all the days Duterte made pronouncements.

To get a better sense of the relative magnitudes of the aggregate losses, we also express them as ratios to the average Gross Domestic Product from 2016 to 2019. Implicitly, then, we compare the losses in stock prices to national income. In addition, we expressed the losses from each pronouncement as ratios to the market capitalization of the Philippine Stock Exchange. The market capitalization at a given time is derived by multiplying the PSE's entire outstanding shares by the prevailing market price at that point. When the losses are expressed as shares in the PSE's market capitalization, we are effectively measuring the losses in investors' wealth. Both the GDP and market capitalization data are sourced from the BSP.

TABLE 11. Aggregate losses (in pesos)

Date	Instantaneous	5-day Period	10-day period
August 3, 2018	16182405.08	46570417.68	-420011776.1
April 17, 2019	-6513519.5	29860704.27	266559405.6
September 18, 2019	-2418828.868	-92762659.64	-441051671
October 28, 2019	2585174.68	105912306.7	287142040.4
December 3, 2019	5681431.714	-30912429.49	-153667596.6
TOTAL	-1330490.849	-47243967.18	-461029597.7

TABLE 12. Aggregate losses as percent of market capitalization

Date	Instantaneous	5-day Period	10-day period
August 3, 2018	9.4216E-05	0.000271139	-0.002445363
April 17, 2019	-3.75565E-05	0.000172175	0.001536965
September 18, 2019	-1.42629E-05	-0.000553895	-0.002633563
October 28, 2019	1.52437E-05	0.000624522	0.00169316
December 3, 2019	3.40097E-05	-0.000185045	-0.000919871

TABLE 13. Aggregate losses as percent of average Gross Domestic Product

Instantaneous	5-day Period	10-day period
-7.66074E-06	-0.000272023	-0.002654529

As shown in Table 11, the pronouncement on September 18, 2019—an attack against the Lopez family—generated the highest amount of instantaneous losses, and even in terms of five-day and ten-day losses. After that pronouncement was made, PSEi immediately lost ₱2,418,828.68. Its losses then rose to ₱92,762,659.64 in five days and ₱441,051,671 in ten days

We also calculate aggregate losses by adding the instantaneous, five-day and then ten-day individual losses individually. Immediately after the pronouncement was made, we estimated that the PSEi lost a total of ₱1,330,490.849. In five days, the losses ballooned to ₱47,243,967.18. Then, in ten days, it skyrocketed to ₱441,051,671.

While the daily instantaneous data would evidently lead to inconsequential results, we find that the ten-day aggregate loss from a single event is estimated to cost the Philippine economy 0.0027 percent of the GDP. We find that, within a ten-day period, the pronouncement against the Lopezes also generated the highest number of losses at 0.0026 percent of the stock market value for the month of September 2019.

7. Conclusion

The biggest changes in the PSEi and to stock market returns are recorded from the first two business pronouncements the president made on August 1 and 3 of 2016. This finding suggests that his rhetorical style has its greatest shock effects early in his term. Moreover, the results also suggest that investors may have grown accustomed to the president's style as his subsequent announcements were followed by narrow fluctuations in stock returns. Our results indicate that none of the dummy variables used to classify Duterte's pronouncements is significant across estimations. In other words, the market reaction is provoked by no particular type of business-related statements of the president.

We also calculated the aggregate losses for the period 2018-2019 for the day immediately following the announcement, for the next 5 days, and for the next 10 days following the same. We find the aggregate losses to be biggest following the Duterte's attack against the Lopezes on September 18, 2019. The resulting 10-day loss is equivalent to 0.0027 percent of the market capitalization of the PSE. Moreover, the total instantaneous losses of the PSEi after all the six pronouncements considered here amounted to ₱1,330,490.85. This rose to ₱ 47,243, 967.18 within five days, and then to ₱441,051,671 within ten days following the pronouncements.

By design, this study is limited to selected negative business-related pronouncement of the president. Possibly, his other business-related pronouncements may have had a positive effect on the stock market. Or, his attack against other sectors—such as members of the opposition, the Catholic Church, or those against hos war of drugs—may also have their own economic consequences. Likewise, his pronouncements after 2019 could have jilted business confidence and outlook. In other words, our estimates provide only a partial assessments of the full economic consequences of President Duterte's words.

Overall, our results show that Duterte's ire against businessmen endangered the business sector leading to significant wealth losses. Investors are known to stand guard against anything that can threaten their future cash inflows such as destabilizing nature of Duterte's negative pronouncements. It is particularly jarring how, in assessing the nature of these utterances, one can easily conclude that his outbursts tend to be personal, unnecessarily explosive, and easily prevented. Insofar as our findings indicate his words have significant economic consequences, they are relevant to financial analysts, researchers and public relations managers who are interested in the link between investors' behavior and confidence and the rhetorics of political leaders. They also contribute to the active academic discussion on populist stongmen found in many countries. Most importantly, perhaps, they may also provide some vital information to voters and citizens in general, who have the right and freedom to demand accountability from their elected leaders and government institutions.

