

# The Measurement of Impacts of Tax Rates on the Risk Level of Listed Viet Nam Banking Firms During 2009-2011

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**Abstract-** *The emerging stock market in Viet Nam has been developed since 2006 and affected by the financial crisis 2007-2009. This paperwork analyzes the impacts of tax policy on market risk for the listed firms in the banking industry as it becomes necessary.*

*First of all, by using quantitative and analytical methods to estimate asset and equity beta of total 9 listed companies in Viet Nam banking industry with a proper traditional model, we found out that the beta values, in general, for many institutions 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 0,109, 0,108 and 0,107. These values are low and acceptable.*

*Third, by changing tax rates in 3 scenarios (25%, 20% and 28%), we recognized equity beta mean value has 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.*

**General Terms-** Market risk volatility, Corporate finance

**Keywords-** Equity beta; financial structure; financial crisis; risk; tax rate; banking industry

## 1. INTRODUCTION

In recent years, together with the development of the whole economy and the growth of FDI, throughout many recent years, Viet Nam banking industry is considered as one of active economic sectors, which has some positive effects 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 banking companies in Viet Nam stock exchange as following:

**Issue 1:** Whether the risk level of banking 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 banking 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.

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.

David (2009) stated the U.S states can increase the likelihood of using tax rate adjustments to cope with fiscal volatility rather than (more harmful) spending fluctuations. Robert et all (2011) recognized a significant positive

relation between changes in intercorporate investment and changes in corporate marginal tax rates on ordinary income.

George and Jot Yau (2012) found that there is a positive relationship between transaction cost and price volatility, suggesting that the imposition of a transaction tax could increase financial market fragility, increasing the likelihood of a financial crisis rather than reducing it. Mark (2012) found in some European countries during the crisis raising tax rates and tax burdens, the trend in which overall revenue levels were broadly stable while marginal rates in corporate and top personal income declined has stopped. Then, Filip (2012) believed low levels of taxation, esp. low levels of taxation on the income or wealth of the so-called productive segments of society are beneficial for economic growth.

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

#### 4. CONCEPTUAL THEORIES

##### The impact of fiscal policy on the economy

If the government changes the tax or expenditure policy, the economy will be affected because the aggregate demand fluctuates, level of economic activities fluctuates, level of income changes and the allocation of economic resources in the public sector in relative to private sector changes.

In a specific industry such as banking 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. And it also shows the purpose of fiscal policy: following either contractionary or expansionary directions.

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. The government might choose either lowering the tax rates or cutting the public expenditures while increasing demand stimulating programs to resolve difficulties from the crisis.

##### The role of fiscal policy

In most of nations and in Viet Nam, fiscal policy can be either deficit or surplus or neutral. If the fiscal policy has deficit, the government has to finance to deficit by issuing government bonds. On the other hand, in the case of surplus budget, the government can slow down the speed of economic growth and stabilize prices when inflation is high.

#### 5. METHODOLOGY

In this study, we use the live data during the crisis period 2009-2011 from the stock exchange market in Viet Nam (HOSE and HNX) to estimate systemic risk results and tax impacts.

In this research, analytical research method is used, philosophical method is used and specially, tax rate

scenario analysis method is used. Analytical data is from the situation of listed banking 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 banking 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. We found out that in 3 cases (rate = 20%, 25%, and 28%), asset beta mean is estimated at 0,437, 0,439 and 0,440 which are almost the same. Also in 3 scenarios, we find out var of asset beta estimated at 0,001 (almost the same) which shows small risk dispersion. Tax rate changes almost has no effect on asset beta var under financial leverage.

