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Political Uncertainty and the Thai Stock Market

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Abstract

The purpose of this paper is to examine the relationship between political uncertainty and the Thai stock market. The news-based index of Luangaram and Sethapramote (2018; 2020) is employed to capture the dynamics of political uncertainty from the second quarter of 1997 to the second quarter of 2020. The results reveal interesting evidence. Firstly, market volatility increases during periods of high political uncertainty. However, the effect on short-run stock returns is insignificant. Secondly, stock prices respond significantly to political uncertainty in the negative direction based on the vector autoregression (VAR) model. The effects are strongest in the second to fourth quarters. Finally, the findings reveal that political uncertainty pushes up the equity risk premium, and the impact is strongest at the extreme lower quantiles of return distributions.

Keywords: political uncertainty, Thai stock market, GARCH, VAR, quantile regression

1. Introduction

In financial economic theory, it is well documented that a positive relationship exists between risk and returns. Risk-averse investors particularly require higher returns for holding risky assets during periods of high uncertainty. Sharpe (1964) classified risks in the financial market into systematic and unsystematic. Unsystematic risk is firm-specific, mostly caused by internal factors such as business risk, financial risk, and operational risk. Unlike unsystematic risk, systematic risk is associated with either the entire market or a particular segment of it. It is caused by economic, political, and sociological changes beyond the control of the company which cannot be eliminated or diversified.

The level of uncertainty is now higher and more important than ever before, especially in terms of political conflict or economic policy uncertainty. Governments generally make policy decisions by taking both economic and non-economic costs into account. These costs are uncertain since market participants cannot perfectly foresee which policies will be implemented. According to Henisz (2002), political uncertainty can be defined as risks principally resulting from government action or, occasionally, inaction. Changes in government policy for taxation or regulation could lead to changes in the business environment, movement of capital, corporate decisions, and corporate performance. Recent studies by Baker et al. (2016) and Pástor and Veronesi (2012; 2013) revealed that government policy uncertainty had a significant impact on both the real economy and financial markets. Specifically, much literature (e.g., Pástor and Veronesi, 2012; 2013) documented the adverse impact of political uncertainty on stock market returns and volatility.

Political uncertainty has become prominent, not only in the United States but also in emerging markets including Thailand. Berkaert and Harvey (2002) summarized that politics in emerging markets played a significant role and appeared to be more strongly connected to business and economics than in developed markets. They also reported that political systems in emerging

markets were less advanced than in developed markets. Therefore, the political situation in emerging markets tended to be more unstable. Since the transition from an absolute monarchy to parliamentary democracy in 1932, Thailand has undergone several significant political events, such as military coups, parliament dissolution, national elections, and protests. To date, Thailand can claim to have experienced the most constitutional changes and ranked among other countries with the highest number of coups.

So far, most of the literature in Thailand has documented the impact of Thai political uncertainty on its economic activities (e.g., Goswami & Panthamit, 2020) and Thai financial markets (e.g., Khanthavit, 2019; Lumjiak et al., 2014; Rujirarangsan & Chancharat, 2019). However, these studies were based on the analysis of the event study framework and regression model with political events used as exogenous variables. Such methodologies are limited since they do not show the dynamic relationships between the stock market and the evolution of political risk perceived by the market over time.

To gain a deeper understanding, the key contribution of this paper is to comprehensively investigate *how political uncertainty affects the Thai stock market over time*. This paper uses the Thai political uncertainty index (PUI) developed by Luangaram and Sethapramote (2018; 2020) to reveal the degree of political uncertainty over time. PUI is a novel, news-based index proposed by Baker et al. (2016). This index reflects the frequency of political-related words in news articles. Specifically, increasing the news coverage on political uncertainty resulted in a high index level, indicating high market perception and generating more uncertainty about government action and inaction. The PUI is then used in regressions with Thai stock market returns and conditional volatility to examine the short-run relationship. The VAR model is also employed to examine the long-run relationship. A final investigation is to check whether political uncertainty is priced through a quantile regression.

The results revealed interesting evidence. Firstly, the Thai stock market's conditional volatilities were found to significantly increase during periods of high political uncertainty, although it did not have a short-run

effect on Thai stock market returns. Secondly, unlike the short run, stock prices responded significantly to political uncertainty in a negative direction. These findings were consistent with the common belief that political risk has a long-run adverse impact on the stock market. The linkage between the equity risk premium and political uncertainty was also examined. Political uncertainty was found to trigger the equity risk premium, with the impact being strongest at the extreme lower quantiles of return distributions, i.e., downside risk.

The remainder of this paper is organized as follows. Section 2 reviews the relevant literature. Section 3 presents the econometric models and summarizes the data used in this paper. The results are presented in Section 4, and the conclusion is provided in Section 5.

2. Literature Review

Politics can exert a significant influence on the performance of financial markets. In this section, the definition and measurement of political uncertainty are reviewed. This is followed by an explanation of the linkage between political uncertainty, real economy, and the stock market, and lastly, a summary of Thai politics and the Thai stock market.

2.1 Political uncertainty

In general, political uncertainty refers to a situation in which political instability could adversely affect the economic environment such as investment opportunities and the outlook for economic growth (Henisz, 2002). From the investment perspective, political uncertainty could arise from unexpected government actions such as a change in the trade and investment policy by controlling capital mobility or intervening in exchange rates. Such political uncertainty can therefore pose a significant risk to investment portfolios.

To analyze the impact of political uncertainty, the risk needs to be measured quantitatively. Previous studies typically use major political events such as national elections (e.g., Niederhofer et al., 1970; Khanthavit, 2020), dissolutions of parliament (e.g., Nimkhunthod, 2007), and coups (e.g., Geyikei, 2017; Lumjiak et al., 2014; Lumjiak et al., 2018; Khanthavit, 2019)

since the event date and market response can be examined through event study methodology. Additionally, the impact of political uncertainty is examined in a regression-based framework where political uncertainty is proxied by risk rating.

With the rapidly growing literature on text search methods, Baker et al. (2016) proposed a novel economic policy uncertainty (EPU) index to capture the market concerns reflected in news articles. This index showed a strong correlation with the CBOE Volatility Index (VIX) and revealed a significant response to events involving major policy concerns such as the Gulf War and presidential elections. Similar news indices have been developed in other studies such as the partisan conflict index (Azzimonti, 2018) and the policy uncertainty index for the U.S. (Shoag & Veuger, 2015). The main advantage of a news-based index is that it reveals how the market perceives political uncertainty over time. In the case of Thailand, Luangaram and Sethapramote (2018) constructed the political uncertainty index (PUI) based on the methodology used by Baker et al. (2016). The movement of the news-based index (i.e., PUI) could provide insight into the political uncertainty level in Thailand over time.

