Chapter

National Elections

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Abstract

This research examined national elections' impact on crash risks of individual stocks listed in the Indonesia Stock Exchange. The study used national elections as a proxy for political uncertainty and negative skewness of stock returns as a proxy for crash risk. On the industry level, researchers found nuances in which national elections' impact varies according to industry, with some industries tending to greater risk of crash than others during national elections and post-national election periods.

Keywords: crash risk, national election, stock market

Introduction

National elections are known to impact stock markets significantly. Previous studies (Saint, 2003; Smith, 2004 and Williams and Van, 2008) have examined national elections' effects on stock markets, with most studies focusing on the overall market, but not looking into national elections' impact on individual stocks.

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Analytical Framework

Literature Review

Previous literature[1] has documented that market returns exhibit negative skewness and asymmetric volatility, which is a tendency for volatility to rise with negative return. When calculating national elections' impact on crashes, this research adopts a narrow, euphemistic definition of the word "crash," associating it solely with conditional skewness of return distribution, in which conditional skewness is interpreted as a measure of crash.

Information Withholding Hypothesis

Perhaps under desirable policy changes, they might not need to disclose it. Even when election outcomes are unfavorable, managers can then release bad news and blame it partially on unfavorable policy changes so that it seems like an uncontrollable external factor. In the post-election[2] period, when political uncertainty is lower, managers gradually lose the ability to hide negative information. Since it is unlikely to remain buried, the negative stockpile eventually emerges and is reflected in stock prices that decline sharply or crash.

Method

Sample Construction

Researchers began by examining all stocks listed in the Indonesia Stock Exchange[3] from 2000 to 2016, and, next, imposed several criteria. Following these criteria, this study's final sample resulted in unbalanced panel data that included 316 companies with 3195 firm-year observations, the earliest in 2002 and the latest in 2016.

[1] Read literature by John Smith, Article 5, June 30, 1976.
[2] National Election article, July 4, 2000.
[3] Indonesia Stock Exchange newsletter.

Stock Crash Risk Measurements

To calculate crash risk, this research using negative skewness of firm-specific weekly return. We calculated negative skewness of firm-specific weekly return as follows:

$$NCSKEW_{i,s} = \frac{-[n \text{ x } (n-1)^{\frac{3}{2}} \text{x } \sum W_{i,t}^3]}{[(n-1) \text{x } (n-2) \text{x } (\sum W_{i,t}^2)^{\frac{3}{2}}]} \quad (1)$$

where firm-specific weekly returns ($W_{i,t}$) are calculated as:

$$W_{i,t} = \ln (1+ \varepsilon_{i,t}) \quad (2)$$

with $\varepsilon_{i,t}$ being residual firm-specific weekly return estimated from an expanded market model as follows:

$$r_{i,t} = \alpha_i + \beta_{1,i} r_{m,t} + \beta_{2,i} r_{m,t-1} + \beta_{3,i} r_{m,t-2} + \beta_{4,i} r_{m,t+1} + \beta_{5,i} r_{m,t+2} + \varepsilon_{i,t} \quad (3)$$

where $r_{i,t}$ is the Wednesday to Wednesday return on stock i in week t and $r_{m,t}$ being market index return for the country in week t.

Results and Discussion

Descriptive Statistics

Table 1 presents descriptive statistics for the dependent variable NCSKEW for the whole sample and by industry. Positive mean values for the total sample suggest that individual stocks were, on average, negatively skewed. Researchers also examined the mean and median NCSKEW for the whole sample period—during the election and post-election periods—to reveal statistically movements of skewness[4].

[4] NCSKEW, article 10, Vol 2.

Table 1. Descriptive statistics

	Mean		Median	
	Total Sample	Election	Total Sample	Election
Agriculture	−0.056	−0.040	−0.072	−0.023
Property	0.004	−0.245	0.027	−0.034
Others	0.390	0.309	0.178	0.162

The following figure (Figure 1), introduces the ideological distribution of those parties in the political spectrum.

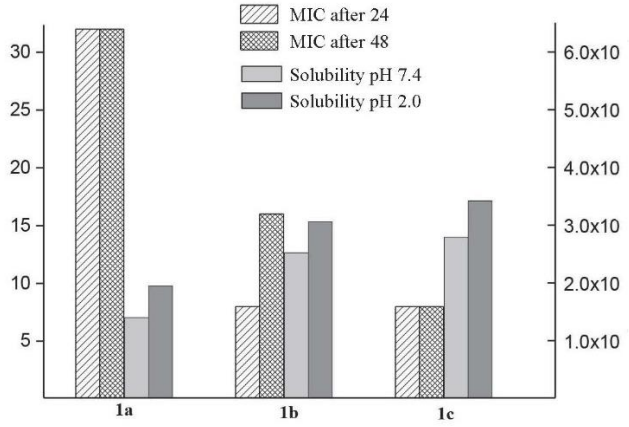

Figure 1. Position of the main political parties.

For mining; property, real estate, and construction; transportation, utilities, and infrastructure; and miscellaneous industries, the election period tended to reduce crash risk, but the post-election period tended to increase it.

Regression Results

To test national elections' effect on crash risk, researchers regressed firm-specific negative return skewness on indicator variables that captured national elections along with control variables, with the model that follows:

$$NCSKEW_{i,t} = \beta_0 + \beta_1 \text{ x } ELECTION_t + \beta_2 \text{ x } POST_t + \beta_3 \text{ x } X_{i,t-1} + \varepsilon_{i,t} \quad (4)$$

where subscripts i and t refer to firm and year, $X_{i,t-1}$ refers to control variables, which are all in lagged values.

Regression results are reported in Table 2.

Table 2. Control variables into regression results

	Main Variable	Mining	Basic Industry	Trade	Agriculture
R^2	0.0027	0.148	0.187	0.063	0.0324
# of Observation	3195	263	638	841	98
# of Cross-section observation	316	33	54	85	11

Significant variables at levels of significance 1%, 5%, and 10% (two-sided) are respectively expressed by ***, **, and *. Numbers in brackets are standard errors.

First, researchers included only dependent and independent variables in the regression using all sample firms. Then, researchers incorporated control variables into the regression, still using all sample firms. Next, researchers ran the regression for each industry classification using all variables.

Conclusion

This research examined national (presidential) elections' impact on individual stock's crash risk in Indonesia. Researchers found no indication of information withholding, as significant data shows that individual stock crash risk increases both in election and post-election periods. Overall, our findings suggest that political uncertainty is an important determinant of stocks' crash or downside tail risk.

References

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Publications from the Last 3 Years:

Li, Q., W. Awiyah, Li, S. and Xu, L. (2020). National elections and tail risk: International evidence. *Journal of Banking and Finance*, 113-128.