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The Effect of Economic Policy Uncertainty on the Capital Adequacy Ratio Adjustment of the Asian Banks

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ABSTRACT

Due to many factors, the CAR is frequently and continuously adjusted in the business. This research examines the factors that affect the CAR target and its adjustment speed. We apply the partial adjustment model to analyze the data of 9 Asia countries' banks from 2010 to 2019. Our key finding is that credit growth shows less influence and is statistically significant on the CAR target than the new variable created by the interaction between credit growth and the economic policy instability index. The adjustment has occurred through this new factor rather than adjustments to the risk sensitivity of the banks' assets or the growth of undivided profit. In addition, the Asian banks improved their CAR by increasing the main components of their core capital.

INTRODUCTION

Recently, uncertainty is a matter for economic decision-making that has been emphasized; economic policy uncertainty (EPU) helps predict recessions at the macro-level (Karnizova & Li, 2014) and in the presence of now-standard financial variables (Scott et al., 2015). The government has widespread effects on the country's overall economy (Ellen & Edward, 2005). When government policies are smooth and predictable, the economic sectors might be more informed about their business enlargement decisions. On the contrary, uncertainty about government policies has severe implications as firms tend to decrease investment and cut jobs (Scott et al., 2016; Huseyin & Mihai, 2016). Banks are sensitive and averse to EPU (Gissler et al., 2016); in reaction to EPU, banks may reduce credit growth to lower risk exposure (Bordo et al., 2016).

Recent studies focus on a bank lending channel through which economic policy uncertainty (EPU) slows US credit growth and eventually harms the economy (Bordo et al., 2016; Zelong and Jijun, 2018; Berger et al., 2018). Hu and Gong (2019) analyzed bank-level data in 19 major economies, adding

evidence that EPU significantly hinders bank credit growth. These authors also confirmed empirically that prudential regulation reduced the impact of EPU on bank lending. Hence, sound prudential policies help reduce bank credit risk when uncertainty rises.

After the financial crisis of 2008, bank regulations and supervision are being tightened to consolidate in the industry worldwide. The Basel Committee has identified the capital adequacy ratio (CAR) as one of the most important criteria financial institutions must follow to maintain their soundness. This requirement is carried out through the implementation of the high-quality capital concept. The public and private sectors have been urging banks to build more capital. Cohen and Scatigna (2016) analyzed 101 large banks from advanced and emerging economies; the results indicated that the adjustment was through the accumulation of retained earnings and shifting to the assets with other risk weights rather than through sharp adjustment in lending or asset growth channels. The authors also supposed that the developments in lending standards and lending spreads have been very weak relative to the other factors influencing bank lending supply. However, Asia countries, which are almost emerging economies, might have another way to comply with the CAR regulations. How did the Asian banks compliance the CAR? Especially with the impact of The World Uncertainty Index (WUI), a new upgrade index from the EPU. That is a gap that this study aims to fill.

1. LITERATURE REVIEW

The World Uncertainty Index (WUI) was developed by Hites Ahir (International Monetary Fund), Nicholas Bloom (Stanford University) and Davide Furceri (International Monetary Fund). The authors construct quarterly indices of economic uncertainty for 143 countries from 1996 onwards using frequency counts of "uncertainty" (and its variants) in the quarterly Economist Intelligence Unit country reports (Hites et al., 2022). The index is associated with greater economic policy uncertainty (EPU), stock market volatility, risk, and lower GDP growth (https://www.policyuncertainty.com/wui_quarterly.html). Uncertainty related to economic policy may affect the real economy. Firms tend to decrease investment and cut jobs amid high uncertainty, while households reduce consumption (Scott et al., 2016; Huseyin & Mihai, 2016).

Bordo et al. (2016) examined the impact of economic policy uncertainty on aggregate bank credit growth. The authors find that policy uncertainty significantly negatively affects bank credit growth. The effects are attributable to loan demand or loan supply if the impact varies with bank-level financial constraints. Findings are consistent with the possibility that high economic policy uncertainty may have slowed the United States' economic recovery from the Great Recession by restraining overall credit growth through the bank lending channel.