2.2 Political uncertainty, real economy, and the financial market

In times of trouble, governments typically intervene in the market via economic policy such as tightening the monetary policy by raising a key interest rate to control inflation. However, market participants cannot fully know in advance exactly how and when the policy will be implemented. Large uncertainty can delay consumption and investment decisions, causing economic slowdown, firms' profitability to shrink, threats to investors' sentiment, and asset prices to decline. Prior studies often relate political uncertainty to economic activity such as foreign direct investment (e.g., Julio & Yook, 2016; Luangaram & Sethapramote, 2020), real output (e.g., Alesina & Sachs, 1988), trade flows (e.g., Goswami & Panthamit, 2020), and investment (e.g., Luangaram & Sethapramote, 2018). The majority of studies revealed that political instability was often associated negatively with economic activities.

These findings could be explained by several theories such as the political business cycle suggested by Nordhaus (1975) whereby politicians might alter policies before elections, leading to economic fluctuations. The partisan theory developed by Hibbs (1977), an alternative approach, argued that policies were predetermined by ideology. Specifically, left-wing parties were more concerned about unemployment than inflation. He reported that Democratic administrations were more likely to implement expansionary policies than Republican administrations. Similarly, Chappell and Keech (1986) found that the average inflation rates under Democratic administrations were higher than under Republican administrations. Hence, economic fluctuations occur because of policy change when opposite parties win the election.

Apart from political-economy and economic literature, several studies have turned their attention to the interplay between politics and financial markets, particularly stock markets. The determinants of stock market returns and fluctuations have posed a long-standing puzzle for financial economists. Shiller (1981) documented that the volatility of stock prices was too volatile to be explained by rational dividend discount models. Following Chen et al. (1986), macroeconomic uncertainty, including political risk, could affect asset prices through two channels: expected cash flows and discount rates. Unpredictability in government policies might threaten the profitability of firms and cash flows due to shifts in consumer demand. Pástor and Veronesi (2012) developed a model and predicted that the stock market will fall when political uncertainty is high. In addition, significant political uncertainty made stock returns more volatile and correlated, especially during weak economic conditions. Because political uncertainty typically affects businesses at large, it is therefore considered a systematic risk. For this reason, investors demand a higher equity risk premium to compensate for uncertainty on the outcomes of political policy. Pástor and Veronesi (2013) developed a general equilibrium model and explained that stock returns were driven by economic shocks, political shocks, and firm-specific shocks, with the latter not being priced because they could be eliminated via diversification. They also showed that

the effects of political risk on equity risk premiums were state-dependent. Specifically, policy change was more likely in weak economic conditions, and therefore, the higher equity risk premium was mainly driven by political shocks.

Numerous researchers have attempted to empirically test whether politics have any impact on financial markets. Niederhoffer et al. (1970) and Herbst and Slinkman (1984) documented that politics caused stock prices to move to reflect the expectation of the U.S. presidential election results. Santa-Clara and Valkanov (2003) related the average monthly returns to the governing party and found that stock market returns were higher during Democratic-led administrations after controlling for differences in the business cycle. Without assuming the election result was known ex-ante, Li and Born (2006) applied the public opinion poll and found evidence to support the causal link between political uncertainty and stock returns. Gao et al. (2019) found that municipal bond yields rose around U.S. gubernatorial elections, while Kelly et al. (2016) revealed that option market investors were willing to pay higher option premiums around the U.S. national election and also confirmed that the political risk was priced by market participants.

Thus far, most studies reviewed have been conducted on the U.S. stock market. This may be because it is one of the most influenced global equity markets. Moreover, the political system in the U.S. is relatively more straightforward than in many other countries. However, the research results obtained for the U.S. may not be easily generalizable in the international context. Interestingly, many papers reveal political uncertainty to have a greater impact on emerging markets than developed markets (e.g., Berkaert & Harvey, 2002; Bilson et al., 2002; Erb et al., 1996). Berkaert and Harvey (2002) reported that the political system in emerging markets was less advanced than in the developed markets; therefore, politics in emerging markets was more strongly intertwined with business and economics than in developed markets. In some countries, the political risk was not limited to the uncertainty of national election results and comes in the form of a revolutionary movement, parliament dissolution, street protest, and military coup. For example, Bautista (2003)

found that conditional market volatilities were positively related to major political and economic events in the Philippines. Likewise, Acemoglu et al. (2018) showed the adverse impact of street protests, such as the Arab Spring, on Egyptian stock market returns. Given that political unrest is still prevalent, particularly in emerging markets including Thailand, this study hypothesizes that political uncertainty influences the behavior of the Thai stock market. Therefore, the political situation remains a significant risk factor in explaining variations in the equity risk premium.

2.3 Evolution of the Thai political system and Thai stock market

The Thai political system revolution began in 1932 when Thailand transitioned from an absolute monarchy into a parliamentary democracy. Unlike the two-party system in the U.S., Thailand has proportional representation, where the government is formed by multi-part coalitions. Therefore, with the mix of parties in a coalition government, it is more difficult to predict future policies that can have important implications for financial markets.

The Stock Exchange of Thailand was established in 1975. Like other emerging markets, the Thai stock market has been one of the most popular investment destinations for years. However, coups are frequent, and the country's ranking in terms of political stability is poor (Lumjiak et al., 2018). Despite the high political uncertainty in Thailand, previous studies on the relationship between political events and the Thai stock market are still limited. Nimkhunthod (2007) studied the average reaction of stock returns to political events between 1975 and 2006 and found positive abnormal returns over a one-week period before and after elections. Khanthavit (2020) also reported that the Thai stock market reacted significantly and positively to the 2019 national election. Besides the stock market reaction to the national election, Nimkhunthod (2007) documented a negative abnormal return on the first trading day after a coup; however, the coup exerted a temporary negative shock and then boosted the market over a longer period. This finding was consistent with that of Lumjiak et al. (2014) who found initial adverse reactions in the Thai stock market to the 2006 coup, but the effects were transient and quickly reversed.

Kongprajya (2010) focused on the impact of political news on stock returns and volatility. Using data obtained during the 2006 coup, she classified political news into good and bad. The response of stock market returns to the coup was insignificant, but the volatility rose significantly. Specifically, the asymmetric impact of political news on stock market volatility was documented. Unfavorable political news exerted a greater increase in stock volatility than the same amount of favorable political news. Lumjiak et al. (2018) extended the work of Lumjiak et al. (2014) by including the 2014 coup in their study, revealing that once again, the coup exerted a short-term impact on the Thai stock market. Both coups increased average market returns and reduced market volatility. Their findings were counter to the common belief that since the coup was associated with political uncertainty and instability, it would have a negative effect on the stock market. This may be due to the Thai-style political context (Lumjiak et al., 2018).

