

Increasing company's financial performance by optimizing the capital structure

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Master's thesis
2018

 **Tomas Bata University in Zlín**
Faculty of Management and Economics

MASTER'S THESIS ASSIGNMENT

(PROJECT, ARTWORK, ARTISTIC PERFORMANCE)

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Degree Course: **Finance**

Thesis Topic: **Increasing company's financial performance by optimizing the capital structure**

Thesis Guidelines:

Introduction

Define the objectives and the application methods used in the Master thesis.

I. Theoretical part

- Prepare literature review focused on financial performance and the capital structure of the company.

II. Practical part

- Characterize the selected company.
- Analyze financial health of the company with emphasis on the capital structure.
- Identify key factors influencing company's capital structure.
- Prepare recommendations for optimization of the capital structure to increase financial performance of the company.

Conclusion

Thesis Extent: cca 70 stran
Appendices:
Form of Thesis Elaboration: tištěná/elektronická

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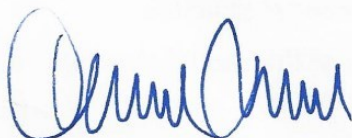
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Thesis Due: **17 April 2018**

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ABSTRAKT

Cílem této diplomové práce je navrhnout projekt optimální kapitálové struktury v akciové společnosti Phat Dat Real Estate. Teoretická část práce obsahuje informace týkající se aspektů kapitálové struktury společnosti, teorie a determinant kapitálové struktury. V praktické části je s využitím nástrojů finanční analýzy posouzeno finanční zdraví a aktuální kapitálová struktura společnosti. Hlavním účelem praktické části je návrh plánu, optimalizace kapitálové struktury společnosti založený na obecně uznávaných a používaných praktikách a metodách. V závěru této diplomové práce je uvedeno shrnutí výsledků analýz a doporučení pro optimalizaci kapitálové struktury společnosti.

Klíčová slova: dluh, vlastní kapitál, optimální kapitálová struktura, finanční analýza, náklady na kapitál.

ABSTRACT

The aim of this master thesis is to design a project of the optimal capital structure in Phat Dat Real Estate Joint Stock Company. The theoretical part of the thesis contains information relating to the aspects of the company's capital structure, the theories as well as determinants of capital structure. In the practical part, financial health and actual capital structure of the company are evaluated by detailed financial analysis. The main objective of the practical part is to design a plan to optimize capital structure of the company relying on generally acknowledged and used methods. In the conclusion of this master thesis, the finished analysis is summarized and the most suitable option for optimizing capital structure of the company is suggested.

Keywords: Debt, owner's equity, optimal capital structure, financial analysis, costs of capital.

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INTRODUCTION

In the current economy, many businesses are facing both internal and external challenges. In the process of integration and trade liberalization, the external challenges here are the intense competition and more and more competitors. Internal challenges can include factors such as the weak enterprises cannot keep up with the international economic integration, the low scientific and technical level result to not efficiency in business. In general, for enterprises, capital is important in the process of production and business. With the current market economy, businesses have more opportunities to access loans. But the problem of executives is how to build a reasonable capital structure between equity and debt to maximize firm value.

Capital structure analysis should provide owners, investors, lenders and other users the information about the firm's financial autonomy, the stability of funding sources, the balance company's financial status, to assess the ability and certainty of the most efficient use of business capital as well as the solvency of the company.

In the current international economic integration process, selecting a reasonable financing structure between equity and debt to maximize the value of the enterprise is necessary. Besides that, finding out which factors affect the capital structure of the business and the impact of these factors is also a huge concern. In fact, the capital structure will vary depending on the characteristics of each business enterprise, the industry in which it operates, and the effects of microeconomic and macroeconomic fluctuations. Rather than finding out what percentage of debt to equity is optimal, financial managers are often interested in finding out what factors influence the decision on using the loans, in other words, use financial leverage. The correlation between these factors and the capital structure can help to evaluate whether the decision on equity is reasonable, what the arising risks are, and which the optimized solution is to improve the efficiency of financial leverage and maximize the value of the business.

The main objective of this thesis is to analyze capital structure of Phat Dat Real Estate Joint Stock company (here referred to as “PDR”), operating in Real Estate Industry in Vietnam, on the basis of various financial opinions, to determine optimal capital structure as well as to recommend how to increase the company’s performance by optimizing capital structure.

The whole thesis is divided into two main parts: Theoretical part and Practical part. The Theoretical part presents literature review focused on financial performance and the capital

structure of the company, explains aspects of the company's capital structure, definition, composition as well as factors affects the capital structure. Some main theories are presented in this part to show the clearly view about this issue. In Practical part, on the basis of selected financial indicators and current capital structure of PDR, financial performance with emphasis on the capital structure is analyzed, evaluated and compared with other companies in the same industry, to find out the optimal capital structure of the Company. Relying on these theoretical knowledge and analysis of PDR's financial data for 5 years, a plan for optimizing capital structure of the company is designed. In the project part, the company will design a project to optimize its capital structure.

OBJECTIVES AND METHODS OF MASTER THESIS PROCESSING

The objective of this master thesis is to provide fully the information about the capital structure of the company and how to increase the company's financial performance by optimizing capital structure.

Firstly, the author will collect and summarize the research literature with the emphasis on different aspects of the capital structure, then review the appropriate literature from the theories and previous studies.

In the next step, the author will collect secondary data from Phat Dat Real Estate Joint Stock Company. Data is collected mainly from financial statement for the period 2012 – 2016 and public information of the company. To understand the business environment and market where the company is operating, PEST analysis and SWOT analysis will be employed to analyze the strengths, weakness, opportunities, threats as well as macroeconomic factors affecting to the company.

Basing on secondary data of the company and basic functions in spreadsheet processing program such as Excel, the detailed financial analyses will be calculated. Then, in the final part, a project will be suggested based on the company's situation and these analyses.

I. THEORETICAL PART

1 CAPITAL STRUCTURE DEFINITION

Capital structure is a financial concept that reflects the ratio between the debts and the equity that the firm uses. Determining an optimal capital structure is important in business operations. Because the optimal capital structure will help businesses minimize their weighted average cost of capital (WACC), and thereby maximize the firm's value. In addition, the capital structure also affects the profitability and business risk that the business may face. Therefore, choosing a capital structure between the debt and equity is an art in financial management. In this part, we will mention some definitions relating to the capital structure, some kinds of risk that can occur in the business, interest tax shield and financial distress that may happen when the firm finances with debt, and asymmetric information in a firm.

1.1 Capital structure

There have been various attempts to define Capital Structure, all definitions explain types of securities and the proportion that create capitalization. In general, Capital Structure of a firm refer to the mix of different securities issued to finance its operations (Nirajini & Priya, 2013). In the process of operations, especially for investment in large-scale business plans, enterprises must consider how to use capital resources most effectively. The firm needs to make investments in order to at least remain its operation. To finance these investments, it has to figure out whether using bank loans, equity bonds, or its retained earnings will get the most profit.

The capital structure is a combination of regular short-term debt, long-term debt and equity that are often used to finance an investment decision of an enterprise. When a firm need to raise its funds, it must decide which types of securities it will sell to investors. How much debt a firm should borrow relative to the equity is known as capital structure decision (Stephen et al., 2016). One of the major problems for corporate finance executives of any businesses of any industries is how to build the capital structure, how much debt it should have to maximize the value of the business, also known as building the optimal capital structure. This is a quite interesting issue both in theoretical and practical applications. Optimizing the capital structure of the firm, no matter in a small business or a global corporation is always an important issue for the management.

The optimal capital structure refers to the ratio between equity and debt financing to minimize the cost of capital, minimize business risk and maximize corporate value. The capital

structure is statistically characterized by the financial leverage of the enterprise or the ratio of debt to total assets.

$$\text{Financial leverage} = \frac{\text{Total debt}}{\text{Total Assets}} \quad (1)$$

Debt includes short-term debt and long-term debt. Therefore, there are two formulas that are short-term financial leverage and long-term financial leverage:

$$\text{Short-term Financial leverage} = \frac{\text{Short term debt}}{\text{Total Assets}} \quad (2)$$

$$\text{Long-term Financial leverage} = \frac{\text{Long term debt}}{\text{Total Assets}} \quad (3)$$

Unfortunately, finding out a reasonable financial leverage for a company is a problem difficult to find out an exact answer. The combination of debt and equity varies depending on the factors involved. At least they depend on two factors:

First, the optimal capital structure varies from industry to industry. The characteristics of the industry that business operates will contribute to determine the capital structure for itself. Firms operating in growth industries like biotechnology and high technology usually use very little debt whereas others industries such as real estate, automotive, airlines have high debt ratio (Berk & Demarzo, 2014, p.526).

Second, the structure of capital varies according to the growth cycle of the business. Firms that are in the initial stage of growth, they often use more equity in capital. By this stage, shareholders will not need the dividends, they expect capital surpluses in the future. When the firms become profitable, it should include debt in its capital structure.

As mentioned earlier, achieving the optimal capital structure is very important to the financial management, it can help maximize the value of the business. In theory, because managers tend to minimize WACC, they will try to adjust the capital structure (Bradley et al., 1984). The following sections outline the relationship between WACC and the value of the firm.

1.2 Risk and leverage

Business risk reflects the risk associated with the operation of the business, causing uncertainty about the profitability of the business. Business risk consists of two types: individual risk and systemic risk. First, the particular risk, sometimes referred to as non-systematic risk, is the company's own risk. For example, an airline could face the risk of airplane engine

malfunction, abnormal weather, the cheap airline competition. These unwanted events will first affect the operation of the company and then affect the profitability. Second, systemic risks, also known as market risks, occur within the whole economy and threaten the functioning of all sectors and businesses. One example is the economic crisis, war, and currency fluctuations. In practice, business risks will vary from business to business, and the difference will depend on the characteristics of the business, industry, and market behavior.

