To what Extent changing tax policy and external financing Influence the risk level of Viet Nam hotel industry during and after the global crisis

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Abstract

Throughout the years, hotel industry in Viet Nam has reached a lot of achievements. Under the volatility of stock price, and changes in macro factors such as inflation and interest rates, the well-established hotel market in Viet Nam has many efforts to recover and grow from the crisis 2008. This study analyzes the impacts of both tax rate policy and leverage on market risk for the listed firms in the hotel industry as it becomes necessary. First, by using quantitative and analytical methods to estimate asset and equity beta of total 20 listed companies in Viet Nam hotel 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, although the risk dispersion reduces to 0,032 if tax rate down to 20% for current leverage situation. 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 level of tax rate. Finally, this paper provides some outcomes that could provide companies and government more evidence in establishing their policies in governance.

INTRODUCTION

Throughout many recent years, Viet Nam hotel market is evaluated as one of active markets, which has certain positive effect for the economy.

The organization of paper contents is as following. As our previous series of paper, the research issues and literature review will be covered in next sessions 2.1 and 2.2, for a short summary. Then, methodology and conceptual theories are introduced in session 2.3 and 2.4. Session 3.1 describes the data in empirical analysis. Session 3.2 presents empirical results and findings. Then, session 4 will conclude with some policy suggestions. This paper also supports readers with references, exhibits and relevant web sources.

Preliminary Notes

Research Issues

Among the scope of the paperwork are:

Issue 1: Whether the risk level of hotel firms under the different changing scenarios of tax rates increase or decrease so much?

Issue 2: Because Viet Nam is an emerging and immature financial market and the stock market still in the starting stage, whether the dispersed distribution of beta values become large in the different changing scenarios of leverage estimated in the hotel industry.

Literature review

John (1999) mentions a two-rate tax system where land is taxed at a higher rate than structures in his research on two-rate property tax effects on land development.

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.

Anderson (2009) recognized that the user cost tax elasticities are relatively small while the expected house price inflation elasticity is substantially larger and therefore plays a greater role in affecting housing market demand.

Spinassou (2013) showed that the impact of Basel III on the regulator's welfare depends on the regulator's strength, and the implementation of an identical leverage ratio across countries would decrease the welfare of regulators with strong powers. Next, Tasca et al., (2013) identified a safe regime, in which excessive leverage does not result in an increase of systemic risk, and a risky regime, in which excessive leverage cannot be mitigated leading to an increased systemic risk. And Gunaratha (2013) revealed that in different industries in Sri Lanka, the degree of financial leverage has a significant positive correlation with financial risk.

Conceptual theories

The combination of tax rate policy and leverage during the crisis period

The central bank and government or Ministry of Finance could use two tools: fiscal and monetary policies to perform macro economic goals. Tax rate is one of fiscal policies, either expansion or contraction, can affect quickly the aggregate demand and good market and industry growth.

Beside, on the one hand, using leverage with a decrease or increase in certain periods could affect tax obligations, revenues, profit after tax and technology innovation and compensation and jobs of the industry. On the other hand, using financial leverage and changing capital structure offers firms better economic conditions. Firms can vary the capital structure with leverage and change the structure of fixed costs and variable costs. Although leverage can help a firm to increase return, the firm will prefer to increase debt up to a point to be not so nervous about risk because of too much debt financing. During the firm life, leverage can contribute to its performance and growth.

METHODOLOGY

We use the data from the stock exchange market in Viet Nam (HOSE and HNX) during the 2007-2011 period to estimate systemic risk results.

In this study, analytical research method and specially, tax rate scenario analysis method is used. Analytical data is from the situation of listed hotel 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.

MAIN RESULTS

General Data Analysis

The research sample has 7 listed firms in the hotel market with the live date 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%), with current debt financing, asset beta mean is estimated at 0,249, 0,251 and 0,246. Also in 3 scenarios, we find out var of asset beta estimated at 0,009 (almost the same). Tax rate changes almost have no effect on asset beta var under financial leverage.

Empirical Research Findings and Discussion

In the below section, data used are from total 7 listed hotel industry companies on VN stock exchange (HOSE and HNX mainly). In the scenario 1, current tax rate is kept as 25% then changed from 20% to 30%. Then, three (3) FL scenarios are changed up to 30% and down to 20%, compared to the current FL degree. In short, the below table 1 shows three scenarios used for analyzing the risk level of these listed firms.
Market risk (beta) under the impact of tax rate, includes: 1) equity beta; and 2) asset beta.