With the frequency of coups and constitutional changes, the analysis between political uncertainty and the stock market in Thailand becomes exceptionally interesting. Sethapramote (2021) recently analyzed the impact of economic policy and political uncertainty on the real sector and stock market in Thailand by using several risk proxies such as the global economic policy uncertainty (EPU) index (Baker et al., 2016), the partisan conflict index (Azzimonti, 2018), and the political uncertainty index (Luangaram & Sethapramote, 2018). He found a significant drop in stock market returns when political uncertainty increased. To the researcher's knowledge, no comprehensive studies exist on the dynamic relationship between political uncertainty and the Thai stock market applying the text-based index proposed by Baker et al. (2016). Therefore, it is worthwhile examining how the Thai stock market responds to the evolution of political uncertainty over the short and long term.

3. Data and Methodology

3.1 Data

To quantitatively capture the degree of political uncertainty in Thailand, the political uncertainty index (PUI) computed by Luangaram and Sethapramote (2018, 2020) according to the methodology of Baker et al. (2016) is used in this paper. The PUI is a scaled frequency count of news articles on Thailand's political-related words. Specifically, the PUI is constructed using five components of equal weight: (1) major political protests by conflicted groups (PROTEST), (2) implementation of Emergency Decrees such as martial law (MARTIAL), (3) severe events such as coup (COUP), (4) changes of government under the constitution, e.g., national elections or dissolutions of parliament (ELECTION), and (5) changes in rules and political structures, e.g., political reform or constitution amendments (REFORM).

In this study, the data spans from the second quarter of 1997 to the second quarter of 2020. The stock market index (SET) and market dividend yield (DY) are retrieved from Reuters Eikon, while the macroeconomic variables (GDP) are collected from the National Economic and Social Development Council (NESDB). The fear index (VIX) data are collected from the CBOE database.

3.2 Methodology

In this section, the econometric methodology is outlined to examine the relationship between political uncertainty and the Thai stock market.

3.2.1 Political uncertainty and stock market return and volatility

Several studies have documented that stock prices react negatively to political risk. Political uncertainty affects stock prices via firms' potential cash flows and investors' required rate of return. For example, Erb et al. (1996) and Smales (2021) found that during a period of high political uncertainty, risk-averse investors decided to sell their riskier assets, leading to a price drop and thus resulting in lower contemporaneous returns. In addition, Pástor and Veronesi (2013; 2021) showed that stock markets were more volatile when

political uncertainty was high.

To investigate the short-run impact of political uncertainty on the stock market, the GARCH(1,1) model with the data in the first-differenced form is used for estimation and includes the PUI in both mean and variance equations. The VIX is also included as a control variable to capture the impact of external shocks on the Thai stock market. Hence, the following models are estimated.

$$\Delta \ln SET_t = \alpha_{SET} + \gamma_1 \Delta \ln SET_{t-1} + \gamma_2 \Delta \ln VIX_t + \gamma_3 \Delta \ln PUI_t + \varepsilon_t$$

$$h_t = \alpha_h + \omega_1 \varepsilon_{t-1}^2 + \omega_2 h_{t-1} + \omega_3 \Delta \ln VIX_t + \omega_4 \Delta \ln PUI_t,$$

where $\Delta \ln SET_t$ is the logarithm stock market returns calculated from the quarterly-ended SET index, $\Delta \ln VIX_t$ is the changes in the volatility index, and $\Delta \ln PUI_t$ is the changes in the political uncertainty index. In addition, is the heteroskedastic conditional variance correlated with the lagged error terms and conditional variance.

According to previous literature, we expect $\gamma_3 < 0$ and ω_4 which indicate that political uncertainty has a negative impact on contemporaneous stock market returns and a positive impact on stock market volatility, respectively.

3.2.2 The long-run impacts of political uncertainty on the stock market

Besides the short-run effects of political uncertainty, the long-run effects are also investigated for the fundamental determination of stock markets. Several studies have noted that the impact of political uncertainty on the stock market was conditional on economic conditions (e.g., Pástor & Veronesi, 2013). However, the complexity of the interaction between the financial market, real economy, and political uncertainty makes it difficult to impose suitable structures for modeling the transmission mechanisms of political uncertainty shocks. Therefore, the Vector Autoregressive (VAR) model with the data in the level form is employed to investigate the dynamic relationship among political uncertainty, economic conditions, and the stock market. The standard VAR model can be written as follows:

$$\mathbf{Y_t} = a_0 + \sum_{i=1}^{p} \mathbf{B_i Y}_{t-i} + \varepsilon_t,$$

where **Y** = [ln(PUI), ln(GDP), ln(SET)]. The number of lags included in the model is determined by the Schwartz Information Criteria (SIC).

The impulse response functions (IRFs) are computed to investigate the response of real output and the stock market to shocks from political uncertainty. To avoid imposing restrictions on the order of response among variables, i.e., the Cholesky order, the generalized impulse response (GIRF) is applied in this study.

3.2.3 Political uncertainty and the equity risk premium

Finally, the fundamental linkage is explained between political uncertainty and the stock market based on the asset pricing model. Since political uncertainty represents the systematic risk factor, investors demand a higher equity risk premium on their investment in compensation for bearing such risk, especially during weak economic conditions (Pástor and Veronesi, 2013). Based on Australian data, Smales (2021) reported a positive relationship between equity risk premium and economic policy uncertainty. A recent study by Duangchaiyoosook and Kilenthong (2022) found that Thai equity risk premium can be significantly explained by both short-run and long-run risks. However, their findings revealed that economic uncertainty has only marginal explanatory power.

Several studies have found evidence to support the time-varying pattern in the equity risk premium based on predictive regression such as those conducted by Fama and French (1989) and Cochrane (2005), who reported that market dividend yield could be used as a predictive variable. Nevertheless, modelling the time-varying pattern poses various problems, especially when using the conventional ordinary least squares (OLS) method. This technique can sometimes misrepresent the true relationship between risk factors and stock returns, especially when the return distribution is abnormal. For example, using the OLS regression, Chevapatrakul et al. (2019) found weak evidence of stock return predictability and subsequently applied quantile regression to

examine the asymmetric association between risk factors and excess stock market returns. Their results suggest that return predictability varies depending on its location in the return distribution. Therefore, modelling risk and returns using quantile regression appears to be more appropriate than the application of conditional mean methods. Recently, Smales (2021) applied quantile regression to estimate the relationship between economic policy uncertainty and equity risk premium. His results confirmed Pástor and Veronesi's (2013) model in which the positive relationship between political uncertainty and equity risk premium is stronger in the lower quantile of return distribution.