Standard measure is beta. Beta is used in the capital asset pricing model (CAPM), which calculates the expected return of an asset based on its beta and expected market returns. Beta is also known as the beta coefficient.

Business risk is influenced by numerous factors, including operational leverage, demand, sales volume, per-unit price, input costs, competition, the flexibility in management, and government regulations. For example, if the demand for the goods does not change, the business can work optimally, thus minimizing risk. On the other hand, frequent changes in input costs can cause business risks when the business cannot react quickly by raising the selling price. In addition, the characteristics of the business are determined by the industry in which it operates and the characteristics of the market. A company with a higher business risk should choose a capital structure that has a lower debt ratio to ensure it can meet its financial obligations at all times.

In short, business risk reflects the risk of the business based on the characteristics of the business. The rate of return required by the investors and WACC are determined by the risk. Therefore, determining the optimal capital structure will have to take into account the business risk and the factors that affect it.

Financial risk is the risk associated with shareholders as a result of the decision to finance with debt. With the use of debt, shareholders will bear this type of financial risk, when the lenders of the company are prioritized to pay to shareholders in the event of bankruptcy. The higher the debt-to-asset ratio is, the greater the financial risk is. Meanwhile, shareholders still have to accept basic business risks while the debt-holders, who receive fixed interest payments, bear none of the business risk.

There are many types of financial risks. The most common ones include credit risk, liquidity risk, asset backed risk, foreign investment risk, equity risk and currency risk.

Financial risk represents the expected rate of return to the shareholders. However, it increases the total risk for shareholders. Similar to business risk, finding a balance between

amount of financial risk that a company can accept is an important issue when finding optimal capital structure.

Financial leverage indicates the level of debt on the total assets of the business. The more debt financing a company uses, the higher financial leverage it uses. A high level of financial leverage means high-interest payments, which affect negatively the company's earnings per share. Financial leverage brings both advantages and disadvantages for the business. An unsuitable debt ratio causes an inefficient financial leverage, affect the total assets and the value of the company. Therefore, determining the optimal capital structure requires balancing both the favorable and the difficult aspects to maximize the value of the enterprise, and, in particular, to increase the market value of the stock.

1.3 Interest tax shield

The firm must pay taxes on the income that they earn. Because interest expense is tax-deductible so that it will reduce the amount of corporate tax the firm must pay. In general, interest tax shield refers the gain to investors that get from tax deductibility of interest payment. According Berk and Demarzo (2014, p.510) *“Interest tax shield is the additional amount that a firm would have paid in taxes if it did not have leverage.”* The effect of a tax shield can be determined using a formula.

$$\text{Interest Tax Shield} = \text{Corporate Tax Rate} \times \text{Interest Payments} \quad (4)$$

As the formula (4), the benefits from the tax shield will increase if the level of debt increases. When the firm finance with debt, each year, it makes interest payment, the cash flow it pays to the investors will be higher due to the amount of interest tax shield.

$$\text{Cash flow to investors in the leveraged firm} = \text{Cash flow to investors in unleveraged firm} + \text{Interest tax shield.} \quad (5)$$

However, the benefit of the tax shield will not encourage businesses to borrow as much. Because not all businesses are profitable, and even if they lose, they still have to pay the interest. Therefore, choosing a capital structure between debt and equity is an art. This is also the premise for developing trade-off theory.

1.4 Financial distress

“When the firm has trouble meeting its debt obligation, we say that the firm is in financial distress.” (Berk & Demarzo, 2014, p.539). Financial distress is a situation where a firm cannot meet or has difficulty to pay off its financial obligations to its creditors, generally due to high fixed costs, illiquid assets or incomes sensitive to economic downturns. In the other words, the firm will incur several costs relating to financial distress if it fails to meet, in full, the end-of-period payment as promised to its debt-holders (Bradley et al., 1984)

The value of a leveraged firm will increase when the interest paid on the debts is tax deductible, reflected in the present value of the tax shield. Meanwhile, the cost of financial distress will reduce the value of the firm. Therefore, a reasonable debt ratio should be chosen so as to maximize the balance between the cost of financial distress and the benefit of the tax shield. This led to the development of trade-off theory - a model used when studying capital structure. According to this theory, "the total value of a leveraged firm equals the value of the firm without leverage plus the present value of the tax savings from debt, less the present value of financial distress costs."

Value of levered firm = Value of unlevered firm + PV of interest tax shield - PV of financial distress cost. (6)

Financial distress cost really exists and is one of the significant costs when evaluating a business. It can be costs in the event of bankruptcy, costs of reorganization, or agency costs incurred when the firm's credit index is reduced. From a manager's point of view, financial distress can be substantial. First, financial distress will reduce the large number of suppliers, employees and loyal customers. Financial distress can cause a potential loss of 10% to 20% of firm value (Andrade & Kaplan, 1998). In addition, financial distress will cause businesses to lose a large market share to its competitors. Secondly, these businesses may be rejected from prospective projects or even on-going projects. Third, the firm will always face the risk of bankruptcy. And the fact is that when the firm falls into bankruptcy, the sale of assets to pay off its debts will only be worth less than the real value of the firm. Thus, a reasonable debt ratio implies an equilibrium between the benefit of the tax shield and the cost of bankruptcy.

If the firm has unstable profits or an unstable market demand, it will face big financial distress. Thus, these businesses should use less debt. In addition, asset structure is also a determinant of financial distress. For example, the loss of intangible assets such as brand image,

human resources, technology will increase the cost of financial distress. Therefore, the higher financial leverage should be used in the firms that invest heavily in the tangible assets and have stable income than others (Bradley et al., 1984).

1.5 Asymmetric information

There is asymmetric information when managers have better information than investors (Berk & DeMarzo, 2014). In fact, there are a number of companies with long history, stable income and these companies rarely raise capital from loans. Stewart Myers developed the pecking order theory to explain the matter that focus on the role of information asymmetry in the operation of the business. Asymmetric information indicates that, typically, managers have more information about the company's operations, risks, prospects and its future cash flow than the outside investor. Because outside investors have less information than managers, they may not be able to evaluate the true value of a new issue of securities by the firm (Nirajini & Priya, 2013).

Only managers know the exact value of the company. Issuing stocks will tend to reduce the value of stocks in circulation by transferring value between new shareholders and old shareholders. Therefore, when it is necessary to increase the capital of the company, managers tend to avoid the issuance of new stocks and prioritize the use of retained earnings of enterprises and then prioritize loans from outside. Issuing new stocks is their last choice. In addition, the pecking-order theory also indicates that the firm will only issue new shares at prices higher than the market value of the stock. Therefore, the issuance of shares will signal that the stock is being overvalued and more importantly, the business is not able to mobilize capital from the loan. Thus, investors are not willing to buy with pre-announcement price, and shares price will decrease (Berk & DeMarzo, 2014). According to the pecking order theory, issuing shares means information is not good under the eyes of investors. On the contrary, if a business is willing to use a loan, it is a positive sign of its growth (Myers, 1984). As a result, loans are often preferred over equity. However, as mentioned earlier, borrowing increases the risk for businesses. Effective firms often use retained earnings as the safest internal source of capital. Therefore, the firms will, first of all, prioritize the increase of capital from retained earnings, then loans, and eventually to issue additional shares.

2 COMPONENT OF CAPITAL STRUCTURE

When a firm need to raise money for an investment project, it will consider which type of securities it should issue to outside investors. The most popular choice is financing only with equity, or it should use the combination of both debt and equity.

2.1 Equity financing

Equity financing is the method of raising capital by selling company's stock to investors. In contrast, the shareholders will receive ownership interests in the company. Owners bear risks most so that they will also demand the highest rate of return. Equity financing includes selling the company's stock and giving a portion of the ownership to investors. The company's proportion will be sold depends on how much the owners have invested in the company and which investments are worth at the time of the financing.

Equity capital includes: contributed capital, which is the amount originally invested to the company to exchange for shares or ownership of the company; and retain earnings, which shows profits that kept from the past and used to strengthen balance sheet or grow company. (Nawaz & Naseem, 2011).

In the early stages of company's development, especially when the company does not have enough revenues, cash flow or assets as collateral, equity financing can attract capital from investors who are willing to take risks with the company. Similarly, if the company shows a promising growth, it can raise capital significantly through selling stocks to the public in the capital markets. Based on the stock price of the company, a part of the company is sold to new investors. For the entrepreneur, equity financing is the way to raise capital before it gains profits in exchange for ownership and control of the company.

Equity in a firm without debt in its capital structure is referred as unleveraged equity. In this case, the firm's common stockholders would face business risk (Brigham & Ehrhardt, 2011). It is the inherent risk that occurs because of uncertainty about the operating profits in the firm's operations.

2.2 Debt financing

Financing the firm with equity is not only option of the entrepreneur. Equity in a firm with debt in its capital structure is called leveraged equity (Berk & DeMarzo, 2014). Debt financing is a method of raising capital by selling debt instruments to individuals and institutional

investors. In contrast, the individuals or institutions will become creditors. The original amount and interest on the debt will be repaid in the term of credit. Long-term debt is normally considered the safest type because the firm has many years to repay the principal while paying interest only in the meantime (Nawaz & Naseem, 2011).

Debt financing consists both secured and unsecured loans. Security involves a form of collateral as a guarantee that the loan will be repaid. If the firm fails to repay the loan, that collateral is forfeited to meet the payment of the debt. Most lenders will ask for some kind of security on a loan. Few, if any, will lend money based on brand name or business idea that they believe it can be successful. The firm can also try to obtain debt financing through an unsecured loan. In this type of loan, the firm's credit reputation is the only security that is accepted. The firm can get a personal loan of thousand dollars or more if they have a good relationship with the bank. But it's usually short-term loans with very high rates of interest. Most of the lenders are very cautious and they are not willing to provide an unsecured loan unless the firm has a substantial amount of business with them in the past and have performed above expectations. Even if the firm does have this type of relationship with the lender, they may still be asked for the collateral on a loan because of economic conditions or their present financial circumstances.

