Capital flows and political conflicts: Evidence from Thailand
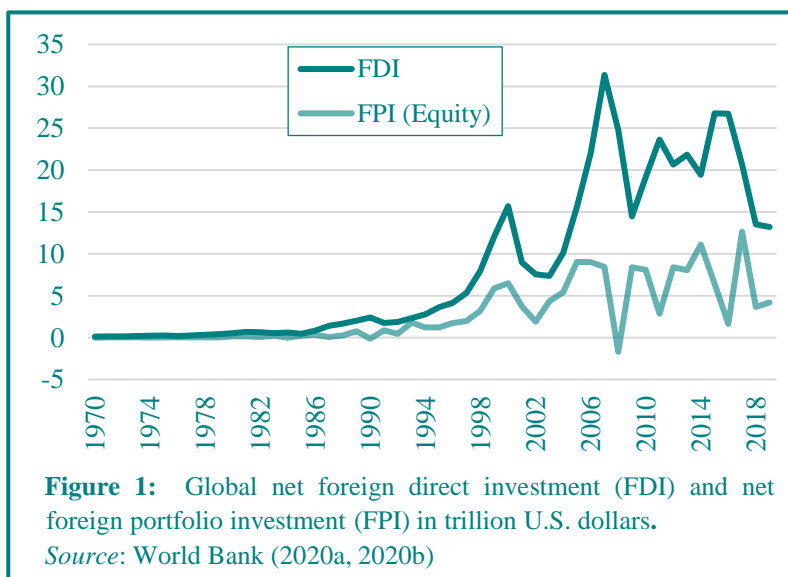
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Abstract

How do domestic political conflicts affect capital flows into Thailand? This article advances the current understanding in two ways. First, it adopts a new method for measuring political uncertainty using Thai-language newspapers over the past 20 years. Given that the nature of political conflicts is multi-faceted, these measures cover the various key components of Thai political tensions—both within and outside of parliament. Second, how different types of tensions affect capital flows are examined using a quantile regression framework—allowing an examination of effects upon the overall distribution of capital flows. The empirical results indicate that Thai political conflicts significantly and adversely affect both foreign direct investment and foreign portfolio investment at the left tails of their distribution. The results also highlight how different types of political conflicts affect capital flows in different ways. For example, uncertainty about a military coup and government measures regarding martial law or emergency decrees have a strong negative effect upon foreign direct investment flows; whereas heightened political protest and news about constitutional reform play a significant role in explaining the risk reversal of foreign portfolio investment flows.

S ince the financial liberalization era of the early 1990s, understanding the evolution and determinants of global capital flows has become a subject of interest for academics and policymakers. For emerging market economies in particular, foreign investment flows are seen as an important catalyst for long-term economic development and welfare gains. In addition to providing external funding, foreign direct investments (FDI) bring in technology transfers and management innovations to a host country. Moreover, FDI from multinational companies links the host to the global value chain and helps to integrate local production into global markets, leading to improved efficiency and productivity in the production process. Since 1990, the global level of net capital inflows has surged in substantial ways and FDI has become the dominant type of investment flow.

Figure 1: Global net foreign direct investment (FDI) and net foreign portfolio investment (FPI) in trillion U.S. dollars. *Source*: World Bank (2020a, 2020b)

Specifically, worldwide FDI increased from only USD 239bn in 1990 to a peak of USD 3trn in 2007. This is illustrated in Figure 1, which also shows net foreign
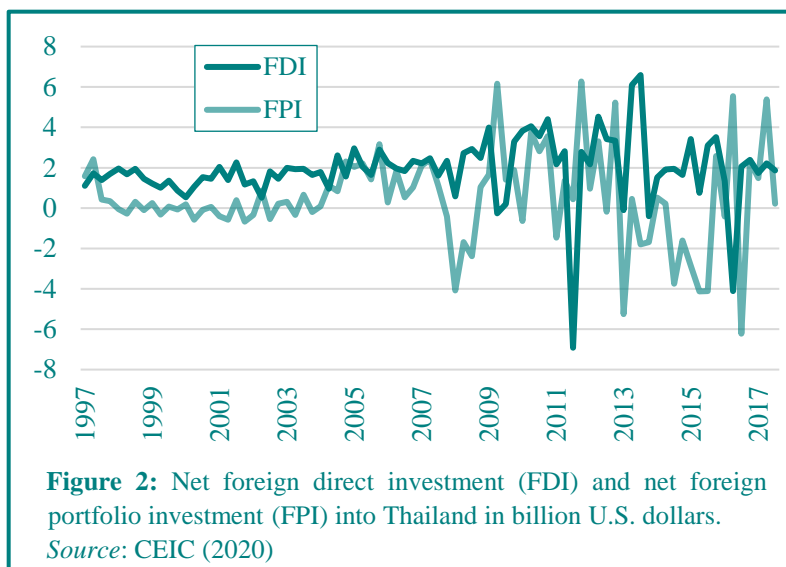
portfolio investments (FPI).[1]

However, since the global financial crisis of 2008/9, significant changes in the overall landscape of global capital flows have emerged. As shown in Figure 1, both FDI and FPI contracted substantially and became more volatile when compared to the pre-2008 period. Similarly, net capital flows into Thailand have become more volatile post-2008—particularly unusual for foreign direct investment (FDI) flows which are ordinarily fairly stable. Figure 2 indicates a three-times increase in volatility in the ten years from 2008 than the previous decade. To put this into perspective, while the standard deviation of net capital flows into Thailand, as a percentage of GDP, rose by 70%, the standard deviation of net capital flows to other South-East Asian emerging economies (Indonesia, Malaysia, and the Philippines) increased by only 37% during the same period.[2]

Against this backdrop of a changing global capital flow landscape, Thailand presents an especially unique setting for the analysis of capital flow determinants in that it also suffered a series of prolonged, fully-fledged, and ongoing political crises. From 2006 to 2014, the country experienced a near-unprecedented degree of political violence and deep polarization—consuming 7 prime ministers and including 2 military coups. In its examination of Thailand, this article contributes to the literature in two ways. First, it emphasizes country characteristics, especially the role of political institutions in creating capital flow volatility post the global financial crisis—in particular, a novel approach to measuring different types of political tensions is applied. Second, the determinants of FDI and FPI are compared and contrasted. An empirical methodology is applied employing a quantile regression framework to explore the effect of Thailand's political conflict on the whole distribution of these two types of capital flows.

Empirical studies on the macroeconomic cost of the various forms of political conflict have garnered much interest in recent years. For example, Dunne and Tian (2019) argues that the economic effect of civil conflict

Using a novel approach of keyword searches across 20 years of newspapers, this article identifies periods of specific types of political uncertainty. On examination of their effects upon capital flows, differing types of uncertainty are seen to effect foreign direct investment and foreign portfolio investment in diverse manners.