According to the aforementioned results, quantile regression is used in this study to examine the time-varying effects of political uncertainty on the equity risk premium. The following model is estimated,

$$Q_\tau\left(\mathrm{Ret}_{t+1,t+h}\middle|\mathrm{X}_t\right) = \alpha_\tau + \beta_\tau \Delta \ln \mathrm{PUI}_t + \theta_\tau \mathrm{DY}_t + \delta_\tau \Delta \ln \mathrm{GDP}_t + \gamma_\tau \mathrm{Ret}_{t,t+h-1} + \mathrm{e}_t,$$

where $Q_\tau(\cdot)$ is the conditional quantile function and τ=0.05,0.10,…,0.90,0.95. $\mathrm{Ret}_{t+1,t+h}$ is the excess market returns over h = 1, 2, and 8 quarters following quarter t.

The cumulative return on the value-weighted market portfolio over month t+1 through t+h subtracting the cumulative returns on one-month T-bills represents the equity risk premium. According to previous literature, $\beta > 0$ is expected, meaning greater political uncertainty requires a higher equity risk premium.

4. Results

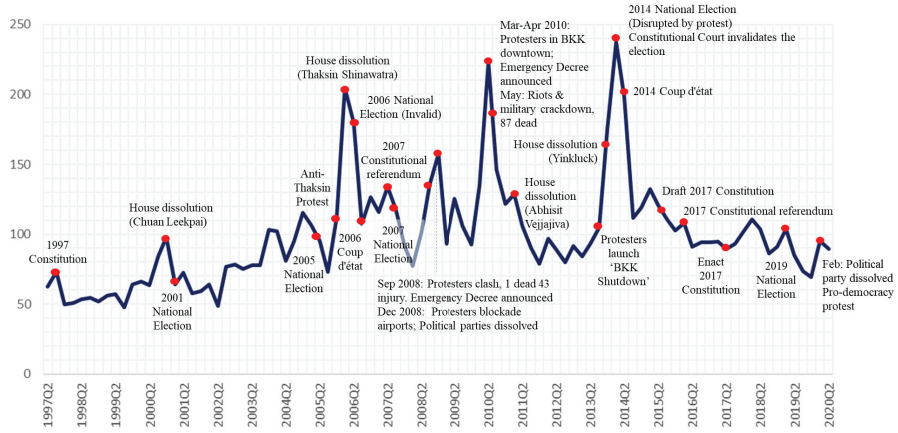
4.1 Preliminary analysis

Figure 1 plots the quarterly political uncertainty index of Thailand. The index shows the evolution of market perception toward political uncertainty over time. As can be observed, the index shows clear spikes around major political events, e.g., the dissolution of parliament in 2000 and 2006, the protests from 2005–2006 that led to a military coup in 2006, the conflict between "red shirts" and "yellow shirts" which worsened in late 2008, the

blockade of airports in 2008, the 2010 political crisis caused by a downturn in Bangkok which led to a military crackdown and the death of 87 people, and the protests from 2013–2014 that led to the coup in May 2014. While the political uncertainty index has declined significantly since 2014, more recent protests have been ongoing since early 2020. The protesters, mostly young, are out on the streets to demand the resignation of Prime Minister Prayuth Chan-o-cha, constitutional changes, and reform of the monarchy under the constitution.

Figures 2 and 3 plot the political uncertainty using the key economic indicators of GDP growth and the SET index, respectively. The political uncertainty index tends to fluctuate more than GDP growth as indicated in Figure 2. The Thai economy grows at a relatively slow rate, less than 5% quarter-over-quarter since 1997; GDP growth reached the highest level of 9.4% in the first quarter of 2012 and the lowest level of -9.90% in the second quarter of 2020. In comparison with the political uncertainty index, the SET index experienced several drops, corresponding with the rise in political uncertainty. For instance, the Thai stock exchange fell after the 2014 coup, whereas other Asian equity markets rose that day.

Figure 1. Political uncertainty index of Thailand



Note. Indices reflect the scaled quarterly counts of newspapers containing the Thailand's politics-related words. The political uncertainty index (PUI) is constructed with five equally weighted components: protest, martial, coup, election, and reform. The series runs from 1997Q2 to 2020Q.

Figure 2. Political uncertainty index and GDP growth

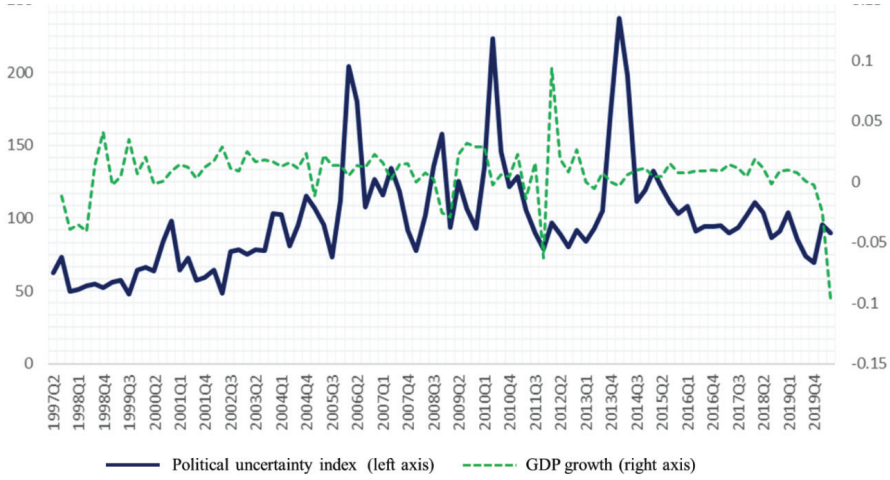
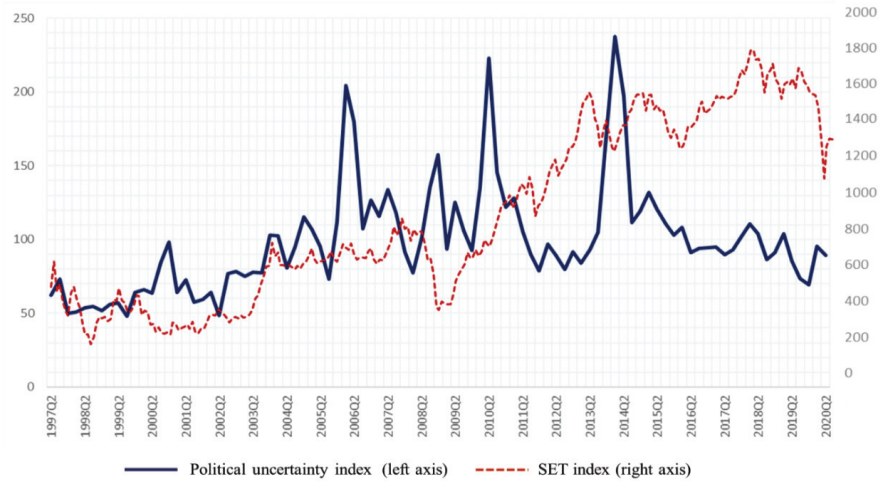


Figure 3. Political uncertainty index and SET index



The Augmented Dickey-Fuller (ADF) test is applied to check the stationarity of the variables used in this study. Table 1 indicates that the null of a unit root of all variables can be rejected at their first differences – I(1), except the market dividend yield which contains no unit root at its level – I(0). Therefore, the market dividend yield at level and other variables at their first difference are used in the GARCH(1,1) estimation, and quantile regression while all level variables are used in the VAR model to explore the long-run dynamic relationship.