References

ABS-CBN News [2019] "Duterte warns of 'takeover' amid looming water crisis", Available from: https://news.abs-cbn.com/news/10/28/19/duterte-warns-of-takeover-amid-looming-water-crisis. Accessed March 20, 2020.

Alloway, T. [2019] "JPMorgan creates 'Volfefe' index to track Trump tweet impact". Available from: https://www.bloomberg.com/news/articles/2019-09-09/jpmorgan-creates-volfefe-index-to-track-trump-tweet-impact. Accessed March 20, 2020.

Arndt, H. W. [2013] "The Wizard and the Pragmatist / Keynes and Churchill". Available from: https://winstonchurchill.org/publications/finest-hour/finest-hour-153/thewizard-and-the-pragmatist/. Accessed on June 3, 2020.

Aquino, R. [2006] "Efficiency of the Philippine stock market", *Applied Economics Letters* 13(7): 463–470. Available from: https://www.tandfonline.com/doi/abs/10.1080/13504850500397437?journalCode=rael20. Accessed March 20, 2020.

Bencivenga, V. R., B. Smith, and R. Starr [1995] "Liquidity of secondary capital markets: allocative efficiency and the maturity composition of the capital stock", *Economic Theory* 7(1):19. Available from: https://link.springer.com/article/10.1007/BF01212180. Accessed March 20, 2020.

Bordo, M. and D. Wheelock [2007] "Stock market booms and monetary policy in the twentieth century", *Federal Bank of St. Louis Review* 89(2):91-122. Available from: https://files.stlouisfed.org/files/htdocs/publications/review/07/03/BordoWheelock.pdf. Accessed March 20, 2020.

Born, J., D. Myers and W. Clark. [2017] "Trump tweets and the efficient Market Hypothesis", *Algorithmic Finance* 6(3-4):103–109. Available from: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2973186. Accessed March 20, 2020.

Banko Sentral ng Pilipinas (BSP) [n.d.] "Key statistical indicators". Available from: http://www.bsp.gov.ph/statistics/efs_prices.asp. Accessed March 20, 2020.

Cabico, G. [2019]. "SWS: More Filipinos get news from Facebook than from radio, newspapers". Available from: https://www.philstar.com/headlines/2019/06/30/1930784/sws-more-filipinos-get-news-facebook-radio-newspapers. Accessed March 20, 2020.

Cavanaugh, J and A. Neath [2019] "The Akaike information criterion: background, derivation, properties, application, interpretation, and refinements", *WIREs Comput Statistics.* Available from: https://onlinelibrary.wiley.com/doi/abs/10.1002/wics.1460. Accessed March 20, 2020.

Chen J. and J. Diaz [2014] "Predictability and efficiency of the Philippine Stock Exchange Index", *Journal of Business and Economics 5*(4):535-539. Available from: https://www.researchgate.net/publication/289536298_Predictability_and_Efficiency_of_the_Philippine_Stock_Exchange_Index. Accessed March 20, 2020.

CNN Philippines [2019] "Duterte sees link between water supply crisis and rate hike". Available from: https://www.cnnphilippines.com/news/2019/4/17/Duterte-Manila-Water-Maynilad-water-shortage.html. Accessed March 20, 2020.

CNN Philippines [2019] "Duterte to ABS-CBN: next year, you're out". Available from: https://cnnphilippines.com/news/2019/12/3/duterte-abs-cbn-franchise-out.html. Accessed March 20, 2020.

Corrales, N. [2017] "Duterte to Lucio Tan: Pay PAL arrears or I'll shut down NAIA Terminal 2". Available from: https://business.inquirer.net/237572/rodrigo-duterte-philippine-airlines-lucio-tan-navigational-fees#ixzz6Ggn3M7Qp. Accessed March 20, 2020.

Fama, E. [1970] "Efficient capital markets: a review of theory and empirical work", *The Journal of Finance* 25(2): 383. Available from: https://www.jstor.org/stable/2325486?seq=1#metadata_info_tab_contents. Accessed March 20, 2020.

Fama, E. [1981] "Stock returns, real activity, inflation, and money", *The American Economic Review* 71(4):545–565. Available from: https://www.jstor.org/stable/1806180?seq=1#metadata_info_tab_contents. Accessed March 20, 2020.

Fama, E. [1991] "Efficient capital markets: II", *The Journal of Finance* 46(5): 1575–1617. Available from: https://www.jstor.org/stable/2328565#metadata_info_tab_contents. Accessed March 20, 2020.