Debt financing might be dangerous in the early stages of a firm. The operations can be difficult and the firm will lose money at first and this can hurt the firm's ability to repay debt and interest on time. The firm's net income will be low so that the tax advantages of debt will be minimal or insignificant. But when the business grows and matures, debt financing can be a stronger option. The tax advantage at this stage will be greater, your cash flow will be more predictable, and the risk you face in potential bankruptcy decreases.

When financing a firm with debt and equity, the firm would face financial risk. When stockholders decide to finance with debt, they have to accept financial risk as the additional risk (Brigham & Ehrhardt, 2011). Also, the financial risk occurs because the firm has fixed financing obligation to pay interest before the shareholders can share in the retained earnings.

2.3 Advantages and Disadvantages of debt and equity financing

2.3.1 Advantages and Disadvantages of debt financing

One of the biggest advantages of using debt instead of equity is that the interest paid on the debt is tax deductible. In other words, businesses benefit from the "tax shield." This is a big

attractiveness for debt financing. The principal and interest payments on a loan are often categorized as business expenses and therefore, they can be deducted from your taxable income. In principle, if we replace equity with debt, we will reduce corporate tax payments, thus increasing the value of the business. The second advantage is that the shareholders can maintain ownership. Debt holders are limited to a fixed return, so shareholders don't have to share profits if the business does exceptionally well. The firm has obligation to make the agreed-upon payments on time when it borrows from the bank or other credit institutions, but that's the end of firm's obligation. The shareholders keep the right to run the business however they choose without interference from outside. The third advantage of debt is that cost of debt is generally less expensive than the cost of equity. Interest rates on bank loans or bond yields are much lower than expected rates of return for investors. Financing debt is also more flexibility and less complicated because they are only obligated to the investor or lender for the repayment period. After all money is paid back, the business is completely free from its obligation. The company is also not required to abide by state and federal securities laws and regulations.

Debt helps management be more cautious when investing: the reality shows that the companies with an abundant in cash and no ability to grow fast, managers have the tendency to invest in noisy and inefficient projects, or increasing costs to create the growth (overinvestment). But if a company uses debt to finance its investments, periodic interest payments, as well as principal payments, will prevent or reduce this excessive investment.

However, the firm can't raise their debt too high than equity. Because the firm may fall into unhealthy financial status and it can lead to risks. Higher debt ratio will lead to greater risk of bankruptcy. As the debt ratio rises, the firm faces the risk of bankruptcy. In other words, bankruptcy costs start to appear and increase faster than the benefits from the "tax shield" that the firm gets by the use of debt financing. In addition, companies with high levels of debt also affect investors' sentiment and create conflicts between creditors and investors. Investors look for projects that are underinvestment. Those are high-risk projects that may create low value in the future but can bring cash in the form of dividends right now. While creditors want the company to invest in low-risk projects and create high value in the future.

2.3.2 Advantages and Disadvantages of equity financing

Equity financing is the long-term solution to finance the needs of a company. It keeps management away from the struggle of raising funds from other sources like financing with debt.

If business fails, the firm don't need to return money to investors. With equity financing, the company will have less burden. There is no loan need to pay back. The company doesn't have to make a monthly loan payment. This can be especially important if the company startup and the profit haven't been generated yet. This also frees investors to use more money into growing the business. In addition, it can be useful when the firm has issues with credits. If the firm lack creditworthiness, showing the poor credit history or lack of a financial track record, equity financing can be preferable and more appropriate than debt financing.

One of the disadvantages of equity is that cost of equity is more expensive than the cost of debt. Because there is no investor (the owner of the business) invest capital in the company to bear the risk of operation but receive interest at the same rate as the loan. There is another disadvantage, as the higher the owner's equity, the greater the number of owners, the greater the pressure on the investor's expectations as well as the larger the management and supervision of the owners on the operators. Sharing ownership and having to work with others could lead to some conflicts if there are differences in vision, management style and ways of running the business. However, equity will still have to increase when the company needs. It raises to balance with debt and keep the company in good financial health.

The value of the business using the loan will be increased by the tax deduction source but the business will bear the financial risk. The risk will increase according to the debt ratio. The value of the business will increase to a certain threshold, then gradually decrease as financial risk increases. So, the firm has to find an optimal capital structure which the firm's value is greatest and the cost of capital is lowest.

3 THEORY OF CAPITAL STRUCTURE

The modern capital structure theory begins with the article by Modigliani and Miller (1958) (MM theory). According to MM theory, the choice between equity and debt is not related to the value of the firm. In other words, the theory points how the capital structure should be, showing under what conditions the capital structure is not related to the value of the enterprise. Modern capital structure theory has continued to grow in later years, including trade-off theory, pecking-order theory, agency costs theory, signaling theory.

3.1 Modigliani & Miller (MM) theory

Modigliani and Miller theory (1958) was the first to study the capital structure of the business, and this was the basis for subsequent theories.

Berk and DeMarzo (2014) mention about MM proposition I as: *“In a perfect market, total value of the firm is equal to the market value of total cash flows generated by its asset and is not affected by its choice of capital structure.”* () In other words, the value of a firm does not depend on the amount of stock being issued but depends on the amount of its assets. It is also possible to understand the MM proposition I as, whether using equity or choosing short or long-term debt, the value of a firm is not changing (Bradley et al., 1984).

As Modigliani and Miller, this proposition is hold under set of conditions referred as perfect market.

1. The securities can be traded by both of investors and the firm at competitive price equal to present value of their future cash flow.
2. There are no taxes, transaction costs and other cost relating to the trading of securities.
3. The cash flow generated by its investment is not affected by financial decision of a firm.

As MM proposition I: $V_L = V_U$ (7)

In which:

V_L : Market value of the firm with financial leverage

V_U : Market value of the firm with no financial leverage

The value of the firm is unchanged even though there is a change in the ratio between debt and equity. In this case, the factors that can affect the business value come from the factors

on the left side of the balance sheet. Therefore, the value of assets and development opportunities are unchanged. Conversely, if the development opportunities of the company change, the working capital will be affected, leading to a change in the valuation of the business.

MM proposition I also implied that the firm can change its capital structure at any time by issuing new securities and pays for in existing investor by funds (Berk & DeMarzo, 2014).

Berk & DeMarzo (2014) mentioned about MM proposition II as: “The cost of capital of levered equity increase with the market value debt-equity ratio of the firm.”

$$R_E = R_A + (R_A - R_D) \times D/E \quad (8)$$

Where:

R_E is cost of Equity, R_A is WACC, R_D is cost of debt, and D/E is debt-equity Ratio.

MM proposition II indicate that if the firm increases financing with debt, cost of equity will increase. And risk of equity depends on business risk that results from firm’s operation and financial risk that results from financial leverage. Business risk is determined by R_A , and financial risk is determined by D/E (Stephen et al., 2000, p.536).

In short, both MM proposition I and II assume that the capital market is perfectly competitive, without the existence of taxes, no transaction costs, and no bankruptcy costs. This is very unrealistic.

MM proposition I with taxes: Firm’s value with financial leverage is equal to the firm’s value unlevered plus the present value of interest tax shield.

$$V_L = V_U + T_c \times D \quad (9)$$

Where:

T_c : Corporate tax rate

D : Amount of debt

MM proposition I with taxes implicate that financing debt is extreme beneficial, in the extreme, optimal capital structure of a firm is 100% debt.

MM proposition II with taxes : The cost of equity R_E is:

$$R_E = R_U + (R_U - R_D) \times D/E \times (1 - T_c) \quad (10)$$

Where R_U is unlevered cost of capital of the firm with no debt. Unlike the MM proposition I, implication of MM proposition II are the same whether taxes is existing or not. (Stephen et al., 2016, p.536)

Two propositions of Modigliani and Miller is the premise for developing theories of the capital structure of the business later.

3.2 Trade-off theory

Based on the theories of Modigliani and Miller, the trade-off theory is a development of Miller when he considered the effects of taxes, bankruptcy costs and agency costs in explaining the Capital structure of the enterprise. A significant purpose of the trade-off theory is to explain that the company usually is financed partly with debt and partly with equity. It refers advantage to finance with debt, the tax benefits of debt and cost of financing with debt, the costs of financial distress which include bankruptcy costs of debt and non-bankruptcy costs (i.e. employee loss, customer loss, suppliers demanding disadvantageous payment terms, etc.).

This theory recognizes that target debt ratios may vary from company to company to maximize the value of the enterprise. It mentions that the firm with safe, tangible asset and lot of taxable income to shield may have high target ratios. In contrast, the unprofitable firm with risky and intangible assets relies mostly on equity (Brealey et al., 2017). More specifically, there will be an optimal combination of companies as they strive for increasing use of debt. Increasing debt will increase WACC. Because the capital structure is a combination of debt and equity, the firm wants to reach the optimal capital structure with lowest WACC and highest firm value, so trade-off theory explains how a firm can get optimal capital structure by adjusting their debt and equity ratios to balance between the benefits tax shield and cost of financial distress. Thus, the optimal capital structure is obtained as the present value of the interest tax shield is offset by the present value of the cost of financial distress. In addition, there are advantages and disadvantages when using debt as previously analyzed.

In the early stages, there are benefits from paying taxes called the tax shield. That means businesses will pay fewer taxes than they must pay by borrowing more debt. However, when there is too much debt, the business will face the risk of repaying in the future. When the firm is unable to pay, the business will go bankrupt. Thus, according to trade-off theory, the

optimal combination point is defined as the highest point of the illustrated curve as shown in Figure 1.

