

# **Firm Size, Price to Book, and Government Ownership Effects: Evidence from Stock Markets in Vietnam**

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*Both firm size and price to book ratio (P/B) have significant effects on return in the markets of Vietnam. Firm size has more power than betas in explaining variations of returns. The role of betas in explaining return improves with the inclusion of firm size. In the models including firm size, P/B is insignificant. As firm size is excluded from the models, P/B becomes a significant factor to determine returns. State owned enterprises (SOEs) are firms in which government holds at least 50% of shares outstanding. There is no evidence that additional return is compensated for political risk in SOEs.*

## **INTRODUCTION**

Several existing literatures emphasize on some determinants of return including firm beta, firm size, and P/B. Studies find in the US markets that prior 1969, firm betas suffice to describe the cross section of expected returns. They find empirical evidence that higher return is associated with higher beta to compensate for additional risk. Higher beta implies higher market risk that requires higher return. For the period after 1969 until 1990, studies show that firm size and book to market ratio combine to capture the cross section of expected returns. However, the relation between beta and return is flat.

This paper examines determinants of return including firm beta, firm size and P/B in the markets of Vietnam. In addition, we investigate whether political risk affects return. The political risk is considered for an investment in SOEs where the government controls corporate policies, employs firms' managers based on political connections rather than on managerial skills.

Our paper shows that firm size highly influences stock return. The results indicate that the lower the firm size, the higher return, and the result is statistically significant at the one percent level. Stocks with higher betas earn higher return than stocks with lower betas only in the model with the existence of firm size. Firm size proves to be more powerful in explaining the variations of cross sectional returns than betas.

It is interesting that P/B is not statistically significant in most of models with the existence of firm size. As firm size is removed from the models, P/B becomes statistically significant at the one percent level, and the magnitude of the coefficient becomes 16 times higher.

After controlling the effect of firm size and beta, the evidences indicate that on average, annual return is 1.27% higher for investment in SOEs than for investment in the other firms. Tax benefits of using debt is confirmed in our models. Controlling for other variables, SOEs earn 0.28% higher return than non-SOEs due to higher leverage in SEOs.

The remainder of the paper is organized as follows: section 2 briefly reviews the existing literature. Section 3 describes data, methodology and hypotheses. Section 4 discusses the result, and our conclusion is in section 5.

## LITERATURE REVIEWS

Sharpe (1964), Lintner (1965), and Black (1972) have documented the relation between average returns and risk. The central prediction of the capital asset pricing model is that the market portfolio of invested wealth is mean-variance efficient in the sense of Markowitz (1959): expected returns on securities are a positive linear function of their market beta that is the slope in the regression of a security's return on the market's return. They argue that market betas suffice to describe the cross-section of expected returns. Black, Jensen, and Scholes (1972) and Fama and MacBeth (1973) find empirical results to confirm the positive relation between stock return and beta during the pre-1969 period.

Contradict to the above results, Fama and French (1992) examine the US stock markets during a period from 1963 to 1990 and find that the size and book-to-market equity ratio (reciprocal of P/B ratio) can jointly explain cross-sectional stock returns. However, after controlling for the size and the book-to-market ratio, beta has no explanatory power in explaining cross-sectional stock returns. The results of Fama and French (1992) are consistent with Reinganum (1981) and Lakonishok and Shapiro (1986). The results proposed by Fama and French (1992) were confirmed by some research such as Barber and Lyon (1997), and Davis (1994).

Fama and French (1995) study whether the behavior of stock prices, in relation to size and book-to-market-equity (BE/ME), reflects the behavior of earnings. The results are consistent with rational pricing, high BE/ME signals persistent poor earnings and low BE/ME signals strong earnings. Moreover, stock prices forecast the reversion of earnings growth observed after firms are ranked on size and BE/ME. Finally, there are market, size, and BE/ME factors in earnings like those in returns.