Table 1. Analyzing market risk under three (3) scenarios (*Made by Author*)

	Tax rate as current (25%)	Tax rate up to 30%	Tax rate down to 20%
Leverage as current Leverage up 30% Leverage down 20%	Scenario 1	Scenario 2	Scenario 3

a. Scenario 1: current tax rate 25% and leverage kept as current, 20% down and 30% up
In this case, all beta values of 7 listed firms on VN hotel industry market as following:

Table 2. Market risk of listed companies on VN hotel industry market under a two factors model (case 1) (source: VN stock exchange 2012)

Order No.	Company stock code	Leverage as current		Leverage down 20%		Leverage up 30%	
		Equity beta	Asset beta (assume debt beta = 0)	Equity beta	Asset beta (assume debt beta = 0)	Equity beta	Asset beta (assume debt beta = 0)
1	DLD	0,167	0,109	0,181	0,131	0,144	0,079
2	DXL	0,295	0,213	0,313	0,243	0,267	0,170
3	MTC	0,373	0,363	0,375	0,366	0,371	0,357
4	OCH	0,748	0,318	0,920	0,497	0,468	0,118
5	SGH	0,381	0,351	0,381	0,357	0,381	0,342
6	VIR	0,298	0,223	0,315	0,252	0,272	0,183
7	VNG	0,234	0,168	0,234	0,181	0,234	0,148

b. Scenario 2: tax rate increases up to 28% and leverage kept as current, 20% down and 30% up
All beta values of total 7 listed firms on VN hotel industry market as below:

Table 3. Market risks of listed hotel industry firms under a two factors model (case 2) *(source: VN stock exchange 2012)*

Order No.	Company stock code	Leverage as current		Leverage down 20%		Leverage up 30%	
		Equity beta	Asset beta (assume debt beta = 0)	Equity beta	Asset beta (assume debt beta = 0)	Equity beta	Asset beta (assume debt beta = 0)
1	DLD	0,169	0,110	0,183	0,132	0,146	0,080
2	DXL	0,298	0,214	0,316	0,245	0,270	0,172
3	MTC	0,373	0,363	0,375	0,367	0,371	0,358
4	OCH	0,764	0,324	0,935	0,505	0,481	0,121
5	SGH	0,381	0,351	0,381	0,357	0,381	0,342
6	VIR	0,301	0,225	0,317	0,253	0,275	0,185
7	VNG	0,234	0,168	0,234	0,181	0,234	0,148

c. Scenario 3: tax rate decreases down to 20% and leverage kept as current, 20% down and 30% up
All beta values of total 7 listed firms on VN hotel industry market as below:

Table 4. Market risks of listed hotel industry firms under a two factors model (case 3) *(source: VN stock exchange 2012)*

Order No.	Company stock code	Leverage as current		Leverage down 20%		Leverage up 30%	
		Equity beta	Asset beta (assume debt beta = 0)	Equity beta	Asset beta (assume debt beta = 0)	Equity beta	Asset beta (assume debt beta = 0)
1	DLD	0,164	0,107	0,179	0,129	0,141	0,077
2	DXL	0,291	0,209	0,310	0,240	0,261	0,166
3	MTC	0,373	0,362	0,374	0,366	0,370	0,357
4	OCH	0,724	0,307	0,897	0,484	0,447	0,113
5	SGH	0,381	0,351	0,381	0,357	0,381	0,342
6	VIR	0,294	0,220	0,311	0,249	0,266	0,179
7	VNG	0,234	0,168	0,234	0,181	0,234	0,148

All three above tables and data show that there are just tiny changes in the values of equity beta and there are bigger fluctuations in the values of asset beta in the three (3) cases.

Comparing statistical results in 3 scenarios of changing leverage

Table 5. Statistical results (FL in case 1) *(source: VN stock exchange 2012)*

Statistic results	Leverage as current			Leverage down 20%			Leverage up 30%		
	Equity beta	Asset beta (assume debt beta = 0)	Difference	Equity beta	Asset beta (assume debt beta = 0)	Difference	Equity beta	Asset beta (assume debt beta = 0)	Difference
MAX	0,748	0,363	0,386	0,920	0,497	0,424	0,468	0,357	0,110
MIN	0,167	0,109	0,058	0,181	0,131	0,051	0,144	0,079	0,066
MEAN	0,357	0,249	0,108	0,389	0,290	0,099	0,305	0,290	0,016
VAR	0,0354	0,0094	0,026	0,0601	0,0157	0,044	0,0117	0,0117	0,000
Note: Sample size : 7 firms									