Figure 2: Net foreign direct investment (FDI) and net foreign portfolio investment (FPI) into Thailand in billion U.S. dollars. *Source*: CEIC (2020)

can be exceptionally large for developing countries, and estimates that such conflicts reduces growth by over 1.5% per year for low-income African countries. Additionally, political risk has received attention in a number of recent studies as a key country risk factor for foreign investors and associated capital flows. For example, Cai and Menegaki (2019) finds that foreign investors are sensitive to U.S. trade policy-related conflict and that this can deter FDI flowing into the United States. Julio and Yook (2016) investigates the effect of political uncertainty on cross-border capital flows and finds that cross-border flows drop significantly during periods just before elections and increase only after the uncertainty is resolved. Azzimonti (2018a) shows that higher political fractionalization reduces levels of foreign investment and growth, and suggests an inverse relation between political risk and FDI. Several empirical studies emphasize the role of strong institutions in attracting capital flows (e.g., Sahu, 2020). Busse and Hefeker (2007) identify political risk indicators that matter most for the investment decisions

of multinational corporations and find that government stability, internal and external conflict, corruption and ethnic tension, law and order, government accountability and the quality of bureaucracy are statistically highly significant factors in explaining foreign investment flows.

At least nine different theoretical approaches (from neoclassical trade theory to an ownership, location, and international advantage framework) attempt to explain FDI and the investment decisions of multinational firms—demonstrating the importance of heterogeneous models and empirical determinants in empirical studies.[3]

The next section discusses how this article measures the different dimensions of Thai political conflict. This is followed by a description of the data and the empirical methodology. The main findings are then presented, looking especially at the statistical results of various determinants, including political tension, on FDI and FPI flows into Thailand. The final section concludes with certain policy-related considerations.

Measuring Thai political conflict

While political risk is widely believed to negatively affect firms' decisions to invest, any empirical analysis needs to define how political risk is measured. Some studies employ subjective expert surveys regarding factors such as the International Country Risk Guide (ICRG). Others use the World Bank's worldwide governance indicators covering 6 dimensions of governance, including a political instability index measuring the *perception* of the likelihood of political instability. It is, however, difficult to perform time-series analysis at a country level using only 25 observations per country. In contrast, other studies use high-frequency financial market data to proxy the degree of political risk indirectly. However, it is hard to distinguish different *types* of political risk in all these types of studies.[4]

This article, in contrast, captures different types of political conflict and uses high-frequency data. The method is based on automated daily news article keyword searches (text mining), the results of which are easily updated in real time. It was assumed that greater media coverage of certain issues would indicate a higher degree of conflict/disagreement being involved. The methodology followed two main steps. First, determining a set of keywords believed to capture topics of interest. Second, counting (using automated computer searches) the number of articles that contain the pre-determined keywords. Using five Thai-language general newspapers, high-frequency data was collected from 1997 onwards. An overall political uncertainty index (PUI) was constructed with 5 "news about" components, *political protest*, *martial law* or *states of emergency*, *military coup*, *general election*, and *constitutional reform*. The first three are designated as "outside" the parliamentary system, and the latter two as "inside".[5]

Table 1: Keyword sets for measuring Thai political conflicts

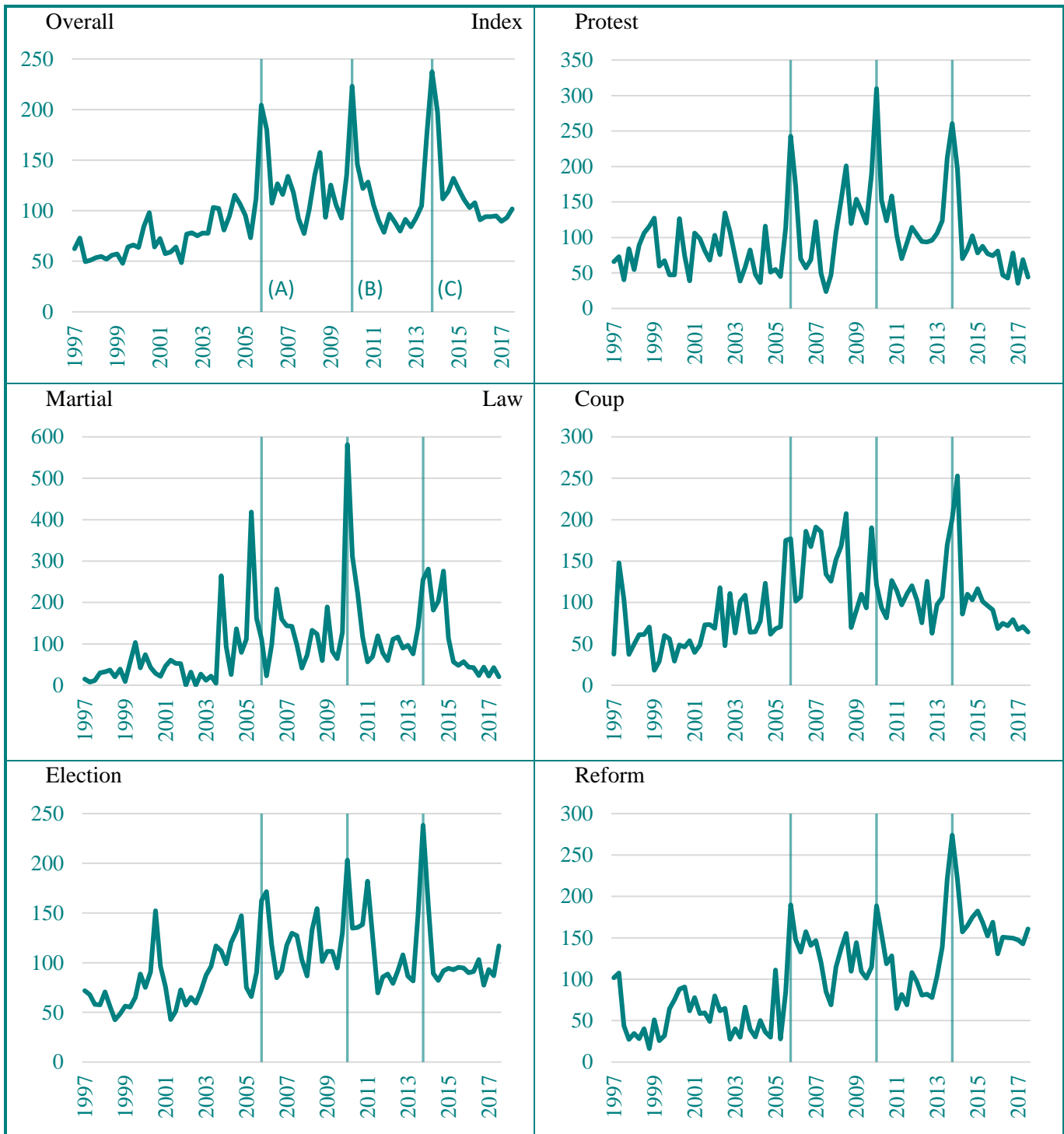| Dimension of political uncertainty	Thai keywords	English translation
1. Political protest	"ชุมนุม" และ "ขัดแย้ง"	"protest" and "conflict"
2. Martial law	"กฎอัยการศึก" หรือ "สถานการณ์ฉุกเฉิน"	"martial law" and "state of emergency"
3. Military coup	"ปฏิวัติ" หรือ "รัฐประหาร"	"revolution" or "coup"
4. General election	"ไทย" และ ("ยุบสภา" หรือ "เลือกตั้ง")	"Thai" and ("parliament dissolution" or "election")
5. Constitutional reform	["การเมือง" และ "ปฏิรูป"] หรือ [("รัฐธรรมนูญ" หรือ "รธน.") และ ("ยกร่าง" หรือ "แก้ไข")]	["politics" and "reform"] or ["constitution" and ("re-draft" or "amend")]
Overall	All of the above	

Source: Luangaram and Sethapramote (2018).