In the same line as Bordo et al. (2016), Hu and Gong (2019) analyzed bank-level data in 19 major economies and consolidated that the EPU has a significant negative effect on the growth of bank credit. In addition, the authors showed empirical evidence that the EPU significantly hinders bank credit growth, but the effect varies across banks. In particular, the negative effect of EPU on loan growth is greater for larger and riskier banks while weaker for more liquid and diversified banks. And the impact of EPU on bank lending depends critically on national prudential regulations. In addition, Badar and Yinjie (2019) analyzed bank data from 17 countries and concluded that the impact of EPU on banks' loan pricing remains persistent after controlling for banks' own idiosyncratic default risk and the political risk variables. These authors also found a significant positive association between loan spreads and the EPU index. Together, these results suggest that government economic policy uncertainty is an economically important risk factor for banks' loan pricing.

Recently, Badar and Yinjie (2919) concluded that government economic policy uncertainty has a significant positive association with interest rates on bank gross loans. Specifically, a one standard deviation increase in EPU leads to a 21.84 basis points increase in average interest rates on bank gross loans. CAR is suggested by the Basel committee as a benchmark for bank soundness and applied in the industry worldwide. Cohen and Scatigna (2016) analyzed data from 101 large banks from advanced and emerging economies to investigate the adjustment channel for the CAR implementation of these banks. The approach is based on the capital requirements regulatory. The authors indicated that retained earnings, issuing new equity, changing the asset side of the bank's balance sheet and shifting the risk-weighted asset (RWA) are the adjustment channels that the bank can employ. The evidence showed that the adjustment

channel was the accumulation of retained earnings, while reductions in risk weights were not the priority, and banks continued to expand their lending.

In addition (Shimizu, 2015) gave another approach to analyze the behavior of adjusting denominators of capital ratios upon the introduction of Basel II regulations of the Japanese banks. In this study, the first analysis investigates the adjustments to the size and composition of portfolios to achieve the target risk-weighted asset. Then, the second analysis investigates how quickly banks adjust the numerator and denominator of their capital ratio. The findings of Shimizu (2015) evidenced that banks adjusted the composition of their assets faster than their asset size to achieve the RWA targets. Besides, banks adjusted their level of regulatory capital faster than their RWA to achieve the capital ratio targets.

In this study, the author follows and combines the methods of both Shimizu (2015) and Cohen and Scatigna (2016) and also adds the economic policy uncertainty index (WUI) as a new factor into the analysis to find out whether this is a factor that might affect on the CAR adjustment speed of the banks in 9 Asia countries or the affect might cause the CAR through the interactive between the WUI and the loan growth.

2. METHODOLOGY AND DATA

The partial adjustment models are used to estimate the adjustment speed of the capital ratios and the contribution of the factors in the adjustment channels that build the CAR. The CAR is defined as the regulatory capital divided by the RWA. Defined by the formula below:

We begin with the simple definition of the RWA

$$\mathrm{CAR}_{i,t} = \frac{(\mathrm{Tier1+Tier2})_{i,t}}{\mathrm{RWA}_{i,t}} \qquad (1)$$

where RWA_{it} is the total risk-weighted assets of bank *I* at year *t*. Under the current regulations, the RWA is specified as the average risk weight on risky total asset:

$$\mathrm{RWA}_{i,t} = \Omega(\mathrm{Risky\ total\ asset})_{i,t} \quad (2)$$

where Ω is denoted as the average risk weight.

In formula (2), almost all risky total assets are in the total financial asset securities, gross loan and advance to customer, and other assets of each bank I at year *t*. The gross loan and advance, which is the largest proportion in the bank asset portfolio, is proxy by its growth to investigate whether this growth is connected with the adjustment of the CAR. Additionally, in the formula (1), the undivided profit is a component of tier 1, a very important channel that adds to the bank's capital to improve the numerator of the CAR. Therefore, the author separates tier 1 from the total equity and the capital generation to make it easier to recognize the contribution of each part in tier 1 to the CAR adjustment.

Dividing the numerator and denominator of the left-hand side of formula (1) to the total assets. In which the Ω is divided into total assets, the risk-weighted asset intensity. Assuming that the other factors are stable, changing each part in the numerator might cause a positive associate relationship with the CAR, while the parts of the denominator might cause an invert.

This research expects to find some evidence of the effect of the WUI index, which is the standard deviation of the government economic policy uncertainty and its interaction with the loan growth on the CAR. The standard deviation of the government economic policy uncertainty is a negative effect on loan growth (Badar & Yinjie (2019), Hu & Gong (2018), Bordo et al., (2016)), while loan growth represents the change in gross loans, which is a part of the denominator of CAR. These two new indicators are added to the estimation model to analyze how the WUI affects the CAR compliance of Asian banks.