Fang, L. and J. Peress [2009] "Media coverage and the cross-section of stock returns", *The Journal of Finance* 64(5): 2023–2052. Available from: https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1540-6261.2009.01493.x. Accessed March 20, 2020.

Gao P. and Y. Qi [2012] "Political Uncertainty and Public Financing Costs: Evidence from U.S. Municipal Bond Markets", *SSRN Electronic Journal*. Available from: https://www.researchgate.net/publication/253236014_Political_Uncertainty_and_Public_Financing_Costs_Evidence_from_US_Municipal_Bond_Markets. Accessed June 3, 2020.

GOVPH [2016] "Q&A: Media Interview with President Rodrigo Roa Duterte", Available from: https://www.officialgazette.gov.ph/2016/08/01/qna-media-interview-with-president-rodrigo-roa-duterte/. Accessed March 20, 2020.

Greenwood, J. and B. Smith [1997] "Financial markets in development, and the development of financial markets", *Journal of Economic Dynamics and Control* 21(1):145–181. Available from: https://www.sciencedirect.com/science/article/pii/0165188995009280. Accessed March 20, 2020.

Guinigundo, D. [2010] "The impact of the global financial crisis on the Philippine financial system – an assessment", *BIS Papers* 54. Available from: https://www.bis.org/publ/bppdf/bispap54s.pdf. Accessed March 20, 2020.

Ho, S. and N Odhiambo. [2018] "Analysing the macroeconomic drivers of stock market development in the Philippines", *Cogent Economics & Finance* 6(1). Available from: https://www.tandfonline.com/doi/full/10.1080/23322039.2018.1451265. Accessed March 20, 2020.

Kahneman, D. and A. Tversky [1979] "Prospect Theory: an analysis of decision under risk", *Econometric*a 47(2):263. Available from: https://www.jstor.org/stable/1914185#metadata_info_tab_contents. Accessed June 3, 2020.

Kelly, B., L. Pástor and P. Veronesi [2014] "The price of political uncertainty: theory and evidence from the option market", *NBER Working Paper Series*. Available from: https://www.nber.org/papers/w19812. Accessed June 3, 2020.

Keynes, J. [1925] "The economic consequences of Mr Churchill. Essays in Persuasion", 207-230. Available from: https://link.springer.com/chapter/10.1007/978-1-349-59072-8_17. Accessed June 3, 2020.

Levine, R. and S. Zervos [1999] "Stock markets, banks, and economic growth", *Policy Research Working Papers*. Available from: https://elibrary.worldbank.org/doi/abs/10.1596/1813-9450-1690. Accessed March 20, 2020.

Linden, A. [2015] "conducting interrupted time-series analysis for single- and multiple-group comparisons", *The Stata Journal: Promoting Communications on Statistics and Stata* 15(2): 480–500. Available from: https://journals.sagepub.com/doi/pdf/10.1177/1536867X1501500208. Accessed March 20, 2020.

Niederhoffer, V [1971] "The analysis of world events and stock prices", *The Journal of Business* 44(2),193. Available from: https://www.jstor.org/stable/2351663#metadata_info_tab_contents. Accessed March 20, 2020.

Pástor, L. and P. Veronesi [2012] "Uncertainty about government policy and stock prices", *The Journal of Finance* 67(4):1219-1264. Available from: https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1540-6261.2012.01746.x. Accessed June 3, 2020.

Pástor, L. and P. Veronesi [2013] "Political uncertainty and risk premia", *Journal of Financial Economics* 110(3):520-545. Available from: https://www.sciencedirect.com/science/article/abs/pii/S0304405X13002080. Accessed June 3, 2020.

Pollock, T. and P. Rindova [2003] "Media legitimation effects in the market for initial public offerings", *Academy of Management Journal* 46(5): 631–642. Available from: https://pennstate.pure.elsevier.com/en/publications/media-legitimation-effects-in-the-market-for-initial-public-offer. Accessed March 20, 2020.

Ranada, P. [2016] "Duterte tags Roberto Ongpin as 'oligarch' he wants to destroy". Available from: https://www.rappler.com/nation/141861-duterte-roberto-ongpin-oligarch. Accessed March 20, 2020.

Ranada, P. [2017] "Duterte orders arrest of Mighty Corp owner". Available from: https://www.rappler.com/nation/163473-duterte-bribery-attempt-cigarette-company. Accessed on March 20, 2020.

Ranada, P. [2017] "Duterte to file multiple estafa charges vs ABS-CBN". Available from: https://www.rappler.com/nation/170367-duterte-file-multiple-estafa-abs-cbn. Accessed March 20, 2020.

Ranada, P. [2017] "Duterte vows to build socialized housing on Mile Long property". Available from: https://www.rappler.com/nation/175863-duterte-socialized-housing-mile-long-property. Accessed March 20, 2020.

