

Changing Tax Policy Impacts on the Risk Level of Viet Nam Wholesale and Retail Firms

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Abstract

Many financial markets including but not limit to, the emerging stock market in Viet Nam, have been affected by the financial crisis 2007-2009. This study analyzes the impacts of tax policy on market risk for the listed firms in the wholesale and retail industry during this period as it becomes necessary. First, by using quantitative and analytical methods to estimate asset and equity beta of total 9 listed companies in Viet Nam wholesale and retail industry with a proper traditional model, we found out that the beta values, in general, for many companies are acceptable. Second, under 3 different scenarios of changing tax rates (20%, 25% and 28%), we recognized that there is not large disperse in equity beta values, estimated at 0,646, 0,653 and 0,657. These values are much lower than those of the listed VN construction firms. Third, by changing tax rates in 3 scenarios (25%, 20% and 28%), we recognized both equity and asset beta mean values have positive relationship with the increasing levels of tax rate. Finally, this paper provides some outcomes that could provide companies and government more evidence in establishing their policies in governance.

Keywords: Equity Beta, Financial Structure, Financial Crisis, Risk, Tax Rate, Wholesale and Retail Industry, JEL Classification: G010, G100, G390

1. Introduction

Together with the development of real estate and banking industry, during many recent years, Viet Nam wholesale and retail industry is considered as one of active economic sectors, which has certain positive effect for the economy.

This paper is organized as follow. The research issues and literature review will be covered in next sessions 2 and 3, for a short summary. Then, methodology and conceptual theories are introduced in session 4 and 5. Session 6 describes the data in empirical analysis. Session 7 presents empirical results and findings. Next, session 8 covers the analytical results. Then, session 9 presents analysis of risk. Lastly, session 10 will conclude with some policy suggestions. This paper also supports readers with references, exhibits and relevant web sources.

2. Research Issues

We mention some issues on the estimating of impacts of tax rates on beta for listed wholesale and retail companies in Viet Nam stock exchange as following:

Issue 1: Whether the risk level of wholesale and retail firms under the different changing scenarios of tax rates increase or decrease so much.

Issue 2: Whether the disperse distribution of beta values become large in the different changing scenarios of tax rates estimated in the wholesale and retail industry.

3. Literature review

Smith (2004) mentions in Chicago, properties located in a designated TIF (tax increment financing) district will exhibit higher rates of appreciation after the area is designated a qualifying TIF district when compared to those properties selling outside TIF districts, and when compared to properties that sell within TIF district boundaries prior to designation.

Robert *et al* (2011) recognized a significant positive relation between changes in intercorporate investment and changes in corporate marginal tax rates on ordinary income.

Next, Ruud *et al* (2013) said that greater tax bias is associated with significantly higher aggregate bank leverage, and this in turn is associated with a significantly greater chance of crisis. Steven (2013) indicated that international tax reform is a major part of Business Tax Reform of the US President. And Both OECD and Europe

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Commission have recently released projects designed to address corporate tax evasion and profits shifting. Next, Omri (2013) suggested the US should adopt a two-pronged corporate tax –residence test: the place where the corporation’s securities are listed for public trading, or the place of the corporation’s central management and control.

Then, Sung, Mark and Laura (2013) also indicated that business property values are more responsive to changes in tax rates as compared to residential property.

Finally, tax rate can be considered as one among many factors that affect business risk of real estate firms.

4. Conceptual theories

The impact of fiscal policy on the economy

Tax policy is one among major fiscal policies. Corporate taxation might affect the output, income or compensation, as well as the revenue-raising capacity of both the tax system and the company.

In a specific industry such as wholesale and retail industry, on the one hand, using tax policy with a decrease or increase in tax rate could affect tax revenues, profit after tax and financial results and compensation and jobs of the industry. On the other hand, using tax policies could increase the financial results of this industry and therefore, affect the tax revenues, compensation and jobs.