Table 1. Unit root test

PUI	SET	GDP	VIX	
-9.867***	-6.771***	-6.860***	-10.848***	
PROTEST	**MARTIAL**	**COUP**	**ELECTION**	**REFORM**
-10.341***	-24.368***	-9.730***	-9.985***	-14.699***

Note. All variables are in the first difference. ADF statistics are reported and **, *** indicate significance at the 5% and 1% level, respectively.

4.2 Empirical findings

4.2.1 Political uncertainty and stock market returns and volatility

The short-run effects of political uncertainty on stock market returns and volatility are examined through the estimation of mean and variance equations in the GARCH(1,1) model, respectively. The results are presented in Table 2.

As can be seen from Table 2, a change in the volatility index ($\Delta \ln VIX_t$) is the key factor influencing Thai stock market returns. Political uncertainty has a negative impact on Thai stock market returns, but the effect is statistically insignificant except for political uncertainty resulting from severe events, such as military coups (COUP). Based on the univariate regression omitting the control variables, Smales (2021) found a strong negative relationship between Australian EPU and stock market returns, but the results were weaker when control variables were included in the regression. Therefore, the possible explanation of marginal evidence on return reaction to political uncertainty

is that some of the policy information is closely related to the information contained in control variables.

Table 2. Political uncertainty and stock market returns and conditional volatilities

Variables	**PUI**	**PROTEST**	**MARTIAL**	**COUP**	**ELECTION**	**REFORM**
Mean equation: $lnSET_t = \alpha_{SET} + \gamma_1 \Delta lnSET_{t-1} + \gamma_2 \Delta \ln VIX_t + \gamma_3 \Delta \ln PUI_t + \varepsilon_t$						
α_{SET}	0.018	0.000	0.017*	0.011	0.013	0.016*
	(0.174)	(0.991)	(0.074)	(0.286)	(0.361)	(0.065)
γ_1	0.299***	0.255***	0.170**	0306***	0.135	0.273***
	(0.008)	(0.000)	(0.027)	(0.002)	(0.167)	(0.002)
γ_2	-0.205***	-0.186***	-0.227***	-0.218***	-0.258***	-0.230***
	(0.001)	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)
γ_3	-0.068	-0.011	-0.001	-0.041**	0.016	-0.016
	(0.214)	(0.357)	(0.724)	(0.019)	(0.748)	(0.442)
Variance equation: $h_t = \alpha_h + \omega_1 \varepsilon_{t-1}^2 + \omega_2 h_{t-1} + \omega_3 \Delta \ln VIX_t + \omega_4 \Delta \ln PUI_t$						
α_h	0.003*	0.000***	0.003***	0.002**	0.005***	0.001***
	(0.079)	(0.000)	(0.001)	(0.024)	(0.006)	(0.000)
ω_1	0.096	-0.014	0.011	0.207	0.010	-0.038
	(0.356)	(0.696)	(0.705)	(0.137)	(0.675)	(0.408)
ω_2	0.580***	0.900***	0.560***	0.519***	0.555***	0.923***
	(0.002)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
ω_3	0.017*	0.001	0.006	0.008	0.025**	0.007**
	(0.071)	(0.395)	(0.234)	(0.122)	(0.030)	(0.021)
ω_4	0.160***	0.004***	0.003***	0.007***	0.011**	0.002
	(0.004)	(0.000)	(0.004)	(0.001)	(0.031)	(0.458)
R-sqaured	0.176	0.198	0.233	0.230	0.243	0.193
Log likelihood	96.350	105.227	89.179	101.021	88.868	99.748

Note. Numbers in parenthesis are p-values, while *, **, and *** indicate significance at 10%, 5%, and 1% level, respectively. PUI is the political uncertainty index, constructed by Luangaram and Sethapramote (2018) and consists of five subcomponents: (1) major political protests or riots (PROTEST), (2) implementation of Emergency Decree or Martial law (MARTIAL), (3) severe events, e.g., coup (COUP), (4) changes of government under constitution (ELECTION), and (5) changes in rules and political structures (REFORM).

The findings of this study reveal that political uncertainty and its components, except for REFORM, have a positive impact on the Thai stock market's conditional volatility. These results corroborate the empirical evidence discussed in Pástor and Veronesi (2013) and Smales (2021) who showed that stock market volatility rose significantly during high political uncertainty. In summary, Thai political uncertainty leads to a fall in stock prices and a rise in volatility over the short run.