Table 6. Statistical results (FL in case 2) (source: VN stock exchange 2012)

Statistic results	Leverage as current			Leverage down 20%			Leverage up 30%		
	Equity beta	Asset beta (assume debt beta = 0)	Difference	Equity beta	Asset beta (assume debt beta = 0)	Difference	Equity beta	Asset beta (assume debt beta = 0)	Difference
MAX	0,764	0,363	0,401	0,935	0,505	0,430	0,481	0,358	0,123
MIN	0,169	0,110	0,059	0,183	0,132	0,051	0,146	0,080	0,067
MEAN	0,360	0,251	0,109	0,392	0,291	0,100	0,308	0,291	0,017
VAR	0,0372	0,0095	0,028	0,0625	0,0161	0,046	0,0122	0,0116	0,001
Note: Sample size : 7 firms									

Table 7. Statistical results (FL in case 3) (source: VN stock exchange 2012)

Statistic results	Leverage as current			Leverage down 20%			Leverage up 30%		
	Equity beta	Asset beta (assume debt beta = 0)	Difference	Equity beta	Asset beta (assume debt beta = 0)	Difference	Equity beta	Asset beta (assume debt beta = 0)	Difference
MAX	0,724	0,362	0,362	0,897	0,484	0,413	0,447	0,357	0,090
MIN	0,164	0,107	0,057	0,179	0,129	0,050	0,141	0,077	0,064
MEAN	0,351	0,246	0,105	0,384	0,287	0,097	0,300	0,287	0,014
VAR	0,0327	0,0093	0,023	0,0564	0,0150	0,041	0,0109	0,0120	-0,001
Note: Sample size : 7 firms									

The above calculated figures generate some following results:

First of all, Equity beta mean values in all 3 scenarios are acceptable (< 0,4) and asset beta mean values are also small (< 0,3). If leverage increases to 30%, asset beta max value decreases slightly to 0,357 when tax rate is up to 30%. Finally, when leverage decreases down to 20%, asset beta max value increases to 0,505 in case tax rate up.

The below chart 1 shows us : when leverage degree decreases down to 20%, if tax rate is up to 28%, average equity beta value increases slightly (0,392) compared to that at the decrease of tax rate of 20% (0,384). However, equity beta

var is 0,037 (tax rate up), little smaller than 0,033 (tax rate down). Then, when leverage degree increases up to 30%, if tax rate is up to 28%, average equity beta decreases little more (to 0,308) compared to that at the decrease of tax rate of 20% (0,300). However, in case the tax rate up, the equity beta var is 0,012, little higher than 0,11 (tax rate down).

   The below chart 2 shows us : when leverage degree decreases down to 20%, if tax rate is up to 28%, average asset beta value increases slightly (0,291) compared to that at the decrease of tax rate of 20% (0,287). However, asset beta var is 0,016 (tax rate up), little smaller than 0,015 (tax rate down). Then, when leverage degree increases up to 30%, if tax rate is up to 28%, average asset beta also increases little more (to 0,291) compared to that at the decrease of tax rate of 20% (0,287). However, in case the tax rate up, the asset beta var is 0,012, the same as that in case tax rate down.

Chart 1. Comparing statistical results of equity beta var and mean in three (3) scenarios of changing FL and tax rate (source: VN stock exchange 2012)
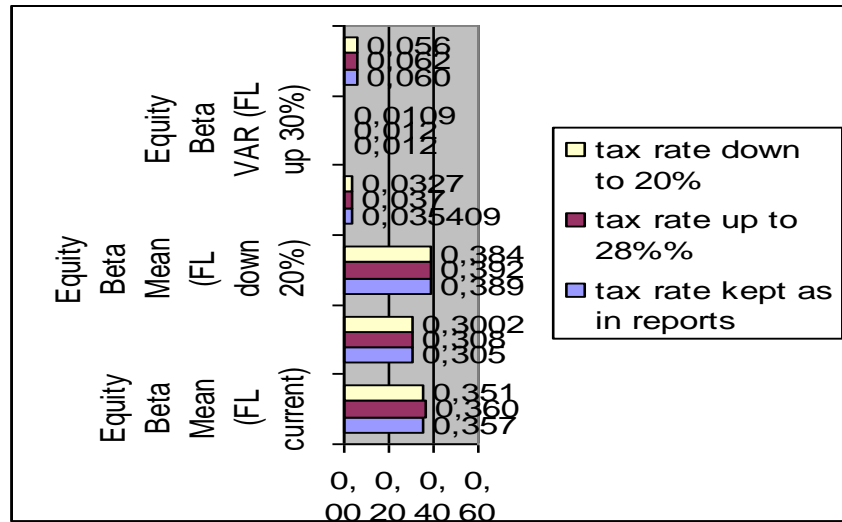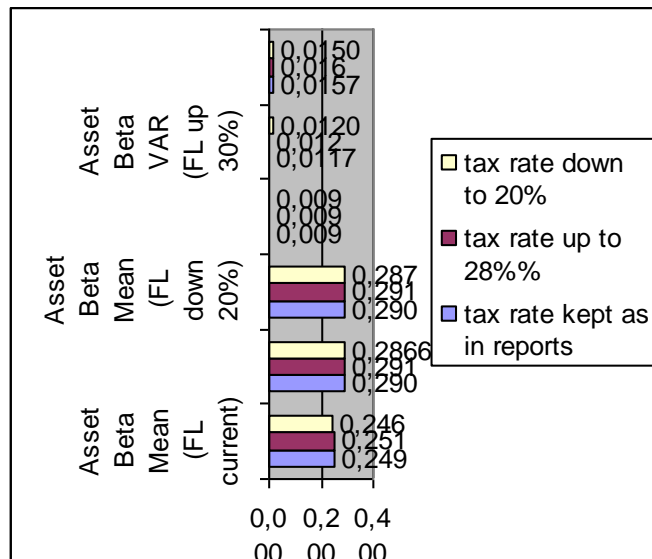