#### 7. EMPIRICAL RESEARCH FINDINGS & DISCUSSION

In the below section, data used are from total 9 listed banking 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 banking market as following:

**Table 1 – Market risk of listed companies on VN banking market (t = 25%)**

| Order No. | Company stock code | Equity beta | Asset beta (assume debt beta = 0) | Financial leverage |
|-----------|--------------------|-------------|-----------------------------------|--------------------|
| 1         | ACB                | 0,6363      | 0,0305                            | 95,2%              |
| 2         | CTG                | 0,5540      | 0,0312                            | 94,4%              |
| 3         | EIB                | 0,3847      | 0,0365                            | 90,5%              |
| 4         | HBB                | 0,1335      | 0,0138                            | 89,7%              |
| 5         | MBB                | 0,0717      | 0,0054                            | 92,5%              |
| 6         | NVB                | 0,0211      | 0,0026                            | 87,7%              |
| 7         | SHB                | 1,0038      | 0,0824                            | 91,8%              |
| 8         | STB                | 0,7344      | 0,0716                            | 90,3%              |
| 9         | VCB                | 0,4083      | 0,0299                            | 92,7%              |

##### 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 banking market as below:

**Table 2 – Market risks of listed banking firms (t = 28%)**

| Order No. | Company stock code | Equity beta | Asset beta (assume debt beta = 0) |
|-----------|--------------------|-------------|-----------------------------------|
| 1         | ACB                | 0,6363      | 0,0305                            |
| 2         | CTG                | 0,5540      | 0,0312                            |
| 3         | EIB                | 0,3847      | 0,0365                            |
| 4         | HBB                | 0,1383      | 0,0143                            |
| 5         | MBB                | 0,0743      | 0,0056                            |
| 6         | NVB                | 0,0226      | 0,0028                            |
| 7         | SHB                | 1,0038      | 0,0824                            |
| 8         | STB                | 0,7344      | 0,0716                            |
| 9         | VCB                | 0,4083      | 0,0299                            |

### 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 banking market in VN as following:

**Table 3 – Market risk of listed banking firms (t = 20%)**

| Order No. | Company stock code | Equity beta | Asset beta (assume debt beta = 0) |
|-----------|--------------------|-------------|-----------------------------------|
| 1         | ACB                | 0,6363      | 0,0305                            |
| 2         | CTG                | 0,5540      | 0,0312                            |
| 3         | EIB                | 0,3847      | 0,0365                            |
| 4         | HBB                | 0,1262      | 0,0130                            |
| 5         | MBB                | 0,0676      | 0,0051                            |
| 6         | NVB                | 0,0189      | 0,0023                            |
| 7         | SHB                | 1,0038      | 0,0824                            |
| 8         | STB                | 0,7344      | 0,0716                            |
| 9         | VCB                | 0,4083      | 0,0299                            |

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 TAX SCENARIOS

### a. tax rate = 25%

| Statistic results     | Equity beta | Asset beta (assume debt beta = 0) | Difference |
|-----------------------|-------------|-----------------------------------|------------|
| MAX                   | 1,004       | 0,082                             | 0,9214     |
| MIN                   | 0,021       | 0,003                             | 0,0185     |
| MEAN                  | 0,439       | 0,034                             | 0,4049     |
| VAR                   | 0,1081      | 0,0008                            | 0,1074     |
| Note: Sample size : 9 |             |                                   |            |

### b. tax rate = 28%

| Statistic results     | Equity beta | Asset beta (assume debt beta = 0) | Difference |
|-----------------------|-------------|-----------------------------------|------------|
| MAX                   | 1,004       | 0,082                             | 0,9214     |
| MIN                   | 0,023       | 0,003                             | 0,0198     |
| MEAN                  | 0,440       | 0,034                             | 0,4058     |
| VAR                   | 0,1074      | 0,0007                            | 0,1066     |
| Note: Sample size : 9 |             |                                   |            |

### c. tax rate = 20%

| Statistic results     | Equity beta | Asset beta (assume debt beta = 0) | Difference |
|-----------------------|-------------|-----------------------------------|------------|
| MAX                   | 1,004       | 0,082                             | 0,9214     |
| MIN                   | 0,019       | 0,002                             | 0,0165     |
| MEAN                  | 0,437       | 0,034                             | 0,4035     |
| VAR                   | 0,1093      | 0,0008                            | 0,1085     |
| Note: Sample size : 9 |             |                                   |            |

Based on the above results, we find out:

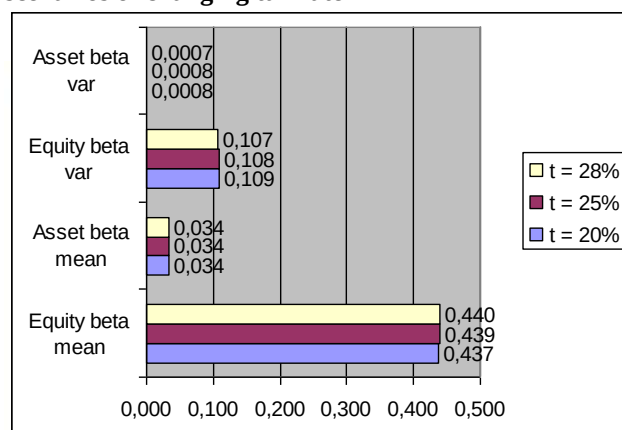
Equity beta mean values in all 3 scenarios are low ( $< 0,5$ ) and asset beta mean values are also small ( $< 0,1$ ) although max equity beta values in some cases might be higher than ( $>$ ) 1. In the case of current tax rate of 25%, equity beta value fluctuates in an acceptable range from 0,021 (min) up to 1,004 (max) and asset beta fluctuates from 0,003 (min) up to 0,082 (max). If corporate tax rate increases to 28%, equity beta moves from 0,023 (min) up to 1,004 (max) and asset beta moves from 0,003 (min) up to 0,082 (max). Hence, we note that there is a change in equity beta min value if corporate tax increases. When tax rate decreases down to 20%, equity beta value changes from 0,019 (min) up to 1,004 (max) and asset beta changes from 0,002 (min) up to 0,082 (max). So, there is a small increase in equity beta min value when tax rate increases in scenario 2 and a small decrease when tax rate 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 0,001 while average asset beta value of these 9 firms increase slightly up to 0,0001. Then, when tax rate reduces to 20%, average equity beta value of 9 listed firms reduce to 0,0015 and average asset beta value of 9 firms down to 0,0001.

The below chart 1 shows us : when tax rate decreases down to 20%, average equity beta decrease slightly while average asset beta maintains the same (0,437 and 0,034) compared to those at the initial rate of 25% (0,439 and 0,034). At the same time, when tax rate increases up to 28%, average equity beta increases slightly whereas average asset beta value remains unchanged (to 0,440 and 0,034). However, the fluctuation of equity and asset beta values (0,109 và 0,0008) in the case of 20% tax rate is

little higher than or equal to ( $\geq$ ) 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

Under the case of decreasing tax rate, (20%), the economy and the companies can receive more benefits but the government budget can have deficit and the government has to cut expenses.

On the other hand, in the case of increasing tax rate (28%), the government will have budget to finance public expenditures but the income tax burden could reduce both demand and supply, as well as the output, jobs and compensation.

## 10. CONCLUSION & POLICY SUGGESTION

In summary, the government has to consider the impacts on the mobility of capital in the markets when it changes the tax policy or tax rates. Beside, it 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 up to 28%, the risk level does not increase so much (0,440 and 0,034), compared of the case it is going to decrease down to 20%.