Table 1. The summary of the variables

Variable	*Definition*	*Calculated*	*Expectation*
CAR	Capital Adequacy Ratio	$\mathrm{CAR}_{i,t} = \frac{(\mathrm{Tier1} + \mathrm{Tier2})_{i,t}}{\mathrm{RWA}_{i,t}}$	+
Size	The logarithm of total asset	The logarithm of total assets of bank *i,t*	-
LoanG	Loan growth ratio	(Gross $\mathrm{loan}_{i,t}$ - Gross $\mathrm{loan}_{i,t-1}$)/Gross $\mathrm{loan}_{i,t-1}$	-
WUI	WUI index by country	Standard deviation WUI index by country year *t*	+/-
LoanG*WUI	The interaction of WUI with the loan growth	Multiply the Loan growth ratio by the WUI index	+/-
FS_TA	The ratio of total financial asset securities to total assets of a bank	Total financial $\mathrm{securities}_{i,t}$/total $\mathrm{assets}_{i,t}$	-
OA_TA	The ratio of other assets to total asset	Other $\mathrm{assets}_{i,t}$/Total $\mathrm{Asset}_{i,t}$	-
RWA_I	The ratio of total risk-weighted asset to total asset	Total Risk-Weighted $\mathrm{Assets}_{i,t}$/Total $\mathrm{Asset}_{i,t}$	-
TE_TA	Equity ratio	Total $\mathrm{equity}_{i,t}$/Total $\mathrm{asset}_{i,t}$	+
T2	Tier 2	Tier 2 $\mathrm{capital}_{i,t}$	+
CET1	Growth of Capital generation ratio	(Net $\mathrm{income}_{i,t}$ – $\mathrm{dividend}_{i,t}$) /Total $\mathrm{equity}_{i,t}$	+

Source: Summary by the authors

3. THE MODEL

To estimate the adjustment speed of the banks, in the long run, the CAR is a function of the factors that affect itself;

$$\mathbf{Y^*_{i,t+1}} = \sum_{j=1}^{j} \beta_j \mathbf{X_{j,i,t}} + \theta_n \mathbf{C_{n,i,t}}, n = 1 \quad (3)$$

Y* is the CAR target, the partial adjustment model of the CAR and its target:

$$\mathbf{Y_{i,t}} - \mathbf{Y_{i,t-1}} = \lambda\left(\mathbf{Y^*_{i,t}} - \mathbf{Y_{i,t-1}}\right) + \varepsilon_{i,t} \quad (4)$$

where Y is respectively the capital on total assets ratio and the capital on risk-weighted assets ratio of bank i, the X_j is the vector of factors j*th* that affect the adjustment of the CAR, and the C_n is the control variable, t is the year from 2010 to 2019; λ is the gap or speed of adjustment during a point time, ($0 \le \lambda \le 1$). Substituting equation (3) into equation (4), then a model that the speed of adjustment (λ) is estimated as follows:

$$\mathrm{Y_{i,t}} = (1 - \lambda)\mathrm{Y_{i,t-1}} + (\lambda\theta_n)\mathrm{C_{n,i,t}} + \sum_{j=1}^{j}(\lambda\beta_j)\mathrm{X_{j,i,t}} + \varepsilon_{i,t} \quad (5)$$

Then, the author includes bank fixed effects (Bank_i), year fixed effects (Year_t), country fixed effect ($\mathrm{Country}_l$) and bank type effects ($\mathrm{Bank\_type}_k$) to absorb any unobserved, time-invariant bank and bank type heterogeneity and business cycle effects, respectively. In addition, the logarithm of the total asset (Size) is a control variable added into the equation, the same as almost all of the analyses in this area. The model could be rewritten as the function below:

$$CAR_{i,t} = (1-\lambda)CAR_{i,t-1} + (\lambda\theta)Size_{i,t} + (\lambda\beta_1)LoanG_{i,t} + (\lambda\beta_2)WUI_t + (\lambda\beta_3)WUI_t * LoanG_{i,t} + (\lambda\beta_4)FS\_TA_{i,t} + (\lambda\beta_5)OA\_TA_{i,t} + (\lambda\beta_6)RWA\_I_{i,t} + (\lambda\beta_7)TE\_TA_{i,t} + (\lambda\beta_8)T2\_TA_{i,t} + (\lambda\beta_9)CET1\_G_{i,t} + \varepsilon_{i,t} \quad (6)$$