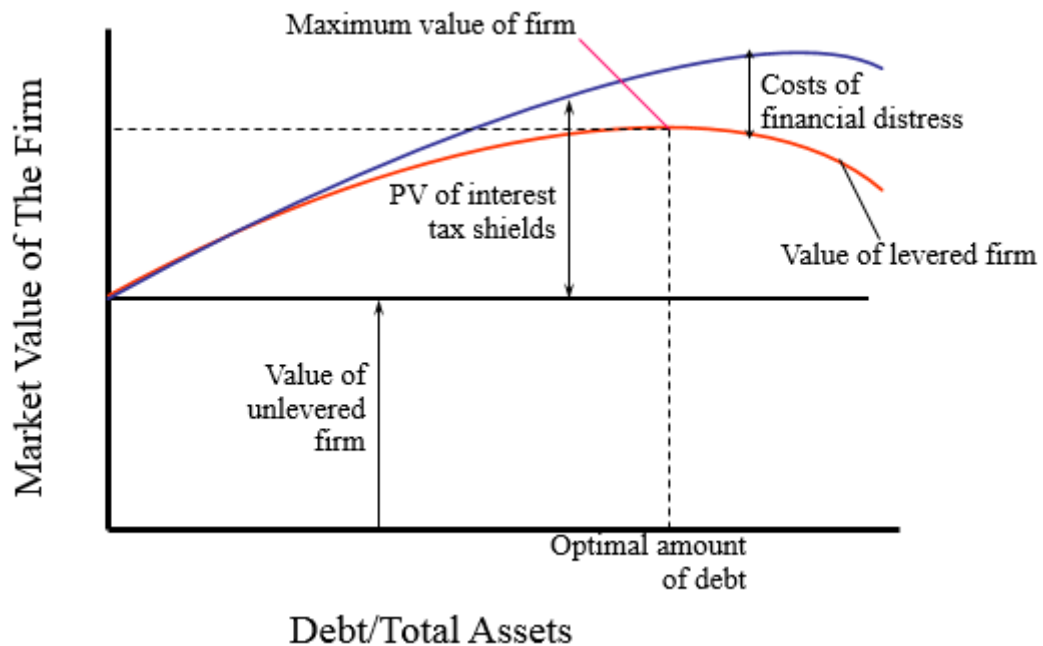


Figure 1: The optimal combination of trade-off theory (Source: Brealey et al., 2017, p.498)

However, there are few things that trade-off theory fails to explain. It cannot explain why some of most successful companies still go well with low financial leverage. This is in contrast to trade-off theory: Debt financing can help businesses maximize profits at equilibrium. Under trade-off theory, high profit should mean using more debt-servicing and more taxable income to shield, thus, it should have a higher target debt ratio. Therefore, the pecking-order theory is essential to solve this problem.

3.3 Pecking-order theory

Pecking-order theory starts with asymmetric information. According to Myers and Majluf (1984), this theory assumes that financial costs increase with asymmetric information. In fact, it has been proven that enterprise executives will always have more information about their business as risk, prospects than outside investors and any actions they take will also affect the overall situation of the business. For example, when the firm informs an increased regular dividend, share prices typically rises, because investors interpret the increase as a signal of management's confidence in future profit (Brealey et al., 2017).

Based on this theory, the company will prefer to use internal financing first. Then, they will borrow loans if necessary. Equity will be sold as a last resort. The pecking-order theory

refers the reason the most profitable companies generally use less debt. Because these companies have greater internal cash flow, they will need less external financing, thus, they will have less debt. For companies with low profitability, they don't have enough internal funds for investment projects and thus, debt financing is the first choice of the pecking-order of external financing (Stephen et al., 2016).

Pecking-order theory also refers that there is no target capital structure. Under this theory, there is no optimal debt-equity ratio. Instead, capital structure of a firm will be determined by its need for external financing, which dictates the amount of debt the firm will have (Stephen et al., 2016)

In Pecking-order theory, attractiveness of interest tax shield is assumed to be a second-order effect. External debt will be used more at a company with a high rate of return and more growth opportunities.

Another point that Pecking-order theory indicates is the firm wants financial slack. The firm will want to reserve generated cash internally to avoid selling equity. Such a cash stockpile is called as financial slack (Stephen et al., 2016)). Having financial slack means having cash, marketable securities, saleable real asset and ready access to debt market or to bank financing (Brealey et al., 2017, p.514). It's not applied at all company, but at least we can observe this pattern in some companies

However, Pecking-order theory is less successful in explaining different debt ratios among industries.

3.4 Agency cost theory

Agency costs are a type of internal cost that arises when stakeholders have different objectives. These costs arise because of core problems, such as conflicts of interest between stakeholders.

There are two types of conflicts. First is the conflict between shareholders and managers that resulting from the case managers holding less than 100% of the residual claim. While shareholders hope that management runs the company in a way that increases shareholder value, management may want to grow the company in the ways to maximize their personal power and wealth. And maybe these ways are not bringing the best interests of shareholders. The second is the conflict between debt holders and equity holders. When the firm finances with debt, a conflict of interest may occur if investment decisions have the different outcome for

the debt's value and equity's value. When risk of financial distress is high, such the conflict mostly arises. In some case, managers can act to benefit for shareholders but harm to debt-holders and lower total value of the firm (Brealey et al., 2017)

Debt-holders have priority on claims over equity-holders. If the shareholders of the firm think that there is a high probability of bankruptcy, they may not make investment projects, even if it increases the value of the firm. This is because of the fact that the costs for the implementation of the project are fully incurred by the owners, while most of the benefits will remain with debt-holders. Equity-holders may take part in riskier projects or underinvest to minimize the benefits to debt-holders. Myers (1977) also refers that the under-investment problem is especially stronger toward growth companies because it will cause them to pass on profitable investment opportunities. Such the firms are better off if financing with equity. However, under-investment problem can be get over by the use of short-term debt. Short-term debt can help arrange the interests of the shareholders and the management (Grossman & Hart, 1988).

Agency costs theory refers that these conflicts and agency cost can be mitigated by selecting the optimal capital structure. In addition, Jensen (1986) also assumed that using debt in the capital structure is a way to minimize agency costs. More specifically, this would give the debt-holder the right to receive a portion of their capital in the case the company was unable to pay interest and the original loan amount.

3.5 Signaling theory

MM assumed that investors have the same information about risks and future prospects of the firm with managers. This is called symmetric information. However, in fact, managers always have better information than outside investors as mentioned before as asymmetric information. It has an important effect on the optimal capital structure.

The argumentation is that management will only issue debt or equity in the case internal resources are not enough to finance its investments or the risk is not appropriate with the expected returns. In this situation, type of the trends, level, and reliability of the information supplied will be identifying with the emphasis.

The managers will not issue additional equity if they think that the current share price is less than the actual value of the stock (relying on their internal information). Thus, investors

often recognize an additional issuance of stock as a negative signal, therefore, the stock price will fall.

4 COSTS OF CAPITAL

As mentioned before, capital consists two types, one is debt and other is equity. If a firm finances its operation with debt, it is borrowing money from the lenders and repay the money in a certain period of time. In return the lenders will receive interest payments on the loans. With equity financing the shareholders buy shares in the company, they become owners and in return, they are given a portion of the firm's profit. Cost of capital generally represents the different costs from different sources of financing obtained by a business.

4.1 Cost of debt

The firm can increase debt in several ways, including borrowing funds from banks, financial institutions or from public debt (bonds) for a period of time with a determined interest rate.

Cost of debt refers to the rate a firm must pay on its current debt. It easily measures the pre-tax rate that company must pay for its creditors. There is difference in cost of debt before and after taxes because interest expenses are deductible from taxable income.

To calculate the pretax cost of debt (R_D), the firm needs to determine the total amount of interest it has to pay on each of its debts for the year. Then, divides this amount by the total debts. To calculate after-tax cost of debt, subtract a company's effective tax rate from 1, then multiply the difference by its cost of debt R_D .

Cost of debt after-tax is: $R_D \times (1 - T_c)$, in which T_c is corporate tax rate.

Lenders demand lower returns because they take the lower risk than any contributors of long-term capital. Therefore, cost of debt is lower than the cost of other forms of financing.

4.2 Cost of Equity

The cost of equity is the rate of return required on an investment in equity that the firm theoretically pays to its shareholders, to compensate for the risk they must undertake by investing their capital.

When a firm needs to raise capital, it can be done by two ways: debt or equity. Debt is cheaper, but it must be paid back. Equity does not need to be repaid, but it costs more than the debt. Although the cost of equity is higher than debt, equity generally provides a higher rate of return than debt because shareholders will take more risks than debt-holders.

Cost of equity could be derived from the capital assets pricing model (CAPM).

$$R_E = R_f + [\beta \times (R_m - R_f)] \quad (11)$$

where:

R_f : the return on risk free assets (such as government bond)

R_m : the expected return on the stock market

$R_f - R_m$: the risk premium

β (beta) measures the volatility of how risky a specific security is to overall stock market.

CAPM describes the correlation between cost of equity and the systematic risk of the firm which is estimated by β (beta). In this equation, the expected rate of return on a risky asset, such as an equity investment, equal to return on risk-free asset (the rate of return paid on risk-free investments such as Treasuries) plus a risk premium.

4.3 Weighted Average Cost of Capital (WACC)

WACC recalls that the firm's overall cost of capital is a weighted average cost of several composition of the firm's capital structure. Firm's value is maximized as the WACC is minimized. WACC is the suitable discount rate for the future cash flow of the firm, therefore, minimizing WACC means maximizing the firm's value. The company can get optimal capital structure if it has a particular debt-equity ratio at which possible WACC is lowest. (Stephen et al., 2016, p.523)

The company's cost of capital depends not only on the cost of debt and equity financing but also how much of each it has in capital structure. (Young and O'Byrne, 2001).

$$WACC = E/(D+E) \times R_E + D/(D+E) \times R_D \times (1-T_c) \quad (12)$$

In formula, the weighted average cost of capital of the WACC consists of two components: the after-tax cost of debt - R_D times the debt to total assets ratio, and the cost of equity times the equity to total assets ratio. It is evident that financial leverage influences the WACC in two directions: first, the change in rate of return, and second, change of debt-equity ratio.

Because the firm always wants to minimize the cost of capital, the amount of debt and the cost of debt play an important role in determining the efficiency of the business operation. Therefore, the adjustment of these two factors can help the firm achieve their optimal capital structure.