Figure 3: Thailand Political Uncertainty Index (PUI)
Source: Luangaram and Sethpramote (2018).

The set of keywords used for each component are illustrated in Table 1, with all keywords being used to measure overall political conflict. The keywords were carefully selected using the criteria that they should not

be too specific to any particular event, yet still be able to effectively identify the key relevant political events in Thailand over time.[6]

Figure 3 reveals the evolution of Thai political conflict since 1997 (overall and by sub-component). Overall Thai political uncertainty (top-left) rose over time with three major spikes, in 2006, 2010, and 2014. The most recent (and ongoing) Thai political crisis has its roots in 2006 when the then Prime Minister Thaksin Shinnawatra was ousted from power by the military coup. Since then, political instability has stemmed from widespread protests. The spikes in overall conflict were due mainly to a series of violent incidents orchestrated by three political protest groups (see the top-right "protest" panel). First, the People's Alliance for Democracy (PAD, popularly known as the Yellow Shirts) was formed in 2006 to oppose Thaksin Shinnawatra (labeled "A" in the top-left panel)—eventually leading to the military coup of that year. In the aftermath, the United Front of Democracy Against Dictatorship (UDD, popularly known as the Red Shirts and viewed as the Yellow Shirts' main rival) was formed to oppose the military government. Consequently, April/May 2010 saw major protests that are widely considered to be among the biggest in Thai history (labeled "B" in the top-left panel). Finally, the People's Democratic Reform Committee (PDRC) was formed in 2013 to eradicate Thaksin's political influence, This led to another military coup in May 2014 (labeled "C" in the top-left panel). While overall political conflict declined substantially after the 2014 coup, tension regarding constitutional reform remained high through to the end of the dataset in 2017 (bottom-right panel).

Data, model specification, and method

For the period of the study (Q2 1997 to Q4 2017), annual average Thai GDP growth was 3.40%—close to global GDP growth at 3.44%. The country's average degree of trade openness (defined as the sum of exports and imports of goods and services to GDP) was 125% of GDP.

The dependent variables (measured in U.S. dollar terms to take a foreign investor's perspective) and the control variables (drawn from the extant literature on the determinants of capital flows) are summarized in Table 2.[7]

Pull factors provide information about the prevailing economic conditions of a host country. For example, GDP growth (YRG) and inflation (INF) characterize the host country's economic condition with capital flows expected to respond to their movements—more growth, more foreign investment, for example. The government bond yield (INT) is used to indicate financial market conditions of a host country. A low rate should attract foreign investors (not to bonds, but to the country's economy as a whole). Exchange rate volatility (FXvol) captures economic (in)stability. Generally, economic stability would advance foreign investors' interests and hence positively affect capital flows. The real effective exchange rate (REER), and trade openness (OPEN), are also important factors for foreign investment decisions in small open economies. In the case of Asian countries, exports are the main source of growth. Hence, greater trade openness should result in greater capital flows. Exchange rate movements can affect capital flows either positively or negatively. For export-oriented industries, an appreciating exchange rate should be inversely related to capital flows. However, for industries relying on the import of capital goods, or on source funding from foreign investors, an appreciating exchange rate should decrease the cost of capital and, hence, result in a positive effect on capital flows.

Push factors include world GDP growth (YWG) which characterizes global economic conditions and, if positive, is also expected to positively affect capital flows. In addition, a rise in the world uncertainty index (WUI) is used as a proxy for global risk aversion behavior. Using the Asia Pacific sub-index of the WUI allows us to associate policy uncertainty at the regional level with capital flows. A higher degree of uncertainty is expected to inversely affect capital flows.

The Thai political uncertainty index (PUI), developed by Luangaram and Sethapramote (2018) is used to characterize key political risk aspects for Thailand—i.e., the components of protests, martial law/state of emergency, coups, elections, and reforms. The

Table 2: Data description, sources, and expected effects on capital flows.

Abbreviation	Variable	Source	Unit	Expected effect on capital flows
FDI	Foreign Direct Investment: Net	Bank of Thailand	millions USD	
FPI	Foreign Portfolio Investment: Total	Bank of Thailand	millions USD	
YRG	Real GDP of Thailand	National Economic and Social Development Board	% growth (YoY)	+
INF	Headline Inflation (YoY)	Ministry of Commerce	% growth (YoY)	+
OPEN	Degree of trade Openness	Calculate from (Export+Import/GDP)	% of GDP	+
REER	Real Effective Exchange Rate Index	Bank of Thailand	2012 = 100	+ , -
Fxvol	Volatility of Thai baht/USD exchange rate	Calculated from GARCH(1,1)	%	-
INT	Treasury Bill & Government Bond Yield: 3 Year	Bank of Thailand	%	-
WUI	World uncertainty index (Asia-Pacific)	www.worlduncertaintyindex.com	normalized index	-
YRW	World GDP Volume Index	International Monetary Fund	% growth (YoY)	+
PUI	Thailand Political Uncertainty Index	Luangaram and Sethapramote (2018)	1997 = 100	-

Source: All data are collected from the CEIC (2020) except the WUI (Ahir *et al.,* 2018) and PUI (authors' calculation).

descriptive statistics and correlation coefficient among the dependent and independent variables can be found in Tables A1 and A2 (Appendix A).

To operationalize the capital flow variables, several measures of FDI and FPI are used in the literature. For example, the ratios of capital flows as a percentage of GDP or of capital flows per capita are often used in order to scale the value of FDI and FPI to country size in cross-country analysis.

To scale the fluctuation of capital flows for single country data, Baker *et al*. (2009) suggest measuring capital flows as the percentage relative to the cumulative position at the beginning of a given period. Another alternative is to log-transform the squared value of capital flows normalized by their standard deviation; this avoids the problem of negative value flows and reduces fluctuations in the capital flow data. Recent studies have used scaled measures of FDI flows to estimate the relationship to independent variables in standard least squared regressions and in VAR models.[8]

This article has sought to find an explanation for capital flows in the case of extreme negative events

captured in the political conflict variables (PUI and its components). This requires a different econometric strategy i.e., to employ quantile regression to estimate the whole distribution of the flows. An advantage of the quantile regression approach is to allow investigation of the behavior of large inflows versus inflows of a smaller size. Therefore, unscaled capital flows are used to preserve the actual distributions of the dependent variables. Variable specifications in the models consist of the political conflict measures and the set of control variables already discussed. Dummy variables (carrying a value of 1 or 0) capture two specific events that may have affected Thai capital flows in unusual ways. The first of these (2011q4) captures the effect of catastrophic nation-wide floods in Thailand from October to December 2011. This natural disaster affected industrial estates in the central part of Thailand and delayed foreign direct investment. The second (2013q2) captures the U.S. Federal Reserve Bank's "taper tantrum" event which followed the Federal Reserve's surprise announcement to reduce the pace of its asset purchase program. At the time, this event caused the sudden movement of capital flows from the developing countries back to the United States.[9]