Ranada, P. [2018] "Duterte: if it were up to me, no ABS-CBN franchise renewal". Available from: https://www.rappler.com/nation/208802-duterte-threatens-again-block-abs-cbn-franchise. Accessed March 20, 2020.

Ranada, P. [2019] "Duterte slams Lopez group anew for past DBP loans". Available from: https://www.rappler.com/nation/240364-duterte-slams-lopez-group-anew-past-dbp-loans. Accessed March 20, 2020.

Ranada, P. [2019] "Duterte threatens Manila Water, Maynilad with expropriation". Available from: https://www.rappler.com/nation/246931-duterte-threatens-manila-water-maynilad-expropriation. Accessed on March 20, 2020.

Ranada, P. [2019] "Duterte threatens Ayalas, Pangilinan after Manila Water arbitration win". Available from: https://www.rappler.com/nation/246352-duterte-threatens-ayalas-pangilinan-manila-water-arbitration-win. Accessed March 20, 2020.

Sathyanarayana, S. and S. Gargesa [2018] "An analytical study of the effect of inflation on stock market returns", *IRA-International Journal of Management & Social Sciences* 13(2). Available from: https://research-advances.org/index.php/RAJMSS/article/view/1311. Accessed March 20, 2020.

Strycharz, J., N. Strauss and D. Trilling [2017] "The role of media coverage in explaining stock market fluctuations: insights for strategic financial communication", *International Journal of Strategic Communication* 12(1): 67–85. Available from: https://www.tandfonline.com/doi/full/10.1080/1553118X.2017.1378220. Accessed March 20, 2020.

Suhaibu, I., S. Harvey and M. Amidu [2017] "The impact of monetary policy on stock market performance: evidence from twelve (12) African countries", *Research in International Business and Finance* 42: 1372–1382. Available from: https://www.sciencedirect.com/science/article/abs/pii/S0275531916304792. Accessed March 20, 2020.

Suleman, M. [2010] "Stock market reaction to good and bad political news", *SSRN Electronic Journal*. Available from: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1713804. Accessed March 20, 2020.

Sy, D. and D. Hofileña [2014] "Monetary policy and stock market movement in the Philippines: a Structural Vector Autoregression approach", *Asia Pacific Business & Economics Perspectives* 2(2). Available from: http://www.apbersociety.org/Asia_Pacific_Business_and_Economics_Research_Society/Journal_files/Deborah.pdf. Accessed March 20, 2020.

Tang, H., M. Habibulla and C. Puah [2007] "Stock market and economic growth in selected Asian countries", *European Journal of Economics, Finance and Administrative Sciences*. Available from: https://mpra.ub.uni-muenchen.de/37649/1/Stock_market_and_economic_growth.pdf. Accessed March 20, 2020.

Tillmann, P. [2020] "Trump, Twitter, And Treasuries", *Contemporary Economic Policy* 38(3). Available from: https://onlinelibrary.wiley.com/doi/full/10.1111/coep.12465. Accessed March 20, 2020.

Titan, A. [2015] "The Efficient Market Hypothesis: review of specialized literature and empirical research", *Procedia Economics and Finance* 32: 442-449. Available from: https://www.sciencedirect.com/science/article/pii/S2212567115014161. Accessed June 3, 2020.

Vera, B. [2017] "BSP likely to keep interest rates steady before Tetangco steps down". Available from: https://business.inquirer.net/231401/bsp-likely-keep-interest-rates-steady-tetangco-steps. Accessed March 20, 2020.

Wu C. & C. Lin [2017] "The impact of media coverage on investor trading behavior and stock returns", *Pacific-Basin Finance Journal* 43: 151–172. Available from: https://ideas.repec.org/a/eee/pacfin/v43y2017icp151-172.html. Accessed on March 20, 2020.

Xun L. [2017] "The value of political rhetoric to stock market: evidence from the United States", *SSRN Electronic Journal*. Available from: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3090013. Accessed on March 20, 2020.

Yang, T., Q. Ying and T. Yousaf [2019] "Media coverage and sustainable stock returns: evidence from China", *Multidisciplinary Digital Publishing Institute* 11(8):1-18. Available from: https://econpapers.repec.org/article/gamjsusta/v_3a11_3ay_3a2019_3ai_3a8_3ap_3a2335-_3ad_3a223999.htm. Accessed on March 20, 2020.

Zach, T. [2003] "Political events and the stock market: evidence from Israel", *SSRN Electronic Journal*. Available from: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=420242. Accessed on March 20, 2020.

Önder, Z. and C. Simga-Mugan [2006] "How do political and economic news affect emerging markets? Evidence from Argentina and Turkey", *Emerging Markets Finance and Trade* 42(4):50–77. Available from: https://www.tandfonline.com/doi/abs/10.2753/REE1540-496X420403. Accessed on March 20, 2020.