5 DETERMINANTS OF CAPITAL STRUCTURE

In the process of international economic integration, the issue of choosing a reasonable capital structure between equity and debt capital to maximize firm value is important. In addition, finding out which factors affect the capital structure of a firm and the impact of each factor is also very necessary. In fact, there are many studies relating to the determinant factors of capital structure. In this part, some factors easy to see in any firm will be mentioned.

5.1 Profitability ratio

There is a strong relationship between profitability and financial leverage. The first explanation is that the higher the profitability rate is, the lower probability of bankruptcy is. In this case, lenders may be more willing to lend to profitable firms, so that these firms would have easier access to debt markets. According to trade-off theory, due to the benefits of the tax shield, the company will borrow more and be encouraged to borrow more. Therefore, the firm will prioritize using the loans, leading to an increase in financial leverage. In addition, the firms with rich cash flow may suffer from the agency problems of free cash flows. Conflict of interest between the managers and the shareholders about payout policies is especially severe when the firm has abundant cash flow. The problem is how to motivate firm's managers to use the cash efficiently instead of investing it at below the cost of capital or wasting it on inefficient projects. Thus, as agency cost theory, benefits of debt will reduce agency costs of free cash flows (Jensen, 1986). So that, there is positive relationship between leverage and profitability.

However, according to Pecking Order theory proposed by Myers and Majluf (1984), in an environment characterized by asymmetric information, it is costly to issue a security which outside investors have little information. Therefore, internal financing is the cheapest way to funding projects. The Pecking Order theory suggests that profitable firms will have lower leverage. They will mostly meet their financing needs by retained earnings. When comparing to inefficient firms, profitable firms will have more money, so they will use this internal capital. Schoubben and Van Hulle (2004) suggests that profitable firms rarely take loans in order to reinstate their profitability as a signal of high quality. In the same opinion, Titman and Wessels (1988) also report a negative relationship between leverage and profitability.

Thus, depending on each case, there will have different results. Study by Rajan and Zingales (1995) showed that while companies in the United States, Canada and Japan have a negative

correlation between profitability and financial leverage, but for the German companies, the results are opposite.

In practical part, profitability ratio as well as other financial ratios and the relationships between them and the firm's capital structure will be analyzed more detailed.

5.2 Firm size

First of all, as trade-off theory, financial leverage and firm size have a positive correlation. The reason is large companies with diversified portfolio have a lower risk of bankruptcy compared to smaller companies (Titman & Wessels, 1988). It means that large companies will have more advantages when cooperating with financial institutions. In fact, small firms are more vulnerable to economic fluctuations such as the economic crisis or the decline in the economy, easy to lead the firm to the risk of bankruptcy. From the perspective of customers, small companies seem to be riskier to invest in. Therefore, small businesses should set high short-term debt ratios instead of long-term debt. In addition, small companies often have limited access to loans. Besides, large companies often have low intermediary costs, lower volatility of cash flows, and higher access to credit markets. Therefore, the creditworthiness of these companies is higher than small ones. Rajan and Zingales (1995) studied that financial leverage has a positive correlation to firm size for all G-7 countries (the United States, Japan, Germany, France, Italy, the United Kingdom, and Canada) except Germany which shows a negative relationship.

However, according to pecking-order theory, there is a negative relationship between firm size and financial leverage. When compared to small-scale enterprises, large-scale enterprises will have more idle capital and higher profitability. Thus, large-scale businesses usually use their own internal capital instead of loans. Costs of new shares issuance may be another consideration when deciding between different sources of external capital. These costs may be a major deterrent for small firms to tap equity markets (Schoubben & Hulle, 2004). Thus they may issue debt to reduce these costs.

5.3 Growth

There are many studies show that when the growth rate is increasingly higher, financial leverage tends to decrease. With high growth rate, the firm will issue more shares instead of borrowing to minimize the sharing of interests between shareholders and creditors. Besides, the firm financing its operations with debt will have to service the debt as promised. Growth

firms may avoid borrowing because with risky debt, they may pass up profitable investment opportunities (Myers, 1977). (Titman & Wessels, 1988) also suggests a negative relationship between debt and growth opportunities. As mentioned earlier, the more debt the company has, the more likely the risk of bankruptcy increase. (Myers, 1984) suggest that growth opportunities are more likely to lose value in financial distress.

In addition, because of the variety choice of future investments, agency costs are higher for fast-growing industries (Titman & Wessels, 1988). Therefore, according to agency theory, the debt ratio is expected to decrease.

However, some researchers show that high growth rate leads to increase of leverage. The evidence is that companies with high growth rates are assumed to be healthy companies in the capital market and they will have easy access to loans. In addition, with the prospect of future growth, these companies may increase their loans to maintain high growth opportunities in the future. Moreover, growth firms may be in need of capital, except internal financing, to finance for their investments. Thus, as Pecking-order theory, they may be more likely to use the debt rather than equity.

5.4 Industry

Each industry has the specific characteristics that affect the capital structure of firms in that industry. Capital structure varies from industry to industry. These may result from the difference in business environments, the level of competition, the capital required... The firms with specialized products may undergo higher costs in the case of bankruptcy, and thus they will have less debt in their capital structure (Titman, 1984).

Some studies show the industries with high profitability likely use less debt. Other studies show that financial leverage in the capital structure is negatively correlated with the frequency of bankruptcy in the industry. Firms which generate stable cash flows through many periods tend to have higher leverage.

In addition, the industry has relation with many factors in the capital structure, such as bankruptcy costs, liquidation value, asymmetric information, collateral assets and trends of macroeconomic.

In general, the debt ratio of firms tends to focus on the industry debt ratio, which may reflect the fact that most of the business risk a firm faces are set by the industry.

5.5 Asset Tangibility

The kind of assets that a firm owns may stimulate the firm's financing behaviors. Tangible assets characterize the company's ability for mortgage loans. As confirmed by Myers (1984), there is a relation between the collateral value of assets and financial leverage. The company with many collaterals can reduce asymmetric information. Moreover, it is obvious that if the company has more mortgage loans, the risks of loans will also decrease (Titman & Wessels, 1988). The collateral value of assets reduces the agency costs of debt and equity by risk transfer (Rajan & Zingales, 1995). Thus, lenders will be more willing to provide credit to firms having the high tangible asset.

In addition, according to the agency costs theory, similar relationships are also presented. In this case, the asymmetric information leads to the wrong valuation of equity. When the collateral is used, the agency costs associated with the debt will be lower. Thus, tangible assets are an important factor in the credit policy of banks and especially important for long-term loans.

However, Grossman and Hart (1988) suggest that financial leverage may have the negative relation with asset tangibility. They assume that agency costs may be higher for firms which have lower collateral assets because it is more difficult to supervise the capital expenditure of such the firms. Higher leverage will increase bankruptcy costs and hence limit the power to benefit for the private wealth of managers. Therefore, firms with the low collateral value of assets may be more leveraged in order to discipline managers.

II. PRACTICAL PART

6 INTRODUCTION ABOUT COMPANY

6.1 Basic characteristics

PDR Real Estate Development Corporation was established in 2004 according to business registration license No. 4103002655 issued by Ho Chi Minh City Planning and Investment Department on 13 September 2004.

Main business activities are investment in construction and trading real estate, estate residences apartment houses, tourism real estate, luxury resort, hotel... The Company has developed and invested in many real estate projects in the major cities and become one of the leading real estate investment companies.

Today, PDR continuously expands its scope of investment on many real estate projects in Ho Chi Minh City and other areas in Vietnam. They are aiming to become one of the leading high-class real estate developers and investors in Vietnam. The well-established brand name, “PDR”, has been being acknowledged gradually, starting with the echo – called “The Ever-ich” – a High-rise Commercial & Apartment Building Project on 3/2 Street, HCMC – which is considered to symbolize for the trust and quality of PDR Corporation.

6.2 Mission, Vision and core value of the company

6.2.1 Vision

To be the leading real estate investment and development corporation in Vietnam.

6.2.2 Mission

- ✓ To create modern, valuable living spaces, fully meet the requirements of customers, conformity with urban development.
- ✓ To ceaselessly develop the company to bring the utmost benefit to our shareholders, employees and contribute positively to the community.

6.2.3 Core Values

PDR leaders and staff are constantly creative, unitive, collaborative to build a professional, effective and friendly working environment.

6.2.4 Operating Principles

PDR always operates on the basic of respect, integrity and fairness; promotes high spirit of responsibility, discipline and responsiveness; creates better value to win lasting trust from our customers in the process of our development.

6.3 Business Activities

Established in 2004 with a focus on the development of real estate projects, hotels, resorts, villas. In a short time, PDR has become one of the leading real estate developers in Vietnam with a number of successful projects. By 2016, the company has been carrying out many outstanding projects that can expect to earn profitability as well as the reputation for the company.

Table 1. The progress of deployment & business projects at the end of 2016

Project	Product	Business activities	Handover
Everich 2	12 blocks include: 4,800 apartments 23,000m ² trade	Suspending business for new development strategy	Refunds are available for customers purchased.
Everich 3	75 villas, 9 apartment blocks	- Villas has been transferred in 2015. - 9 blocks of apartments are transferring	Deposit of 300 billion for the transfer of apartments
Everich Infinity	439 apartments 325 officetel (Office + Hotel) 1,271 m ² trade	- 95% sold - Looking for business partners	Handover from Q4.2016 to Q2.2017: 50% of apartments
Millenium	653 apartments 387 officetel 17 shophouse	- Sold 80% of all products	Handover from Q2.2018

CMT8 Project	Compensation is being completed, planning to shift to serviced apartments and offices	Expected to business in 2018.	
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Source: BaoViet Securities

6.4 Business Plans

Do not develop massively the projects as the other real estate businesses today but PDR is remarked as a reputable developer, any project developed and launched have created fever for the real estate market.