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

## REFERENCES

- [1] Bowman, M., Debray, S. K., and Peterson, L. L. 1993. Reasoning about naming systems.
  - [2] Bessembinder, Hendrik., and Zhang, Feng., (2010), Firm Characteristics and Long run Stock Returns After Corporate Events, *Journal of Financial Economics*
  - [3] Dutt, Tanuj., and Mark, Humphery –Jenner., (2013), Stock Return Volatility, Operating Performance and Stock Returns: International Evidence on Drivers of the “Low Volatility” Anomaly, *Journal of Banking and Finance*
  - [4] Eugene, Fama F., and French, Kenneth R., (2004), The Capital Asset Pricing Model: Theory and Evidence, *Journal of Economic Perspectives*
  - [5] Flifel, Kaouther., (2012), Financial Markets between Efficiency and Persistence : Empirical Evidence on Daily Data, *Asian Journal of Finance and Accounting*
  - [6] Grullon, Gustavo., Lyandres, Evgeny., and Zhdanov, Alexei., (2012), Real Options, Volatility and Stock Returns, *Journal of Finance*
  - [7] Huy, Dinh T.N., (2012), Estimating Beta of Viet Nam listed construction companies groups during the crisis, *Journal of Integration and Development*
  - [8] Kashyap, Anil K., and Zingales, Luigi., (2010), The 2007-8 Financial Crisis: Lessons from Corporate Finance, *Journal of Financial Economics*
  - [9] Pereiro, Luis E.,(2010), The Beta Dilemma in Emerging Markets, *Journal of Applied Corporate Finance*
  - [10] Saleem, Kashif., (2011), Time Varying Correlations between Stock and Bond Returns : Empirical Evidence from Russia, *Asian Journal of Finance and Accounting*
  - [11] Ang, A., Chen, J., (2007), CAPM Over the Long Run: 1926-2001, *Journal of Empirical Finance*
  - [12] Baker, Kent H., Singleton, Clay J., and Veit, Theodore E., (2011), Survey Research in Corporate Finance: Bridging The Gap Between Theory and Practice, *Oxford University Press*
- Other web sources**
- [13] [http://www.ifc.org/ifcext/mekongpsdf.nsf/Content/PS\\_DP22](http://www.ifc.org/ifcext/mekongpsdf.nsf/Content/PS_DP22)
  - [14] <http://www.mofa.gov.vn/vi/>
  - [15] <http://www.hsx.vn/hsx/>
  - [16] [www.tuoitre.com.vn](http://www.tuoitre.com.vn;);
  - [17] [www.saigontimes.com.vn](http://www.saigontimes.com.vn;);
  - [18] [www.mof.gov.vn](http://www.mof.gov.vn) ;
  - [19] [www.vneconomy.com.vn](http://www.vneconomy.com.vn) ;
  - [20] [www.sbv.gov.vn](http://www.sbv.gov.vn).
  - [21] [www.hnx.vn](http://www.hnx.vn)
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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 (2007: required reserves ratio at SBV is changed from 5% to 10%) (2009: special supporting interest rate is 4%) |
| 2009 | 9%-12%                   | 9%-10%        |                                                                                                                               |
| 2008 | 19%-21%                  | 15%-16,5%     |                                                                                                                               |
| 2007 | 12%-15%                  | 9%-11%        |                                                                                                                               |

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

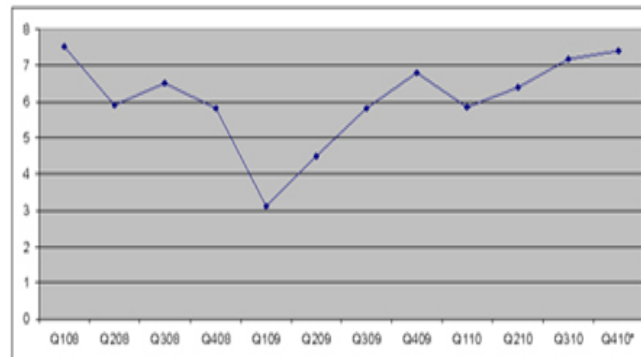
| Year | Basic rate | Note                      |
|------|------------|---------------------------|
| 2011 | 9%         |                           |
| 2010 | 8%         |                           |
| 2009 | 7%         |                           |
| 2008 | 8,75%-14%  | Approximately, fluctuated |
| 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% (Estimated at Dec 2010) | 6,5% (expected) | 19.495       |
| 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    | <a href="#">CÔNG TY CP LÂM SẢN PISICO QUẢNG NAM</a>    | Phan Văn Cường | 4000405162 | <a href="#">Kinh doanh nông, lâm sản</a> |
| 2     | 2    | <a href="#">CÔNG TY CP VÀNG BẠC ĐÁ QUỲ SJC CẦN THƠ</a> | Lê Phát Vinh   | 1800636290 | <a href="#">Vàng, bạc, đá quý</a>        |
| 3     | 3    | <a href="#">CÔNG TY CP SỢI PHÚ NAM</a>                 | Hoàng Văn Thắm | 3300491474 | <a href="#">Sản xuất sợi, dệt</a>        |
| 4     | 4    | <a href="#">CÔNG TY CP VÀNG BẠC ĐÁ QUỲ BẾN THÀNH</a>   | Tê Trí Dũng    | 300847936  | <a href="#">Vàng, bạc, đá quý</a>        |