During and after financial crises such as the 2007-2009 crisis, there raises concerns about fiscal policies or public policies of many countries, in both developed and developing markets.

5. Methodology

The impacts from the financial crisis happened during the period 2007-2011; therefore, in this study, we use the live data from the stock exchange market in Viet Nam (HOSE and HNX) during the four or five years period to estimate systemic risk results and tax impacts.

In this study, analytical research method is used and specially, tax rate scenario analysis method is used. Analytical data is from the situation of listed wholesale and retail firms in VN stock exchange and current tax rate is 25%.

Finally, we use the results to suggest policy for both these enterprises, relevant organizations and government.

6. General Data Analysis

The research sample has total 9 listed firms in the wholesale and retail market with the live data from the stock exchange.

Firstly, we estimate equity beta values of these firms and use financial leverage to estimate asset beta values of them. Secondly, we change the tax rate from 25% to 28%

and 20% to see the sensitivity of beta values. In 3 cases (rate = 20%, 25%, and 28%), asset beta mean is estimated at 0,349, 0,352 and 0,355. Also in 3 scenarios, we find out var of asset beta estimated at 0,031 (almost the same, with a little decrease if tax rate increases to 28%) which shows small risk dispersion. Tax rate changes almost has no effect on asset beta var under financial leverage.

7. Empirical Research Findings and Discussion

In the below section, data used are from total 9 listed wholesale and retail companies on VN stock exchange (HOSE and HNX mainly). In the scenario 1, current tax rate is 25% which is used to calculate market risk (beta). Then, two (2) tax rate scenarios are changed up to 28% and down to 20%, compared to the current corporate tax rate.

Market risk (beta) under the impact of tax rate, includes:

- 1) Equity beta; and 2) asset beta

7.1 Scenario 1: current tax rate is 25%

In the case of tax rate of 25%, all beta values of 9 listed firms on VN wholesale and retail market as following:

Table 1 Market risk of listed companies on VN wholesale and retail market (t = 25%)

Order No.	Company stock code	Equity beta	Asset beta (assume debt beta = 0)
1	HHS	0,728	0,479
2	IMT	0,399	0,386
3	TH1	0,409	0,160
4	BSC	0,420	0,342
5	PET	1,273	0,351
6	BTT	0,829	0,640
7	CMV	0,391	0,126
8	PIT	1,012	0,514
9	VT1	0,411	0,175

7.2. Scenario 2: tax rate increases up to 28%

If corporate tax rates increases up to 28%, all beta values of total 9 listed firms on VN wholesale and retail market as below:

Table 2 Market risks of listed wholesale and retail firms (t = 28%)

Order No.	Company stock code	Equity beta	Asset beta (assume debt beta = 0)
1	HHS	0,736	0,485
2	IMT	0,399	0,386
3	TH1	0,409	0,160
4	BSC	0,423	0,344
5	PET	1,273	0,351
6	BTT	0,835	0,644
7	CMV	0,401	0,129
8	PIT	1,012	0,514
9	VT1	0,423	0,180

7.3. Scenario 3: tax rate decreases down to 20%

If corporate tax rate decreases down to 20%, all beta values of total 9 listed firms on the wholesale and retail market in VN as following:

Table 3 Market risk of listed wholesale and retail firms (t = 20%)

Order No.	Company stock code	Equity beta	Asset beta (assume debt beta = 0)
1	HHS	0,715	0,470
2	IMT	0,398	0,385
3	TH1	0,409	0,160
4	BSC	0,416	0,338
5	PET	1,273	0,351
6	BTT	0,819	0,632
7	CMV	0,376	0,121
8	PIT	1,012	0,514
9	VT1	0,393	0,167

All three above tables and data show that values of equity and asset beta in the case of increasing tax rate up to 28% or decreasing rate down to 20% have small fluctuation.

