Risk Analysis In Viet Nam Hardware Sector And Policies During And After The Global Crisis

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ABSTRACT

The aim of this study is to present Risk Analysis in Viet Nam Hardware Sector and Policies During and After The Global Crisis. Until now, with uncertainty or risks, we change various scenarios of fin.leverage (Fl) to see beta values sensitivity. Authors use in this study method of analysis (scenario of fin leverage) and beta value estimation and also correlation b.t them. In our sample size with twenty two firms in computer sector - hardware: with live data we analyze beta values sensitive to fin leverage (or decrease). Also fin leverage has correlated negatively with mean values (equity beta) (0,742, 0,715 and 0,716). Hence, We also analyze that in this study when leverage is going to increase up to 30%, the risk dispersion level increases little less as well as the asset beta var, compared to the case it is going to decrease down to 20%.

keyword: competitors, equity and asset beta, size, hardware industry.

INTRODUCTION

Information te[1]chnology plays a very important role in many businesses. Businesses must identify risks to information technology systems and data, minimize and manage these risks, and develop plans to respond to information technology crises. Businesses have legal obligations related to security, electronic transactions and employee training that affect their IT risk management strategy.

Therefore, We used in this paper, beta estimation formula developed by Sharpe et al and later applied by Fama & French.

We apply it into computer industry (hardware) with risk analysis.

We also test with live data that how much changes/dispersion in market risk level (equity and asset beta) with various scenarios of fin.leverage.

We mention some issues on the estimating of impacts of external financing on beta for listed hardware industry companies in Viet Nam stock exchange as following:

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Issue 1: Whether the risk level of hardware industry firms under the different changing scenarios of leverage increase or decrease so much.

Issue 2: Whether the disperse distribution of beta values become large in the different changing scenarios of leverage and competitor selection and tax rate estimated in the hardware industry.

In our next sections we analyze/present methods, concepts (relevant) main findings-empirical, with discussion a, analysis and conclusion.

METHODOLOGY

A. Conceptual theories
The more fin leverage the firm use, the more profits it will needs.
Finance and growth go parralel in any ecopnomy, esp. In an industry such as hardware sector.
There are4 many kinds of risks such as financial risks, Cyber security risk - which is an urgent and extremely important issue and this will inform the decisions the security organization will make in the future to reduce risk levels and address vulnerabilities.

Hence authors select this topic:

"Risk Analysis in Viet Nam Hardware Sector and Policies During and After The Global Crisis".

B. Methodology
Authors use in this study method of analysis (scenario of fin leverage) and beta value estimation and also correlation b.t them.
First we identify /aware of market risk situation in this hardware sector then we used live data from stock markets with tax of 25%. Form calculation of market risks we compared in charts to analyze values (equity and asset betas).

PREVIOUS STUDIES
In developing countries, there are many studies done to test correlation b.t risks and fin.leverager.
Here we analyze more in below figure:
Figure 1- - Summary of studies

(source: author analyis).

Lastly, digital commerce, inormation exchange and infrastructure networks. Communications rely heavily on global network platforms, reaching more than half of the world's population. connecting to the Internet (Nye, 2017; Weiss & Jankauskas, 2018). As the potential risks of cyberspace increase in modern society (Choucri, 2019), both the public and private sectors are interested in the ability to respond. □ with cybersecurity issues (Bossong & Wagner, 2017).

MAIN RESULTS

General Analysis

In our sample size with twenty two firms in computer sector - hardware: with live data we analyze beta values sensitive to fin leverage (or decrease). Also fin leverage has correlated negatively with mean values (equity beta) (0,742, 0,715 and 0,716)

Main Findings and Discussion

First, we change the competitive equity determinant in two (2) contexts to select competitor firm:

+ With purely equity based : competitor selected by equity

+ With total debt and equity based : competitor selected by debt plus (+) equity

We see how we use competitors as comparable here - on VN stock exchange (HOSE and HNX mainly).

(see below figure 2)