|    |    |                                                                      |                      |            |                                                                                                  |
|----|----|----------------------------------------------------------------------|----------------------|------------|--------------------------------------------------------------------------------------------------|
| 5  | 5  | <a href="#">CÔNG TY CP MAY CHIẾN THẮNG</a>                           | Ninh Thị Ty          | 100101058  | <a href="#">Ngành may</a>                                                                        |
| 6  | 6  | <a href="#">CÔNG TY TNHH DU LỊCH TRẦN VIỆT</a>                       | Nguyễn Mạnh Cương    | 301069809  | <a href="#">Du lịch, khách sạn</a>                                                               |
| 7  | 7  | <a href="#">N.A</a>                                                  |                      | 2012701    |                                                                                                  |
| 8  | 8  | <a href="#">CÔNG TY TNHH TRUYỀN THÔNG ADT</a>                        | Đặng Huy Thắng       | 100905796  | <a href="#">Sản xuất khác</a>                                                                    |
| 9  | 9  | <a href="#">CÔNG TY CP KẾT NỐI NHÂN TÀI</a>                          | Tiêu Yến Trinh       | 305202145  | <a href="#">Kinh doanh tổng hợp khác</a>                                                         |
| 10 | 10 | <a href="#">CÔNG TY TNHH THIẾT LẬP</a>                               | Nguyễn Hoàng Ân      | 1500441413 | <a href="#">Sản xuất, kinh doanh, chế biến gạo, bột mì, ngũ cốc...</a>                           |
| 11 | 11 | <a href="#">CÔNG TY TNHH-CHẾ BIẾN THỦY SẢN VÀ XNK TRANG KHANH</a>    | Trần Tuấn Khanh      | 1900287501 | <a href="#">Nuôi trồng, chế biến, kinh doanh thủy sản và các sản phẩm thịt</a>                   |
| 12 | 12 | <a href="#">CÔNG TY SẢN XUẤT THƯƠNG MẠI VÀ ĐẦU TƯ TAM MINH</a>       | Lưu Tuấn Anh         | 4300327589 | <a href="#">Sản xuất đồ gỗ, nội thất</a>                                                         |
| 13 | 13 | <a href="#">CÔNG TY TNHH THƯƠNG MẠI SẢN XUẤT HÙNG HUY</a>            | Voòng A Hoa          | 302259111  | <a href="#">Sản xuất và gia công giấy, dếp</a>                                                   |
| 14 | 14 | <a href="#">CÔNG TY TNHH THƯƠNG MẠI HOÀNG ĐẠO</a>                    | Hồ Hoàng Bách        | 301434963  | <a href="#">Sản xuất, kinh doanh thuốc lá, nguyên liệu thuốc lá</a>                              |
| 15 | 15 | <a href="#">CÔNG TY TNHH THƯƠNG MẠI XÂY DỰNG ĐIỀU LONG</a>           | Đặng Thị Linh Phương | 302000905  | <a href="#">Kinh doanh tổng hợp khác</a>                                                         |
| 16 | 16 | <a href="#">CÔNG TY CP XÂY DỰNG NHÀ VÀ PHÁT TRIỂN HÀ TÀNG HÀ NỘI</a> | Phạm Thanh Nam       | 101370536  | <a href="#">Xây dựng nhà và các công trình kỹ thuật dân dụng; hoạt động xây dựng chuyên dụng</a> |
| 17 | 17 | <a href="#">CÔNG TY CP XĂNG DẦU THƯƠNG MẠI SÔNG TRÀ</a>              | Nguyễn Anh           | 4300334642 | <a href="#">Kinh doanh xăng dầu, khí đốt, nhiên liệu và các sản phẩm liên quan</a>               |
| 18 | 18 | <a href="#">CÔNG TY CP SỢI PHÚ THANH</a>                             | Nguyễn Văn Cường     | 3300471069 | <a href="#">Sản xuất sợi, dệt</a>                                                                |
| 19 | 19 | <a href="#">CÔNG TY TNHH DU LỊCH VÀ THƯƠNG MẠI SÔNG HỒNG</a>         | Lê Công Hoàng        | 100237411  | <a href="#">Kinh doanh xăng dầu, khí đốt, nhiên liệu và các sản phẩm liên quan</a>               |
| 20 | 20 | <a href="#">CÔNG TY CP DẦU THỰC VẬT BÌNH ĐỊNH</a>                    | Nguyễn Thị Thùy Giao | 4100399995 | <a href="#">Sản xuất thực phẩm chế biến: sữa, đường, cà phê, dầu ăn, bánh kẹo...</a>             |

