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**THE IMPACT OF CAPITAL STRUCTURE ON THE FIRM
VALUE OF LISTED COMPANIES IN THE PLASTIC AND
PACKAGING INDUSTRY IN VIET NAM**

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SUMMARY OF DOCTORAL THESIS IN ECONOMIC

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INTRODUCTION

1. Urgency of the subject

In a market economy, an enterprise is considered as an profitable asset, a commodity which could bring benefits to investors. Therefore, when investors invest in enterprises or make investment decisions, appropriate financial decisions, it is necessary to consider the value of the enterprise. Seen from the financial perspective, the value of the enterprise is the total present value of the future benefits that investors receive from the enterprise's activities. The benefits that investors get from enterprises are shown through the cash flow that enterprises will bring to investors in the future. In the context of fluctuations of time, risks and future growth ..., the enterprise managers also aim to reach the goal of maximizing the value of the enterprise besides the goal of maximizing profits.

However, there are many factors that affect the value of the enterprise, including internal and external factors. In which, capital structure is a very important factor affecting the value of enterprises. This comment is mentioned in different theoretical and empirical research, but the relationship between capital structure and value of enterprises has inconsistent results. Studies by Dalbor, Lee & Upneja (2007), Cheng & Tzeng (2011), Sudivat et al. (2012), Rathinasamy et al. (2000), Altan & Arkan (2011), Ogbulu & Emeni (2012) showed that capital structure has a positive impact on enterprise's value. The studies of Aggarwal & Zhao (2007), Rayan (2008), Aggarwal et al. (2011) also showed that capital structure has a negative impact on enterprise's value. But some theories shown that there is not any relationship between capital structure and the value of enterprises, such as Modigliani & Miller (1958, 1963); Jensen & Meckling (1976); Miller (1977); Myer (1977,1984); Myer & Majluf (1984); Graham, (2000); Baker & Wurgler (2002); Welch (2004).

The plastic and packaging industry has had strong growth and important contributions to the process of building and developing the country. In the period of 2012 - 2018, the plastic and packaging industry is one of the top industries with high growth rates and average annual growth rate of 16% - 18%. With nearly 4000 enterprises, most of them are private enterprises (accounting for 99.8% of the total number of enterprises operating in the Vietnamese plastic and packaging industry), the plastic and packaging industry is considered as an dynamic industry which contributes to economic growth in Vietnam and create jobs. Plastic products and packaging produced by Vietnamese enterprises are present in most different industries, such as construction, electronics, and automotive. In the field of consumption, plastic products are used to package or produce plastic products in daily life such as stationery, toys. Plastic products are increasingly used in consumption as well as raw materials for other industries. However, during the development process, businesses in the plastic and packaging industries has to face certain difficulties and limitations such as small size, dependence on the final products such as food, construction, electronic equipment, cars; raw materials for production are mostly imported, accounting for a large proportion in the production cost structure and primary plastic materials are less diversified, and distributed unevenly. This forces businesses to use more loans to solve financial difficulties due to fluctuations in the consumption market as well as the input market. The capital of the business depends heavily on outside actors. Enterprises in the plastic and packaging industries have no orientation to adjust the capital structure. In addition, indicators reflecting business performance of enterprises in the plastic and packaging industries such as BEP, ROA and ROE tend to decrease in the period of 2012 - 2018. The increase in the scale of enterprises in the plastic and packaging industry, due to the increase in debt size and equity,

have not really derived from the increase in business efficiency; financial leverage has a negative impact on business operations. Enterprise value tends to decrease.

The problem is, how is the capital structure of the plastic and packaging companies listed today? Does it affect to firm value? If so, is this effect negatively or positively on firm value. This is a very important evidence to propose policy implications to help administrators of plastic and packaging businesses to adjust capital structure in order to maximize the firm value. Therefore, it is necessary to study the topic "*The impact of the capital structure on the firm value of the listed plastic and packaging enterprises in Vietnam*" is a practical issue that has scientific and practical significance..

2. Overview of research

Currently, there have been many domestic and foreign studies examining the impact of capital structure on enterprise value published in prestigious scientific journals. However, with difference in research samples, sectors of business and locations of businesses, results are different. Therefore, the impact of the capital structure on the enterprise value is reflected through the following 3 directions:

First, capital structure has no impact on business value.

Second, capital structure has a linear impact on firm value.

Third, capital structure has a non-linear effect on firm value.

In addition to the studies that directly examine the impact of capital structure on enterprise value, a number of other studies also examine the impact of capital structure on business performance, financial risks and expenditure. the cost of capital, thereby having an indirect impact on enterprise value.

3. Research objectives

Research objective: to propose policy implications to help corporate administrators of the plastic & listed packaging industry to adjust capital structure to increase the firm value.

Research tasks: from the research objectives, specific research tasks:

First, research systematically and contribute to clarify the theoretical basis of capital structure and the impact of capital structure on enterprise value.

Secondly, analyze and evaluate the current capital structure of the listed plastic and packaging enterprises in Vietnam.

Thirdly, analyze the impact of capital structure on enterprise value of listed plastic and packaging enterprises in Vietnam.

Fourth, propose policy implications to help corporate administrators of the plastic & packaging industry listed in Vietnam to adjust their capital structure to increase the firm value.

4. Object and research scope

To achieve the research objectives and solve the research questions posed, the thesis identifies the subject and scope of the research as follows:

Object of study: the impact of capital structure on enterprise value.

Research scope

+ About time: The thesis focuses on researching the impact of capital structure on the enterprise value of listed plastics and packaging enterprises in Vietnam in the period from 2012 to 2018.

+ About space: the thesis focuses on case studies of 35 enterprises producing plastic products and enterprises manufacturing plastic packaging products (referred to as plastic and packaging enterprises) listed in Vietnam. .

5. Research method

The thesis uses a combination of qualitative research methods and quantitative methods on the basis of the methodology of dialectical materialism and historical materialism to analyze, evaluate and interpret the questions laid out related to the field of study. The main methods are as follows: (1) method of comparison and descriptive statistics; (2) regression method with table data. As the pooled classical least-squares regression method; fixed effect model (FEM); random effect model (REM) regression method; percentile regression method; general least squares regression method (GLS).

6. The contributions of the thesis

The thesis studies the impact of capital structure on enterprise value of plastic and packaging enterprises listed on Vietnam's stock market. Compared with previous studies, the thesis has made certain contributions in terms of basic science and practice:

Firstly, the thesis clarifies the basic theory of capital structure; corporate value and the impact of capital structure and firm value. On the basis of theoretical studies and empirical research evidence of domestic and foreign projects, it shows that there is an impact of capital structure on enterprise value.

Secondly, the thesis has analyzed and evaluated the current financial situation, situation of capital structure and enterprise value of listed plastics and packaging companies in Vietnam. Thereby, pointing out the characteristics, shortcomings and limitations in the capital structure of the companies in the plastic and packaging industry listed in Vietnam.

Thirdly, the thesis has used more general least squares regression model (FGLS) and the percentile model to analyze the impact of capital structure on the enterprise value of enterprises in the plastic industry listed packaging in Vietnam. As a result, there is statistical evidence that debt ratio (DA), short-term debt ratio (SDA) have opposite effects on firm value (TOBIN'SQ).

Fourthly, the thesis proposes recommendations to help business administrators of the plastic and packaging industry to adjust capital structure to improve firm value. Some of the main proposals are: (1) plan target capital structure; (2) adjust debt structure towards increasing long-term debt, gradually reducing short-term debt; (3) periodic evaluate and analysis of the capital structure of the business; (4) improve efficiency in using financial leverage; (5) improve business efficiency of businesses.

7. The structure of the thesis

In addition to the introduction, general conclusion, references, list of published works and appendices, the structure of the thesis includes 4 chapters:

Chapter 1: Theoretical basis of the impact of capital structure on enterprise value.

Chapter 2: Current situation of capital structure and enterprise value of listed companies in the plastic and packaging industry in Vietnam.

Chapter 3: The impact of capital structure on firm value of listed companies in the plastic and packaging industry in Vietnam.

Chapter 4: Recommendations for business administrators in the plastics and packaging industries listed in Vietnam

CHAPTER 1

THEORETICAL BASIS OF THE IMPACT OF CAPITAL STRUCTURE ON ENTERPRISE VALUE

1.1. OVERVIEW OF ENTERPRISE'S RESOURCES STRUCTURE.

1.1.1. Capital of the business.

The enterprise's capital source reflects the source of the capital that the enterprise mobilizes and uses to create an increase in asset value for the business.

To organize and choose an appropriate and effective method of capital mobilization, it is necessary to classify capital sources. Based on certain criteria, it is possible to divide the enterprise's capital into many different categories.

* Based on capital ownership relationship, the enterprise's capital source includes equity and liabilities.

* Based on the time of mobilizing and using capital, the enterprise's capital includes temporary capital (or short-term capital) and regular capital (also called long-term capital).

* Based on the scope of capital mobilization, capital sources of the business include internal and external capital sources.

1.1.2. Capital structure of the business.

1.1.2.1. *The concept of the capital structure of the business*

According to different approaches, it shows a separate understanding of the capital structure, thereby influencing the decisions to choose the appropriate capital structure to increase profits, minimize risks and maximize value of the business. Therefore, according to the researcher, "Capital structure is the relationship between capital sources in the total capital of enterprises mobilized and used in business activities for certain purposes".

1.1.2.2. *Indicators reflect the capital structure of the business*

Based on the relationship of capital ownership, capital structure of the business is shown through indicators such as debt ratio, equity ratio.