3.1 Data

The sample was constructed by collecting the economic policy uncertainty index data from the website https://www.policyuncertainty.com/wui_quarterly.html. This website hosts the economic policy uncertainty index data developed by Hites et al. (2022). These authors have constructed a new index, the World Trade Uncertainty Index, that measures uncertainty related to trade for 143 individual countries every quarter from 1996 onwards, using the Economist Intelligence Unit (EIU) country reports. The approach to constructing the WTU index is to count the number of times uncertainty is mentioned within proximity to a word related to trade in the EIU country reports. In this research, we downloaded the index data for 9 Asian countries and merged them with bank-level financial statements yearly data of banks operating in these countries from the Bankscope database from 2010–2019.

4. RESULTS AND DISCUSSIONS

The collected data is an unbalanced panel data. The loan growth and capital generation ratio information are less than the other 12 observations and 01 observation, respectively.

Table 2. Summary statistics of the data

	N	Mean	Sd	min	max	Se
CAR	5040	0.123	0.317	0.001	4.882	0.004
Size	5040	7.779	1.265	1.643	11.489	0.018
LoanG	5028	0.118	0.441	-1.000	8.455	0.006
WUI	5040	0.096	0.053	0.000	0.376	0.001
FS_TA	5040	0.213	0.147	0.000	0.879	0.002
OA_TA	5040	0.250	0.177	0.000	0.727	0.002
RWA_I	5040	0.293	0.347	0.001	6.080	0.005
TE_TA	5040	0.126	0.129	-0.811	0.756	0.002
T2_TA	5040	0.006	0.010	0.000	0.202	0.000
CET1	5039	0.035	0.207	-7.826	7.843	0.003

Source: Calculated by the authors

Table 2a. Summary statistics by year – Mean

Year	*CAR*	*Size*	*LoanG*	*WUI*	*FS_TA*	*OA_TA*	*RWA_I*	*TE_TA*	*T2_TA*	*CET1*
2010	0.019	7.401	0.019	0.045	0.238	0.087	0.081	0.054	0.009	0.000
2011	0.017	7.438	0.038	0.146	0.241	0.099	0.061	0.110	0.008	0.000
2012	0.018	7.483	0.041	0.138	0.240	0.171	0.108	0.096	0.007	0.000
2013	0.041	7.500	0.072	0.132	0.242	0.136	0.065	0.115	0.004	0.001
2014	0.103	7.992	0.130	0.133	0.216	0.151	0.236	0.110	0.009	0.022
2015	0.098	7.956	0.166	0.110	0.217	0.166	0.275	0.116	0.006	0.032
2016	0.142	7.796	0.163	0.066	0.218	0.184	0.375	0.122	0.006	0.073
2017	0.143	7.813	0.142	0.092	0.227	0.181	0.341	0.125	0.006	0.039
2018	0.154	7.850	0.184	0.110	0.228	0.180	0.343	0.130	0.006	0.063
2019	0.151	7.798	0.141	0.084	0.218	0.189	0.330	0.152	0.006	0.043

Source: Calculated by the authors

Table 2b. Summary statistics by country – Mean

	CAR	*Size*	*LoanG*	*WUI*	*FS_TA*	*OA_TA*	*RWA_I*	*TE_TA*	*T2_TA*	*CET1*
China	0.153	7.378	0.195	0.069	0.290	0.288	0.546	0.106	0.007	0.123
India	0.124	6.990	0.131	0.124	0.243	0.153	0.411	0.115	0.009	0.061
Indonesia	0.227	9.169	0.204	0.104	0.108	0.236	0.647	0.162	0.011	0.057
Japan	0.111	7.709	0.051	0.106	0.251	0.164	0.078	0.074	0.004	0.007
Korea	0.135	10.826	0.082	0.094	0.157	0.106	0.536	0.075	0.015	0.069
Malaysia	0.288	6.643	0.113	0.112	0.224	0.339	0.497	0.194	0.011	0.075
Philippine	0.045	7.273	0.184	0.128	0.140	0.379	0.169	0.236	0.004	-0.005
Singapore	0.070	8.822	0.259	0.063	0.410	0.254	0.125	0.196	0.002	0.007
Vietnam	0.038	8.725	0.212	0.066	0.115	0.285	0.645	0.172	0.001	0.001