|    |    |                                                                       |                       |            |                                                                                    |
|----|----|-----------------------------------------------------------------------|-----------------------|------------|------------------------------------------------------------------------------------|
| 21 | 21 | <a href="#">CÔNG TY CP VẬT TƯ MỎ ĐÌA CHẤT</a>                         | Lê Nhật Tân           | 101453768  | <a href="#">Kinh doanh tổng hợp khác</a>                                           |
| 22 | 22 | <a href="#">CÔNG TY TNHH MTV SÀI GÒN BẾN TRE</a>                      | Nguyễn Ngọc Minh Hùng | 1300419650 | <a href="#">Bán lẻ, kinh doanh siêu thị</a>                                        |
| 23 | 23 | <a href="#">CÔNG TY TNHH HẢI VIỆT</a>                                 | Nguyễn Văn Ri         | 3700443193 | <a href="#">Kinh doanh nông, lâm sản</a>                                           |
| 24 | 24 | <a href="#">CÔNG TY TNHH MAY PHÙ ĐÔNG</a>                             | Dương Đức Thanh       | 100598947  | <a href="#">Ngành may</a>                                                          |
| 25 | 25 | <a href="#">CÔNG TY TNHH THƯƠNG MAI VÀ DỊCH VỤ KỸ THUẬT TESCO</a>     | Trần Thanh Bình       | 101507773  | <a href="#">Sản xuất, kinh doanh ô tô, phụ tùng ô tô</a>                           |
| 26 | 26 | <a href="#">CÔNG TY TNHH THƯƠNG MAI PHÚC THÁI</a>                     | Bùi Xuân Huy          | 600346391  | <a href="#">Kinh doanh xăng dầu, khí đốt, nhiên liệu và các sản phẩm liên quan</a> |
| 27 | 27 | <a href="#">CÔNG TY TNHH MINH ĐĂNG</a>                                | Nguyễn Thị Cẩm Nhung  | 2200258144 | <a href="#">Nuôi trồng, chế biến, kinh doanh thủy sản và các sản phẩm thịt</a>     |
| 28 | 28 | <a href="#">CÔNG TY TNHH THƯƠNG MAI VÀ DỊCH VỤ VÂN TÀI NGOC KHÁNH</a> | Trần Ngọc Huân        | 4000377194 | <a href="#">Kinh doanh xăng dầu, khí đốt, nhiên liệu và các sản phẩm liên quan</a> |
| 29 | 29 | <a href="#">CÔNG TY TNHH THƯƠNG MAI DỊCH VỤ VÂN PHÁT</a>              | Cao Ngọc Anh          | 303332212  | <a href="#">Kinh doanh tổng hợp khác</a>                                           |
| 30 | 30 | <a href="#">CÔNG TY CP VÂN TÀI VÀ DỊCH VỤ PETROLIMEX NGHỆ TĨNH</a>    | Võ Văn Tân            | 2900428497 | <a href="#">Kinh doanh xăng dầu, khí đốt, nhiên liệu và các sản phẩm liên quan</a> |
| 31 | 31 | <a href="#">CÔNG TY TNHH THƯƠNG MAI SẢN XUẤT TÂN BÌNH</a>             | Trần Trí Thức         | 3900326063 | <a href="#">Sản xuất đồ gỗ, nội thất</a>                                           |
| 32 | 32 | <a href="#">CÔNG TY TNHH NGUYỄN LIÊU GIẤY DUNG QUẤT</a>               | Nguyễn Nị             | 4300308498 | <a href="#">Sản xuất đồ gỗ, nội thất</a>                                           |
| 33 | 33 | <a href="#">CÔNG TY TNHH BỆNH VIỆN ĐA KHOA TƯ NHÂN AN SINH</a>        | Ngô Đăng Sơn Anh      | 302774433  | <a href="#">Sản xuất khác</a>                                                      |
| 34 | 34 | <a href="#">CÔNG TY TNHH IN LƯA NHẤT PHƯƠNG</a>                       | Huỳnh Thị Thanh Thủy  | 301441840  | <a href="#">Sản xuất giấy, in ấn, xuất bản</a>                                     |
| 35 | 35 | <a href="#">CÔNG TY CP DẦU KHÍ SÀI GÒN-PHÚ YÊN</a>                    | Trần Công Chường      | 4400344901 | <a href="#">Kinh doanh xăng dầu, khí đốt, nhiên liệu và các sản phẩm liên quan</a> |
| 36 | 36 | <a href="#">CÔNG TY CP BÊ TÔNG ĐĂNG HẢI</a>                           | Phan Văn Khanh        | 400619838  | <a href="#">Sản xuất, kinh doanh vật liệu xây dựng: xi măng, gạch xây, đá,</a>     |