Chan and Chen (1991) examine the US. Markets and suggest that the size and P/B are proxies for the risk that is not captured by beta. Higher beta-adjusted returns of small firms and firms with low P/B can be seen as compensation to investors for this additional risk. However, Chan, Hamao, and Lakonishok (1991) they find that BE/ME plays a significant role in explaining the cross-sectional variation of stock returns in Japanese market. It indicates that the variation of cross-sectional stock returns can be captured by two firm characteristics such as size and BE/ME.

Banz (1981) documents that market equity (firm size) adds to the explanation of stock return. Small stocks earn higher return than large stocks. Bhandari (1988) finds a positive relation between stock return and leverage to equity, controlling for firm size and beta. Likewise, Barber and Lyon (1997) find that the financial and nonfinancial firms have very similar return patterns. Both financial and nonfinancial firms exhibit a significant size and book-to-market premium.

Size is also related to profitability. Controlling for BE/ME, small stocks tend to have lower earnings on book equity than do big stocks. The size effect in earnings is, however, largely due to the low profits of small stocks after 1980. Until 1981, profitability shows little relation to size. But the recession of 1981 and 1982 turns into a prolonged earnings depression for small stocks.

For some reason, which remains unexplained, small stocks do not participate in the boom of the middle and late 1980s Fama and French (1995).

## DATA, METHODOLOGY AND HYPOTHESES

The paper uses panel data of listed firms in two exchanges of Vietnam, from 2007 to 2012. The data of daily stock prices, firm characteristics including market capitalization, dividend yield, P/B, etc., are collected from DataStream.

### OVERVIEW OF STOCK EXCHANGES IN VIETNAM

The Vietnamese stock market initiated in Hochiminh city, on 28<sup>th</sup> July 2000 with only 5 listed companies. In 2005, a second exchange began trading in Hanoi with 7 listed stocks. By the end of 2012, the number of listed firms in both exchanges rose to 703. Each stock exchange has a market index. The Hochiminh stock exchange index is called the VN Index, and the Hanoi stock exchange index is the HaSTC Index. The index of each exchange is the value-weighted stock price index of all common stocks traded on that exchange.

**TABLE 1**  
**LISTED FIRMS AND STOCK EXCHANGES IN VIETNAM 2007-2012**

Year	2007	2008	2009	2010	2011	2012
Number of firms listed	236	320	437	626	685	703
<i>Hanoi exchange</i>	<i>105</i>	<i>160</i>	<i>251</i>	<i>360</i>	<i>388</i>	<i>395</i>
<i>Hochiminh exchange</i>	<i>131</i>	<i>160</i>	<i>186</i>	<i>266</i>	<i>297</i>	<i>308</i>
Total MarketCap (VND trillion)	505.63	218.39	608.84	749.65	536.95	783.22
<i>Hanoi exchange</i>	<i>141.10</i>	<i>58.58</i>	<i>125.33</i>	<i>137.28</i>	<i>82.98</i>	<i>87.16</i>
<i>Hochiminh exchange</i>	<i>364.53</i>	<i>159.81</i>	<i>483.51</i>	<i>612.37</i>	<i>453.97</i>	<i>696.06</i>
GDP (VND trillion)	1,143.70	1,485.00	1,658.40	1,980.90	2,535.00	2,720.00
Percentage of GDP	44.21	14.71	36.71	37.84	21.18	28.79
Exchange rate (USD/VND)	16,114	16,997	17,941	18,932	20,828	20,835

The stock exchanges of Vietnam have a rapid development. Table 1 reveals that the percentage of the total market capitalization on GDP is almost 45 percent in 2007, and 29 percent in 2012. Although the number of listed firms significantly increases from 236 firms in 2007 to 703 firms in 2012, the ratio of the total market capitalization on GDP declines sharply. The major reason for the drop of this percentage is the decline in the stock exchanges in Vietnam since 2008. The VN-Index, a market index in Vietnam, decreases from 927 in 2007 to 316 in 2008, and then increases to 414 in 2012.