Previously, PDR pursued a strategy of expanding the land bank on a very large scale and key location by acquisition land of organizations and individuals. Since then, the company will develop high-end residential real estate with large-scale projects. But this major ambition has led to PDR risk in 2011-2013 with the project Everich 2 that has occupied a lot of resources of the company. Since 2016, PDR has changed its strategies with expectation to improve the business results. In this part, some new strategies of the company for the next periods are mentioned.

Business Strategies for period from 2016 – 2022

The company has new directions in the development strategy for 2016-2020 in the accumulation of land fund and the project development strategy. Particularly:

- ✓ Land fund accumulation strategy: The company concentrates its resources on the development of BT (Construction - Transfers) projects (especially development projects on existing land without much compensation) to exchange land for development projects.
- ✓ Business Development Strategies: the company will allocate centrally located lands which are swapped from the BT project to develop into the sources with stable income as the office, hotel, or service apartment. Large land funds will develop apartment projects or transfers to recover funds.
- ✓ Investment capital: Company uses the proceeds from the transfer of major projects to invest in BT projects. In addition, the lands transferred to the company will be

used to call for co-operation or transfer to reinvest in another project. Orientation will minimize the use of loans for investment in BT projects.

Business Plan for the year 2017

- ✓ River City Project (The Everich 2): Aims to sell 1,500 products, equivalent to 100,000 m² of blocks E, F, H.
- ✓ Everich 3 Project: Completing legal procedures to transfer.
- ✓ The Ever Rich Infinity Project: Signed the exclusive right of distribution with business partners, committed to sell in July 2017, handed over the apartment and put the project into exploitation and use.
- ✓ Millenium Project (132 Ben Van Don): Expectedly in Quarter 1/2017 will be licensed construction and certification of qualified for sale or lease. It is expected that the project will sell all remaining products in 2017.
- ✓ Project Bau Ca - Quang Ngai: Completion of payment of compensation, ask for permission to transfer land use rights, expected to put into business products of the project in the third quarter 2017.

The List of BT projects that the Company is implementing is shown in Table 2.

Table 2: BT projects of PDR as of August 2017 (Source: Bao Viet Securities)

Projects	Size (billion VND)	Land fund
Phan Dinh Phung Stadium Expected to sign BT contract Q4.2017	2,000	- 902 m ² Phan Van Dat Street. - The land 2.342 Tran Hung District 1. - 3ha in HCMC and other land fund.
Trauma and orthosis hospital Complete design & approval of investment. Expected to sign contract Q1.2018	2,000	4ha in District 2, HCMC

Thu Thiem Bridge 4 Pending approval of the Prime Minister on the selection mechanism.	7,500	- 11ha Thu Thiem, District 2, HCMC - 15ha in Tan Thuan, District 7, HCM
Project of Binh Chanh - Binh Tan	4,200	No land fund yet

7 VIETNAM REAL ESTATE INDUSTRY

7.1 Functions and characteristics of Vietnam Real Estate Industry

7.1.1 Roles of Real Estate Industry in Vietnam

The Vietnam real estate market is one of the most important markets in the economy as it directly relates to a tremendous amount of assets in terms of size, character and value. Real estate is a great asset to the nation. The share of real estate in total wealth in countries varies, but usually accounts for more than 40% of the country's total wealth. Real estate activities account for 30% of total economic activity. In addition, real estate also accounts for most of the value of each household. In the market economy, real estate does not only represent the place of residence, the place of economic activity, but also the capital for development through mortgage activity.

The real estate market is closely related to other markets such as financial markets, construction markets, labor markets. The development and good management of the real estate market will contribute stimulate production and increase the state budget through stimulating measures on land and infrastructure, and so on in order to make important and positive changes in the structure of the sector, region and country.

The housing segment is an important segment of the real estate market and is the most active segment due to the largest share of the sector. The development and effective management of the real estate market will support the growth of housing demand in urban and rural areas. Therefore, the development and stabilization of the housing market to ensure housing prices in line with people's incomes is one of the important roles of the state in managing the real estate market.

7.1.2 Characteristics

Firstly, the characteristics of real estate are immobile and associated with specific natural, economic and social conditions. The supply and demand for real estate in the areas is diverse and abundant in quantity, style, quality to size and level of development. In addition, real estate depends more on psychology, habits and preferences of people. Therefore, supply and demand real estate in each region also has its own characteristics. The real estate market depends much on the characteristics of each region. Thus, studies on the real estate market must be conducted in each area and linked to the social-economic conditions of that area. It

is unreasonable to apply the price and supply-demand of the real estate market in this area to other areas.

Secondly, the real estate market is closely related to the capital market. Because real estate is a high-value product due to the expensive cost of land and construction. Changing the function and characteristics of a real estate product is very difficult. Moreover, the sale of real estate is not carried out quickly and simply as other goods. Therefore, the investment in real estate must have a long-term capital and usually involve the participation of banks or financial institutions. In fact, the real estate market cannot thrive and sustainability without a healthy and sustainable capital market. Therefore, the analysis of the real estate market should be placed in a certain economic context for each period.

And thirdly, the real estate market is strongly influenced by the laws and policies of the government. Real estate plays an important role in every country because of its high-value. Real estate-related activities often have a strong influence on economic and social activities. In order to strengthen state's role, the state must pay attention to the real estate market, to promulgate legal documents and policies to implement the role and management functions to the real estate market. Moreover, the value of a real estate project is not only affected by its own characteristics, but also by its associated social-economic activities as well as other nearby real estates. Therefore, the state should play the important role of managing and regulating this market.

7.2 The development stages of the Vietnam real estate market

Over 20 Vietnam officially started the market economy, the real estate market in Vietnam has experienced many ups and downs. It reflects supply and demand rules and the impact of macro policies applied to regulate the economy. - The spontaneous development period before 1993.

The fluctuation periods of the real estate market in Vietnam is summarized as following:

- The outbreak period from 1993 to 1996, associated with the issuance of land and housing policies.
- Declining period 1997 - 1998 due to effects of Asian financial crisis.
- The boom period 1999 - 2003 with the policies of urban development, housing policy.
- Stagnation period 2004 - 2006.

- The period of recovery and development from the beginning of 2007 with the formation of professionalism by the movement of the market itself and the process of completing the legal corridor (Law on Real Estate Business, Housing, Construction, Investment).

7.3 PEST Analysis

PEST analysis (including political, economic, social and technologies) describes macro-environmental factors used to track the environment where the firm is operating in or when the firm is planning to launch a new product/project. PEST analysis is a simple tool that helps to analyze changes in the business environment. It can help to understand the growth or decline of the market, business position of the company as well as potential and direction for operations.

In this part, environmental factors impacts to the business results of PDR will be analyzed.

➤ Political

In general, Vietnam is considered to have a stable political situation compared to other countries in the region.

The Institute of Economics and Peace (IEP) on June 8, 2016, published the Global Peace Index (GPI) 2016. According to the IEP, Vietnam is one of 10 countries without conflicts inside and outside of the country.

Compared with other ASEAN countries, Vietnam has fewer issues related to religion and ethnic conflict. After introducing "innovation" policy since 1986, Vietnam has been achieving stable GDP growth. Vietnam is considered a safe country to invest, creating a favorable business environment and attracting foreign investors.

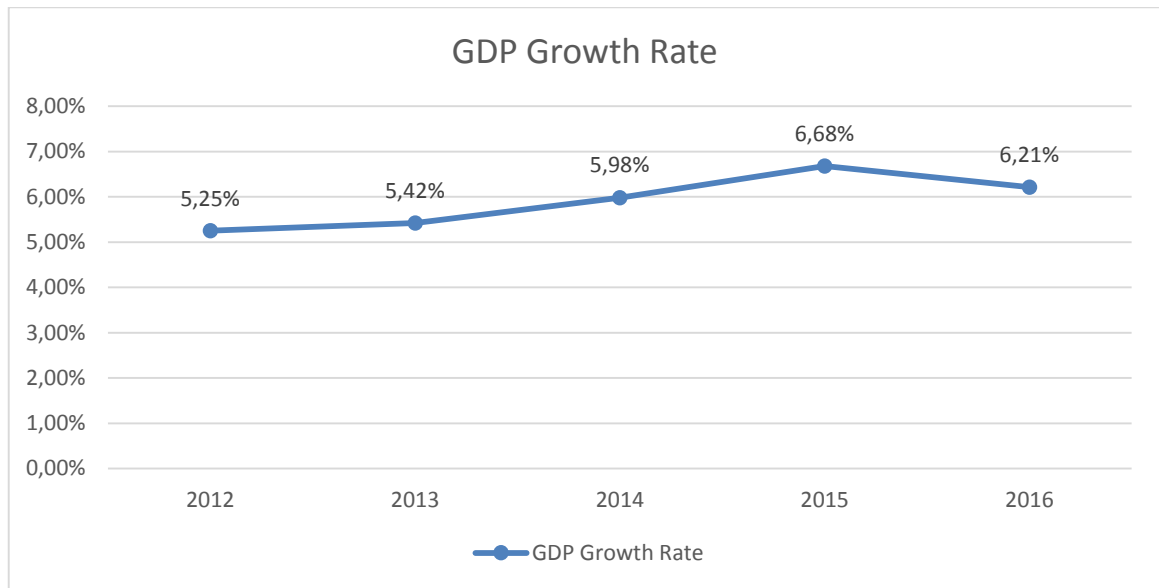


Figure 2: Vietnam GDP growth for period 2012-2016 (Source: Vietnam General Statistics Office)

➤ Economics

In the context of a volatile global economy, the Vietnamese economy has also shown signs of vulnerability to shocks. Economic growth in the first two quarters of 2016 was 5.48% and 5.78% lower than the same period last year. Although recovering in the second half of the year, the annual economic growth was only 6.21%, lower than the 6.68% in 2015.