Fig 2- - Competitor selection in different scenarios

| Order No.	Company stock code	Competitor with purely equity based (t0&t1)	Competitor with debt+equity based (t0)	Competitor with debt+equity based (t1)	Slightly smaller competitor with debt+equity based (t1)	Double size competitor with debt+equity based (t1)	Slightly smaller competitor with equity based (t0&t1)	Double size competitor with equity based (t0 & t1)
1	CMT							
2	SVT	CMT as comparable	ONE as comparable	TLC as comparable	TLC as comparable	VIE as comparable	HPT as comparable	ST8 as comparable
3	VIE	KST as comparable	KST as comparable	UNI as comparable	ONE as comparable	LTC as comparable	VAT as comparable	ONE as comparable
4	HPT	CKV as comparable	ST8 as comparable	TST as comparable	TST as comparable	ITD as comparable	CKV as comparable	TAG as comparable
5	NIS	VIE as comparable	VIE as comparable	VTC as comparable	VTC as comparable	ST8 as comparable	SMT as comparable	CKV as comparable
6	TST							
7	ST8							
8	TAG							
9	POT							
10	CKV							
11	ONE	CKV as comparable	UNI as comparable	UNI as comparable	UNI as comparable	TAG as comparable	NIS as comparable	SVT as comparable
12	PMT							
13	SMT	NIS as comparable	NIS as comparable	PMT as comparable	HTP as comparable	NIS as comparable	VIE as comparable	VTC as comparable
14	UNI							
15	TLC							
16	KST	VTC as comparable	VTC as comparable	TLC as comparable	VTC as comparable	VIE as comparable	ONE as comparable	UNI as comparable
17	VAT							
18	VTC							
19	ELC	POT as comparable	SAM as comparable	ITD as comparable	ITD as comparable	CMG as comparable	POT as comparable	ANV as comparable
20	SAM							
21	LTC							
22	ITD							

(source: made by authors)

Chart 1 – Comparing statistical results of equity beta var and mean in case tax rate down 20% at t1 (source: VN stock exchange 2012)
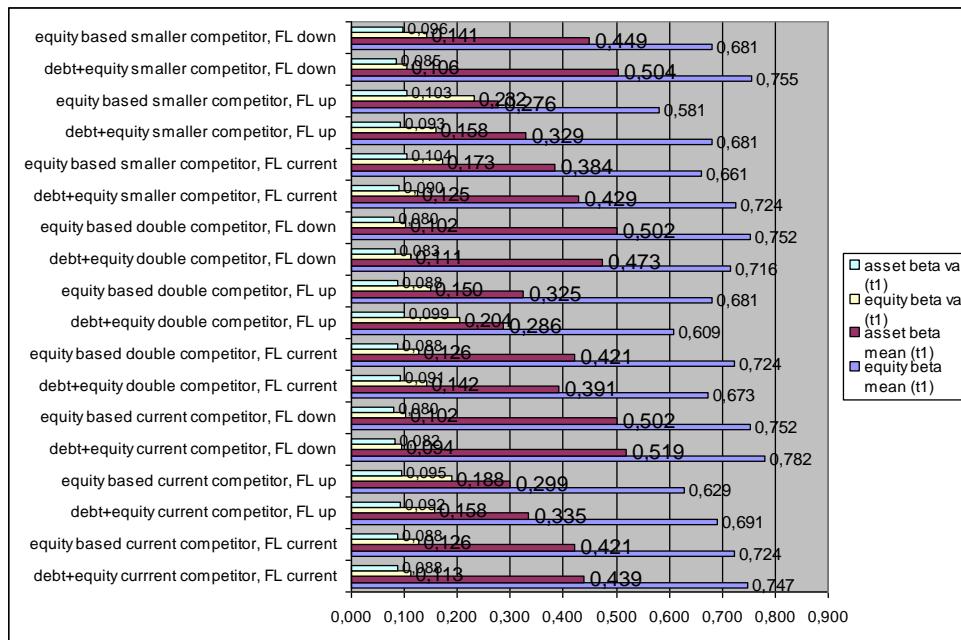
(source: made by authors)

Chart 2 – Max and min values of risk in the hardware industry if tax rate kept at 25%
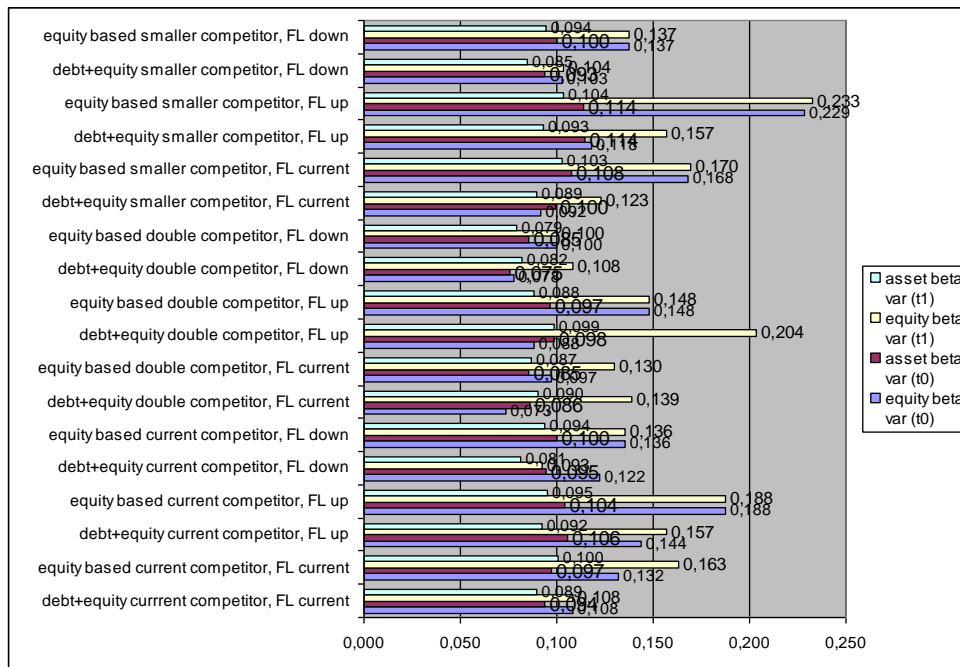
(source: made by authors)