The main specification is

$$
\begin{aligned}
CapitalFlow_{i,t} = \alpha_{i,j} + \\
\beta_{1,i,j}\Delta\ln PUI_{j,t} + \beta_{2,i,j}YRG_t + \\
\beta_{3,i,j}INF_t + \beta_{4,i,j}\Delta INT_t + \\
\beta_{5,i,j}OPEN_t + \beta_{6,i,j}FXvol_t + \\
\beta_{7,i,j}\Delta\ln REER_t + \beta_{8,i,j}\Delta\ln WUI_t + \\
\beta_{8,i,j}YRW_t + \theta_{i,j}Dummy_{i,t} + \varepsilon_{i,j,t}
\end{aligned}
$$

(1)

where i and j represent the types of capital flows and the components of political uncertainty (with t being time). For the FDI equation, only the dummy variable for Q4 2011 was used. For the FPI equation, both dummy variables were included. The regressions are estimated by quantile regressions to identify the statistically crucial factors that have affected Thai capital flows.

Empirical results

First a baseline OLS (at means) equation is estimated and then modelled using quantile regressions with the quantiles (q) {q = 0.05, 0.1, 0.25, 0.50, 0.75 0.90, 0.95}. Results of the FDI and FPI regressions are shown in Tables 3 and 4, respectively.

As shown in Table 3, the coefficients of overall political conflicts are statistically significant at the 5 and 10 percent level in the quantile regression of q=0.05 and q=0.10, respectively. The coefficient of political tension at q=0.95 has a significant positive effect at the 10 percent level. Looking at the quantile regression for PUI sub-indices, the main effect relates to the *reform* dimension of conflict (see Table 5). This might appear counter-intuitive, but news about reform may be viewed positively by foreign investors. A similar result is found in Portugal with Julio *et al.* (2013) providing evidence that reform, especially regarding the prevalence of corruption, could attract foreign direct investment. Nevertheless, the finding should be treated with some caution since the statistical significance level is not high.

Table 4 shows significant negative effects of political conflict on FPI flows at the 1 percent level of statistical significance for the quantile regression of q=0.05. There is no significant relation for either FDI or FPI using the mean level OLS regression. The findings thus highlight the effect of Thai political risk on capital flows mainly at extreme negative events rather than at the conditional mean.

Regarding the pull and push control factors, in addition to political conflict, foreign exchange volatility is a main factor explaining both FDI and FPI, especially in the left tails (the negative side of capital flows). For the macroeconomic factors (Table 3), trade openness is the crucial pull factor that attracts capital flows into Thailand, especially for the case of FDI flows. The results underline the nature of the FDI in Thailand, namely the focus on export-oriented industries related to regional supply chains. For the other domestic (pull) factors, GDP growth and inflation have the expected effect on FDI in the left tail in the 5th quantile regression, which indicates that FDI is deterred in periods of weak economic performance. As for global (push) factors, neither world GDP growth nor the world uncertainty index significantly affect the whole distribution of FDI in the quantile regressions.

Table 3: OLS and quantile regression estimates of net USD foreign <u>direct</u> investment (FDI) flows into Thailand

| | OLS | | | Quantile Regressions | | | | |
| | *mean* | *5th* | *10th* | *25th* | *50th* | *75th* | *90th* | *95th* |
Variables	*(1)*	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*
Political conflict	540	-2409**	-1396*	-602	488	1158	1802	1690*
	(0.436)	(0.023)	(0.077)	(0.448)	(0.562)	(0.195)	(0.432)	(0.067)
Control Variables								
GDP growth	-48	104**	92*	18	-69	42	-98	-144**
	(0.447)	(0.023)	(0.077)	(0.850)	(0.465)	(0.574)	(0.140)	(0.028)
Inflation	-3	311**	61	138	14	15	-111	178
	(0.976)	(0.035)	(0.709)	(0.279)	(0.916)	(0.902)	(0.495)	(0.447)
Interest rate	-102	-659*	-331	-175	-7	115	-113	144
	(0.440)	(0.055)	(0.598)	(0.317)	(0.962)	(0.496)	(0.503)	(0.588)
Openness	37***	41*	27	33*	25*	20	79***	64***
	(0.001)	(0.051)	(0.587)	(0.071)	(0.063)	(0.381)	(0.003)	(0.003)
REER	-568	-22507	8904	3764	-337	2243	2397	-27640*
	(0.871)	(0.108)	(0.342)	(0.493)	(0.939)	(0.746)	(0.836)	(0.068)
FX Volatility	-69	-644***	-461***	-394**	-115	-90	23	-25
	(0.611)	(0.003)	(0.002)	(0.019)	(0.615)	(0.554)	(0.819)	(0.846)
World Uncertainty	-367*	-290	-489	-412	-163	-344	54	97
	(0.085)	(0.353)	(0.440)	(0.178)	(0.459)	(0.362)	(0.964)	(0.861)
World GDP growth	48	142	45	31	83	-144	50	-28
	(0.722)	(0.533)	(0.833)	(0.865)	(0.631)	(0.300)	(0.763)	(0.865)
dummy 2011q4	-9926***	-8170***	-7558***	-8921***	-9847***	-9368***	-12225***	-13752***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Intercept	-2724**	-6669**	-3421	-3442*	-1256	477	-6051**	-3602
	(0.037)	(0.011)	(0.598)	(0.086)	(0.362)	(0.862)	(0.039)	(0.143)
R-squared	0.417	0.478	0.378	0.277	0.210	0.174	0.218	0.327
N		80	80	80	80	80	80	80

Note: The results are based on the OLS and quantile regressions for the whole distribution of the (unscaled) net foreign direct investment data of the following equation.

$$FDI_t = \alpha + \beta_1 \Delta \ln PUI_t + \beta_2 YRG_t + \beta_3 INF_t + \beta_4 \Delta INT_t + \beta_5 OPEN_t + \beta_6 FXvol_t +$$
$$\beta_7 \Delta \ln REER_t + \beta_8 \Delta \ln WUI_t + \beta_9 YRW_t + \theta_1 Dummy2011q4_t + \varepsilon_t$$

PUI is the overall political uncertainty index *, ** and *** denote statistical significance at the 10, 5 and 1 percent level. The figure in the parentheses is the p-value.