Based on the time of mobilizing and using capital, the capital structure of the enterprise is shown through indicators such as the temporary capital source coefficient, the regular capital source coefficient.

Based on the scope of capital mobilization, the capital structure of the business is reflected through indicators such as coefficient of internal capital, coefficient of external capital.

1.1.2.3. *Factors affecting the capital structure of the business*

The main external factors affecting the capital structure of the business include: Economic growth; Market interest rate; Development prospects of the capital market; Inflation rate.

The main internal factors affecting the enterprise's capital structure include: size of the enterprise, asset structure of the enterprise, business risk, profitability, growth rate, payment function. Enterprises need to pay special attention and consider these factors in the selection of capital structure.

1.1.2.4. *Theories about the capital structure of the business*

Some theories about the capital structure mentioned in the thesis include Theory of optimal capital structure; Capital Structure Theory of Modigliani and Miller; Theory of trade-offs (Trade - Off - Theory, TOT) and Theory of classification order (Pecking Order Theory). The researches on the above theories show the following highlights: firstly, research on the above theories shows that there is a relationship between capital structure and the value of the business. Capital structure is an important factor affecting the value of the business. Secondly, an optimal debt ratio exists where firm value is maximized, balancing risk and return. Thirdly, in practice, It is difficult to determine the optimal capital structure of an enterprise. Therefore,

when calculating, the concept of optimal capital structure is replaced by the concept of target capital structure. The target capital structure is the combination of capital sources that an enterprise wants to maintain towards to ensure the increase in enterprise value corresponding to the different development stages of the business. Fourthly, building a target capital structure is an essential need in financial management, as well as in the financing policy of businesses in each period of development. Each business when formulating a sponsorship policy aims to achieve three goals: (1) mobilize appropriate capital with maximum scale; (2) building a target capital structure; and (3) maintaining that target funding structure.

1.2. IMPACT OF CAPITAL STRUCTURE ON ENTERPRISE VALUE.

1.2.1. Overview of business value

1.2.1.1. Enterprise value concept

According to the cost approach, firm value is the total value of all assets (tangible assets, intangible assets) under current ownership of the business.

According to the benefit approach, firm value is the monetary expression of all the benefits or income that a business can gain in the future.

According to the market approach, the enterprise value is reflected through market indicators of the business such as the transaction price index in the market, the price-to-average ratio (P / E), billion Average price to revenue (P / S), average book value (P / B), ratio of business value to profit before tax, interest and average depreciation (EV / EBITDA), the Tobin'Q index.

1.2.1.2. The main factors affecting enterprise value

- Factors group of current assets, capital sources of enterprises: capital structure of enterprises; the size and structure of the enterprise's assets.

- Group of factors reflecting the corporate governance level of the enterprise: Business administration capacity of the enterprise; Business performance and future growth trend; Dividend policy of the business.

- Factors reflecting the business advantages of the enterprise: Business reputation; Technical qualifications and labor skills.

- Group of factors belonging to the business environment of the enterprise: Group of factors belonging to the general business environment of the enterprise; Group of factors belonging to the typical business environment of the enterprise.

1.2.1.3. Several methods of determining enterprise value

The enterprise value base is the market value basis or the non-market value base. Each enterprise valuation method is built on the foundations, grounds and serves objects with different purposes, legal characteristics, economic - technical characteristics and market characteristics. Depending on the characteristics and structure of the business activities; the level of development of each country, each region; the field of the business and the qualification of valuers, we can choose and use different suitable pricing method. Approaches applied in enterprise valuation include: market approach, cost approach and benefit approach (or income approach).

1.2.2. The impact of capital structure on enterprise value.

a. The impact of capital structure on business performance.

The impact of the use of debt on the return to equity is through the following formula:

$$ROE = \left[BEP + \frac{D}{E} * (BEP - r) \right] * (1 - t)$$

In which: BEP is the economic rate of return of assets; D is the loan; E is equity; r is the cost of the debt; t is the corporate income tax rate

b. The impact of capital structure on financial risk

From the view of the trade-off theory, when a firm is financed by debt, the debt ratio increases, it will benefit from the tax shield this benefits that makes the firm's value increases.

On the other hand, along with the increase in the use of debt, businesses will incur a kind of expense, called bankruptcy expense or financial exhaustion expense (financial hardship expense), which increases Increasing financial risk of businesses, thereby reducing business value. When the size of debt increases to the optimal point, the present value of financial exhaustion expenses equals the present value of the benefits provided by the tax shield. If the firm continues to borrow beyond the optimal point, and the debt ratio continues to rise, the present value of the financial exhaustion expenses is greater than the present value of the benefits brought by the tax shield. In return, financial risk increases and corporate value decreases.

c. The impact of capital structure on the average cost of capital

In order to meet the capital needs in business activities, enterprises must mobilize capital from many different sources and each source has different cost of capital, so it is necessary to determine the average cost of capital. Weighted average cost of capital (WACC) is determined by the weighted average method. As the debt ratio changes, so does the weighted average cost of capital (WACC). In other words, capital structure has an impact on the firm's average cost of capital.

1.3. EXPERIENCE PLANNING CAPITAL STRUCTURE TO MAXIMIZING ENTERPRISE VALUE AND WITHDRAWAL LESSONS FOR PLASTIC AND PACKAGING ENTERPRISES IN VIETNAM

1.3.1. Experience of businesses from different industries in foreign countries

1.3.2. Experience of businesses from different industries in Vietnam

1.3.3. Learned lessons for listed companies in the Plastic and Packaging industry in Vietnam

The lessons in operating the capital structure to increase business value for enterprises in the plastic and packaging industry listed in Vietnam are, as follows:

Firstly, theoretically and experimentally, there are many indicators to measure and are used to represent firm value, but indicators reflect past results, and also reflect future expectations. The most commonly used investor hybrid is Tobin's Q.

Second, debt settlement is an important issue in capital structure planning.

Third, it is necessary to build a target capital structure to minimize the risk when the debt ratio is too high, to ensure financial independence.

Fourth, the analysis of the impact of capital structure on enterprise value should be placed in relationship with internal and external factors.

Fifth, businesses need to focus on their main areas, on the department operating effectively. When planning a strategy for building capital structure, businesses need to review their business activities, find the areas in which they operate effectively to focus resources to promote.

CHAPTER 2

SITUATION OF CAPITAL STRUCTURE AND ENTERPRISE VALUE OF LISTED PLASTIC ENTERPRISES AND PACKAGING IN VIETNAM

2.1. OVERVIEW OF LISTED PLASTIC AND PACKAGING ENTERPRISES IN VIETNAM

2.1.1. An overview of businesses in the plastic and packaging industry in Vietnam

2.1.2. Production and business characteristics of enterprises in the Plastic and Packaging industries

2.1.3. Financial performance and business results of the Plastic and Packaging companies listed on the Vietnamese stock market

Overview of research samples: Data sources for analysis are synthesized from 2 main sources including secondary data sources and primary data sources. On December 31st, 2018, there are 38 listed plastic and packaging enterprises on the Vietnam Stock Exchange. However, securities codes such as NHH, NSP and MCP did not collect enough financial report data in the

period of 2012 - 2018, so they were excluded from the research samples. Thus, the sample contains 35 enterprises.

Based on the field of production and business, it is possible to divide the enterprises in the research sample into 2 groups. Group 1: Group of enterprises producing plastic packaging products; Group 2: Group of enterprises producing plastic products.

Based on the size of the property on December 31st, 2018, the research sample can be divided into 3 groups. Group 1 is the small group with the average asset size of less than 100 billion VND; Group 2 is the medium-sized group with assets ranging from over 100 billion VND to less than 1000 billion VND; Group 3 is the large-scale group with the average asset size of over 1,000 billion VND.

Based on the rate of ownership rate on December 31st, 2018, it is possible to divide the enterprises in the research sample into 2 groups. Group 1 is the group with state ownership rate below 50%; Group 2 is the group with state ownership rate over 50%.

Based on the location listed on December 31, 2018, the enterprises in the research sample can be divided into 3 groups. Group 1 is the group of businesses listed on UPCOM; Group 2 is the group of companies listed on the HNX; Group 3 is a group of companies listed on HOSE.

The financial situation of the plastic and packaging companies listed in Vietnam in the period 2012-2018 highlights the following characteristics:

In terms of business scale: the business scale of businesses in the plastic and packaging industries has increased and has high growth rates.

In terms of asset structure: The asset structure of enterprises in the plastic and packaging industry has markedly changed over 2 periods. In the period 2012 - 2015, the percentage of investment in private assets increased from 62.06% in 2012 to 64.67% in 2015 and the rate of investment in assets decreased. However, in the period 2015 - 2018, the asset structure has been adjusted in the direction of gradually decreasing the rate of investment in short term asset from 64.67% in 2015 to 61.29% in 2018. If in the whole period (2012 - 2018), plastic and packaging enterprises maintained an average asset structure around 63% of short term asset and 37% of total assets. This is due to the business characteristics of plastic and packaging enterprises that in recent years have maintained large inventories, large amounts of receivables in order to store raw materials for production and promote consuming products.

About solvency, due to maintaining a high scale of short-term assets, the current solvency and fast solvency of the enterprises in the plastic and packaging industries are both higher than 1, proving that the enterprises in the plastic industry and packaging still secures short-term debts. However, the capacity of current payment and quick payment tend to decrease in the period of 2014 - 2018. the capacity of current payment are maintained at a relatively low level and tend to decrease, this is an indicator that enterprises will encounter difficulties in repaying due debts.