### GOVERNMENT OWNERSHIP IN LISTED FIRMS

In Vietnam, the government launched a privatization, preferably called “equitization” program in mid-1992. Privatization in Vietnam has changed thousands of SOEs, defined as firms with the ownership of the government being at least 50 percent, from 100% governmental holding to private firms or firms with substantial reduction of government ownership percentage. This effort in restructuring the SOEs achieved an impressive result in reducing the number of SOEs. The number of SOEs decreased from 12,297 in 1991 to 6,264 by April 1994. The Vietnamese government still plays an important role in the reform of SOEs. After the privatization, survived SOEs are usually important firms that the government would like to retain its control. With its financial power, the government may not let those survived SOEs go bankrupt.

The Vietnamese government still dominates corporate policies in hundreds of listed firms. By the year end of 2012, among 703 firms listed on 2 stock exchanges of Vietnam, 199 firms are SOEs. Blenman and Le (2014) document that governmental controls in firms can be classified as a political risk in the market of Vietnam, because SOEs sometimes mix social objective with maximizing profitability and the management is elected based on political connections rather than on managerial skills. They show that foreigners disproportionately invest more in stocks with lower government ownership percentages, stocks listed on the Hochiminh exchange than stocks listed on the Hanoi exchange.

Sun and Tong (2003) document that in China, SOEs are expected to have higher leverage due to some reasons. The cost of borrowing is lower as the SOEs carry (either implicit or explicit cost) government guarantees. In addition, borrowing is the only avenue to raise funds, since SOEs do not have access to private investors and chronicle low profitability or even loss makes retained earnings hardly a viable funding source. Their findings of higher leverage in SOEs are consistent with Megginson, Nash, and Randenborgh (1994). In our research, leverage on average is 100.62% for the whole sample, 124% for SOEs, and 89% for non-SOEs. Thus, the leverage level in SOEs of Vietnam is similar to previous studies.

## PORTFOLIO FORMATION

Chan and Chen (1988) among others show that firm size produces a wide spread of average returns and betas. Fama and French (1992) form portfolios by first sorting data by firm size to construct 10 portfolios. They then sort each sized portfolio by beta to form 100 size-beta portfolios, and by book to market ratio to create 100 size-book to market ratio portfolios. Portfolios are created annually at the end of June of year  $t$  based on accounting data at the end of year  $t-1$ . This procedure ensures that investors have accounting information available for creating their portfolios.

We construct our portfolios in the same method. The only difference is that, we use quintiles, instead of deciles. The number of listed firms is small over the period, 2007 to 2012. If we create 10 by 10 stock portfolios, the number of observations in each portfolio is pretty low. To analyze the effect of firm size and beta on return, we have 5 portfolios of size and 5 portfolios of beta, generating 25 size-beta portfolios, instead of 100 portfolios. Similarly, we have 25 size-price to book ratio portfolios to examine the effect of firm size and P/B on return.

## VARIABLES AND HYPOTHESES

(a) **Firm Size:** This variable is the market capitalization of a firm.

(c) **Beta:** A firm beta is calculated through the firm's daily return and market's daily return. Firm beta is the slope of relationship between the firm's stock price index and the market's price index where the firm is listed. If the firm changed the market on which it lists during a year, we use the index of the market on which the firm is currently listed at the year end.

(d) **Price to Book:** The ratio is defined as the market price of a share divided by its book value at year-end. Price to book ratio is collected from DataStream, the number of listed firms having P/B available is not the same as the number of listed firms whose beta is estimated using the market model.

(f) **Leverage:** This is a measure of long-term financial distress. It is defined as the ratio of total debt to total common equity at year-end.

(i) **Government Ownership:** This variable is defined as the proportion of shares held by the government at each firm at year end.