4.2.2 Political uncertainty, the macroeconomy, and stock market over the long run

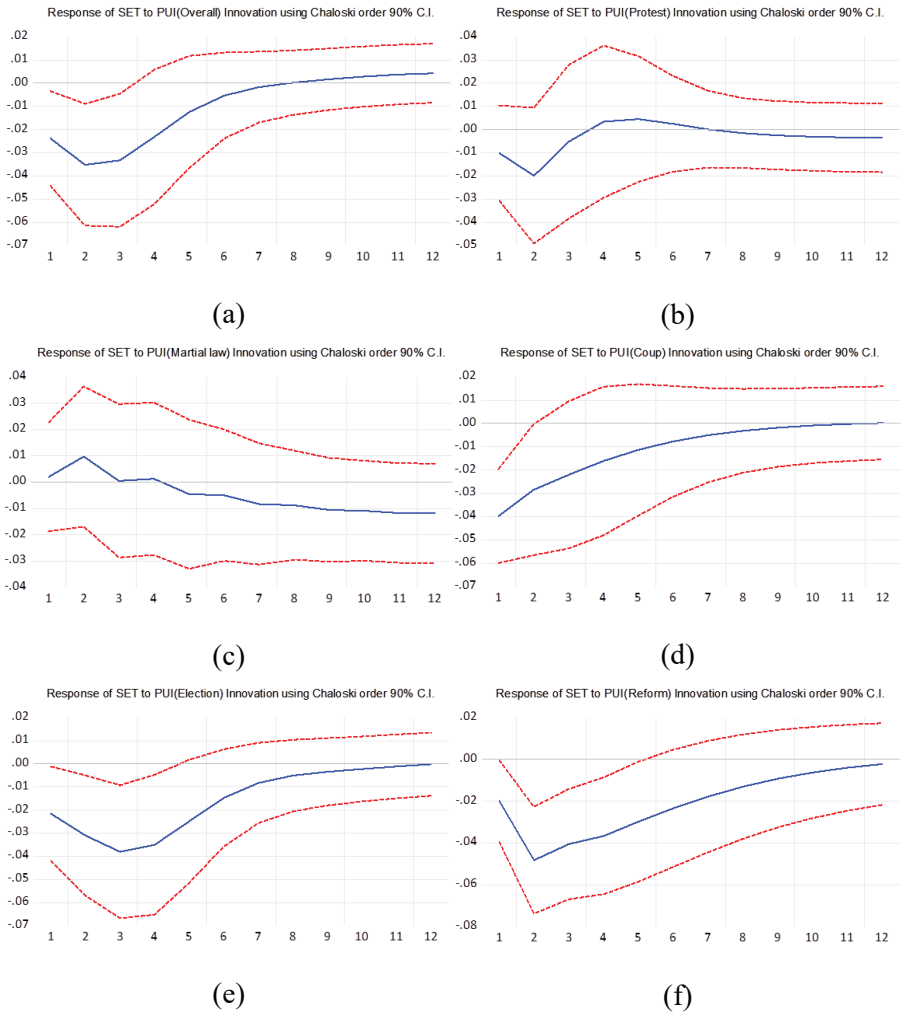
The long-run dynamic relationship among political uncertainty, economic conditions, and the stock market is examined via the VAR model with the variables in their level form. The VAR model consists of two lags based on minimizing the SIC criteria. The generalized impulse response function of shocks to political uncertainty is calculated and shown in Figure 4.

As can be seen in Figure 4 (a), the Thai stock market responds strongly to political uncertainty in the negative direction, and the impacts reach the maximum level within two quarters. However, the patterns of response are different in each dimension of political uncertainty. The results in Figure 4 (d) show that the stock market rapidly responds to extreme unexpected events such as a coup. The evidence from Lumjiak et al. (2014) also showed an immediate response of the Thai stock market in a negative direction to the 2006 coup. Apaitan et al. (2022) explained that the stock market suffers a fall faster than the real economy because this kind of uncertainty affects the financial market before transmitting to the real economy. Since a coup creates the highest uncertainty on the Thai stock market, foreign and domestic investors rapidly re-balance their portfolios by moving toward safer assets, also referred to as the flight-to-quality phenomenon.

In addition, the stock market responds negatively to political uncertainty resulting from national elections and political reform but in a relatively longer period when compared with the response to a coup. Since the election process and political reform take considerable time to complete, the response of the stock market to these types of uncertainty is prolonged.

The response time in this study (two to four quarters) is comparable to the response time of economic activities, i.e., GDP, consumption, and investment, to political uncertainty as reported by Luangaram and Sethapramote (2018).

Figure 4. Impulse – response function of the political uncertainty shocks to stock markets



Note. Y-axis, percent response to 1 standard deviation political uncertainty shock; X-axis, quarters after shock. Blue and red dotted lines represent response and 90% confident interval, respectively.

Interestingly, protests yield a negative but insignificant effect on the Thai stock market, as shown in Figure 4 (b). Moreover, Figure 4 (c) indicates that the Thai stock market responds insignificantly to political uncertainty arising from the implementation of emergency decrees or martial law in a positive direction.

4.2.3 Political uncertainty and the expected risk premium

Quantile regression is used to estimate the impact of political uncertainty on the equity risk premium. The values of the estimated quantile regression slope parameter are reported in Table 3. For comparison, the values of the estimated OLS slope coefficient are also reported in the first row.

The OLS regression results reveal a lack of return predictability for both political uncertainty and market dividend yield over all forecast horizons. As mentioned earlier, the mean regression summarizes the average relationship between the independent variables and dependent variable which does not allow the relationships to differ across various market conditions. The average effect is an important feature to examine; however, quantile regression provides a more comprehensive picture since it could reveal the effects of political uncertainty on the equity risk premium under different market conditions, e.g., bearish (low quantile), normal (medium quantile), or bullish (high quantile).

Focusing on the quantile regression results, the statistics in Table 3 indicate the following. Firstly, political uncertainty is found to strongly predict the expected risk premium at the one-year forecast horizon. For instance, equal to 0.341 when h = 4 implies a one-standard-deviation increase in political uncertainty causes an increase of 34.1% per annum in a four-quarter ahead excess market return. Secondly, market dividend yield is also found to strongly predict the expected risk premium at the one-year forecast horizon. More importantly, the impact of political uncertainty and market dividend yield on the one-year ahead equity risk premium are strongest at the extreme lower quantiles of the return distributions. The impact of political uncertainty is significant only when . In addition, beyond the median, the impact of market dividend yield on the equity risk premium completely disappears since the

estimated coefficient is no longer statistically significant. These results are consistent with the empirical evidence discussed in Chevapatrakul et al. (2019), who show that excess stock market return has the strongest predictive power at the lower quantiles for forecast horizons up to one year. The results also corroborate the evidence of time-varying equity risk premium, with the risk premium being larger during bearish rather than bullish periods.

Besides the effects of overall political uncertainty, its impact on each component of the equity risk premium is also considered in this study. Figures 5, 6, and 7 display the coefficients from the quantile regressions with each component of political uncertainty for the first, fourth, and eighth quarters ahead of predictive stock return regression. The empirical results show that the expected stock return only reacts strongly to political uncertainty in the case of fourth quarter expected returns. When considering each dimension of political uncertainty, elections and reform have the strongest impacts on expected stock returns. Moreover, the effects of political uncertainty are found to be stronger at the left tail of the stock return distribution than at the right. The expected return responses are strongest in the extremely negative condition, i.e., in the fifth and tenth quantile regression ($q = 0.05$; $q = 0.1$). The results from the median regression ($q = 0.5$) indicate that the coefficients are close to zero and not statistically significant. Hence, a "median" level of political uncertainty is apparently not a major concern for investors. When considering the results at the right tails, the estimated coefficients were found to be statistically insignificant due to the high standard errors of the estimated coefficients. These results suggest that investors' responses to political uncertainty are inconsistent.