About business performance: Indicators reflecting the business performance of enterprises in the plastic and packaging industries such as total assets turnover, working capital turnover, accounts receivable turnover and goods turnover inventories tended to decrease in the period of 2012 - 2018, which showed that business performance has decreased.

In terms of operational efficiency, indicators reflecting the performance of businesses in the plastic and packaging industries such as BEP, ROA, and ROE tend to decrease in the period of 2012 - 2018. This shows that the efficiency business decline. When the economic profitability of an asset is not enough to offset the cost of debt, the increase in the size of debt will reduce the return on equity (ROE), then reduce the value of the business.

Regarding to the financial balance, in the period of 2012 - 2018, the NWC of the enterprises in the plastic and packaging industry were all higher than 0. It shows that the

enterprises still ensure the financial balance, although the ratio between NWC on total assets tends to decrease.

2.2. REALITY STRUCTURE OF CAPITAL RESOURCES AND ENTERPRISE VALUE OF LISTED PLASTIC AND PACKAGING ENTERPRISES IN VIETNAM.

2.2.1. Capital structure by ownership relationship

Table 2.1: Liability ratios according to classification criteria

Unit: %

Field	2012	2013	2014	2015	2016	2017	2018	Average
According to the field of production and business								
Packaging products	44,33	43,55	41,89	41,23	42,28	46,06	47,16	43,79
Plastic products	45,71	47,77	48,94	46,14	48,01	49,63	49,54	47,96
According to the size of the property								
Small scale	32,04	28,29	23,12	20,12	19,68	20,38	20,30	23,42
Medium scale	45,76	46,18	46,37	46,45	47,57	50,10	50,83	47,61
Large scale	49,14	53,00	54,78	49,01	52,25	55,34	55,20	52,67
According to the rate of state ownership								
Private ownership	42,48	43,92	43,97	42,12	43,97	46,89	47,62	44,43
State ownership	58,09	56,55	56,50	54,08	54,19	54,55	53,27	55,32
According to the listed location								
HOSE	44,21	44,55	44,52	42,38	45,31	49,66	51,79	46,06
HNX	48,58	49,32	48,57	48,59	51,45	53,08	53,65	50,46
UPCOM	40,53	42,29	43,63	38,72	36,93	39,08	37,61	39,83
Plastic and packaging industry	45,16	46,08	46,12	44,17	45,72	48,20	48,59	46,29

Source: Fellow calculations from financial statements of businesses in the Plastic and Packaging industries

The variation in capital structure of enterprises in the plastic and packaging industry tends to fluctuate over 2 periods. In the period of 2012 - 2016, the capital structure of enterprises in the plastic and packaging industry fluctuated in the trend of increasing the equity ratio and decreasing the debt ratio. However, in the period of 2016-2018, the capital structure is adjusted to regularly decrease the equity ratio and gradually increase the debt ratio. The capital structure by book value in 2018 was around 49% of debt ratio and 51% of equity ratio.

2.2.2. Capital structure by time mobilization and use of capital

In the period of 2012 - 2018, the plastic and packaging enterprises maintained their capital structure in terms of time of mobilization and stable use of capital, with the rate of regular funding of 60% and the rate of temporary funding of 40%. However, the capital structure according to the term of mobilization and use of capital tends to increase the rate of temporary funding and gradually decrease the rate of regular funding in the period of 2016-2018, the capital structure in 2018 reached 41, 82% of the rate of temporary funding and 58.18% of the rate of regular funding

2.2.3. Capital structure according to capital mobilization scope

The scale of internal capital and external capital tend to increase in the period of 2012 - 2018, with the average growth rates are 16.42% and 19.02% respectively. The scale of human resources external capital is 4.23 times higher than that of the maintenance workers. In terms of structure, in the period of 2012 - 2018, the plastic and packaging enterprises have a stable capital structure, with external capital accounted 83.35% and internal capital accounted 16,65%. External capital of plastic and packaging enterprises accounts for a high proportion in the total capital of businesses and tends to decrease slightly in the period of 2012 - 2018.

2.2.4. Enterprise value of listed Plastic and Packaging companies.

Table 2.2: Tobin'sQ's index according to classification criteria

Type of enterprise	2012	2013	2014	2015	2016	2017	2018
According to the field of production and business							
Packaging products	0,81	0,91	0,95	0,96	1,08	0,98	0,88
Plastic products	0,90	0,97	0,96	1,12	1,23	1,11	0,92
According to the size of the property							
Small scale	0,77	0,78	0,78	0,92	1,12	0,69	0,99
Medium scale	0,86	0,92	0,92	0,95	1,03	0,99	0,84
Large scale	0,92	1,08	1,09	1,34	1,49	1,35	0,99
According to the rate of state ownership							
Private ownership	0,86	0,94	0,94	1,07	1,20	1,07	0,90
State ownership	0,91	0,99	1,01	0,98	1,04	1,00	0,93
According to the listed location							
HOSE	0,93	1,10	1,08	1,26	1,41	1,31	1,06
HNX	0,81	0,91	0,94	1,02	1,21	1,04	0,90
UPCOM	0,89	0,88	0,86	0,94	0,88	0,86	0,76
Plastic and packaging industry	0,87	0,95	0,95	1,06	1,17	1,06	0,90

Source: Fellow calculations from financial statements of businesses in the Plastic and Packaging industries

The Tobin'sQ index increased in the period 2012 - 2018, from 0.87 in 2012 to 0.90 in 2018. However, during this period, Tobin'sQ fluctuated through 2 main periods, 2012 - 2016, the Tobin'sQ index increased continuously from 0.87 in 2012 to 1.17 in 2016. This reflects the enterprise value of enterprises in the plastic and packaging industry increased during this period. Entering the period of 2016 - 2018, the Tobin'sQ index decreased from 1.17 in 2016 to 0.90 in 2018. This reflects the enterprise value of enterprises in the plastic and packaging industry has decreased over the period.

CHAPTER 3

IMPACT OF CAPITAL STRUCTURE ON ENTERPRISE VALUE OF LISTED PLASTIC AND PACKAGING ENTERPRISES IN VIETNAM

3.1. THE IMPACTS OF CAPITAL STRUCTURE ON BUSINESS EFFICIENCY, FINANCIAL RISK, EQUALITY EXPENSES AND ENTERPRISE VALUE OF LISTED PLASTIC AND PACKAGING ENTERPRISES IN VIETNAM

3.1.1. The impact of capital structure on the performance of listed companies in the plastic and packaging industry in Vietnam

The relationship between capital structure and business performance affects business value clearly, which reflected in 2 phases. In the period of 2012 - 2016, the economic return of assets (BEP) and the cost of debt (RDT) tended to decrease, especially BEP is smaller than RDT, showing that financial leverage affects in the negative direction. In this condition, the increase in the debt ratio will reduce the return to equity (ROE), thereby negatively affect to the enterprise value. In the period of 2016 - 2018, the economic return of assets and the cost of debt tended to decrease, the index (BEP - RDT) was less than 0. Financial leverage still had a negative impact on the business efficiency of the business. In this conditions, the increase in the debt ratio from 32.05% in 2016 to 42.81% in 2018; DE coefficient increased from 0.7 in 2016 to 1.34 in 2018; Increasing the short-term debt ratio from 23.39% in 2016 to 35% in 2018, has had a negative impact on ROE, and thereby reducing corporate value (Tobin'sQ). In the period

of 2012 - 2018, the economic return of assets and the cost of debt tended to decrease, the index (BEP - RDT) was less than 0, and financial leverage had a negative impact.

Table 3.1: Effects of capital structure on business performance of plastic and packaging enterprises by degree of use of financial leverage

Business group	Ratio	2012	2013	2014	2015	2016	2017	2018	Growth 2012 - 2018
Business groups with positive financial leverage	BEP - rdt (%)	7,4	5,7	4,5	5,2	4,7	4,2	4,8	-7,05
	ROE (%)	23,3	25,2	21,1	20,8	20,1	18,1	17,0	-5,14
	Tobin'sQ	0,97	1,27	1,23	1,28	1,44	1,25	1,06	1,51 %
	DA (%)	27,3	24,2	22,7	26,2	24,8	27,7	32,4	2,89
	LDA (%)	3,6	6,8	4,8	5,8	4,7	8,4	5,5	7,11
	SDA (%)	23,7	17,3	17,9	20,4	20,1	19,3	26,9	2,16
Business groups with negative financial leverage	BEP - rdt (%)	-6,1	-5,8	-6,0	-5,0	-3,2	-7,1	-5,7	-1,16
	ROE (%)	7,4	8,6	6,6	9,7	10,9	3,4	3,1	-13,51
	Tobin'sQ	0,79	0,80	0,82	0,87	0,97	0,80	0,78	-0,10 %
	DA (%)	48,2	44,4	48,1	40,8	37,5	49,3	50,6	0,80
	LDA (%)	11,9	7,2	7,5	6,8	11,6	11,6	9,6	-3,52
	SDA (%)	36,4	37,2	40,6	33,9	25,9	37,7	41,0	2,03

Source: Fellow calculations from financial statements of businesses in the Plastic and Packaging industries

With the enterprises having positive financial leverage, in the period of 2012 - 2018, the debt ratio increased from 27.3% in 2012 to 32.4% in 2018, with an average growth rate of 2.89%. In which, the long-term debt ratio, the short-term debt ratio increased with the average growth rates are respectively 7.11% and 2.16%. Under the positive impact of financial leverage, the increase in the debt ratio has an amplifying effect on business efficiency, thereby positively impacting the enterprise market value.