|    |    |                                                        |                 |            |                                                                                                  |
|----|----|--------------------------------------------------------|-----------------|------------|--------------------------------------------------------------------------------------------------|
|    |    |                                                        |                 |            | <a href="#">cát...</a>                                                                           |
| 37 | 37 | <a href="#">CÔNG TY CP GIẤY BÌNH ĐÌNH</a>              | Võ Ngọc Thủy    | 4100258761 | <a href="#">Sản xuất và gia công giấy, dếp</a>                                                   |
| 38 | 38 | <a href="#">CÔNG TY CP ĐẦU TƯ PHÁT TRIỂN THIÊN SƠN</a> | Vũ Văn Tuyên    | 101536301  | <a href="#">Sản xuất, kinh doanh vật liệu xây dựng: xi măng, gạch xây, đá, cát...</a>            |
| 39 | 39 | <a href="#">HTX THƯƠNG MẠI ĐÔ THÀNH</a>                | Hàng Thanh Dân  | 302804374  | <a href="#">Kinh doanh thực phẩm chế biến: sữa, đường, cà phê, dầu ăn, bánh kẹo.....</a>         |
| 40 | 40 | <a href="#">CÔNG TY CP XÂY DỰNG TỔNG HỢP 269</a>       | Trương Duy Niệm | 3000244523 | <a href="#">Xây dựng nhà và các công trình kỹ thuật dân dụng; hoạt động xây dựng chuyên dụng</a> |

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

| Order No. | Company stock code | Equity beta | Asset beta (assume debt beta = 0) | Financial leverage |
|-----------|--------------------|-------------|-----------------------------------|--------------------|
| 1         | ACB                | 0,7874      | 0,0378                            | 95,2%              |
| 2         | CTG                | 0,5540      | 0,0312                            | 94,4%              |
| 3         | EIB                | 0,3847      | 0,0365                            | 90,5%              |
| 4         | HBB                | 0,1335      | 0,0138                            | 89,7%              |
| 5         | MBB                | 0,0722      | 0,0054                            | 92,5%              |
| 6         | NVB                | 0,0211      | 0,0026                            | 87,7%              |
| 7         | SHB                | 1,0038      | 0,0824                            | 91,8%              |
| 8         | STB                | 0,7395      | 0,0721                            | 90,3%              |
| 9         | VCB                | 0,4083      | 0,0299                            | 92,7%              |