8. Comparing statistical results in 3 scenarios of changing tax rate

a. tax rate = 25%

Statistic results	Equity beta	Asset beta (assume debt beta = 0)	Difference
MAX	1,273	0,640	0,6334
MIN	0,391	0,126	0,2657
MEAN	0,653	0,352	0,3002
VAR	0,1069	0,0307	0,0761

Note: Sample size : 9

b. tax rate = 28%

Statistic results	Equity beta	Asset beta (assume debt beta = 0)	Difference
MAX	1,273	0,644	0,6287
MIN	0,399	0,129	0,2705
MEAN	0,657	0,355	0,3022
VAR	0,1058	0,0308	0,0750

Note: Sample size : 9

c. tax rate = 20%

Statistic results	Equity beta	Asset beta (assume debt beta = 0)	Difference
MAX	1,273	0,632	0,6410
MIN	0,376	0,121	0,2553
MEAN	0,646	0,349	0,2970
VAR	0,1086	0,0305	0,0781

Note: Sample size : 9

Based on above results, we find out:

Equity beta mean values in all 3 scenarios are little low (< 0,7) and asset beta mean values are small (< 0,4). In the case of current tax rate of 25%, equity beta value

fluctuates in a wide range from 0,391 (min) up to 1,273 (max) and asset beta fluctuates from 0,126 (min) up to 0,640 (max). We note there is a big decrease in max asset beta value here. If corporate tax rate increases to 28%, equity beta moves from 0,399 (min) up to 1,273 (max) and asset beta moves from 0,129 (min) up to 0,644 (max). Hence, we note that there is a little increase in equity beta min value if corporate tax increases. When tax rate decreases down to 20%, equity beta value changes from 0,376 (min) up to 1,273 (max) and asset beta changes from 0,121 (min) up to 0,632 (max). So, there is small decrease in equity/asset beta min values when tax decreases in scenario 3.

Beside, Exhibit 7 informs us that in the case 28% tax rate, average equity beta value of 9 listed firms increases up to 0,004 while average asset beta value of these 9 firms increase slightly up to 0,002. Then, when tax rate reduces to 20%, average equity beta value of 9 listed firms reduce to 0,007 and average asset beta value down to 0,004.

The below chart 1 shows us : when tax rate decreases down to 20%, average equity and asset beta values decrease slightly (0,646 and 0,349) compared to those at the initial rate of 25% (0,653 and 0,352). At the same time, when tax rate increases up to 28%, average equity and beta increases slightly (to 0,657 and 0,355). However, the fluctuation of equity and asset beta values (0,109 and 0,031) in the case of 20% tax rate is higher than or equal to (>=) the results in the rest 2 tax rate cases.

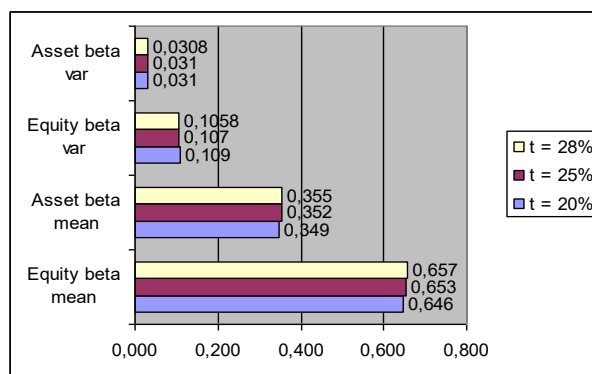


Chart 1 Comparing statistical results of three (3) scenarios of changing tax rate

9. Risk analysis

In the case of decreasing tax rate, (20%), the market and companies can receive more benefits such as generating more jobs and compensation, but the government budget can have deficit and the government has to cut expenses. Changes in tax rates can have both positive and negative impacts on the local market.

In the case of increasing tax rate (28%), the government will have budget to finance public expenditures but the tax could reduce both demand and supply. Moreover, both the company and the firm owner will have to pay taxes.