With the enterprises having negative financial leverage, in the period of 2012 - 2018, the debt ratio increased from an average of 48.2% in 2012 to 50.6%. In 2018, the average growth rate is 0.8%. In which, the long-term debt ratio decreased with an average reduction rate of 3.52%. The ratio of short-term loans increased with an average growth rate of 2.03%. The increase in debt ratio, especially from the rise of the short-term debt ratio, in the context of negative amplification of financial leverage will have a negative impact on the business performance and market value of the business. . The return to equity has fallen with a rate of 13.51%. Tobin'sQ index also dropped by an average of 0.1%. The group of enterprises with negative financial leverage is maintaining capital structure with the debt ratio and short-term debt ratio much higher than the debt ratio of the group of businesses with positive financial leverage. That is, the level of use of financial leverage of the group of businesses with negative financial leverage is high. This has a negative impact on corporate value. Tobin'sQ of enterprises having negative financial leverage are lower than those of firms with positive financial leverage.

Thus, the analysis of the average figures of plastic and packaging enterprises showed that because the index (BEP - rdt) is less than 0, financial leverage has a negative impact on business performance. The debt ratio, short-term debt ratio and DE ratio tend to increase, which will have a negative impact on reducing ROE of plastic and packaging enterprises, showing that there is a negative relationship. The direction between the debt ratio, the short-term debt ratio and business performance, thereby negatively affects the enterprise value.

3.1.2. The impact of capital structure on financial risk of plastic and packaging companies listed in Vietnam

Table 3.2: The impact of capital structure on financial risks of enterprises in the plastic and packaging industry

Targets	2012	2013	2014	2015	2016	2017	2018	Average growth		
								2012 - 2018	2012 - 2016	2016 - 2018
Debt ratio (%)	39,28	38,03	38,29	34,12	32,05	37,10	42,81	1,45	-4,96	15,57
Long-term debt ratio (%)	8,33	7,06	6,36	6,38	8,66	9,84	7,82	-1,06	0,97	-5,00
Short-term debt ratio (%)	30,95	30,97	31,93	27,74	23,39	27,26	35,00	2,07	-6,76	22,32
Current solvency	2,05	2,05	2,45	2,55	2,57	2,48	2,31	1,97%	5,77%	-5,24%
Zscore	7,54	7,69	7,85	8,51	8,72	7,79	7,45	-0,20%	3,70%	-7,55%
NWC (%)	23,23	22,77	23,88	26,76	25,30	22,11	19,48	-2,89	2,16	-12,26
Tobin's Q	0,87	0,95	0,95	1,06	1,17	1,06	0,90	0,69%	7,78%	-12,13%
ROE (%)	14,24	13,82	11,26	14,76	14,87	11,00	9,06	-7,26	1,08	-21,94

Source: Research student's calculations from corporate financial statements

In the period of 2012-2016, the debt ratio tends to decrease, with an average reduction rate of 4.96%; The decrease in short-term debt has had an impact on the current solvency ratios, the Z-score and NWC ratios of plastic and packaging companies, and the financial risks of plastic and packaging firms tends to decrease. When financial risks decrease, there will be an increase in business value. ROE and Tobin's Q of plastic and packaging companies both increased with growth rates of 1.08% and 7.78%, respectively. Thus, the debt ratio, the short-term debt ratio has a positive impact with the financial risk and thereby has a negative impact on the enterprise value.

In the period 2016 - 2018, the debt ratio tends to increase, with an average growth rate of 15.57%, because the increase in the short-term debt ratio has had an impact on the Current solvency coefficients, Zscore and NWC of plastic and packaging enterprises tend to decrease, volatile financial risks increase. Increased financial risks will have negative effects on corporate value. ROE and Tobin's Q of the plastic and packaging enterprises decreased during this period with the rates of decrease of 21.94% and 12.13%, respectively. Thus, the debt ratio, the short-term debt ratio has a positive impact with the financial risk and thereby has a negative impact on the enterprise value.

During the whole period 2012 - 2018, when the debt ratio tended to increase volatility with an average growth rate of 1.45%; The increase in short-term debt ratio with the rate of 2.07% has had an impact on the volatility of Zscore and NWC to decrease. Increasing financial risks of plastic and packaging enterprises will reduce the value of businesses. The ROE has decreased with an average reduction rate of 7.26%. Thus, when the debt ratio fluctuates, it will increase the impact of financial risks and thereby reduce the value of the business.

Thus, although financial risks are still controlled by plastic and packaging enterprises, ensuring financial safety (current solvency ratio is greater than 1, Zscore is greater than 5.83; NWC is greater than 0). However, financial risks tend to increase volatility along with the increase in debt ratio, short-term debt ratio, which will have a negative impact on corporate value. In other words, the capital structure of plastic and packaging businesses in the period

2012 - 2018 has had an increased impact on financial risks, thereby negatively affecting business value.

3.1.3. The impact of capital structure on the cost of capital of listed companies in the plastic and packaging industries in Vietnam.

Table 3.3: The impact of capital structure on the cost of capital of plastic and packaging enterprises

Targets	2012	2013	2014	2015	2016	2017	2018	Average growth		
								2012 - 2016	2016 - 2018	2012 - 2018
Debt ratio (%)	39,28	38,03	38,29	34,12	32,05	37,10	42,81	-4,96	15,57	1,45
Long-term debt ratio (%)	8,33	7,06	6,36	6,38	8,66	9,84	7,82	-1,06	0,97	-5,00
Short-term debt ratio (%)	30,95	30,97	31,93	27,74	23,39	27,26	35,00	2,07	-6,76	22,32
r_e (%)	11,68	13,44	12,07	9,82	10,21	8,45	7,68	-3,32	-13,23	-6,74
r_{dt} (%)	11,55	11,95	11,29	9,24	8,69	7,95	7,65	-6,86	-6,18	-6,63
WACC (%)	12,15	13,31	12,63	10,00	10,22	8,95	8,37	-4,24	-9,50	-6,03
Tobin'sQ	0,87	0,95	0,95	1,06	1,17	1,06	0,90	0,08	-0,12	0,69

Source: Research student's calculations from corporate financial statements

In the period of 2012-2016, due to market lending rates, risk-free interest rates tended to decrease, leading to lower volatility in the cost of using loans, with a reduction rate of 6.86%. . The cost of equity also decreased with a decrease rate of 3.32%. Along with the adjustment of the reduced debt ratio with a reduction rate of 4.96% in the period of 2012 - 2016 has reduced the average cost of capital (WACC) from 12.15% in 2012 to 10.22% in 2016. When the average cost of capital decreases, there will be an increase in corporate value. The Tobin's Q index and ROE have increased volatility in the period of 2012 - 2016. Thus, the decrease in debt ratio has reduced WACC, and thereby increasing the Tobin's Q and ROE, which means that the value of the business increases. In other words, there was an inverse relationship between the debt ratio and the firm's value in the period 2012 - 2016.

In the period of 2016-2018, the average cost of loans decreased by 6.18%; Average reduction in cost of equity is 13.23%. This has the effect of reducing the average cost of capital (WACC), with an average reduction rate of 9.5%, and in turn, the effect of increasing firm value. In addition, as the cost of debt fell, the cost of equity has prompted plastic and packaging firms to increase their loans (average growth rate in this period is 33); increasing the number of ordinary shares outstanding, thereby increasing the value of equity. But the market share value of plastic and packaging firms tended to decrease, causing the equity market value to drop with an average reduction rate of 12.71%. This causes the debt ratio to increase volatility (with an average growth rate of 15.57%; firm's value (Tobin'sQ) has a decrease in volatility (with a rate of 12.13%). Thus, there is an inverse relationship between the debt ratio and the enterprise value in the 2016-2018 period.

In the whole period 2012 - 2018, when the debt ratio tends to increase, with an average growth rate of 1.45%, along with the decrease in the cost of capital, the cost of using Equity has the effect of reducing the average cost of capital (WACC) and thereby increasing firm value (Tobin'sQ). Thus, there is a positive relationship between the debt ratio and the enterprise value in the period 2012 - 2018.

In summary, through the above analysis, it is found that in the period of 2012 - 2016, the decrease in the debt ratio has had the impact of increasing business efficiency, reducing financial risks and reducing cost of use, average capital, and thereby has the effect of increasing firm value (Tobin'sQ). In the 2016-2018 period, the increase in volatile debt ratio has had the

impact of reducing business efficiency, increasing financial risks and thereby reducing corporate value. Thus, through a periodic review, there is an inverse relationship between the debt ratio and the enterprise value (Tobin's Q). However, if considering the period 2012 - 2018, the increase in the debt ratio has reduced business efficiency (decreased ROE), increased financial risk (decreased Zscore and NWC), and costs decrease in average capital use.

Thus, the analysis shows that there is a difference in the relationship between capital structure and firm value (Tobin's Q) for different business groups according to the classified criteria.

The short-term debt ratio was inversely related to the Tobin's Q index of small, medium, and large firms with a positive relationship with Tobin's Q of firms manufacturing plastic product; manufacturing of packaging products and group of private and Government's enterprises, group of enterprises listed on HOSE, HNX.

The long-term debt ratio has an inverse relationship with Tobin's Q index of the group of small-scale manufacturing enterprises, and the group of SOEs. Tobin's Q has a positive relationship with the long-term debt ratio of medium and large-scale enterprises, group of private companies, companies listed on HOSE, HNX, UPCOM.