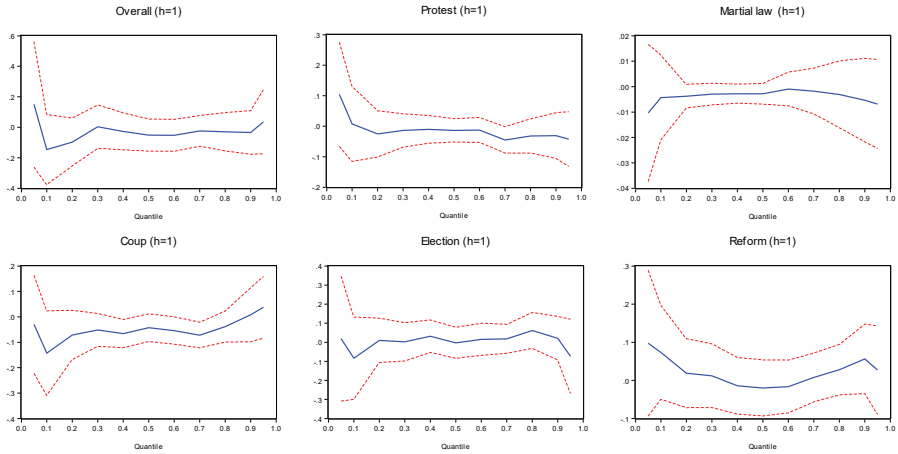
Table 3. The results of quantile regressions on the equity risk premium

$$Q_\tau\left(\mathrm{Ret}_{t+1,t+h}\middle|X_t\right) = \alpha_\tau + \beta_\tau \Delta \ln \mathrm{PUI}_t + \theta_\tau \mathrm{DY}_t + \delta_\tau \Delta \ln \mathrm{GDP}_t + \gamma_\tau \mathrm{Ret}_{t,t+h-1} + e_t,$$

	Political uncertainty (β_τ)					Dividend yield (θ_τ)				
h	1	2	3	4	8	1	2	3	4	8
OLS	-0.042	-0.024	-0.002	0.032	-0.048	-0.032	0.011	0.024	0.037	0.035
	(0.052)	(0.078)	(0.098)	(0.082)	(0.098)	(0.020)	(0.021)	(0.030)	(0.029)	(0.042)
0.05	0.150	-0.142	0.131	0.341***	-0.021	-0.026	0.023	0.001	0.048*	0.029
	(0.249)	(0.182)	(0.234)	(0.105)	(0.172)	(0.033)	(0.049)	(0.042)	(0.028)	(0.042)
0.10	-0.146	-0.038	0.073	0.276**	0.063	-0.029	0.026	0.025	0.066**	0.245
	(0.139)	(0.157)	(0.174)	(0.012)	(0.132)	(0.034)	(0.025)	(0.035)	(0.029)	(0.032)
0.20	-0.097	0.026	0.055	0.194	0.128	-0.015	0.042*	0.052**	0.035	0.003
	(0.095)	(0.088)	(0.086)	(0.121)	(0.107)	(0.031)	(0.022)	(0.026)	(0.034)	(0.033)
0.30	0.004	-0.038	0.041	0.084	0.037	-0.004	0.010	0.046	0.042	0.007
	(0.086)	(0.060)	(0.076)	(0.096)	(0.070)	(0.030)	(0.026)	(0.028)	(0.032)	(0.034)
0.40	-0.028	0.012	0.038	0.060	0.012	-0.008	0.001	0.037	0.053**	0.006
	(0.074)	(0.057)	(0.094)	(0.090)	(0.071)	(0.030)	(0.025)	(0.030)	(0.025)	(0.037)
0.50	-0.051	0.032	0.058	0.012	0.015	-0.005	0.001	0.045	0.046*	0.009
	(0.064)	(0.058)	(0.104)	(0.093)	(0.071)	(0.031)	(0.026)	(0.032)	(0.026)	(0.040)
0.60	-0.053	0.022	0.115	-0.027	0.017	-0.001	0.004	0.055	0.026	-0.002
	(0.064)	(0.063)	(0.088)	(0.078)	(0.075)	(0.034)	(0.031)	(0.035)	(0.029)	(0.041)
0.70	-0.024	-0.005	0.120	0.026	0.027	-0.010	-0.026	0.012	0.032	-0.019
	(0.061)	(0.083)	(0.096)	(0.066)	(0.090)	(0.040)	(0.035)	(0.044)	(0.031)	(0.045)
0.80	-0.030	0.099	0.097	0.076	-0.018	-0.042	-0.018	0.016	0.034	0.003
	(0.076)	(0.018)	(0.111)	(0.086)	(0.125)	(0.040)	(0.042)	(0.046)	(0.036)	(0.049)
0.90	-0.034	-0.001	-0.120	0.011	0.073	-0.059	0.003	0.054	0.036	0.035
	(0.087)	(0.182)	(0.023)	(0.225)	(0.271)	(0.037)	(0.050)	(0.061)	(0.058)	(0.073)
0.95	0.035	-0.229	-0.304	-0.494	-0.659	-0.045	0.028	0.071	-0.001	0.040
	(0.126)	(0.246)	(0.335)	(0.354)	(0.417)	(0.345)	(0.056)	(0.101)	(0.062)	(0.070)

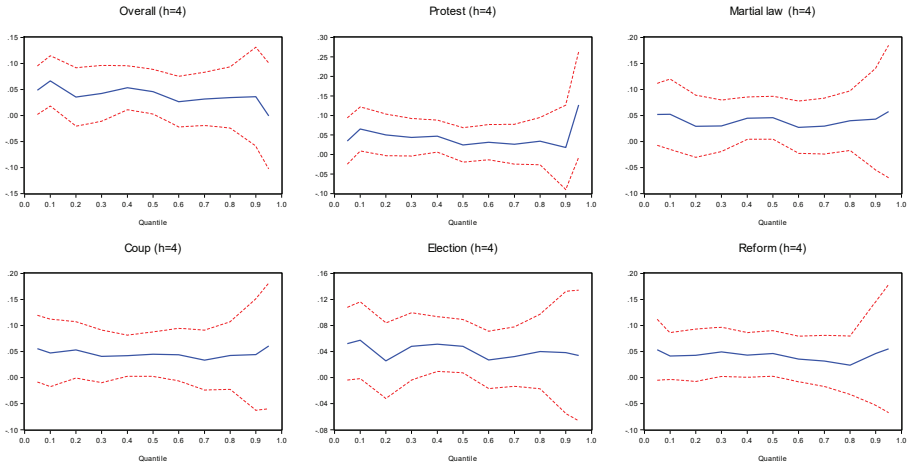
Note. The quantile regression is estimated when and h = 1, 2, …,4, 8 quarters. The standard errors are shown in the parentheses. Statistical significance at the 10%, 5%, and 1% levels are indicated by *, **, and ***, respectively.