Conclusion and Policy suggestion

In summary, the government continues to increase the effectiveness of building the legal system and regulation and macro policies supporting the plan of developing both the construction together with the real estate market. The Ministry of Finance Continue to increase the effectiveness of fiscal policies and tax policies which are needed to combine with other macro policies at the same time, although we could note that in this study when tax rate is going to increase from 20% to 28%, the value of equity beta mean also increases.

The State Bank of Viet Nam continues to increase the effectiveness of capital providing channels for both construction and real estate companies.

Finally, this paper suggests implications for further research and policy suggestion for the Viet Nam government and relevant organizations, economists and investors from current market conditions.

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Exhibit

Exhibit 1 – Interest rates in banking industry during crisis (source: Viet Nam commercial banks)

Year	Borrowing Interest rates	Deposit Rates	Note
2011	18%-22%	13%-14%	
2010	19%-20%	13%-14%	Approximately
2009	9%-12%	9%-10%	(2007: required reserves ratio at SBV is changed from 5% to 10%)
2008	19%-21%	15%-16,5%	
2007	12%-15%	9%-11%	(2009: special supporting interest rate is 4%)

Exhibit 2 – Basic interest rate changes in Viet Nam (source: State Bank of Viet Nam and Viet Nam economy)

Year	Basic rate	Note
2011	9%	
2010	8%	
2009	7%	
2008	8,75%-14%	Approximately, fluctuated
2007	8,25%	
2006	8,25%	
2005	7,8%	
2004	7,5%	
2003	7,5%	
2002	7,44%	
2001	7,2%-8,7%	Approximately, fluctuated
2000	9%	

Exhibit 3 – Inflation, GDP growth and macroeconomics factors (source: Viet Nam commercial banks and economic statistical bureau)

Year	Inflation	GDP	USD/VND rate
2011	18%	5,89%	20.670
2010	11,75%	6,5%	19.495
	(Estimated at Dec 2010)	(expected)	
2009	6,88%	5,2%	17.000
2008	22%	6,23%	17.700
2007	12,63%	8,44%	16.132
2006	6,6%	8,17%	
2005	8,4%		
Note		approximately	

Exhibit 4: GDP growth Việt Nam 2006-2010 (source: Bureau Statistic)

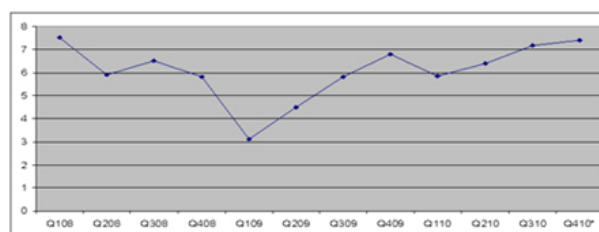


Exhibit 5: Top 40 among top 500 SMEs with the highest growth speed in 2012 (source: Vietnamnet and Viet Nam report)