As of 20/12/2016, capital mobilization of credit institutions increased 16.88% (the same period in 2015 increased 13.59%), helping credit institutions to stabilize liquidity, ready to meet the demand of credit for the economy and secure credit/deposit ratio; The credit growth of the economy was 16.46%, indicating that the capital absorption ability of enterprises was relatively good and the bank's interest income improved.

Interest rates are relatively stable. The common lending rate in priority sectors is 6% -7% per year for short-term, 9% -10% per year for the medium and long-term. Lending rates for normal business sectors were at 6.8% -9% per year for short-term; 9.3% -11% per year for the medium and long-term. In general, the credit structure is continuing to focus on priority areas such as agriculture, exports, supporting industries, small and medium enterprises to effectively support economic growth.

(Source: Vietnam General Statistics Office 2016)

➤ Social

Firstly, the growth of population is increasing, especially in large cities with rapid urbanization such as Hanoi, HCMC and Da Nang, boosting demand for housing. The income of workers is also increasing. So they care not only about the housing but also pay more attention to quality and amenities, services, villas, and entertainment.

Second, due to the speed of industrialization, urbanization and the development of service industries, new industries, demand for office space, business area, space for hotels, factories are widening.

➤ Technologies

Current trends in technology development are electronics and telecommunication. Electronic telecommunication technology is applied in all fields including real estate management. This technology involves operation management and operation of the office and apartment buildings, commercial centers, project management, urban planning design.

Real estate companies can purchase and use real estate management technology right from the initial stage of project planning, deploying and commissioning, as well as exploitation throughout their operations of real estate. This is a service that requires a high degree of professionalism and thus will greatly benefit the real estate investor in maximizing the efficiency as well as protection and enhancement of their property value.

7.4 Industry SWOT analysis

SWOT analysis is a useful technique to help the organization identify its strengths, weaknesses, opportunities and threats relating to business competition or planning projects. In particular, SWOT analysis is a basic analytical technique that assesses what an organization can and cannot do with the internal factors like the strengths and weaknesses as well as external factors as the opportunities and threats. By using SWOT analysis, the company can determine what can support it to achieve its objectives, and what are obstacles that must be overcome or minimized to accomplish desired results.

Each industry has different characteristics. Understanding what are strengths and weaknesses of the business environment where the firm is operating, as well as the opportunities and the threats in which, can help the company to propose reasonable strategies to keep up the trend of the market. In this part, we will mention SWOT analysis of Vietnam Real Estate Industry – where the PDR is operating in.

➤ Strengths

Real Estate industry is one of the important aspects of the development of the country, which reflects the changes and advances in economics. When Vietnam integrates globally, the real estate industry is increasingly important in improving the living standard not only for domestic people but also for foreigners who are working in the country. They will be the witnesses and extend the message about a fast developing and integrating Vietnam – Consequently, it keeps attracting a strong cash flows investing in Vietnam.

The people’s committees of provinces, cities and related department support the land creation bank to attract investment. Real estate firms which are holding a large land bank will have more advantages. The policies of expanding land bank from local areas will create more investment opportunities as well as increase competitive advantages for the real estate enterprises.

➤ Weaknesses

Firstly, the Vietnam real estate is quite young about value size and development history in comparison with other Asia and Asian countries.

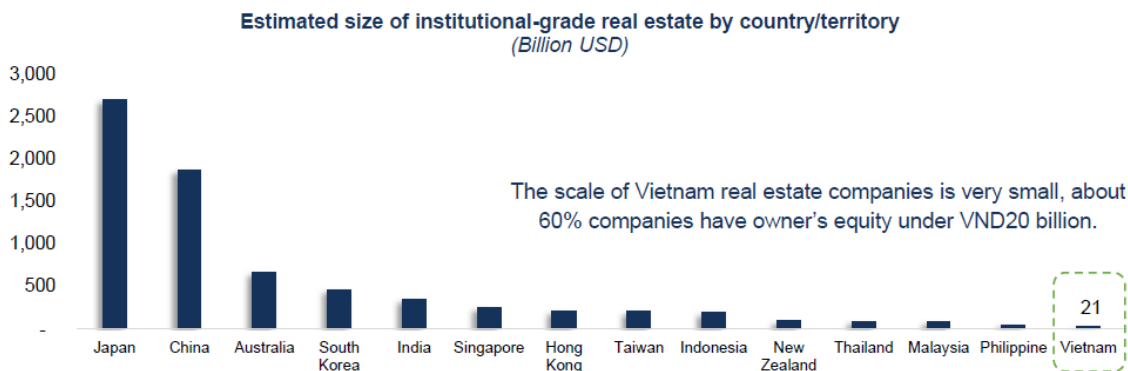


Figure 3: Estimated size of institutional-grade real estate by country/territory (Source: Nomura Research Institute 2013)

Real estate market has still not contributed significantly to the development of the economic. The percentages of real estate activities contributed in GDP every year remains low, about 4% (Source: General Statistics Office of Vietnam)

Secondly, real estate industry relies heavily on debts. While in developing countries, the capital sources for real estate industry is diversified from financial institutions, saving funds, FDI capital, then Vietnam real estate market mainly depend on credit from the banking system. According to the Department of Planning and Investment of HCMC, real estate firms have only 15% to 20% of owner's equity over the total investment of the projects, meaning

that they use about 70% to 80% loans. Moreover, about 65% of collateral is real estate. Because of the substantial dependence on loans, the real estate industry has suffered several challenges from debt repayment, large inventory, and lack of funds to complete the project. Thus, the work may not be completed and there are no finished products to handover to customers, especially when banks stop disbursement. The deviation of the capital structure has created many puzzle, such as the capital financing real estate projects primarily should have been medium - long term sources, but the banks only provide short-term funds (mainly from saving deposit). The lack of fund leads to immense financial risk for real estate companies. (Sources: State Bank of Vietnam, Ministry of Construction Vietnam, FPTIS Research)

Lastly, there is a lack of market information transparency while the forecasting system is inconsistent and unreliable. Due to the short-term benefits, many buyers are willing to break the rules to make transactions, leading to the risks and losses. In many cases, real estate companies raise capital from customers through contracts of capital contribution without eligible conditions. According to the Global Property Transparency Index 2014 conduct by Jones Lang LaShalle, Vietnam was ranked 62/102 and was categorized as low transparency, even lower than other nearby countries such as China, India, Thailand, Malaysia.

➤ Opportunities

Vietnam has stable political, economic and social system. With characteristics that require a huge of capital, the stability of the macroeconomic is always the top concern for real estate investment. BCI index of Vietnam rebounded strongly since the end of 2013 until now, showing that the belief and business prospects of the European business community in Vietnam have returned and increased. (Source: EuroCham)

In addition, Vietnamese government and the State Bank of Vietnam has many policies to support the real estate industry for both investors and residents. There are certain advanced steps in administrative procedures to cut off the time consumed for procedures in the constructions and investment.

➤ Threats

In short-term, the ability to suggest an immediate solution to deploy new capital flow to the real estate market is unclear. Moreover, the positive change in administrative procedures cannot be applied immediately and effectively. Although some of the real estate segments has been advanced slightly in transactions, the dependence on bank credit is still a major

obstacle in the firm's capital structure. In fact, many uncompleted projects still face difficulty accessing the credit market.

Besides, massive developing projects could increase the gap between supply and demand. Generally, the supply of real estate is still abundant and is expected to increase strongly in the future. If there is no detailed research from the real estate firms, the oversupply is unavoidable. Massive development of projects without market evaluation will increase competition level among real estate firms in general and investment projects in particular.

7.5 Vietnam Real Estate Market Outlook

As Real estate industry report that was presented by FPT securities in 2015, the real estate market in Vietnam has the outlooks as following:

- The changes in Supply and Demand: The trend of investing in affordable housing projects is increasing. This is also development orientation that the Government encourages the investment in the future. With the change in consumer's preference, moderate apartment (50-100m²) is preferred than larger ones.
- Officetel (Office + Hotel) – The outstanding product of commercial real estate: Officetel is multifunctional office model, which is very popular in developed countries as the demand for property increases highly. In Vietnam, officetel is quite new but it will save time and costs for foreign specialists having representative offices here, research groups, or SMEs. Especially, officetel catches up trend of young entrepreneurs, and the flows of new overseas investment in Vietnam.
- Cash flow are returning to the real estate market: bank credit still accounts for the largest proposition. Real estate is a prospective sector in which bank is boosting lending. At the end of 2016, loans for real estate increased by 8.95% compare to the previous year, which is higher than the growth of GDP (6.21%) and other prioritized fields like agriculture (6.3%), exports (7.4%).
- Real Estate Companies are undertaking a major restructuring. In 2016, the difference between companies in the real estate industry has been more and more cleared. The weak companies have to cut down price or even sell the assets to resolve financial problem. Restructuring organization in real estate industry is not simple, because it relates closely with bank industry. This is a consequence of fast development period when companies have limited

capital and must to borrow with high interest rate loans. When the real estate products didn't meet the market requirement, inventories and debt obligations made pressure on the market.

- The trend of M&A and the emerging of foreign players. M&A became a new trend in the last few years. The more difficult the real estate market is, the more projects have been purchased. M&A is appropriate trend for the current real estate market. It can resolve some problems. The weak companies can sell off the projects to concentrate on solving financial problem. And it creates the good chance for the companies which have strong financial resource.

8 PDR SWOT ANALYSIS

Besides the SWOT factors of the industry, SWOT analysis of the own company is also very important. PDR has its own strengths and weaknesses as well as its opportunities and challenges that it has to overcome.