(j) **Dummy Listed HN:** equal to 1 if the firm is listed on the Hanoi stock exchange, equal to zero if the firm is listed on the Hochiminh stock exchange. In Vietnam, at the same time, a firm is only listed on one exchange. The listing requirement of the two exchanges is almost the same. The major difference between the two exchanges is the regulation about firm size. The minimum book value of common stocks for firm listed on Hochiminh exchange is 80 billion VND, while for firm listed on Hanoi exchange is 10 billion VND.

(l) **Return:** The return of each stock is calculated using stock daily unadjusted price.

(m) **Volatility:** this is the standard deviation of daily stock price, reflecting the individual risk of each stock.

(n) **Dummy SOEs:** Dummy variable that equals to 1 if at least 50% of shares outstanding of the firm is owned by the government of Vietnam. Due to the guarantee of the government for the existence of SOEs, the probability that SOEs go bankrupt is almost zero. When considering an investment in SOEs, investors will trade off between a low default risk and a political risk due to the control of corporate policies by the government.

(o) **Foreign Ownership:** Percentage of the firm common equity held by foreigners in Vietnam. According to the government regulations, foreign ownership includes all shares held by non-residents irrespective of their locations. The laws and regulations of Vietnam have restricted foreign ownership percentage in each listed firm. During the sample period, 2007-2012, the proportion of shares held by foreign investors in each firm is limited to 49% of outstanding stocks in non-banking listed firms and 30% of outstanding stocks in commercial banks.

*Hypothesis 1: Small stocks earn higher return than large stocks*

Fama and French (1992) and others find that return from investment in smaller firms is higher than investment in larger firms. Firm size is proven to capture risk, the lower firm size, the higher risk. Additional return for investment in small firm is compensated for additional risk. Large firms are usually more popular in public than small firms. Particularly, since information disclosure standards are lower in Vietnam than in developed countries, the higher risk associated with investing in smaller firms is more pronounced in Vietnam.

*Hypothesis 2: Low P/B stocks earn higher return than high P/B stocks*

Chan and Chen (1991) argue that stocks with low P/B are judged by the markets to have poor prospects, thus, have higher expected returns than stocks with strong prospects. We expect the same in the markets of Vietnam.

*Hypothesis 3: SOEs have higher benefits from tax shield than non-SOEs*

The data used in this paper are consistent with the markets of China, showing that SOEs take advantages of the government ownership, lowering cost of borrowing, then leverage is higher for SOEs than non-SOEs. M&M (1963) article argues that in a world without bankruptcy, firms can take advantages of using more debts to benefit from tax savings. With the guarantee of the government for the existence of SOEs, default risk of SOEs is almost zero. SOEs utilize the benefits of tax shield to earn higher return, using more debt in their capital structure.

*Hypothesis 4: Additional return is compensated for political risk in SOEs.*

Political risk exists in SOEs as the government controls corporate policies and selects management based on political connections, but not on managerial skills. In some situations, SOEs mix social objective with maximizing profitability. Consequently, the wealth of shareholders is negatively affected. Additional risk would be compensated by additional return.

## **EMPIRICAL RESULTS**

### **Baseline Regression**

Table 2 shows the Fama – MacBeth based model regression results. We use multiple models to explain the effects of several factors on return. Fixed effect models are used in all regressions.

In all models, firm size and return have a negative relation and the coefficients are consistently significant at one percent level. The results indicate that small stocks earn higher return than large stocks. Blenman and Le (2014) argue that information disclosure standards are lower in Vietnam than in developed markets. In addition, large firms are typically better known to investors than are small firms. Investors may consider small size firms riskier than large firms, holding all other factors constant. Higher

return is compensated for a riskier investment investors make while selecting small firms rather than large firms. Firm size is strongly and negatively associated with returns, the empirical results of firm size effect is consistent with Banz (1981).