Table 4: OLS and quantile regression estimates of USD net foreign <u>portfolio</u> investment (FPI) flows into Thailand

	OLS	Quantile Regressions						
	mean	*5th*	*10th*	*25th*	*50th*	*75th*	*90th*	*95th*
Variables	*(1)*	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*
Political conflict	-1037	-6789***	-1746	-1556	-944	589	1665	-29
	(0.255)	(0.006)	(0.260)	(0.183)	(0.438)	(0.693)	(0.385)	(0.987)
Control Variables								
GDP growth	39	317***	162	68	59	-41	-214	-105
	(0.634)	(0.006)	(0.260)	(0.349)	(0.503)	(0.750)	(0.344)	(0.566)
Inflation	34	257	385	192	192	-11	-563	-409
	(0.870)	(0.277)	(0.012)	(0.198)	(0.258)	(0.969)	(0.117)	(0.154)
Interest rate	86	-476	-12	-35	11	-11	-196	-537
	(0.721)	(0.188)	(0.945)	(0.875)	(0.969)	(0.988)	(0.461)	(0.110)
Openness	13	-38	-58**	-27	4	42	98***	151***
	(0.579)	(0.367)	(0.018)	(0.173)	(0.881)	(0.460)	(0.006)	(0.000)
REER	3882	23947	1195	-506	526	8724	8591	16267
	(0.644)	(0.239)	(0.846)	(0.945)	(0.951)	(0.730)	(0.423)	(0.135)
FX Volatility	650***	94	271	502***	704***	891***	1364***	894*
	(0.000)	(0.775)	(0.212)	(0.027)	(0.000)	(0.000)	(0.000)	(0.052)
World Uncertainty	71	-80	129	91	-462	1	1459**	1780**
	(0.846)	(0.897)	(0.738)	(0.838)	(0.257)	(0.999)	(0.024)	(0.012)
World GDP growth	-22	446	317	156	2	20	352	-127
	(0.930)	(0.333)	(0.298)	(0.524)	(0.994)	(0.934)	(0.411)	(0.703)
dummy 2011q4	-312	4996**	3219**	1446	-214	-2139	-5751***	-6702***
	(0.765)	(0.045)	(0.011)	(0.302)	(0.890)	(0.242)	(0.009)	(0.006)
dummy 2013q2	-5860***	-1533	-2895**	-4095***	-5991***	-7389***	-9156***	-9799***
	(0.000)	(0.397)	(0.010)	(0.002)	(0.000)	(0.000)	(0.000)	(0.000)
Intercept	-1194	-1395	3297	1516	-678	-3695	-7874**	-13103***
	(0.640)	(0.730)	(0.133)	(0.512)	(0.812)	(0.572)	(0.049)	(0.002)
R-squared	0.167	0.255	0.288	0.209	0.136	0.138	0.237	0.344
N	80	80	80	80	80	80	80	80

Note: The results are based on the OLS and quantile regressions for the whole distribution of the (unscaled) net foreign portfolio investment data of the following equation.

$$FPI_t = \alpha + \beta_1 \Delta \ln PUI_t + \beta_2 YRG_t + \beta_3 INF_t + \beta_4 \Delta INT_t + \beta_5 OPEN_t + \beta_6 FXvol_t + \beta_7 \Delta \ln REER_t + \beta_8 \Delta \ln WUI_t + \beta_9 YRW_t + \theta_1 Dummy2011q4_t + \theta_2 Dummy2013q2_t + \varepsilon_t$$

PUI is the overall political uncertainty index, *, ** and *** denote statistical significance at the 10, 5 and 1 percent level. The figure in the parentheses is the p-value.

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For the FPI flows of Table 4, the effects of trade openness on the positive side of flows are stronger than those of the negative counterpart. For the other pull factors, the results are similar to those of the FDI flows where GDP growth has a positive and significant effect only in the 5th quantile regression.

There is no evidence that FPI flows are much affected by inflation, bond yield, and the real exchange rate. For the push factors, world GDP growth still does not result in a significant effect on FPI flows. However, the world uncertainty index does significantly explain FPI flows in the right tails of the FPI distribution, meaning that the relative stability of regional risks is an important factor in attracting FPI during periods of large portfolio investment flows. For the quantile regressions, the R-squared of both the left and right tails of the distribution are generally higher than those of the median equation. To wit, the R-squared values of the median of the FDI and FPI regressions are equal to 0.21 and 0.16, respectively. In the case of the FDI and FPI regressions, the R-squared in the extremely bad capital flow period (5th quantile) are equal to 0.48 and 0.25, while those of the extremely good period are equal to 0.33 and 0.34. These results provide additional support for the argument that political conflict, apart from other risk factors, can explain capital flows during extreme events better than in periods of regular economic conditions.

Next, an evaluation is made of how foreign capital flows into Thailand are affected by the different components of political conflict. The results for the FDI and FPI flows are shown in Tables 5 and 6 respectively. There are differences, specifically in the case of FDI flows at q=0.05, the most important components of political risks in Thailand were *military coups* and government measures related to *martial law*/*states of emergency*. This indicates that political conflicts handled outside, rather than within, the normal operation of Thailand's parliamentary system are responsible for the negative effects on FDI flows. For FPI flows, it is *protests* and *reforms* that are statistically significant at the 1 and 10 percent levels, respectively. Comparing the movement of each of the five PUI components, the *protests* and *reforms* components show a higher degree

of persistence than other components. Thus, *protests* and *reforms* transmit their effects onto financial market risk and subsequently affect foreign portfolio investment.

Examining the effects of the control variables, the volatility of the foreign exchange rate and the national flood disaster (2011q4) turn out to be the important indicators affecting FDI flows (Table 5). The interest rate and inflation are the other pull factors that significantly affect FDI. The effect of the push factors, however, are not strong in the extreme left tail of the quantile regression (q=0.05). For FPI flows (Table 6), the great flood in Thailand (2011q4) is by far the most crucial event affecting capital flows. The U.S. Fed's policy of tapering its quantitative monetary easing in 2013 is not significant in the 5th quantile of FPI flows. The (domestic) pull factors have stronger effects on FDI than FPI flows. This is not surprising as in the 5th (most negatively volatile) quantile of extreme events, traditional factors such as GDP growth and bond yields are not expected to have a significant influence on the capital flows as the latter are much better explained by the extreme events dummy and the increasing concerns over Thailand's political stability.

Finally, the quantile process of the coefficients of political conflict from each of the FDI and FPI regressions are computed (see Figures 4 and 5). In most cases negative effects are found at the extreme left tail of the capital flow distribution (q=0.05; q=0.1). This finding implies that the various types of political conflict in Thailand are important risk factors explaining the downside risk of capital flows into the country.

The results from the median regressions (q=0.5) show that the coefficients are close to zero and, in most cases, not statistically significant. Hence, a "median" level of political conflict is apparently not a major concern for foreign investors, certainly not when compared to more adverse conditions. However the effects of political conflict at the right tails. Depending on the regression, the coefficients show both negative and positive signs in the 80th to 95th percentile ranges. In addition, the standard errors of the estimated coefficients are high, suggesting that for large capital inflows, foreign investors' responses to political conflict are inconsistent.