Order	Rank	Company name	CEO	Tax code	Industry
1	1	CÔNG TY CP LÂM SẢN PISICO QUẢNG NAM	Phan Văn Cường	4000405162	Kinh doanh nông, lâm sản
2	2	CÔNG TY CP VÀNG BẠC ĐÁ QUỲ SJC CẦN THƠ	Lê Phát Vinh	1800636290	Vàng, bạc, đá quý
3	3	CÔNG TY CP SỢI PHÚ NAM	Hoàng Văn Thám	3300491474	Sản xuất sợi, dệt
4	4	CÔNG TY CP VÀNG BẠC ĐÁ QUỲ BẾN THÀNH	Tề Trí Dũng	300847936	Vàng, bạc, đá quý
5	5	CÔNG TY CP MAY CHIẾN THẮNG	Ninh Thị Ty	100101058	Ngành may
6	6	CÔNG TY TNHH DU LỊCH TRẦN VIỆT	Nguyễn Mạnh Cường	301069809	Du lịch, khách sạn
7	7	N.A		2012701	
8	8	CÔNG TY TNHH TRUYỀN THÔNG ADT	Đặng Huy Thắng	100905796	Sản xuất khác
9	9	CÔNG TY CP KẾT NỐI NHÂN TÀI	Tiêu Yến Trinh	305202145	Kinh doanh tổng hợp khác
10	10	CÔNG TY TNHH THIẾT LẬP	Nguyễn Hoàng Ấn	1500441413	Sản xuất, kinh doanh, chế biến gạo, bột mì, ngũ cốc...
11	11	CÔNG TY TNHH-CHẾ BIẾN THỦY SẢN VÀ XNK TRANG KHANH	Trần Tuấn Khanh	1900287501	Nuôi trồng, chế biến, kinh doanh thủy sản và các sản phẩm thịt
12	12	CÔNG TY SẢN XUẤT THƯƠNG MẠI VÀ ĐẦU TƯ TAM MINH	Lưu Tuấn Anh	4300327589	Sản xuất đồ gỗ, nội thất
13	13	CÔNG TY TNHH THƯƠNG MẠI SẢN XUẤT HÙNG HUY	Voòng A Hoa	302259111	Sản xuất và gia công giầy, dép
14	14	CÔNG TY TNHH THƯƠNG MẠI HOÀNG ĐẠO	Hồ Hoàng Bách	301434963	Sản xuất, kinh doanh thuốc lá, nguyên liệu thuốc lá
15	15	CÔNG TY TNHH THƯƠNG MẠI XÂY DỰNG ĐIỀU LONG	Đặng Thị Linh Phương	302000905	Kinh doanh tổng hợp khác
16	16	CÔNG TY CP XÂY DỰNG NHÀ VÀ PHÁT TRIỂN HẠ TẦNG HÀ NỘI	Phạm Thanh Nam	101370536	Xây dựng nhà và các công trình kỹ thuật dân dụng; hoạt động xây dựng chuyên dụng
17	17	CÔNG TY CP XĂNG DẦU THƯƠNG MẠI SỐNG TRÀ	Nguyễn Anh	4300334642	Kinh doanh xăng dầu, khí đốt, nhiên liệu và các sản phẩm liên quan
18	18	CÔNG TY CP SỢI PHÚ THANH	Nguyễn Văn Cường	3300471069	Sản xuất sợi, dệt
19	19	CÔNG TY TNHH DU LỊCH VÀ THƯƠNG MẠI SỐNG HỒNG	Lê Công Hoàng	100237411	Kinh doanh xăng dầu, khí đốt, nhiên liệu và các sản phẩm liên quan
20	20	CÔNG TY CP DẦU THỰC VẬT BÌNH ĐỊNH	Nguyễn Thị Thùy Giao	4100399995	Sản xuất thực phẩm chế biến: sữa, đường, cà phê, dầu ăn, bánh kẹo...
21	21	CÔNG TY CP VẬT TƯ MỎ ĐỊA CHẤT	Lê Nhật Tân	101453768	Kinh doanh tổng hợp khác