In table 2, risk factors are positively and strongly associated with returns. Both beta and volatility coefficients are positive and significant at one percent level in almost all models. The results indicate that riskier stocks earn higher returns. The results support CAPM indicating that higher stock return is associated with higher stock beta, and are similar to the results of Reinganum (1981), Fama and MacBeth (1973) using US stock returns during the pre-1969 period.

Table 2 implies that firm size has more power in explaining return variations. Both firm size and beta appear in model (vi) resulting R-squared of 39.64%. As we exclude beta, while still remain firm size in model (iv), the R-squared is 38.84%. In model (v), we exclude firm size but keep beta. The R-squared in model (v) drops to 31.15%, lower than R-squared in model (iv) where firm size is retained but beta is excluded.

P/B shows a constant negative relation with return. In models (vi) and (vii), as firm size is included, P/B is not statistically significant, and the coefficient is around -0.005. However, as firm size is excluded in models (v) and (ii), P/B becomes statistically significant at one percent level and the magnitude of the coefficient turns to be -0.08 that is 16 times higher than the magnitude of the coefficient in models (vi) and (vii) where firm size is utilized. Table 2 verifies hypothesis 1 and hypothesis 2.

Foreign ownership and turnover rate have significant and positive effects on return. In model (i), the coefficients of both foreign ownership and turnover rate are positive and statistically significant at one percent level. The results indicate that stocks having more investment from foreign investors and stocks that are traded more often earn higher return than the others, holding other factors constant. In addition, the existence of turnover rate in the model improves the magnitude and significance of P/B. The coefficient of P/B changes from -0.005 in model (vii) to -0.022 in model (i), resulting from adding turnover rate in the regression model. Moreover, the coefficient of P/B is insignificant in model (vii), then turns significant at five percent in model (i).

**TABLE 2**  
**REGRESSION RESULTS OF RETURN**

Return	(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
Beta	0.039*** [0.005]	0.026* [0.085]			0.025* [0.09]	0.037*** [0.009]	0.038*** [0.008]
Size	-0.08*** [0.000]		-0.084*** [0.000]	-0.084*** [0.000]		-0.086*** [0.000]	-0.086*** [0.00]
Volatility	0.008** [0.047]	0.022*** [0.000]	0.008** [0.033]	0.010** [0.012]	0.023*** [0.000]	0.011*** [0.004]	0.01** [0.013]
Price to Book	-0.022** [0.046]	-0.08*** [0.000]	-0.012 [0.216]	-0.011 [0.238]	-0.08*** [0.00]	-0.005 [0.62]	-0.005 [0.587]
Gov. Ownership				-0.13* [0.06]	-0.13* [0.076]	-0.123* [0.065]	
Listed Hanoi	-0.012 [0.53]	-0.019 [0.33]	-0.028 [0.126]	-0.031* [0.095]	-0.021 [0.28]	-0.03 [0.142]	-0.024 [0.188]
Leverage	0.006* [0.077]	0.01** [0.013]	0.007* [0.072]	0.007** [0.04]	0.01*** [0.007]	0.008** [0.031]	0.007* [0.053]
Dummy-SOEs	0.006 [0.789]	0.003 [0.89]	0.008 [0.715]				0.01 [0.65]
Foreign - - Ownership	0.14*** [0.005]	0.10* [0.052]	0.11** [0.023]	0.11** [0.035]	0.096* [0.074]	0.12** [0.016]	0.13*** [0.010]
Turnover Rate	0.0015*** [0.001]						
Constant	0.97*** [0.000]	-0.035 [0.17]	1.07*** [0.000]	1.1*** [0.000]	0.0001 [0.99]	1.08*** [0.000]	1.05*** [0.000]
R-squared	40.49	30.73	38.45	38.84	31.15	39.64	39.27
N	916	1083	916	1085	1083	916	916

In Table 2, numbers in parentheses represent the p-values for a t-test that the average t-statistic is zero. The fixed effect are used in all models. The superscripts, \*\*\*, \*\*, and \* denote the 1%, 5%, and 10% levels of significance, respectively.