Empirical results

In chart 1, var (equity beta) has maximum value in case Fin.leverage up 30%. While equity beta mean reached max when Fl down 20%.

In chart 2, asset beta var reaches the highest value in case Fin leverage up 30%.

And we see, in chart 3B , asset beta var reached max when keeping Fin leverage as current.

Risk analysis

When financial managers of the firm use Fin leverage it means risk--return trade-off, in which it expresses a decisional variable (FL) for managers.
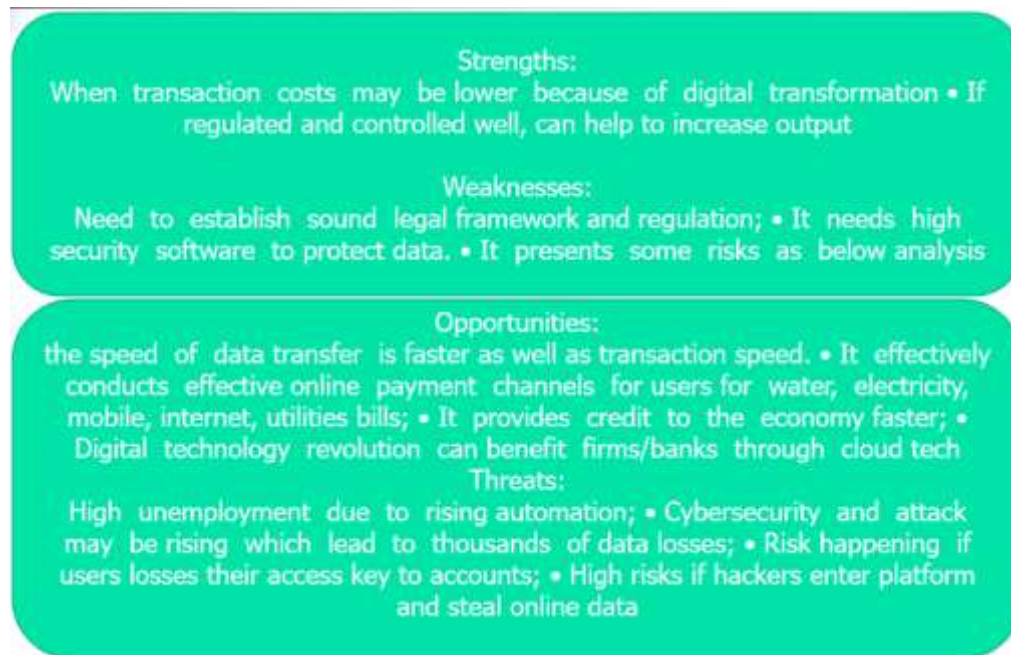
Max risks/ FL means the firm requires max profit.

Discussion and conclusion
Risks
We discuss more in below figure: there are more risks in digital era (fig 3).

Fig 3- - SWOT analysis in computer sector ad in ICI era

(source: Nguyen Ngoc Thach et al, 2020)
We also analyze/could note that in this study when leverage is going to increase up to 30%, the risk dispersion level increases little less as well as the asset beta var, compared to the case it is going to decrease down to 20%.

Moreover, when we review measures (security) as well as identifying assets (digital) of a firm. Etc. (so called risk management - cybersecurity), and developing appropriate solutions to continue operations or Minimize possible risks when security can be sure about the enterprise foundation of the network platform.

When IoTs developed as well as sensors in locations new devices will be hacked in easier manner.

(source:mi2.com.vn)

Finally, the study implies future direction in which we can do further policy suggestions and researches for risk management in specific market conditions.

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Appendix 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
2008	19%-21%	15%-16,5%	ratio at SBV is changed
2007	12%-15%	9%-11%	from 5% to 10%)
			(2009: special supporting interest rate is 4%)