22	22	CÔNG TY TNHH MTV SÀI GÒN BẾN TRE	Nguyễn Ngọc Minh Hùng	1300419650	Bán lẻ, kinh doanh siêu thị
23	23	CÔNG TY TNHH HẢI VIỆT	Nguyễn Văn Rỉ	3700443193	Kinh doanh nông, lâm sản
24	24	CÔNG TY TNHH MAY PHÙ ĐỔNG	Dương Đức Thanh	100598947	Ngành may
25	25	CÔNG TY TNHH THƯƠNG MẠI VÀ DỊCH VỤ KỸ THUẬT TESCO	Trần Thanh Bình	101507773	Sản xuất, kinh doanh ô tô, phụ tùng ô tô
26	26	CÔNG TY TNHH THƯƠNG MẠI PHÚC THÁI	Bùi Xuân Huy	600346391	Kinh doanh xăng dầu, khí đốt, nhiên liệu và các sản phẩm liên quan
27	27	CÔNG TY TNHH MINH ĐĂNG	Nguyễn Thị Cẩm Nhung	2200258144	Nuôi trồng, chế biến, kinh doanh thủy sản và các sản phẩm thịt
28	28	CÔNG TY TNHH THƯƠNG MẠI VÀ DỊCH VỤ VẬN TẢI NGỌC KHÁNH	Trần Ngọc Huân	4000377194	Kinh doanh xăng dầu, khí đốt, nhiên liệu và các sản phẩm liên quan
29	29	CÔNG TY TNHH THƯƠNG MẠI DỊCH VỤ VẬN PHÁT	Cao Ngọc Anh	303332212	Kinh doanh tổng hợp khác
30	30	CÔNG TY CP VẬN TẢI VÀ DỊCH VỤ PETROLIMEX NGHỆ TĨNH	Võ Văn Tân	2900428497	Kinh doanh xăng dầu, khí đốt, nhiên liệu và các sản phẩm liên quan
31	31	CÔNG TY TNHH THƯƠNG MẠI SẢN XUẤT TÂN BÌNH	Trần Trí Thức	3900326063	Sản xuất đồ gỗ, nội thất
32	32	CÔNG TY TNHH NGUYÊN LIỆU GIẤY DUNG QUẤT	Nguyễn Nị	4300308498	Sản xuất đồ gỗ, nội thất
33	33	CÔNG TY TNHH BỆNH VIỆN ĐA KHOA TƯ NHÂN AN SINH	Ngô Đăng Sơn Anh	302774433	Sản xuất khác
34	34	CÔNG TY TNHH IN LỤA NHẤT PHƯƠNG	Huỳnh Thị Thanh Thủy	301441840	Sản xuất giấy, in ấn, xuất bản
35	35	CÔNG TY CP DẦU KHÍ SÀI GÒN-PHÚ YÊN	Trần Công Chương	4400344901	Kinh doanh xăng dầu, khí đốt, nhiên liệu và các sản phẩm liên quan
36	36	CÔNG TY CP BÊ TÔNG ĐĂNG HẢI	Phan Văn Khanh	400619838	Sản xuất, kinh doanh vật liệu xây dựng: xi măng, gạch xây, đá, cát...
37	37	CÔNG TY CP GIÀY BÌNH ĐỊNH	Võ Ngọc Thủy	4100258761	Sản xuất và gia công giầy, dép
38	38	CÔNG TY CP ĐẦU TƯ PHÁT TRIỂN THIÊN SƠN	Vũ Văn Tuyên	101536301	Sản xuất, kinh doanh vật liệu xây dựng: xi măng, gạch xây, đá, cát...
39	39	HTX THƯƠNG MẠI ĐỒ THÀNH	Hàng Thanh Dân	302804374	Kinh doanh thực phẩm chế biến: sữa, đường, cà phê, dầu ăn, bánh kẹo.....
40	40	CÔNG TY CP XÂY DỰNG TỔNG HỢP 269	Trương Duy Niệm	3000244523	Xây dựng nhà và các công trình kỹ thuật dân dụng; hoạt động xây dựng chuyên dụng