Leverage has a positive effect on return. As leverage increases by 10% return increases by 0.08%. In another regression results, not presented in this paper, we separate the sample into two sub-samples, one with only SOEs, and the other with only non-SOEs. We find that the coefficient of leverage is only significant in the former, but insignificant in the latter. Leverage of SOEs is 35% higher than leverage of non-SOEs, causing 0.28% higher return in SOEs due to higher leverage, controlling other variables.

The capital structure theories suggest that the benefit of interest tax shield encourages higher leverage that could lead to higher firm value and higher return so long as the possible bankruptcy costs are factored in. However, the probability of SOEs going bankrupt is almost in Vietnam due to the guarantee of the government for the existence of SOEs. This finding is consistent with the capital structure theory implying the benefits of tax shield, while default risk due to higher leverage is very low, resulting from the wishes of the government to maintain SOEs. The results verify hypothesis 3.

Table 2 shows that increase in government ownership in a firm lowers return. However, the return of SOEs where the government controls corporate policies is higher than the return in the other firms. In models (i), (ii), (iii), and (vii), we use SOEs Dummy, a dummy variable that is equal 1 if the firm is SOE and zero otherwise. The regression results show SOEs earn higher return than non – SOEs, although the coefficient is insignificant. Section 4.4 provides more analysis of this issue.

## FIRM SIZE AND BETA

The previous section shows that beta becomes more robust in the model with the inclusion of firm size. Without firm size in the models, the coefficient of beta becomes less robust and its magnitude significantly decreases.

The correlation coefficient between beta and firm size is 0.187 and significant at one percent level. In this section, we create 5 portfolios (5 size quintiles) by sorting data based on size. We then sort each size quintile by betas to construct 5 beta portfolios for each size quintile. We ultimately form 25 size – beta portfolios. We follow Fama and French (1992), all variables used to form portfolios are known to investors prior the portfolios are created.

**TABLE 3**  
**AVERAGE RETURNS FORMED ON SIZE AND THEN BETA**

Firms are annually sorted by size into 5 quintiles. In each quintile, firms are then sorted by beta to create 25 size-beta portfolios. The last column represent the p-values for a t-test that the difference between the average return of the highest beta portfolio and the average return of the lowest beta portfolio is zero. The superscripts, \*\*\*, \*\*, and \* denote the 1%, 5%, and 10% levels of significance, respectively.

	All	Low Beta	Beta 2	Beta 3	Beta 4	High Beta	High Beta - Low Beta	P-Value
Small Size	6.94	8.00	8.38	10.43	4.17	3.70	-4.30	0.015**
Size 2	5.91	5.98	6.78	6.24	5.29	5.27	-0.71	0.33
Size 3	5.32	3.89	5.35	6.82	6.23	4.32	0.43	0.38
Size 4	4.34	3.81	4.20	4.56	4.56	4.57	0.76	0.27
Large Size	3.48	2.48	4.77	4.16	3.26	2.73	0.25	0.4
All	5.20	4.83	5.90	6.44	4.70	4.12	-0.71	

The results in Table 3 again, indicate that firm size is consistently negatively associated with stock returns. For the whole sample, average return of the smallest size is 6.94 percent, decreasing as firm size becomes larger, being 3.48 percent for the largest firm size. The difference in returns between the smallest firm size and largest firm size is 3.46% (=6.94 % - 3.48 %). The results show that the average return of the smallest size quintile is almost double the average return of the largest quintile.

The results in Table 3, however, do not show a positive relationship between beta and return, controlling for the effect of firm size. As we compare the mean return of the highest beta portfolio with



the mean return of the lowest beta portfolio in each size quintile, the result is only significant for the smallest size quintile with the lowest beta portfolio having higher return than the higher beta portfolio. In the smallest size quintile, the average return of the lowest beta portfolio is 8% and 4.30% higher than the average return of the highest beta portfolio (8% - 3.7%), and the result is significant at 5 percent level (the p-value = 1.5%). In this size quintile, the highest beta portfolio even has lowest return.