Table 5: Quantile regression estimates (q = 0.05) of USD net foreign <u>direct</u> investment (FDI) inflows for Thailand with sub-indices of PUI

Variables	Overall	Protest	Martial	Coup	Election	Reform
Political conflict	-2409** (0.023)	-90 (0.816)	-125** (0.023)	-2078** (0.011)	1017 (0.208)	-708 (0.137)
Control Variables						
GDP growth	-2409** (0.023)	-90 (0.816)	-125** (0.023)	-2078** (0.011)	1017 (0.208)	-708 (0.137)
Inflation	311** (0.035)	240 (0.239)	183 (0.309)	203 (0.117)	268 (0.123)	357** (0.028)
Interest rate	311** (0.035)	240 (0.239)	183 (0.309)	203 (0.117)	268 (0.123)	357** (0.028)
Openness	41 (0.051)	52 (0.128)	58 (0.116)	74 (0.040)	11 (0.724)	27 (0.245)
REER	-22507 (0.108)	-16227 (0.208)	-12072 (0.215)	-1964 (0.848)	376 (0.972)	-18460 (0.196)
FX Volatility	-644*** (0.003)	-717*** (0.002)	-644*** (0.001)	-677*** (0.001)	-693*** (0.002)	-699*** (0.003)
World Uncertainty	-290 (0.353)	-214 (0.462)	-491* (0.087)	-729* (0.056)	-455 (0.224)	-684 (0.135)
World GDP growth	142 (0.533)	147 (0.560)	117 (0.581)	-20 (0.921)	313 (0.156)	313 (0.264)
dummy 2011q4	-8170*** (0.000)	-6515*** (0.000)	-6671*** (0.000)	-7981*** (0.000)	-5796*** (0.000)	-7655*** (0.000)
Intercept	-6669** (0.011)	-8668** (0.040)	-8976* (0.063)	-10118** (0.043)	-3716 (0.317)	-5788* (0.053)
R-squared	0.482	0.478	0.465	0.470	0.465	0.472
N	80	80	80	80	80	80

Note: The results are based on the 5th quantile regressions of the net (unscaled) foreign direct investment's equation using the sub-categories of the political conflict's variables.

$$FDI_t = \alpha_j + \beta_{1.j}\Delta \ln PUI_{j,t} + \beta_{2,j}YRG_t + \beta_{3,j}INF_t + \beta_{4,j}\Delta INT_t + \beta_{5,j}OPEN_t + \beta_{6,j}FXvol_t +$$

$$\beta_{7,j}\Delta \ln REER_t + \beta_{8,j}\Delta lnWUI_t + \beta_{9,j}YRW_t + \theta_{1,j}Dummy2011q4_t + \varepsilon_{j,t}$$

where j = {overall, protest, martial law, coup, election, reform}

*, ** and *** denote statistical significance at the 10, 5 and 1 percent level. The figure in the parentheses is the p-value.

Table 6: Quantile regression estimates (q = 0.05) of USD net foreign portfolio investment (FPI) inflows for Thailand with sub-indices of PUI

Variables	Overall	Protest	Martial	Coup	Election	Reform
Political conflict	-6789***	-2141***	261	-1649	3155	-2731*
	(0.006)	(0.005)	(0.195)	(0.246)	(0.174)	(0.071)
Control Variables						
GDP growth	317**	234***	224	198	119	177
	(0.032)	(0.005)	(0.195)	(0.334)	(0.221)	(0.244)
Inflation	257	296	315	312	355*	436
	(0.277)	(0.234)	(0.320)	(0.347)	(0.074)	(0.104)
Interest rate	-476	-962	-1062	-76	-296	-1008
	(0.188)	(0.257)	(0.291)	(0.861)	(0.431)	(0.284)
Openness	-38	-11	-27	-102**	-91**	-15
	(0.367)	(0.848)	(0.640)	(0.048)	(0.012)	(0.755)
REER	23947	-2497	-21175	5114	-6868	-12350
	(0.239)	(0.895)	(0.568)	(0.849)	(0.605)	(0.715)
FX Volatility	94	58	81	237	180	48
	(0.775)	(0.845)	(0.808)	(0.379)	(0.630)	(0.873)
World Uncertainty	-80	-13	-2126	-2258	-1578*	-1356
	(0.897)	(0.986)	(0.080)	(0.338)	(0.059)	(0.349)
World GDP growth	446	775*	763	279	313	576
	(0.333)	(0.095)	(0.124)	(0.534)	(0.401)	(0.245)
dummy 2011q4	4996**	4639***	4527**	6430**	7081**	3368*
	(0.045)	(0.004)	(0.043)	(0.044)	(0.019)	(0.061)
dummy 2013q2	-1533	-1936	-2565	-2135	-1629	-1779
	(0.397)	(0.221)	(0.197)	(0.163)	(0.440)	(0.337)
Intercept	-1395	-5656	-4267	7383	6093	-4950
	(0.730)	(0.469)	(0.590)	(0.177)	(0.121)	(0.524)
R-squared	0.255	0.292	0.228	0.229	0.225	0.254
N	80	80	80	80	80	80

Note: The results are based on the 5th quantile regressions of the net (unscaled) foreign portfolio investment's equation using the sub-categories of the political conflict's variables.

$$FPI_t = \alpha_j + \beta_{1.j}\Delta \ln PUI_{j,t} + \beta_{2,j}YRG_t + \beta_{3,j}INF_t + \beta_{4,j}\Delta INT_t + \beta_{5,j}OPEN_t + \beta_{6,j}FXvol_t +$$

$$\beta_{7,j}\Delta \ln REER_t + \beta_{8,j}\Delta \ln WUI_t + \beta_{9,j}YRW_t + \theta_{1,j}Dummy2011q4_t + \varepsilon_{j,t}$$