Source: Calculated by the authors

Table 2c. Summary statistics by bank type – Mean

	CAR	*Size*	*LoanG*	*WUI*	*FS_TA*	*OA_TA*	*RWA_I*	*TE_TA*	*T2_TA*	*CET1*
Commercial	0.108	7.883	0.138	0.096	0.217	0.211	0.334	0.105	0.007	0.050
Cooperative	0.133	6.369	0.102	0.091	0.243	0.204	0.538	0.101	0.011	0.030
Investment	0.395	7.860	0.225	0.092	0.332	0.423	0.081	0.271	0.002	0.014
Real estate	0.118	6.941	0.178	0.119	0.056	0.142	0.222	0.110	0.001	0.004
Saving	0.016	7.311	0.106	0.126	0.129	0.415	0.059	0.287	0.002	0.003

Source: Calculated by the authors

The figures in Table 2a show that in the three years from 2010 to 2012, the CAR was under 2%. The risk sensitivity was low during that time, and the banks almost did not increase their capital generation levels. Meanwhile, the equity to total assets ratio increased twice between 2010 and 2011, and the tier 2 capital ratio fluctuated slightly. After 2013, almost all the Asian banks in the data improved their CAR; the equity ratio and the capital generation were higher than the previous; meanwhile, the asset sensitivity also increased. The figures in Table 2b and 2c supplement the information that from 2010 to 2019, the CAR of the banks in China, India, Japan and Korea were around the middle range, while in Singapore, Philippines and Vietnam, the CAR was respective. The CAR in Malaysia and Indonesia were the highest and the second highest, respectively. In the industry, saving banks had the lowest CAR, 1.6%, while investment banks showed the highest at 39.5%.

Table 3. Correlation matrix between the independent variables

	CAR_{t-1}	*Size*	*LoanG*	*WUI*	*FS_TA*	*OA_TA*	*RWA_I*	*TE_TA*	*T2_TA*	*CET1*
CAR_{t-1}	1	0.1	0.07	-0.01	0.02	0.17	0.15	0.05	0.02	0.02
Size		1	0.06	-0.06	-0.02	-0.04	0.08	-0.04	0.05	0.01
LoanG			1	0	-0.04	0.07	0.01	0.04	-0.03	0.04
WUI				1	-0.05	-0.03	-0.08	0.01	0.06	-0.04
FS_TA					1	-0.18	-0.03	-0.03	0.02	0.06
OA_TA						1	0.03	0.34	-0.12	0.01
RWA_I							1	-0.04	0.44	0.19
TE_TA								1	-0.08	-0.01
T2_TA									1	0.07
CET1										1

Source: Calculated by the authors

In Table 3, the correlations matrix between variables shows that most of the variables do not have very high correlation coefficients between each other, suggesting that the chances of multicollinearity in multivariate analysis are low.

The estimated results of models (6) in Table 4 show the significance statistically for the CAR adjustment speed calculation, in which the year fixed effects (6a) provide a low adjustment speed at only 0.094 while the estimations added bank and country fixed effects (6b), bank and bank type fixed effects (6c) give almost the same CAR adjustment speed at 0.82. The control variable loses its significant statistical effect on CAR in both models (6a) and (6b) and shows a statistically significant from the estimation of the model (6b) at 95%. The results also provide that the loan growth variable has a statistically significant effect on CAR in models (6b) and (6c), but in model (6a), this factor does not have enough evidence of this effect. Additionally, the WUI alone does not give any evidence of its effect on the CAR. Meanwhile, the interaction of WUI and loan growth showed strong evidence that this interaction has a positive statistically significant effect on the CAR and has the highest impact compared with the other variables in the models. Results of the interactive variable might be understood that the impact of WUI on CAR might be calculated by the WUI multiple the coefficient of loan growth and the coefficient of the interactive variable, a magnitude of the loan growth and the WUI together impact on CAR and stronger than the impact of loan growth alone on the CAR. The findings are associated with and contribute to the findings of Bordo et al. (2016) and Hu & Gong (2018). The relationship between loan growth and economic policy uncertainty also provides evidence of its effect on the CAR adjustment of Asian banks from 2010 to 2019.