The debt ratio is inversely related to Tobin's Q of the group of small and medium enterprises and the group of SOEs; business group listed on UPCOM. Tobin's Q has a positive relationship with the debt ratio of the group of enterprises producing plastic products, manufacturing packaging products, the group of large-scale enterprises, the group of private enterprises, listed on HOSE, HNX.

3.2. USING THE REVOLUTION MODEL SURVEILLANCE OF THE IMPACT OF CAPITAL STRUCTURE ON ENTERPRISE VALUE OF LISTED PLASTIC AND PACKAGING ENTERPRISES IN VIETNAM

3.2.1. Description of selected variables

- Dependent variable reflects the value of the enterprise. Depending on different calculation methods, enterprise value has different way of estimating value. In the Thesis, enterprise value is represented through the criteria as Tobin's Q.

$$\text{Tobin's Q} = (\text{EMV} + \text{LBV}) / (\text{EBV} + \text{LBV})$$

- Explanatory variable: When considering the capital structure of the business, we often focus on the relationship between debt (including short-term loans, long-term loans) and equity in the total capital of enterprise. In which, short-term loans and long-term loans are determined by book value; Equity is determined by the market value of the business. The capital structure of the business is shown through the debt ratio (DA), short-term debt ratio (SDA), long-term debt ratio (LDA).

- Control variables, including Business Performance (ROA); Asset structure (TANG); Efficiency in using capital and assets (VTS); Enterprise growth rate (GRTS); Business size (QMTS)

On the basis of choosing the BMA model through the BMS application package on the open source R statistical software, control variables that have the best impact on enterprise value will be analyzed. The results showed that the control variables most likely to affect firm value (Tobin's Q) are selected including ROA and QMTS.

Recommended research model:

- Model 1: The impact of the debt ratio on the enterprise value

$$\text{Tobin's } Q_{i,t} = \beta_0 + \beta_1.DA_{i,t} + \beta_2.ROA_{i,t} + \beta_3.QMTS_{i,t}$$

- Model 2: The impact of the long-term debt ratio on the enterprise value

$$\text{Tobin's } Q_{i,t} = \beta_0 + \beta_1.LDA_{i,t} + \beta_2.ROA_{i,t} + \beta_3.QMTS_{i,t}$$

- Model 3: The impact of the short-term debt ratio on the enterprise value

$$\text{Tobin's } Q_{i,t} = \beta_0 + \beta_1.SDA_{i,t} + \beta_2.ROA_{i,t} + \beta_3.QMTS_{i,t}$$

3.2.2. Research results on the relationship between capital structure and business value.

Model 1: Effect of debt ratio (DA) and independent variables on firm value (Tobin'sQ)

According to FGLS model, the regression coefficient of debt coefficient (DA) of plastic and packaging enterprises; group of plastic enterprises; Packaging business group; the group of enterprises with an SOE rate below 50%; The medium-sized and large-scale enterprises group respectively - 0.635; - 0.305; - 1,274; - 0,624; - 0.743 and - 0.678 with 1% statistical significance. That means that the debt ratio (DA) has a negative impact on firm value (Tobin'sQ) with a statistical significance of 1%. That is, when the DA increases by 1%, the enterprise value (Tobin'sQ) of the plastic and packaging enterprises decreases by 0.635%; plastic businesses decreased by 0.305%; packaging businesses decreased by 1,274%; the group of enterprises with an SOE rate below 50% decreased 0.624%; the medium-sized group decreased by 0.743% and the large business group decreased by 0.678% with 99% confidence. The group of enterprises producing packaging products had greater fluctuation of enterprise value than the group of plastic and packaging enterprises and the group of enterprises manufacturing plastic products due to poor business performance and cost of use. Using large debt, the financial leverage amplifies negatively; the increase in debt will make the corporate value decrease even more. However, this conclusion only refers to the average volatility of the debt ratio and does not refer to fluctuations in its overall distribution. The percentile regression coefficients of the variable DA show that the effects of DA on Tobin'sQ correspond to each percentile of Tobin'sQ.

Plastic and packaging enterprises: corresponding to the percentiles Q15, Q20, Q30, Q40, debt ratio (DA) has a positive impact on firm value (Tobin'sQ) with statistical significance 5 % and 10% of the percentiles Q15 and Q20. But the impact of DA on Tobin'sQ decreased as the percentile increased from Q1 to Q40. Corresponding to the higher percentile level of Q40; the impact of the debt ratio (DA) on firm value (Tobin'sQ) increases gradually but in the opposite direction with the statistical significance of 5% and 10 % at the Q70, Q85 and Q90 percentile. In other words, the group of Plastic and Packaging enterprises whose Tobin'sQ is less than 0.88 (Q40 percentile respectively), the debt ratio has a positive impact on the enterprise value, deciding to use debt to Financing the business of plastic and packaging businesses will create a good signal to the market. Firms with Tobin'sQ's greater than 0.88, debt ratios have a negative impact on firm value.

Thus, the FGLS model shows evidence that the debt ratio (DA) has a negative impact on firm value among the analyzed groups of firms (except for firms with an SOE ratio of over 50%).). The percentile regression model shows that firms with low Tobin'sQ (corresponding to the lower percentile level of Q40 of the group of plastic and packaging enterprises; Q30 of the group of enterprises producing plastic products and the group of enterprises) have an SOE rate of less than 50%; Q60 of the group of packaging manufacturers; Q50 of a group of medium-sized enterprises and Q20 of a group of large enterprises) debt ratio (DA) is effective. Moved in the same direction to corporate value. In contrast, firms with higher Tobin'sQ, debt ratio (DA) have a negative effect on firm value. In other words, for businesses with low corporate value, the increase in debt will have an increase in firm value. Firms with higher corporate value, the increase in debt will have the effect of reducing firm value.

Model 2: Effects of long-term debt ratio (LDA) and independent variables on firm value (Tobin'sQ)

According to the FGLS model, there is no statistical evidence that the long-term debt ratio (LDA) has a negative impact on firm value (Tobin'sQ) for plastics and packaging firms; group of enterprises producing plastic products; Group of enterprises manufacturing plastic

packaging. For the group of enterprises with average size; group of large firms, there is statistical evidence that the long-term debt ratio (LDA) has a negative impact on firm value (Tobin'sQ). That is, the increase in the use of long-term debt has the effect of reducing the enterprise value. For the group of enterprises with an SOE ratio below 50% and the group of enterprises with an SOE ratio of over 50%, the long-term debt ratio (LDA) has a positive impact on firm value (Tobin'sQ) with the level of the statistical significance of 10% for the group of enterprises with an SOE rate of over 50%. However, this conclusion only refers to the average volatility of the debt ratio and does not refer to fluctuations in its overall distribution. The percentile regression coefficient of the variable LDA shows the effect of LDA on Tobin'sQ corresponding to each percentile of Tobin'sQ.

Plastic and packaging enterprises: at the Q15 and Q20 percentiles, the long-term debt ratio (LDA) has a positive impact on firm value (Tobin'sQ) with the statistical significance of 5% and 10%. As for the other percentiles from Q30 to Q90, there is no statistical evidence that long-term debt ratio (LDA) has a positive impact on firm value (Tobin'sQ). In other words, the group of Plastic and Packaging enterprises with Tobin'sQ is less than 0.74 (Q20 percentile respectively), the long-term debt ratio has a positive impact on firm value, decision to use debt. Borrowing to finance the business of plastic and packaging enterprises will generate good signals to the market.

Thus, the analytical results in the FGLS model have no statistical evidence that the long-term debt ratio (LDA) has a negative impact on Tobin'sQ. At low percentile levels (Q15, Q20), there is statistical evidence that LDA has a positive effect on Tobin'sQ for plastics and packaging firms; medium business group. In addition, there is statistical evidence that ROA and QMTS have a positive effect on Tobin'sQ, meaning that improving business efficiency and expanding firm size will have the effect of increasing firm value.

Model 3: Effects of short-term debt ratio (SDA) and independent variables on enterprise value (Tobin'sQ)

According to the FGLS model, there is statistical evidence that the short-term debt ratio (SDA) of the plastic and packaging firms; group of enterprises producing plastic products; group of businesses manufacturing plastic packaging; the group of enterprises with an SOE rate below 50%; Medium firms and large firms have a negative effect on firm value (Tobin'sQ) with the statistical significance of 1%. That is, the increase in the use of short-term loans will reduce the value of the business. There is no statistical evidence that the short-term debt ratio (SDA) has a negative impact on Tobin'sQ of the group of firms with an SOE ratio of over 50%. However, this conclusion only refers to the average fluctuation of the short-term debt ratio and does not refer to fluctuations in its overall distribution. The percentile regression coefficient of the variable SDA shows the effect of SDA on Tobin'sQ corresponding to each percentile of Tobin'sQ.

Plastic and packaging enterprises: Corresponding to the percentiles Q15, Q20, Q30, the short-term debt ratio (SDA) has a positive impact on firm value (Tobin'sQ) with statistical significance 10 % at the Q15 percentile. The degree of SDA's impact on Tobin'sQ decreased as the percentile increased from Q15 to Q30. Corresponding to the percentile levels from Q40 to Q90, the short-term debt ratio (SDA) has a negative effect on firm value (Tobin'sQ) with a statistical significance of 5% in the Q70 to Q90 percentile. The impact of SDA on Tobin'sQ gradually increased from the Q40 percentile to Q90 percentile. In other words, the group of plastic and packaging enterprises with Tobin'sQ is less than 0.81 (Q30 percentile respectively), short-term debt ratio has a positive impact on enterprise value, decision to use debt. Short-term loans to finance the business of plastic and packaging businesses will create a good signal to the

market. Firms with Tobin's Qs greater than 0.81, short-term debt ratios have a negative impact on firm value.