### SIZE AND PRICE TO BOOK RATIO

Fama and French (1992) use logarithm values over period 1963-1990 and find that the correlation coefficient between firm size and book to market ratio (BTM) is -0.26. They find that within a size decile, returns typically increase strongly with BTM, with the difference in return of 0.99 percent per month between highest BTM and lowest BTM.

**TABLE 4**  
**AVERAGE RETURNS FORMED ON SIZE AND THEN PRICE TO BOOK RATIO**

Firms are annually sorted by size into 5 quintiles. In each quintile, firms are then sorted by P/B to create 25 size-beta portfolios. The last column represent the p-values for a t-test that the difference between the average return of the highest P/B portfolio and the average return of the lowest P/B portfolio is zero. The superscripts, \*\*\*, \*\*, and \* denote the 1%, 5%, and 10% levels of significance, respectively.

	All	Low P/B	P/B 2	P/B 3	P/B 4	High P/B	Low P/B - High P/B	P-Value
Small Size	6.90	7.04	7.57	8.17	8.01	3.73	3.31	0.04**
Size 2	5.94	7.09	8.24	5.63	5.29	3.47	3.62	0.025**
Size 3	5.35	6.41	6.54	6.33	5.35	2.10	4.31	0.003***
Size 4	4.37	3.93	6.25	4.40	4.49	2.76	1.17	0.21
Large Size	3.50	4.95	4.86	2.50	3.38	1.82	3.13	0.002***
All		5.88	6.69	5.41	5.30	2.78	3.11	

According to our sample, the correlation coefficient between firm size and P/B that is the reciprocal of BTM, is 0.23. Table 4 shows that within a quintile, the average return of the lowest P/B portfolio is consistently higher than the average return of the highest P/B portfolio. The difference in return between portfolios with lowest P/B and portfolios with highest P/B is 3.11 percent annually (5.88% - 2.78%). Most of the hypothesis that the difference between the average return of the lowest P/B portfolio and the average return of the highest P/B portfolio is zero is rejected at 5 percent level. Table 4 also confirms that small stocks earn almost double return than large stocks.

### RETURN OF SOES AND NON-SOES

The regression results in section imply that return is negatively associated with government ownership. The higher percentage of shares outstanding are held by the government, the lower return the firm has. However, as we use a dummy variable indicating whether the firm is SOEs, the results show that SOEs earn higher return than non-SOEs, but the coefficient is insignificant.

**TABLE 5**  
**AVERAGE RETURNS OF SOES AND NON-SOES FORMED ON SIZE AND THEN P/B**  
 Firms are annually sorted by size into 5 quintiles. In each quintile, firms are then sorted by P/B to create 25 size-beta portfolios. In each size-beta portfolio, stocks are sorted into SOEs and non-SOEs.

	Small P/B	P/B 2	P/B 3	P/B 4	Large P/B	All
<b>Small Size</b>						
SOEs	9.2	8.86	9.16	8.42	4.98	8.124
Non-SOEs	5.97	6.73	7.67	7.75	2.76	6.176
<i>SOEs - Non-SOEs</i>	3.23	2.13	1.49	0.67	2.22	1.948
<b>Size 2</b>						
SOEs	11.22	5.7	6.18	7.66	3.67	6.886
Non-SOEs	6.53	9.6	5.38	3.79	3.33	5.726
<i>SOEs - Non-SOEs</i>	4.69	-3.9	0.8	3.87	0.34	1.16
<b>Size 3</b>						
SOEs	3.21	6.34	6.38	6.35	3.72	5.2
Non-SOEs	7.29	6.73	6.3	4.65	1.42	5.278
<i>SOEs - Non-SOEs</i>	-4.08	-0.39	0.08	1.7	2.3	-0.078
<b>Size 4</b>						
SOEs	9.28	5.06	4.49	5.18	3.97	5.596
Non-SOEs	1.79	6.77	4.34	4.19	2.18	3.854
<i>SOEs - Non-SOEs</i>	7.49	-1.71	0.15	0.99	1.79	1.742
<b>Large Size</b>						
SOEs	4.93	4.84	6.14	3.71	4.49	4.822
Non-SOEs	4.96	4.87	0.87	3.11	2.46	3.254
<i>SOEs - Non-SOEs</i>	-0.03	-0.03	5.27	0.6	2.03	1.568