Table 4. Panel regression of Capital Adequacy Ratio: partial adjustment model

Dependent variable:	*CAR*		
Model	(6a)	(6b)	(6c)
Constant	-0.028	0.136	0.500
	(-1.386)	(1.363)	(1.521)
CAR1	0.906**	0.181***	0.180***
	(11.233)	(3.741)	(11.306)
	λ= 0.094	***λ= 0.819***	***λ= 0.82***
Size	0.003	-0.015	-0.054**
	(1.274)	(-0.667)	(-1.998)
LoanG	-0.022	-0.016**	-0.015***
	(-0.991)	(-2.421)	(-3.106)
WUI	-0.027	-0.041	-0.037
	(-0.519)	(-0.764)	(-0.359)
LoanGxWUI	0.096	**0.137*****	**0.139*****
	(0.766)	(3.411)	(3.412)
FS_TA	-0.001	-0.041	-0.036
	(-0.106)	(-0.473)	(-0.223)
OA_TA	0.046	0.130	0.146
	(1.618)	(0.991)	(1.232)
RWA_I	0.019	0.054	0.049
	(1.095)	(1.569)	(1.434)
TE_TA	0.030	0.753*	0.716
	(1.029)	(1.891)	(1.584)
T2_TA	0.286*	0.746**	0.804
	(1.788)	(2.075)	(0.510)
CET1	0.009	0.004	0.005
	(0.542)	(0.416)	(0.974)
Adj $R^{2:}$	0.775	0.879	0.879

Model 6a: Year fixed effects ($Year_t$)

Model 6b: bank fixed effects ($Bank_i$), year fixed effects ($Year_t$); and country ($Country_l$)

Model 6c: bank fixed effects ($Bank_i$), year fixed effects ($Year_t$) and bank type effects ($Bank\_type_j$)
Note: *p<0.1;**p<0.05;***p<0.01; numbers in the parenthesis are the t value.

Source: Calculated by the authors

The results also show evidence that the banks neither adjust their assets nor shift the risk weight to achieve their CAR target. On the other hand, some evidence indicates that in the period, the Asian banks improved their core capital, and these improvements had a positive, statistically significant effect on the CAR target. The core capital improvements of the Asian banks in the sample data were similar to the calculations of Cohen and Scatigna (2016) on the advanced economic banks and Tung et al., (2018) on Vietnamese commercial banks. Besides, even though the summary statistic shows a similar trend in the change of risk-weighted assets as the findings of Cohen & Scatigna (2016) on emerging-economy banks, the authors do not have evidence that the Asian banks shift risk-weight assets to adjust the CAR.

If we stand on the approach of Shimizu (2015), the results indicate that the CAR gets the impact from more factors of the numerator than the denominator. Additionally, the strength of the effect from the components of the numerator is also higher than that from the denominator. Only the estimation with the fixed effect of the bank type proves that the bank's asset size is associated with CAR. This result suggests that the different bank types might have other ways to achieve their CAR target. The difference might be within the characteristics of the assets held by each bank type.

Finally, the partial adjustment models provide the adjustment speeds, in which model 6a shows a very slow adjustment speed while models 6b and 6c indicate the speed at the CAR adjusts 82% toward its target within a year.

CONCLUSION

The results could indicate that to implicate the CAR regulation. Asian banks improved their core capital rather than adjusted their asset portfolio. This research finds that the loan growth is evident in the impact on the CAR adjustment; WUI has to interact with the loan growth and then show evidence of a magnified effect of the loan growth on the CAR adjustment. Applying fixed effects by the bank, country fixed effects, and bank type effects to absorb any unobserved, time-invariant bank type and country heterogeneity and business cycle effects give strong evidence of this than only the year used. During this period, Asian banks might not regularly use the shift of risk-weight assets to achieve their target CAR.

Our findings give the bank monitoring and manager a point to analyze when the economic policy uncertainty rises. Early on, this situation could not be found to be a factor that directly affected CAR improvement. However, there is evidence that the increase in economic policy uncertainty would cause a decrease in banks' lending in a year lag (Bordo et al., 2016; Hu & Gong, (2018)). Accordingly, the growth of loans is going to be decreased. Thus, through the interaction calculation between loan growth and WUI, the manager could estimate a CAR trend for managing this indicator.

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