Exhibit 6: Risk and financial leverage of 9 listed wholesale and retail firms on VN stock exchange period 2007-2011

Order No.	Company stock code	Equity beta	Asset beta (assume debt beta = 0)	Note	Financial leverage
1	HHS	0,728	0,479	PIT as comparable	34,2%
2	IMT	0,399	0,386	TH1 as comparable	3,4%
3	TH1	0,409	0,160		60,8%
4	BSC	0,420	0,342	FBA as comparable	18,7%
5	PET	1,273	0,351		72,4%
6	BTT	0,829	0,640	PIT as comparable	22,8%
7	CMV	0,391	0,126	PIT as comparable	67,9%
8	PIT	1,012	0,514		49,2%
9	VT1	0,411	0,175	BTT as comparable	57,5%
Average					43,0%

Exhibit 6: Risk and financial leverage of 9 listed wholesale and retail firms on VN stock exchange period 2007-2011

Order No.	Company stock code	Equity beta	Asset beta (assume debt beta = 0)	Note	Financial leverage
1	HHS	0,728	0,479	PIT as comparable	34,2%
2	IMT	0,399	0,386	TH1 as comparable	3,4%
3	TH1	0,409	0,160		60,8%
4	BSC	0,420	0,342	FBA as comparable	18,7%
5	PET	1,273	0,351		72,4%
6	BTT	0,829	0,640	PIT as comparable	22,8%
7	CMV	0,391	0,126	PIT as comparable	67,9%
8	PIT	1,012	0,514		49,2%
9	VT1	0,411	0,175	BTT as comparable	57,5%
Average					43,0%

Exhibit 7 Increase/decrease risk level of listed wholesale and retail firms under changing scenarios of tax rates: 25%, 28%, 20% period 2007 - 2011

Order No.	Company stock code	t = 25%		t = 28%		t = 20%	
		Equity beta	Asset beta	Increase /Decrease (equity beta)	Increase /Decrease (asset beta)	Increase /Decrease (equity beta)	Increase /Decrease (asset beta)
1	HHS	0,728	0,479	0,008	0,005	-0,013	-0,009
2	IMT	0,399	0,386	0,000	0,000	-0,001	-0,001
3	TH1	0,409	0,160	0,000	0,000	0,000	0,000
4	BSC	0,420	0,342	0,002	0,002	-0,004	-0,003
5	PET	1,273	0,351	0,000	0,000	0,000	0,000
6	BTT	0,829	0,640	0,006	0,005	-0,010	-0,008
7	CMV	0,391	0,126	0,010	0,003	-0,015	-0,005
8	PIT	1,012	0,514	0,000	0,000	0,000	0,000
9	VT1	0,411	0,175	0,012	0,005	-0,018	-0,008
Average				0,004	0,002	-0,007	-0,004

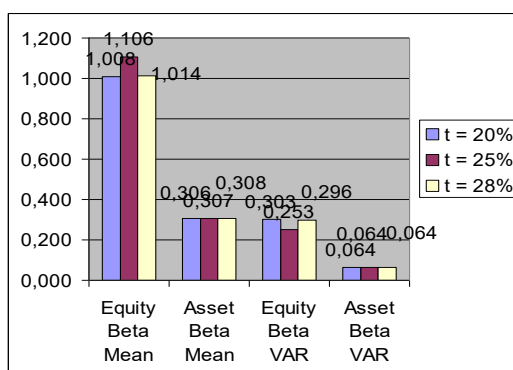
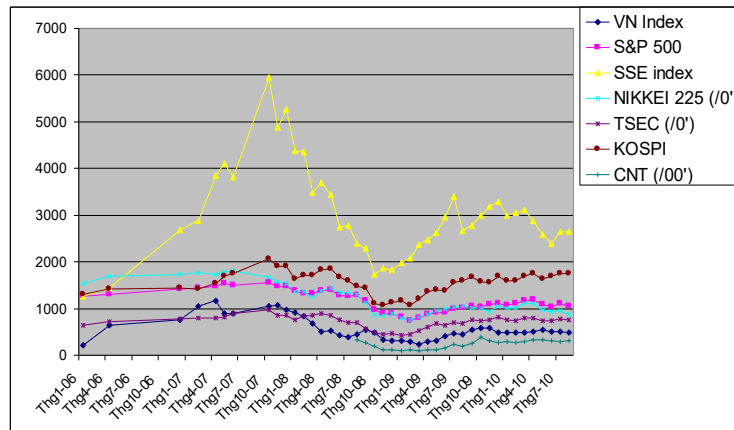


Exhibit 8-Comparing statistical results of three (3) scenarios of changing tax rate of 104 listed construction firms

Exhibit 9- VNI Index and other stock market index during crisis 2006-2010



Author note: My sincere thanks are for the editorial office and Lecturers/Doctors at Banking University and International University of Japan. Through the qualitative