Thus, the analytical results in the FGLS model provide evidence that the short-term debt ratio (SDA) has a negative impact on firm value in the analyzed enterprise groups. The percentile regression model provides statistical evidence that firms with high firm value, short-term debt ratio (SDA) has a negative impact on firm value (Tobin's Q).

3.3. SUMMARY OF RESEARCH RESULTS

3.3.1. Result

Firstly, the capital structure of enterprises in the plastic and packaging industries ensures financial autonomy.

In the period 2012 - 2016, the economy recovered with the economic growth continuously increasing, the stock market prospered, the average stock price of the plastic and packaging enterprises increased. Therefore, the equity value according to the market value of plastic and packaging enterprises increases, the equity ratio by market value has increased continuously from 60.72% in 2012 to 67.95% in 2016. At the same time, in the period of 2012 - 2018, whether from the perspective of book value or market value, the equity ratio of enterprises in the plastic and packaging industry are both greater than the debt ratio. This shows that the capital structure of enterprises in the plastic and packaging industry has ensured financial autonomy.

Second, the capital structure of enterprises in the plastic and packaging industries has ensured a financial balance in business operations.

The size of NVA and NVA both tends to increase in the period 2012 - 2018, with average growth rates of 18.24% and 19.08%, respectively. However, plastic and packaging enterprises maintain an average NVTX ratio of 60% and an average NVR of 40%. Long-term regular capital accounts for a large proportion in the capital structure. This is consistent with the characteristics of the business industry and ensures stability in the sponsorship of the business. In the period 2012 - 2018, the NWC index of enterprises in the plastic and packaging industries was greater than 0 according to the classification criteria. Thus, the above analyzed factors show that enterprises in the plastic and packaging industry still ensure their financial balance.

Third, the enterprise value of enterprises in the plastic and packaging industries tends to increase.

Enterprise value is reflected in the Tobin's Q indicator. The Tobin's Q index increased in the period 2012 - 2016 and decreased in the period of 2016-2018. It shows that the enterprise value of the enterprises of the plastic industry and packaging increased in the period of 2012 - 2016 and decreased in the period 2016 - 2018. In general in the period of 2012 - 2018, the Tobin's Q index increased slightly, in other words, the firm's value of enterprises. the plastic and packaging industries tend to increase slightly. Except for the group of firms listed on UPCOM whose Tobin's Q index decreased in the period 2012-2018, the remaining groups of firms whose Tobin's Q index increased in the period of 2012 - 2016 and decreased in the period of 2016 - 2018. In particular, in 2018, the Tobin's Q index of these groups of businesses was close together, around 0.9.

3.3.2. Limited and causes

3.3.2.1. Limit

Firstly, the increase in debt reduces the business efficiency of the business.

BEP, ROA, ROE ratios of plastic and packaging enterprises tend to decrease in the period of 2012 - 2018. The debt ratio tends to increase in the period of 2012 - 2018 with the growth rate. the annual average is 1.45%. In the context that the economic rate of return of assets (BEP)

tends to fluctuate and reach lower than the cost of debt (rdt), financial leverage has a negative impact, Equity rate reduction amplification (ROE). Thus, the increased adjustment of debt of enterprises in the plastic and packaging industry in the period 2012 - 2018 has reduced the business efficiency of the business, thereby having a negative impact on the enterprise value; especially for the group of businesses whose difference between the economic return of assets and loan interest rates is negative ($BEP - rdt < 0$).

Second, the increase in the size of the debt and the debt ratio has increased financial risks, thereby negatively affecting the enterprise value. Capital structure of plastic and packaging enterprises has been adjusted in the direction of gradually increasing the debt ratio and decreasing the equity ratio in the period 2012 - 2018. Capital structure by book value in 2018 around 49% debt ratio and 51% equity ratio. In the capital structure of plastic and packaging enterprises, short-term debts account for a high proportion, on average in the period 2012 - 2018 reached 39.39%. At the same time, the enterprise's liabilities are mostly fees (28.67%). This shows that, the increase in the use of short-term loans will increase the financial risks for businesses, thereby reducing the value of the business. Regarding the structure of liabilities, the scale and proportion of short-term debts in total liabilities tend to increase. Short-term debt accounts for a very high proportion in the structure of liabilities, on average, in the period 2012 - 2018 reached 87.88%. Using the majority of short-term debt to finance the capital needs of the business will put pressure on the solvency, affecting the cash flow and thereby negatively affecting the enterprise value.

Third, capital of plastic and Packaging businesses depends mainly on external capital.

Although in terms of scale, maintenance personnel and human workers both tend to increase in

Third, capital of plastic and Packaging businesses depends mainly on external capital.

Although in terms of scale, casualties and civil servants both tended to increase in the period 2012 - 2018 with average growth rates of 16.42% and 19.02% respectively, but in terms of structure, in the period of In the period of 2012 - 2018, the plastic and packaging enterprises maintained stably the average proportion of human workers at 83.35%. Thus, the capital of plastic and packaging enterprises depends heavily on external capital sources. Endogenous capital accounts for a low proportion (16.65% on average), proving that self-financing capacity for these businesses is not high.

Fourthly, the increase in business value of enterprises in the plastic and packaging industries due to the increase in capital size, has not really stemmed from the increase in business efficiency.

Enterprise value is calculated and reflected through economic value added and Tobin's Q index. Through the method of added economic value, the enterprise value of enterprises in the plastic and packaging industry increased continuously. in the period 2012 - 2018. The increase in enterprise value is mainly due to the rapid increase in the total investment capital of enterprises in the plastic and packaging industries. The portion of value added (EVA) created accounts for a small proportion of enterprise value and tends to decrease in the period 2012 - 2018. This provides evidence for the statement: an increase in corporate value of enterprises in the plastic and packaging industry, due to the increase in debt size and equity, have not really derived from the increase in business efficiency.

Fifth, the debt ratio and the short-term debt ratio negatively affect the firm value of enterprises in the plastic and packaging industry.

Experimental results show that:

- The debt ratio (DA) has a negative impact on the enterprise value of enterprises in the plastic and packaging industries.

The FGLS model has provided statistical evidence that the debt ratio (DA) of the plastic and packaging firms; Group of enterprises manufacturing Plastic; Group of enterprises manufacturing plastic packaging; the group of enterprises with an SOE rate below 50%; medium-sized and large-scale firms have a negative impact on firm value. That is, when other factors do not change, the increase in debt ratio (DA) will be a bad signal to the market, which has a negative effect on corporate value (Tobin'sQ). This is consistent with the performance of businesses in the plastic and packaging industry in the period 2012 - 2018. When the difference between the economic return of assets (BEP) is smaller than the cost of debt, after-tax loan (rd), the increase in the debt ratio will cause the financial leverage to have a negative impact, amplifying in the direction of reducing the return of equity, thereby reducing the impact of Enterprise value. In addition, the increase in the size of short-term loans and short-term debt ratio, will increase financial risks for businesses in the plastic and packaging industry, thereby reducing business value. Karma. The results of this experimental study are similar to those of Asifa Kausar, Mian Sajid Nazir and Hashim Awais Butt (2014); Batool K. Asiri and Salwa A. Hameed (2014); Chinaemerem and Odita Anthony (2012); Shohreh Alfi and Mohammad Hossein Safarzadeh (2016); Divya Aggarwal, Purna Chandra Padhan (2017); Rami Zeitun and Gary G. Tian (2007); Ajayi Oziomobo Dada and Zahiruddin B. Ghazali (2016); Tianyu He (2013); Le Thi Phuong Vy & Phung Duc Nam (2013). There is no statistical evidence that the long-term debt ratio has a negative effect on firm value (Tobin'sQ) of plastic and packaging firms.

However, when looking at the percentile regression model, the results show that the effect of the debt ratio on firm value (Tobin's Q) is different among the percentiles of each classified group of firms. When firm value (Tobin'sQ) is low (with percentile ratio Q15 to Q40), the debt ratio (DA) has a positive impact on firm value (Tobin'sQ), especially with a low percentile (Q15, Q20). The results of this study are similar to those of Rathinasamy et al (2000), Cheng & Tzeng (2011), Altan & Arkan (2011), Sudev et al. (2012), Ogbulu & Emeni (2012), Berzkalne. (2015). In contrast, when firm value (Tobin'sQ) is high (in percentile ratio Q50 to Q90), the debt ratio (DA) has a negative impact on firm value (Tobin'sQ), It shows that the increase in the use of debt will reduce the value of ENTERPRISES.

- The short-term debt ratio (SDA) has a negative impact on the firm's value of enterprises in the plastic and packaging industries.

The FGLS model provides statistical evidence that the short-term debt ratio (SDA) has a negative impact on firm value (Tobin'sQ) of plastic and packaging firms with statistical significance. first%. That is, the increase in the use of short-term loans will reduce the value of the business. An increase in the short-term debt ratio will increase the financial risks for businesses, thereby reducing the value of the business. The percentile regression model provides statistical evidence that firms with high firm value (percentile ratio Q70 to Q90), short-term debt ratio (SDA) have a negative impact on corporate value (Tobin'sQ) of firms in the plastic and packaging industries.

For long-term loans, with the survey sample conducted, there is no statistical evidence to show that the long-term debt ratio (LDA) of the plastic and packaging enterprises, the group of plastic producers; group of businesses manufacturing plastic packaging; The group of enterprises with an SOE ratio below 50% has an impact on the enterprise value (Tobin'sQ).