Chart 2. Comparing statistical results of asset beta var and mean in three (3) scenarios of changing FL and tax rate *(source: VN stock exchange 2012)*

Conclusion and Policy suggestion

In summary, the government has to consider the impacts on the movement of market risk in the markets when it changes the macro policies and the legal system and regulation for developing the hotel market. The Ministry of Finance

continues to increase the effectiveness of fiscal policies and tax policies which are needed to combine with other macro policies at the same time. The State Bank of Viet Nam continues to increase the effectiveness of capital providing channels for hotel firms as we might note that in this study when leverage is going to increase up to 30%, the risk level decreases to 0,287 (asset beta mean decreases if tax rate moves down to 20%).

Furthermore, the entire efforts among many different government bodies need to be coordinated.

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. VNI Index and other stock market index during crisis 2006-2010
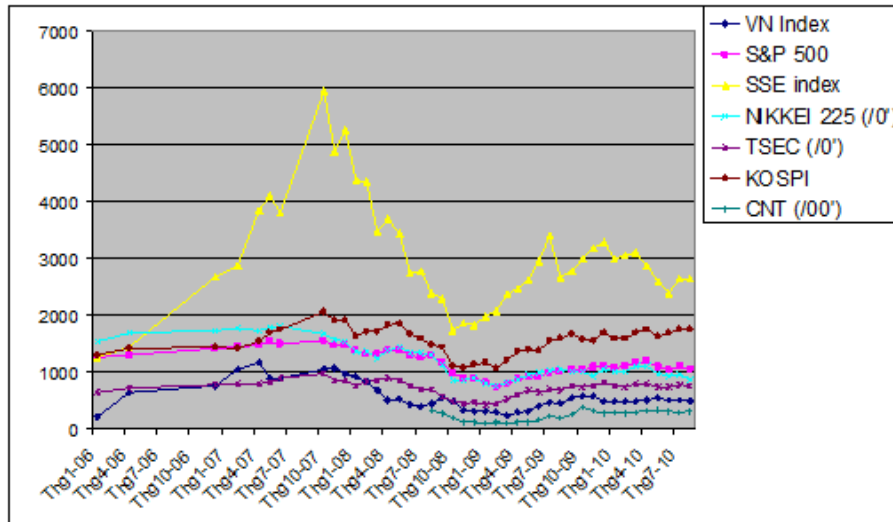*(source: global stock exchange 2012)*

Exhibit 2. Comparable firms and changing leverage for Viet Nam hotel firms
(source: Viet Nam stock exchange 2012)

Order No.	Company Stock code	Comparable firm	FL as current	FL up 30%	FL down 20%
1	DLD	VNG as comparable	35,0%	45,5%	28,0%
2	DXL	SGH as comparable	28,0%	36,4%	22,4%
3	MTC	SGH as comparable	2,8%	3,6%	2,2%
4	OCH	RIC as comparable	57,5%	74,8%	46,0%
5	SGH		7,9%	10,2%	6,3%
6	VIR	MTC as comparable	25,2%	32,7%	20,1%
7	VNG		28,4%	36,9%	22,7%
		Average	26,4%	34,3%	21,1%