Figure 5. Quantile process estimation (one-quarter forecast horizon)



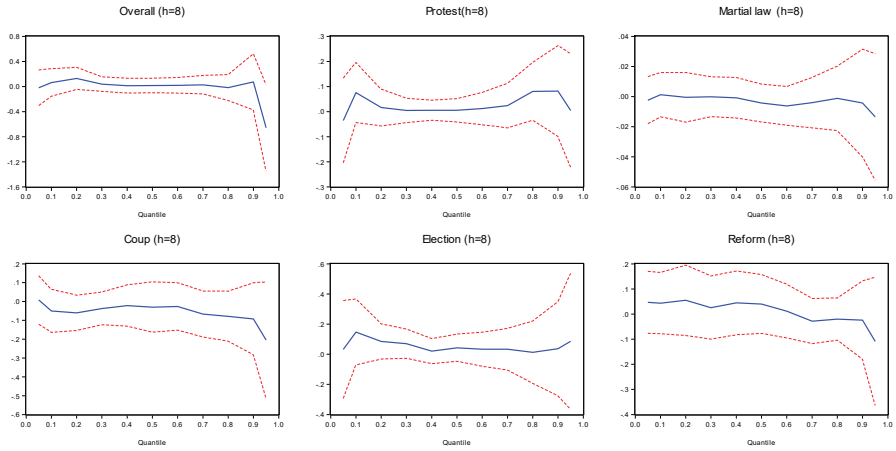
Note. The slope parameters of PUI and its five subcomponents: protest, martial, coup, election, and reform. The quantile regression is estimated when and h = 1. The 90% confidence intervals are depicted by the dotted line in the plots.

Figure 6. Quantile process estimation (four-quarter forecast horizon)



Note. The slope parameters of PUI and its five subcomponents: protest, martial, coup, election, and reform. The quantile regression is estimated when and h = 4. The 90% confidence intervals are depicted by the dotted line in the plots.

Figure 7 Quantile process estimation (eight-quarter forecast horizon)



Note. The slope parameters of PUI and its five subcomponents: protest, martial, coup, election, and reform. The quantile regression is estimated when and h = 8. The 90% confidence intervals are depicted by the dotted line in the plots.

The political uncertainty is relevant to the equity risk premium only during a bearish market; we then repeat the earlier analysis by introducing the dummy variable to capture different market conditions. We follow the methodology of Smales (2020) to investigate the nonlinearity between political uncertainty and expected returns using the state variables as an interaction term. Because a government is more likely to replace existing policies when the economy is weak and political instability is high, two dummy variables are constructed to represent market conditions. First, the economic state variable is considered a recession state (equal to one) when GDP growth is negative for two consecutive quarters. Second, the prevailing PUI state variable is determined by the level of political uncertainty. The dummy variable is set to be equal to one when PUI is beyond the 95 percent quantile (PUI > 179). The results are summarized in Table 4.

Table 4. The results of dummy variable regression on the equity premium

$$Ret_{t+1,t+h} = \alpha + \beta_1 \Delta \ln PUI_t + \beta_2 \Delta \ln PUI_t * States + \theta DY_t + \delta \Delta \ln GDP_t + \gamma Ret_{t,t+h-1} + e_t$$

Panel A: Recession					
h	1	2	3	4	8
constant	0.070	-0.041	-0.093	-0.102	-0.041
	(0.064)	(0.061)	(0.071)	(0.075)	(0.095)
	-0.044	0.012	-0.021	0.056	0.052
	(0.061)	(0.066)	(0.073)	(0.059)	(0.047)
	-0.043	-0.169	-0.005	-0.113	-0.348
	(0.161)	(0.230)	(0.305)	(0.276)	(0.344)
Panel B: High level of prevailing political uncertainty					
constant	0.072	-0.042	-0.090	-0.107	-0.053
	(0.062)	(0.026)	(0.060)	(0.080)	(0.107)
	-0.090	-0.071	-0.047	0.029	-0.072
	(0.055)	(0.073)	(0.075)	(0.090)	(0.091)
	0.202**	0.198	0.151	-0.010	0.186*
	(0.089)	(0.125)	(0.149)	(0.106)	(0.104)

Note. h = 1, 2, …,4, 8 quarters. The standard errors are shown in the parentheses. Statistical significance at the 10%, 5%, and 1% levels are indicated by *, **, and ***, respectively.

Panel A shows the effect of economic conditions. The interaction term is not significant in every model, indicating that the relationship between political uncertainty and equity risk premium during the recession is not different from that of the normal period. The coefficients estimated using a prevailing level of PUI reveal a different story. The coefficients of the interaction term in Panel B are positive and significant for one-quarter and eight-quarter ahead equity risk premium models. These imply that higher political uncertainty leads to higher equity risk premium especially when prevailing political uncertainty is at the highest level. Together, the results confirm a different response of equity risk premium to political uncertainty depend on the market conditions.

5. Conclusions

Politics play a vital role in financial markets, especially in emerging economies. With Thailand having the highest number of coups in the Southeast Asia region and the tension caused by political uncertainty remaining high, the analysis between political uncertainty and the Thai stock market becomes exceptionally interesting. Specifically, this paper focuses on how political uncertainty could impact the behavior of the Thai stock market. To measure the evolution of political uncertainty over time, this study uses the political uncertainty index (PUI) constructed by Luangaram and Sethapramote (2018) based on the methodology of Baker et al. (2006). This index reveals the market's perception toward political uncertainty since it shows several spikes during major political events such as the 2000 and 2006 dissolution of parliament, the 2010 protests and military crackdown, and the 2014 national election following the 2014 military coup.

Employing the data from the second quarter of 1997 to the second quarter of 2020, the empirical results uncover several notable findings. Firstly, over the short run, political uncertainty is found to have a negative but only marginal impact on stock market returns. However, the conditional volatilities in the Thai stock market are pushed up during periods of high political uncertainty. In contrast to the short-run response, the Thai stock market reacts strongly to political uncertainty in the negative direction with coups creating the largest negative impact. The effects are strongest in the second to fourth quarters. Interestingly, protests yield a negative but insignificant effect on the Thai stock market in the long run. Lastly, the impact of political uncertainty on the equity risk premium is examined. The issue of non-linearity between the equity risk premium and predictive variable is addressed, hence quantile regression is employed. The results show that political uncertainty also pushes up the equity risk premium with the impact being strongest at the extreme lower quantiles of return distributions, i.e., downside risk.

In summary, the results of this study support the previously documented evidence on how the stock market responds to political uncertainty,

in that the equity risk premium is found to be larger during periods of bearish sentiment when greater political uncertainty is associated with falling stock prices and rising volatility. By determining the empirical results, we reiterate the important effect of political uncertainty on the stock market. Investors and portfolio managers should incorporate political risk as an additional risk factor in stock valuation and risk management. Moreover, the political uncertainty index (PUI) could be used as an alternative indicator for market monitoring.

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