Table 3.4: Results of the impact of capital structure on firm value from FGLS model of each enterprise group

Variable	Hypothesis	coefficient						
		Plastic and packaging	Plastic products	Packaging products	Private ownership	State ownership	Medium	Large scale
DA	-	-0,64***	-0,31***	-1,27***	-0,62***	0,11	-0,74***	-0,68***
LDA	+/-	-0,01	-0,02	-0,01	0,03	0,31*	-0,74***	-0,49**
SDA	-	-0,59***	-0,31***	-1,04***	-0,56***	-0,16	-0,81***	-0,58***

Source: Synthesis of graduate students

Note: *, ** and *** represent 10%, 5%, and 1% significance respectively.

3.3.2.2. The cause of the limitations

a. Subjective reasons

Firstly, businesses in the Plastic and Packaging industry have not implemented the target capital structure

Enterprises in the plastic and packaging industries have not scientifically established their target capital structure. Loans and equity capital raised by plastic and packaging enterprises are based on capital demand according to business plans from time to time. Practical surveys show that, when the need for capital arises, equity sources such as retained earnings, contributed capital through the issue of shares. Then, the rest of the capital needs will be financed from market loans. The mobilization of capital to finance capital needs does not come from having to ensure the target capital structure, affecting the capital mobilization and use plan of enterprises, increasing business risks, thereby increasing business risks. positive impact on business value. Thus, the building and maintaining the target capital structure suitable for each stage of the business development has not been recognized and interested by administrators. From there, affecting the capital mobilization strategy and negatively impacting the enterprise value.

Second, the plastic and packaging enterprises have not used their financial leverage properly. Financial leverage only promotes positive effects when the difference $(BEP - rdt) > 0$ and vice versa; If the enterprise increases the use of debt in the condition of difference $(BEP - rdt) < 0$, it will reduce ROE or EPS, thereby reducing the enterprise value. In the past 2012-2018 period, maintaining a high debt ratio while the economic return of assets (BEP) of plastic and Packaging companies was lower than interest expenses. negative to ROE and corporate value.

Third, the efficiency of mobilizing and using short-term assets is low. Plastic and packaging businesses have maintained their size of short-term receivables and large inventories, which in turn affects their working capital turnover and business performance.

Fourth, the operational efficiency and value of plastic and packaging businesses are strongly influenced by the fluctuation of foreign exchange rates. Input materials of plastic and packaging enterprises are mainly imported from abroad (mostly from China) while export revenue of plastic products and packaging accounts for only about 14% of the value structure of branch; Therefore, the fluctuation of USD / VND exchange rate has a great impact on the profit margins of enterprises in the industry, negatively affecting business efficiency and business value.

b. Objective reasons

First, the level of competition among businesses in the plastic and packaging industries is always high.

Due to the low barrier to entry, the number of businesses in the industry is large, with the total number of businesses in the whole industry about 4000 businesses operating with the entire industry scale at about 15 billion USD. Products of the plastic industry and packaging do

not have too much difference between enterprises when production technology is simple, mainly from China.

Second, the tendency to limit the use of plastic products that are not environmentally friendly. This is also a challenge for the plastic and packaging industry in Vietnam when in the industry's export structure, the traditional packaging products that are not environmentally friendly account for a relatively large proportion. In addition, many countries around the world are also applying high environmental protection tax rates or even banning the production, sale and use of plastic bags. This is a challenge for businesses in the plastic and packaging industries using outdated technology. This trend has the effect of reducing the ability of businesses to consume products, thereby affecting the revenue, profitability and value of plastic and packaging businesses.

Third, plastic products and packaging in Vietnam are mostly in the low-end segment. Vietnam's plastic and packaging enterprises are mainly small and medium (accounting for more than 90% of all plastic and packaging businesses). Therefore, there is no condition to invest in modern technology and machinery. In addition, small and medium-sized businesses often have difficulty in accessing loans due to limited collateral, high interest expenses, etc. Only a few large-scale enterprises are subject to intensive investment and have products that meet the increasing demands and tastes of consumers. This makes the competitiveness of Vietnam's Plastic and Packaging products in the market low, especially plastic household products.

CHAPTER 4

RECOMMENDATIONS TO LISTED PLASTIC AND PACKAGING ENTERPRISES MANAGERS IN VIETNAM

4.1. MACROECONOMIC CONTEXT AND VIETNAM'S ECONOMIC PROSPECTS

4.1.1. Economic context

4.1.2. Development orientation of companies in the Plastic and Packaging industries listed in Vietnam

4.2. RECOMMENDATIONS TO LISTED PLASTIC AND PACKAGING ENTERPRISES MANAGERS IN VIETNAM

4.2.1. Planning the target capital structure for listed companies in the Plastic and Packaging industry

In each stage of development, an enterprise needs to define specific business objectives that are suitable to the characteristics of the business, the socio-economic situation in each stage. Capital structure planning must be based on the theoretical basis of the trade-off theory between risk and return. Expectations for greater future profits by increasing the debt ratio will also increase the financial risk for the business. When risks increase, stock prices tend to decrease and corporate values also tend to decrease, but the expectation of increased profits also increases corporate value. Therefore, the optimal capital structure must ensure a balance between risks and profits, thereby maximizing the value of the business.

However, in practice, determining the optimal capital structure is very complicated, because each source of capital mobilized has certain limitations and advantages. In addition, the characteristics of the business lines and characteristics of each business are not the same. At different times, in different economic context, the target capital structure is also different, it changes in each period, each stage of business development. Therefore, in order to plan the target capital structure, the enterprise needs to grasp the following basic views: Adjusting the capital structure should be consistent with the characteristics of the business; Adjusting capital

structure needs to ensure a balance between risks and returns; Adjustment of capital structure must ensure compatibility and flexibility; Adjustment of capital structure must be appropriate to each stage of business development; Adjustment of capital structure should be appropriate to the business environment; Planning the firm's target capital structure must be considered in relation to many influencing factors.

Business managers in the Plastic and Packaging industry need to rely on variables such as business performance (ROA), asset structure (TANG), operational efficiency (VTS), business growth (GRTS), solvency (LIQ) and firm size (QMTS). Analysis results of factors affecting capital structure of Plastic and Packaging businesses show:

- Business efficiency (ROA) and solvency (LIQ) have a negative impact on the debt ratio (DA). That is, the increase in business efficiency and solvency of the business will have the impact of reducing the debt ratio, thereby increasing the enterprise value.

- Business growth rate (GRTS) and asset structure (TANG) have a positive impact on the debt ratio (DA), indicating an increase in business growth and adjustment of asset structure. In the direction of increasing fixed assets, there will be an increase in the debt ratio (DA), thereby reducing the value of the business.

4.2.2. Adjust the debt structure in the direction of increasing long-term debt and gradually reducing short-term debt

In the capital structure of plastic and packaging enterprises, short-term debts account for a high proportion, on average in the period 2012 - 2018 reached 39.39%. At the same time, the majority of corporate debts are fees (28.67%). This shows that the use of short-term debt will increase financial risks for businesses. The analysis results show that the increase in SDA will have the effect of reducing enterprise value. Therefore, enterprises in the Plastic and Packaging industry need to adjust their debt structure in the direction of increasing long-term debts and gradually reducing short-term debts.

Enterprises need to actively consolidate, increase credit position and strengthen negotiation activities, require suppliers to expand commercial credit policies or require customers to make prepayments for large goods. Moreover, then allows businesses to reduce short-term loans to finance short-term capital needs, reducing the cost of using loans.

Long-term debts include appropriated long-term debts and long-term loans. Long-term accounts accounted for a low proportion in the capital structure of Plastic and Packaging businesses, averaging 0.57% in the period 2012 - 2018. Long-term loans also accounted for a low proportion, averaging 6.34% in the capital structure of Plastic and Packaging enterprises in the period of 2012 - 2018. In order to increase long-term loans, enterprises Plastic and Packaging can implement the following specific solutions:

- Issuing corporate bonds.
- Long-term loan from commercial banks or credit institutions.
- Take long-term loan through financial leasing.

4.2.3. Periodically evaluate and analyze the capital structure of the business

Capital structure is affected by business efficiency, asset structure, asset growth rate, solvency ... Therefore, when these variables change, there will be an impact on capital structure, thereby affecting the enterprise value. The periodic review of capital structure will help administrators to consider whether the current target capital structure is still in line with the allowed measure? Is there a need to adjust the target capital structure? Thus, the periodic re-evaluation of the target capital structure is necessary. When re-evaluating, businesses should note the following important changes:

- When there is a change in the bank's monetary and credit policy
- When there is a change in investment policy
- When there is a change in dividend policy in the long term
- When there is a change in business efficiency

4.2.4. Increasing equity capital in order to further improve the financial autonomy of the business

In the period 2012 - 2018, the size of equity capital increased continuously in the period 2012 - 2017 and decreased in the period of 2017 - 2018. According to the market value, the equity ratio increased in the period of 2012 - 2016 and decreasing in the period of 2016 - 2018. Maintaining the capital structure in the trend of gradually decreasing the equity ratio and gradually increasing the debt ratio contains many risks, the degree of independence in terms of financial decline. Therefore, increasing equity, improving equity ratio, and financial autonomy of businesses in the plastic and packaging industries are essential. Some necessary measures to increase the equity ratio are as follows:

Firstly, to fully exploit additional endogenous capital to increase equity, through dividend policy adjustments, by reducing the dividend payout ratio to prioritize retained earnings for reinvestment or by choosing an appropriate stock dividend payout. In addition, the application of a reasonable dividend policy must be based on the business production strategy and actual conditions in the life cycle of the business.