where j = {overall, protest, martial law, coup, election, reform}

*, ** and *** denote statistical significance at the 10, 5 and 1 percent level. The figure in the parentheses is the p-value.
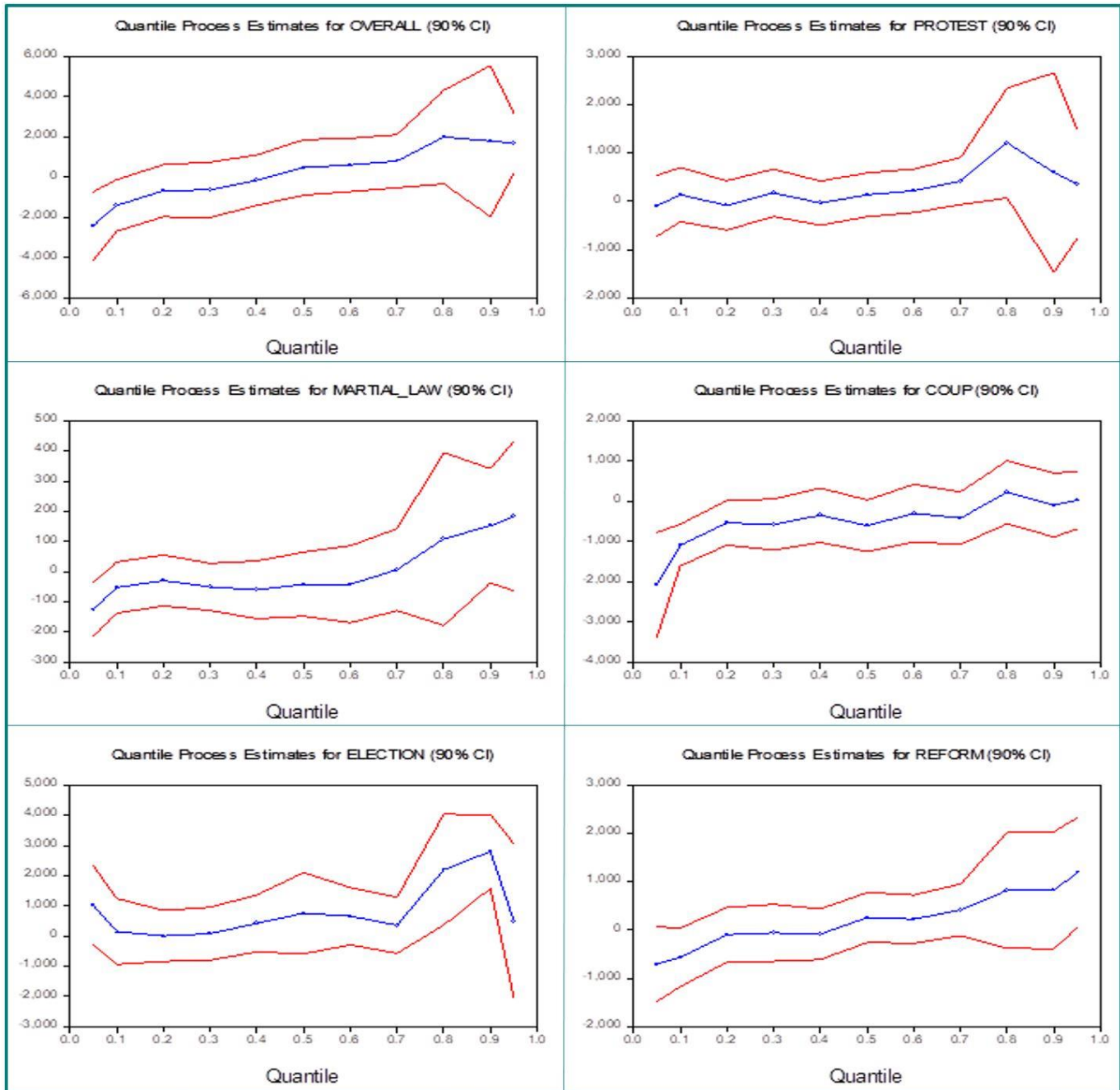
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Figure 4: Quantile process estimates for overall political risk and its dimensions on the foreign direct investment (FDI) regressions

Note: The results are based on the quantile regressions for the whole distribution of the (unscaled) net foreign portfolio investment's equation using the sub-categories of the political conflict's variables.

$$FDI_t = \alpha_j + \beta_{1,j} \Delta \ln PUI_{j,t} + \beta_{2,j} YRG_t + \beta_{3,j} INF_t + \beta_{4,j} \Delta INT_t + \beta_{5,j} OPEN_t + \beta_{6,j} FXvol_t +$$

$$\beta_{7,j} \Delta \ln REER_t + \beta_{8,j} \Delta \ln WUI_t + \beta_{9j} YRW_t + \theta_{1,j} Dummy2011q4_t + \varepsilon_{j,t} ,$$

where j = {overall, protest, martial law, coup, election, reform}

The blue lines present the estimated coefficients of $\beta_{1,j}$. The red lines indicate the 90th confidence interval.
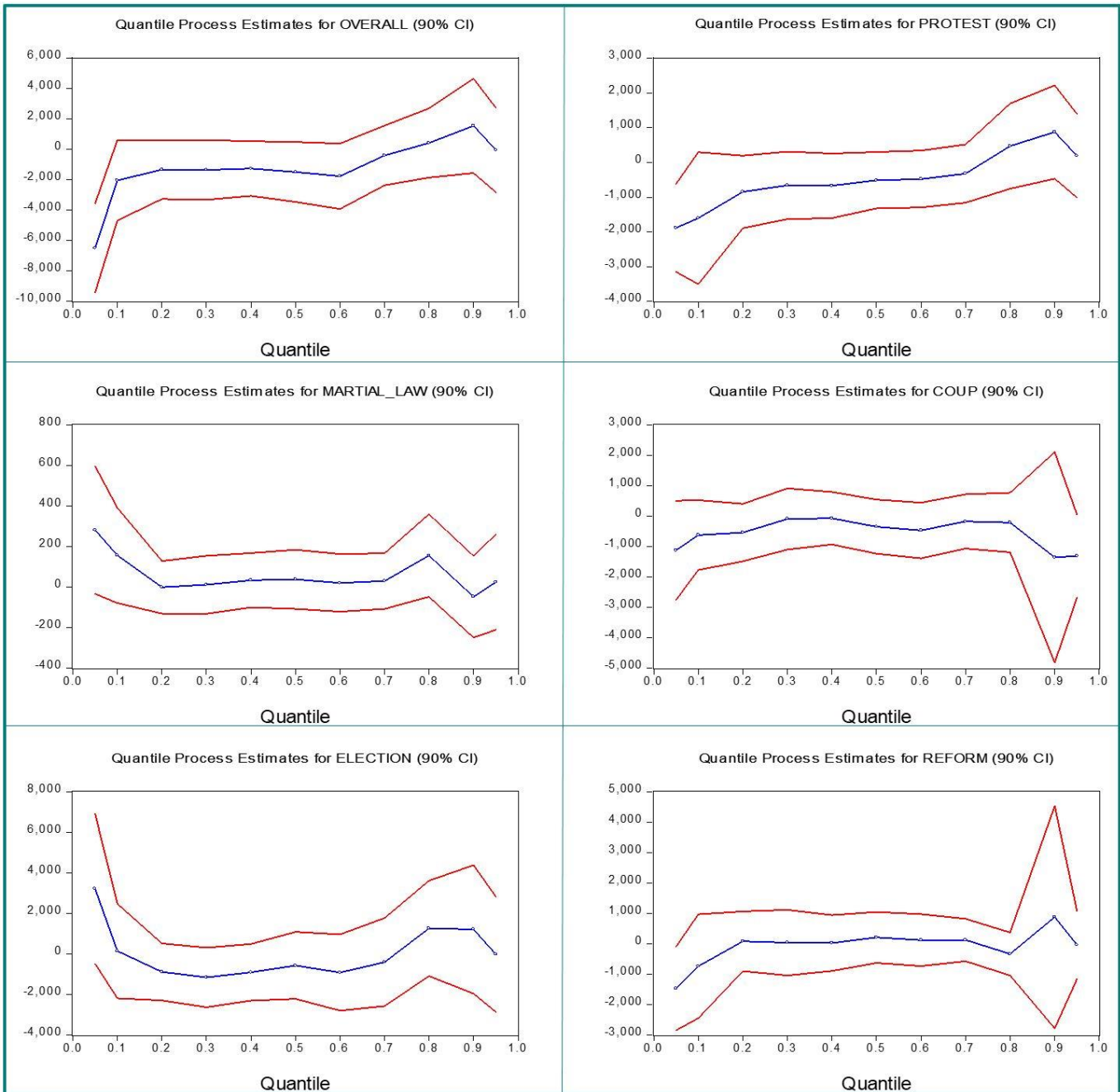
Figure 5: Quantile process estimates for overall political risk and its dimensions on the foreign portfolio investment (FPI) regressions

Note: The results are based on the quantile regressions for the whole distribution of the (unscaled) net foreign portfolio investment's equation using the sub-categories of the political conflict's variables.

$$FPI_t = \alpha_j + \beta_{1,j}\Delta \ln PUI_{j,t} + \beta_{2,j}YRG_t + \beta_{3,j}INF_t + \beta_{4,j}\Delta INT_t + \beta_{5,j}OPEN_t + \beta_{6,j}FXvol_t +$$

$$\beta_{7,j}\Delta \ln REER_t + \beta_{8,j}\Delta \ln WUI_t + \beta_{9,j}YRW_t + \theta_{1,j}Dummy2011q4_t + \varepsilon_{j,t} \quad ,$$

where j = {overall, protest, martial law, coup, election, reform}

The blue lines present the estimated coefficients of $\beta_{1,j}$. The red lines indicate the 90th confidence interval.