In table 5 we analyze the difference in return between SOEs and non-SOEs by constructing 5 by 5 portfolios separately for SOEs and non-SOEs, resulting 25 size-P/B portfolios for each.

Section 4.1 finds that SOEs earn 0.28% higher return than non-SOEs due to utilizing benefits of tax shield, without compensating for financial distress cost. The guarantee from the government for the existence of SOEs implies that the probability that SOEs go bankrupt is zero. Table 5 shows evidence that the average return of SOEs is about 1.27% higher than average return of non-SOEs. In each size quintile portfolio, average return is higher for SOEs than non-SOEs, except for quintile 3 where the average return of SOEs and non-SOEs is almost the same. A low difference (0.99%) between total return difference (1.27%) and return difference due to using more leverage (0.28%), along with regression results in table 2 where Dummy SOEs is utilized, implies that additional return compensated for political risk in SOEs is trivial. Hypothesis 4 is not verified.

## CONCLUSION

This paper examines the effects of size, P/B and political risk on return in the markets of Vietnam. Firstly, the results find evidence that both firm size and P/B have significant effects on return. Firm size has more power than betas in explaining variations of returns. The role of betas in explaining return improves with the inclusion of firm size. In the models including firm size, P/B is not statistically significant. As firm size is excluded from the models, P/B becomes a significant factor to determine returns, with the magnitude of the coefficient being 16 times higher.

Secondly, we find that small stocks outperform large stocks, and the results are robust in all models. The average return of the smallest size quintile portfolio is almost double the average return of the largest size quintile portfolio.

Thirdly, we also find that leverage is higher for state owned enterprises than for the other firms. A possible reason is because SOEs carry lower implicit or explicit cost of borrowing due to guarantee from the government. Leverage is positively related to return. The results are more robust in models including only SOEs than in model including only firms are not SOEs. The capital structure theory states that using more debt creates benefits due to tax shield, but carry some potential bankruptcy costs. However, the probability that SOEs go bankrupt is almost zero, since the government would like to maintain SOEs that survive after privatization.

We do not find evidence that additional return is compensated for political risk for investment in SOEs. The average return is 1.27% higher for SOEs than for non-SOEs. Of the total difference, 0.28% is attributed for using more debts in SOEs.

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**APPENDIX A  
VARIABLE DEFINITIONS**

<i>Government Ownership</i>	The percentage of shares held by the government at year end
<i>Price to Book</i>	Market price divided by the book value of a share at year end
<i>Beta</i>	The beta coefficient for the market model, estimated using daily returns
<i>Return</i>	The return is computed using daily stock price data
<i>Volatility</i>	The standard deviation of a firm's daily return
<i>Leverage</i>	Total liabilities divided by total equity
<i>Dummy Listed Hanoi</i>	A dummy variable which equals 1 if a firm is listed on the Hanoi exchange and 0 otherwise
<i>Size</i>	The market capitalization of the firm.
<i>Dummy SOEs</i>	A dummy variable which equals 1 if the government holds at least 50% of outstanding stocks.
<i>Foreign Ownership</i>	Percentage of common equity held by foreigners in Vietnam
<i>Turnover Rate</i>	The total shares traded over a year divided by the total shares of the firm at year end