Periodically, businesses in the plastic and packaging industries need to re-evaluate their business life cycle and their ability to grow in the future as a basis for building a proper and effective dividend payment policy for each stage of distribution, development of the business. In addition, dividend policy planning must be consistent with the planning of the target capital structure, according to the business development strategy of the business.

Enterprises in the plastic and packaging industries should have a variety of combinations of dividend payments such as cash or stocks.

Second, choose effective equity mobilization options. In addition to increasing equity from the return on reinvestment through dividend policy adjustments, plastic and packaging businesses need to choose outside equity mobilization options such as issue shares to the public. In the period 2012 - 2018, the number of shares commonly issued and the owner's contributed capital tended to increase continuously, especially the group of plastic manufacturing enterprises; large-scale business group; group of private owned enterprises and group of enterprises listed on HOSE and HNX. Along with the context of macroeconomic stability, good economic growth, strong development potential of businesses in the Plastic and Packaging industry, the use of opportunities to increase stock issuance to raise equity Friendship is positive. Especially, thanks for the group of foreign investors, enterprises can access modern technology and management skills.

4.2.5. Attaching importance to improving the efficiency of using financial leverage

Financial leverage reflects the use of borrowed capital in the firm's total capital in order to expect an increase in the return to equity or earnings per ordinary share of the business. The use of loans contains potential financial risks that enterprises may encounter in business, but it also has the effect of making the equity return rate to fluctuate, thereby expect to bring a greater profit for the owner. If the economic return of assets (BEP) that the firm creates is greater than the cost of capital, the increase in debt will have a positive amplifying effect, increasing the rate of return of equity. Equity (ROE), but if the economic return of assets (BEP) that the firm generates is less than the cost of debt, the increase in debt will have a negative amplifying effect, rapidly declining than equity return.

Table 4.1: Difference (BEP - rdt) of enterprises by classification criteria

Unit: %

Categories	2012	2013	2014	2015	2016	2017	2018
According to the field of production and business							
Packaging products	3,08	0,19	-1,36	0,11	0,19	-1,17	-1,25
Plastic products	-2,57	-3,78	-4,12	-0,69	0,16	-0,32	-1,17
According to the size of the property							
Small scale	-0,22	-3,26	0,44	-6,25	1,08	1,40	-1,56
Medium scale	-1,55	-2,28	-4,08	-0,35	-0,24	-0,73	-2,07
Large scale	1,10	-1,79	-1,70	2,06	1,68	-1,05	0,62
According to the rate of state ownership							
Private ownership	-0,55	-2,10	-2,85	0,21	0,21	-1,14	-1,10
State ownership	0,86	-2,65	-3,85	-3,18	0,00	1,69	-1,70
According to the listed location							
HOSE	1,42	-0,30	-1,31	2,01	1,08	-3,52	-2,42
HNX	-1,43	-2,14	-3,42	0,29	0,32	-0,34	-1,27
UPCOM	-0,09	-3,97	-3,91	-3,57	-0,89	1,42	0,01
According to the degree of use of financial leverage							
(BEP - rd) > 0	7,41	5,69	4,53	5,17	4,72	4,19	4,78
(BEP - rd) < 0	-6,10	-5,80	-6,03	-5,03	-3,24	-7,12	-5,69
Plastic and packaging industry	-0,31	-2,19	-3,02	-0,37	0,17	-0,66	-1,20

Source: Research student's calculations from corporate financial statements

Of the 35 enterprises observed in 2018, 15 enterprises had the difference of $BEP - rdt > 0$; The remaining 20 enterprises have $BEP - rdt < 0$. < 0 , negative amplification of financial leverage, the increase in the use of more debt will have a faster depletion effect on equity returns. Facing this situation, businesses should not borrow more debt, should focus on solutions to further improve business efficiency, seek funding sources that have an impact on improving equity ratio. These businesses should prioritize using profits to re-invest more, issue shares to mobilize capital and most importantly, need to implement solutions to improve business efficiency, from which sustainable returns to pay off critical debts.

4.2.6. Constantly improving business efficiency of businesses

The analytical results show that the portion of economic value added (EVA) created accounts for a small proportion in corporate value and tends to decrease in the period 2012 - 2018. Thus, the increase in wealth The production of enterprises in the Plastic and Packaging industry due to the increase in debt size and equity, has not really stemmed from the increase in business efficiency. The estimation results also show that business efficiency (ROA) has a positive impact on business value. Therefore, it is necessary to have solutions to improve business efficiency of enterprises in the Plastic and Packaging industry. The basic solution to improve business efficiency is to promote the production and consumption of products, in order to increase revenue for businesses and save costs and lower product costs.

- Promote further production and sales of products.
- Save costs, lower product costs.

4.2.7. Speed up capital turnover in the business process, focusing on the solvency of enterprises

The research results of factors affecting the capital structure show that total asset turnover (VTS) and solvency (LIQ) have a negative impact on the debt ratio (DA). Therefore, the increase in total asset turnover, solvency will have the impact of reducing the debt ratio. In order to increase the speed of capital turnover of a business, it is necessary to maximize revenue on the basis of the level of assets under management and use of the business. Enterprises need

to implement solutions to expand the market, increase quality, increase selling prices, thus increasing revenue, at the same time reducing product costs, reducing selling costs, and business management costs.

- Diversify the product consumption market
- Apply advanced technology in production to produce high quality products, diversified in types and designs, highly competitive, friendly with the environment, to meet most of the needs of in the domestic market, with the ability to export high value-added products with increasing output.
- Strictly control business costs, lower product costs

4.3. PERFORMANCE CONDITIONS

4.3.1. The State should have measures to stabilize the macro-economy

4.3.2. The State should have policies to support businesses in the Plastic and Packaging industry

4.3.3. The State should take measures to support listed Plastic and Packaging companies to raise capital through the stock market.

4.3.4. The State should implement a policy to stabilize interest rates and exchange rates

CONCLUSION

In business activities, enterprises can use many different capital sources to meet the capital needs in each stage of development. However, enterprises need to know how to coordinate the use of capital sources to create a reasonable capital structure thereby maximizing the value of the business. In practice, the decision to choose a capital structure is always a difficult issue for managers because it suffers from many different influencing factors depending on the business operating conditions of the business. On the basis of analyzing the current situation of capital structure and enterprise value of enterprises in the Plastic and Packaging industry, together with empirical evidence on the impact of capital structure on the enterprise value of enterprises Plastic and Packaging industry listed on the stock market of Vietnam, The thesis has solved the following objectives:

Firstly, the thesis has contributed to systematizing the theoretical basis of capital structure, enterprise value and the impact of capital structure on enterprise value in the market economy.

Secondly, the thesis has analyzed the current capital structure of the listed plastic and Packaging enterprises in Vietnam from the perspective of capital ownership relationship; time to mobilize and use capital; capital mobilization scope. Thereby pointing out the limitations in the capital structure of enterprises in the Plastic and Packaging industries such as the capital structure has the effect of reducing business efficiency; increases financial risks for businesses. The capital structure of a business depends heavily on external actors.

Thirdly, the thesis has analyzed the impact of the capital structure on the enterprise value of the listed plastics and packaging enterprises in Vietnam. The linear regression model shows that the debt ratio and the short-term debt ratio have a negative impact on firm value with a statistical significance of 5%. However, according to the percentile regression model, the effects of debt ratio and short-term debt ratio on Tobin'sQ differ with different percentile levels.

Fourthly, the thesis analyzes the characteristics of the Vietnam Plastics and Packaging industry, examining the socio-economic context and development orientation of the Plastic and Packaging industry, thereby proposing policy implications to adjust the capital structure to enhance the value of the business.

Thus, the thesis has solved the set objectives, answered research questions based on the results of analysis with solid evidence. Although the PhD student has made a lot of efforts in research, capital structure, business value is a complicated issue, especially for a specific industry such as the Plastic and Packaging industry, which is under competition of manufacturers from outside. Therefore, the thesis cannot help but have certain shortcomings. In order to further complete the thesis, the PhD student hopes to receive valuable comments from scientists and colleagues for the thesis to be more complete.

LIST OF STUDENTS PUBLISHED WORKS RELATED TO THE THESIS

1. Mai Thanh Giang, Tran Van Quyet (2018), "Research on factors affecting business performance of plastic enterprises listed on Vietnam's stock market", *Journal of Economy & Development* , 258 (December 2018), pp. 55-62.
2. Mai Thanh Giang (2020), "Capital structure of Plastic and Packaging companies listed on Vietnam's stock market_ Situation and solutions", *Journal of Economics & Business Administration*, 12 (March / 2020), pp. 67-73.
3. Mai Thanh Giang (2020), "Determining business value: Case study of plastic and packaging enterprises listed in Vietnam", *Proceedings of International Conference - Sustainable Development and the role of Universities in the era of the fourth industrial revolution*, May 2020, pp. 339-345.
4. Mai Thanh Giang (2020), "The impact of capital structure on enterprise value of Plastic and Packaging industry listed in Vietnam: Percentile regression model.", *Journal of Economics & Business Administration joint*, 14 (September 2020), pp. 87-92.
5. Mai Thanh Giang (2020), "The impact of capital structure on enterprise value of Plastic and Packaging industry listed in Vietnam.", *Journal of Economy & Development*, 280 (October 2020), pp. 59-67.