Conclusion

This article is motivated by a need to better understand capital flows in the aftermath of the global financial crisis of 2008/9 when both foreign *direct* investment and foreign *portfolio* investment flows became more volatile than before. In addition, for Thailand, there is also a need to examine the multifaceted nature of its political turmoil, especially from 2006 onward. The resulting conflict has been almost wholly unprecedented and has created a deep polarization within the country.

Examining how different types of political conflict affect foreign investors' decisions to place direct or portfolio investments in Thailand indicates that heightened political conflict significantly and adversely influences both types of capital flows at the left tail of the distribution, depriving Thailand of foreign capital inflows, but did not affect the mean of these flows. Furthermore, the downside risk of foreign direct investment and portfolio investment flows respond differently to the different types of political conflict. In particular, conflicts originating outside parliament, namely the imposition of *martial law/states of emergency* and of *military coups* are statistically significant downside risk factors for foreign direct investment. Foreign portfolio investment, however, reacts more to political conflict in the form of *protests* and parliamentary-driven *reforms*.

Overall, the article highlights foreign investors' heterogenous responses to different types of political conflict. Given that capital flows are of crucial importance for the Thai economy, the country's export capacity and its international competitiveness depend on its ability to attract foreign direct investment. It is therefore important to address the root sources of the political turmoil experienced since 2006 and to mitigate the resulting capital flow volatility on Thailand's economy.[10]

Notes

1. FPI equity includes net inflows from equity securities other than those recorded as direct investment and including shares, stocks, depository receipts (American or global), and direct purchases of shares in local stock markets by foreign investors. FDI refers to direct investment equity flows in the reporting economy. It is the sum of equity capital, reinvestment of earnings, and other capital. Direct investment is a category of cross-border investment associated with a resident in one economy having control or a significant degree of influence on the management of an enterprise that is resident in another economy. Ownership of 10 percent or more of the ordinary shares of voting stock is the criterion for determining the existence of a direct investment relationship. The global sum does not necessarily equal zero as the net inflows to a country measure flows due to non-residents.

2. See also Hannan (2018). Emerging economies: 37% is the authors' own calculation drawn from CEIC (2020).

3. For a detailed survey of the nine approaches, see Faeth (2009).

4. Worldwide governance indicators are: Voice and accountability; political instability and absence of violence; government effectiveness; regulatory quality; rule of law; and control of corruption. Proxy data: Bekaert, *et al.* (2014).

5. Assumption: The methodology follows Baker, *et al.* (2016), which constructs an economic policy uncertainty index, and Azzimonti (2018b), which employs a similar method for measuring political partisan conflicts. General newspapers: Based on Luangaram and Sethapramote (2018).

6. The choice of keywords is validated in Figure 3, with its frequency spikes matching the timing of all the major political events in Thailand. It may be asked whether this method of quantifying political conflict via Thai-language newspapers can be considered an unbiased measure and, more specifically, why foreign investors should be expected to react to Thai, rather than English-language newspapers. In response to this challenge, the aim of the keyword search is to capture political events rather than political perspectives. When there are major political events, most, if not all, Thai and English newspapers will cover these events. Indeed, as a robustness check, it was found that there was a high correlation between the measures constructed from Thai newspapers versus those from English newspapers. In addition, suitable English newspapers commenced in 2006, giving a smaller time-series than that provided by Thai-language newspapers.

7. Domestic (or pull) factors are real GDP growth (YRG), inflation (INF), the 3-year government bond yield (INT), trade openness (OPEN), the real effective exchange rate index (REER), and the exchange rate

volatility of the domestic currency (FXvol), where REER is a trade weighted index obtained from the Bank of Thailand. We computed FXvol using a standard conditional volatility GARCH (1,1) model. Nondomestic global (or push) factors are world GDP growth (YWG) and a world uncertainty index (WUI), the latter tracking uncertainty across the globe using text-mining methods to extract information from the country reports of the Economist Intelligence Unit (Ahir *et al.,* 2018*)*. The index is available for 143 countries.

8. Scaling: Busse and Hefeker (2007); Nguyen, *et al.* (2020); Sahu (2020). Log-transform: Busse and Hefeker (2007). Least squared: Azzimonti (2019). VAR: Cai, *et al.* (2019)

9. Quantile regression: Sahu (2020).

10. Capital flows: Nidhiprabha (2017).

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Appendix A: Descriptive statistics and correlation coefficients among the dependent and independent variables

Table A1: Descriptive statistics of the macroeconomic, financial market and risk variables

	YRG	*INF*	*INT*	*OPEN*	*REER*	*FXVOL*	*WUI*	*YRW*
Mean	3.40	2.42	3.65	125.46	93.92	0.0011	642	3.44
Median	3.82	2.02	3.06	126.79	95.61	0.0005	614	3.50
Maximum	15.30	10.23	15.29	150.36	109.44	0.0114	1,977	6.11
Minimum	-12.20	-2.73	1.45	88.89	76.36	0.0000	98	-2.91
Std. Dev.	4.13	2.43	2.64	12.77	8.59	0.0019	336	1.64
Skewness	-1.16	0.83	3.01	-0.54	-0.18	4.08	1.07	-1.59
Kurtosis	6.42	4.08	12.57	3.13	1.74	19.92	5.03	6.84

Source: Authors' calculations.

Table A2: Correlation coefficients between the capital flows and the determinant variables.

	FDI	*FPI*	*PUI*	*YRG*	*INF*	*INT*	*OPEN*	*REER*	*FXVOL*	*WUI*	*YRW*
FDI	1.00										
FPI	0.05	1.00									
PUI	0.27	-0.01	1.00								
YRG	0.12	0.09	0.11	1.00							
INF	0.04	0.02	-0.01	-0.34	1.00						
INT	0.00	-0.01	-0.30	-0.61	0.71	1.00					
OPEN	0.15	0.07	0.50	0.26	0.22	-0.33	1.00				
REER	0.22	-0.05	0.43	0.01	-0.21	-0.33	0.33	1.00			
FXVOL	-0.06	-0.04	-0.41	-0.56	0.54	0.90	-0.48	-0.43	1.00		
WUI	-0.05	-0.03	0.00	0.31	-0.08	-0.29	0.17	-0.01	-0.26	1.00	
YRW	0.06	0.04	0.21	0.44	0.27	0.01	0.33	-0.01	-0.03	-0.07	1.00

Source: Authors' calculations.

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