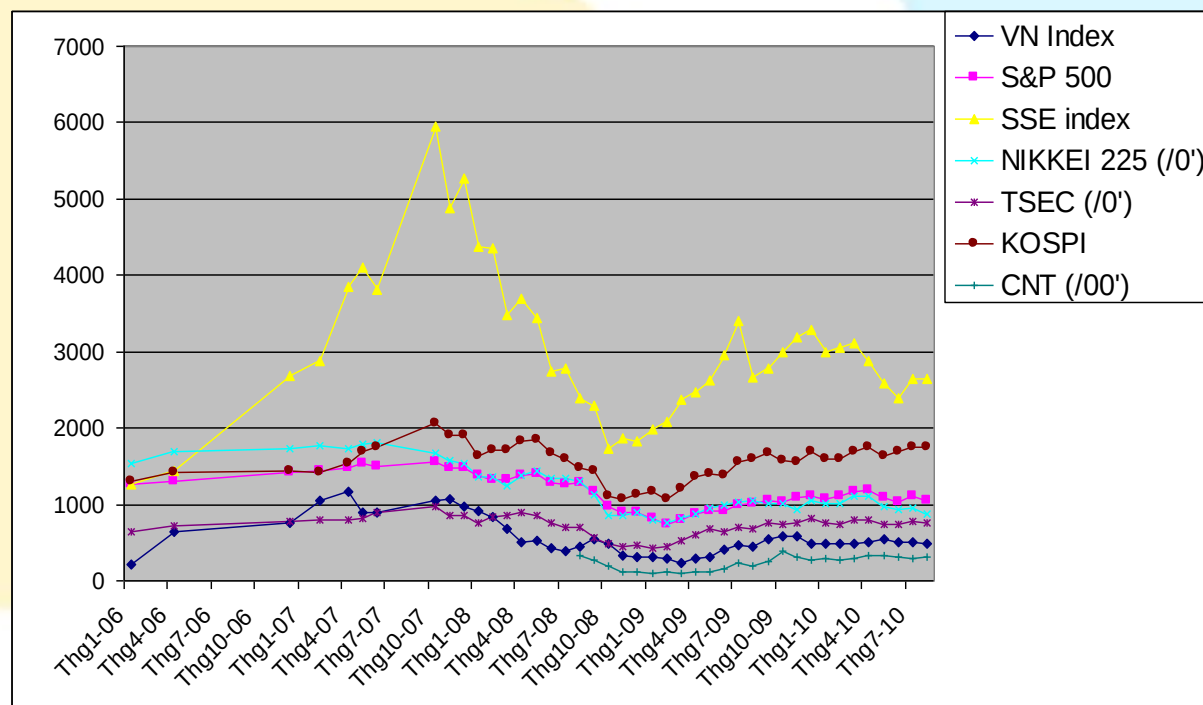
**Exhibit 7 –** Increase/decrease risk level of listed real estate firms under changing scenarios of tax rates : 25%, 28%, 20% period 2007 - 2011

| Order No. | Company stock code | t = 25%     |            | t = 28%           |                  | t = 20%           |                  |
|-----------|--------------------|-------------|------------|-------------------|------------------|-------------------|------------------|
|           |                    | Equity beta | Asset beta | +/- (equity beta) | +/- (asset beta) | +/- (equity beta) | +/- (asset beta) |
| 1         | ACB                | 0,636       | 0,031      | 0,0000            | 0,0000           | 0,0000            | 0,0000           |
| 2         | CTG                | 0,554       | 0,031      | 0,0000            | 0,0000           | 0,0000            | 0,0000           |
| 3         | EIB                | 0,385       | 0,036      | 0,0000            | 0,0000           | 0,0000            | 0,0000           |
| 4         | HBB                | 0,134       | 0,014      | 0,0048            | 0,0005           | -0,0073           | -0,0008          |
| 5         | MBB                | 0,072       | 0,005      | 0,0027            | 0,0002           | -0,0041           | -0,0003          |



|         |     |       |       |        |        |         |         |
|---------|-----|-------|-------|--------|--------|---------|---------|
| 6       | NVB | 0,021 | 0,003 | 0,0015 | 0,0002 | -0,0022 | -0,0003 |
| 7       | SHB | 1,004 | 0,082 | 0,0000 | 0,0000 | 0,0000  | 0,0000  |
| 8       | STB | 0,734 | 0,072 | 0,0000 | 0,0000 | 0,0000  | 0,0000  |
| 9       | VCB | 0,408 | 0,030 | 0,0000 | 0,0000 | 0,0000  | 0,0000  |
| Average |     |       |       | 0,0010 | 0,0001 | -0,0015 | -0,0001 |

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



## Author's Biography



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