Table 3: SWOT analysis of the own company

<p>Strengths</p> <ul style="list-style-type: none"> - PDR shows the potential of an ever-growing company and affirms its brand by quality projects. - The company's high-end housing, office and apartment projects are favored and trusted for quality as well as appropriated with the trend of the Vietnamese people, especially the Everich projects - High-rise Commercial & Apartment building, that have brought the brand-name for PDR. - PDR also has a land bank located in a convenient location, located in the potential development area of HCMC, promising to bring high efficiency. 	<p>Weaknesses</p> <ul style="list-style-type: none"> - PDR is not active in the business, from product introduction activities, advertising to the PR activities. Marketing strategy is less effective, has not attracted attention in the market. - The products are not diversified, mainly focus on apartments/houses, luxury resort, limiting the company's competitiveness.
<p>Opportunities</p> <ul style="list-style-type: none"> - Stable macroeconomic. In 2016, the Government promulgated many policies on administrative reform as well as macro policies to solve urgent issues of the economy, such as restructuring the banking system, rescue the real estate market, and equitization of state-owned enterprises. - Young population and fast urbanization, promising a boom in housing demand. The 	<p>Threats</p> <p>Due to the fluctuation of the price of construction materials, real estate businesses in general, PDR, in particular, have many difficulties.</p> <ul style="list-style-type: none"> - The entry of multinational corporations into the real estate sector raises competitive pressures in the industry. Multinational companies with strong financial strength

<p>orientation of Government for the period 2015 – 2020 is to build 425 million m² of housing floor with about 3 million new houses, and 12.5 million m² of the social houses in urban areas to meet the basic demand for housing, improving living standard and social welfare.</p> <p>- Attracting foreign investment has led to increased demand for office space and business.</p>	<p>and great prestige, so joining the industry is easy.</p>
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9 ANALYSIS OF THE ASSET AND CAPITAL STRUCTURE

In this part, asset structure and capital structure of PDR are analyzed as horizontal analysis and vertical analysis. A horizontal analysis is a fundamental analysis that compares ratios or line items in the financial statements of a firm over a certain time period. It allows investors and stakeholders to determine trends or how a company has grown over time. Moreover, horizontal analysis could be used to compare a firm's growth rates in relation to its competitors and industry. Vertical analysis is financial statement analysis method in which, each amount on a financial statement as a percentage of the total account. It can be easy to compare balance sheets, income statements and other financial reports of all the firms of all sizes.

Table 4: Asset structure of PDR for period 2012 – 2016 (Unit: Million VND)

	2012	2013	2014	2015	2016
A. SHORT-TERM ASSETS	4,890,275	5,362,887	5,705,424	6,745,183	8,100,625
	94.27%	94.78%	94.26%	89.45%	89.98%
I. Cash and cash equivalents	10,054	7,433	7,946	31,572	149,428
	0.19%	0.13%	0.13%	0.42%	1.66%
III. Short-term receivables	208,076	183,833	280,267	665,869	590,825
	4.01%	3.25%	4.63%	8.83%	6.56%
IV. Inventories	4,667,318	5,164,363	5,413,250	6,034,609	7,356,019
	89.98%	91.28%	89.43%	80.03%	81.71%
B. LONG-TERM ASSETS	296,997	295,080	347,563	795,652	901,725
	5.73%	5.22%	5.74%	10.55%	10.02%
	193,904	197,053	202,167	427	2,295

II. Fixed assets					
	3.74%	3.48%	3.34%	0.01%	0.03%
V.2. Investments in associates, joint-ventures	45,000	45,000	97,000	345,762	294,070
	0.87%	0.80%	1.60%	4.59%	3.27%
TOTAL ASSETS	5,187,272	5,657,966	6,052,986	7,540,835	9,002,350
	100%	100%	100%	100%	100%

Source: Own processing

Look at the company's assets, the horizontal analysis shows that total assets of PDR in the last 5 years was growing at an average rate of 15% per year, from VND 5,187 billion in 2012 to VND 9,002 billion in 2016. The largest increase was recorded in 2015 (24.58%) and in 2016 (19.38%). The growth is mainly reflected the increase in the short-term asset (in 2015: 18.22%, in 2016 is 20.09%). The growth of inventories plays a key role that increases from VND 4,890 billion (2012) to VND 8,101 billion (2016). Cash and cash equivalent accounted for a small part, but increased sharply in the last year 2016 (373.29%), which could help the firm in the case of unexpected higher costs. Short-term receivables also showed the changes considerably, that increased from VND 208 billion (2012) to VND 591 billion (2016), that increased 184%. That may reflect the change in credit condition between company and customers to sell products. In this period, long-term assets increased significantly from VND 300 billion to VND 900 billion. In which, the most notable is the increase in investments in associates, joint-ventures account as well as the decrease in the fixed asset. In 2015 and 2016, PDR enhanced its investments to associates and joint-ventures, total amount increases from VND 45 billion to about VND 300 billion. The value of fixed assets decreased significantly over last 5 years, from VND 200 billion in 2012 – 2014 decreased to VND 0.5 billion in 2015 and VND 2.3 billion in 2016.

Looking at the balance sheet from the vertical analysis, it can be said that the short-term assets accounted mainly in the total assets of the company over the last 5 years, which accounted at least 90% in the total asset. Due to the sector where the company operates, the largest share of short-term assets belongs to inventories. Inventories also accounted for about 80% of total asset. In which, from 2012 – 2014, its proportion was 90%, it reflects main

liquidity of PDR depend on inventories. Although cash and cash equivalent proportion increased, but it only accounted for a small fraction in total asset. The highest proportion was seen in 2016, but it was only 1.66%. Generally, the increase in proportion of short-term receivables over last 5 years may affect to the overall liquidity of the company (The largest increase was seen in 2015 which was 8.83%). But it also accounted a small part in total asset, so that its effects was not significant.

Table 5: Capital structure of PDR for period 2012 – 2016 (Unit: Million VND)

	2012	2013	2014	2015	2016
A. LIABILITIES	3,761,236	4,230,432	4,584,692	5,270,003	6,598,553
I. Short -term liabilities	1,021,620	676,216	1,126,777	1534,318	1,678,062
I. 10. Short-term borrowings and financial leases	486,551	206,278	612,681	505,607	434,359
II. Long-term liabilities	2,739,616	3,554,217	3,457,915	3,735,685	4,920,491
II. 3. Long-term accrued expenses	-	-	-	1,214,143	1,834,689
II. 8. Long-term borrowings and financial leases	2,285,191	2,567,314	2,156,922	2,243,873	2,807,288
B. OWNER'S EQUITY	1,426,036	1,427,534	1,468,294	2,270,832	2,403,797
I. 11. Undistributed earnings after tax	38,922	40,420	81,181	164,926	288,603

Source: Financial statement of PDR

Firstly, it can be seen that PDR used financial leverage in the period 2012 – 2016. It included both of short-term and long-term financial leverage.

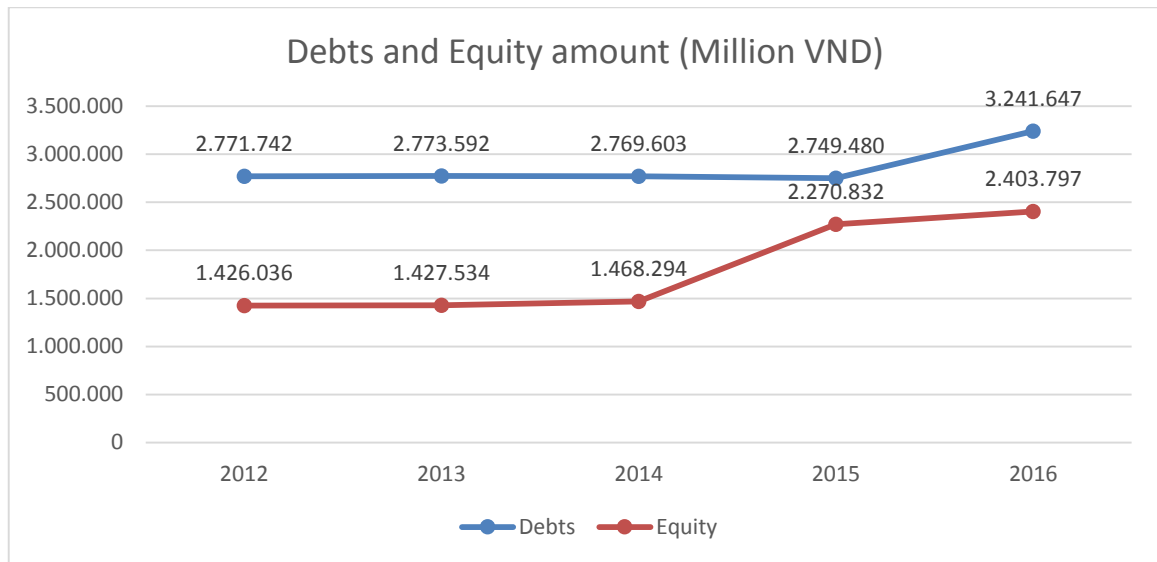


Figure 4: Debts and Equity account of PDR for period 2012 – 2016 (Source: Own processing)

As part of the horizontal analysis, there was a large increase in equity in the year 2015 that increased 54.66% compared to 2014. In this year, PDR issued additional 65,100,000 common shares to raise capital for operation. Retained earnings increased rapidly over time, but its amount was much smaller than debts and accounted for a very small part in equity account. Liabilities account also increased considerably in this period with average growth rate of 15.25%. Meanwhile the volume of debts resources changed but not significant (except in 2016, when total debts increased 17.9% compared to 2015). The short-term debt fluctuated. It decreased in 2013 but increased sharply in 2014 and continued decreasing in 2015 and 2016. But short-term debt was much lower than long-term debt. Although long-term debt decreased in 2014, but it keeps increasing in 2015 and 2016 and accounted for a large share of long-term liabilities of the firm.

The vertical analysis reflects the changes in capital structure of the firm. It can be seen easily that long-term debt proportion was high in the total liabilities, but it has decreased over time. Short-term debt and retained earnings are not significant in total owner's equity and liabilities of PDR. With such amount of debts, PDR may face financial distress if the company doesn't have enough money to pay its obligation. To gain a more in-depth look at PDR's capital structure, the leverage ratio of the company will be analyzed more detailed in the financial ratio analysis part.

10 ANALYSIS OF REVENUES, PROFITS AND CASH FLOW

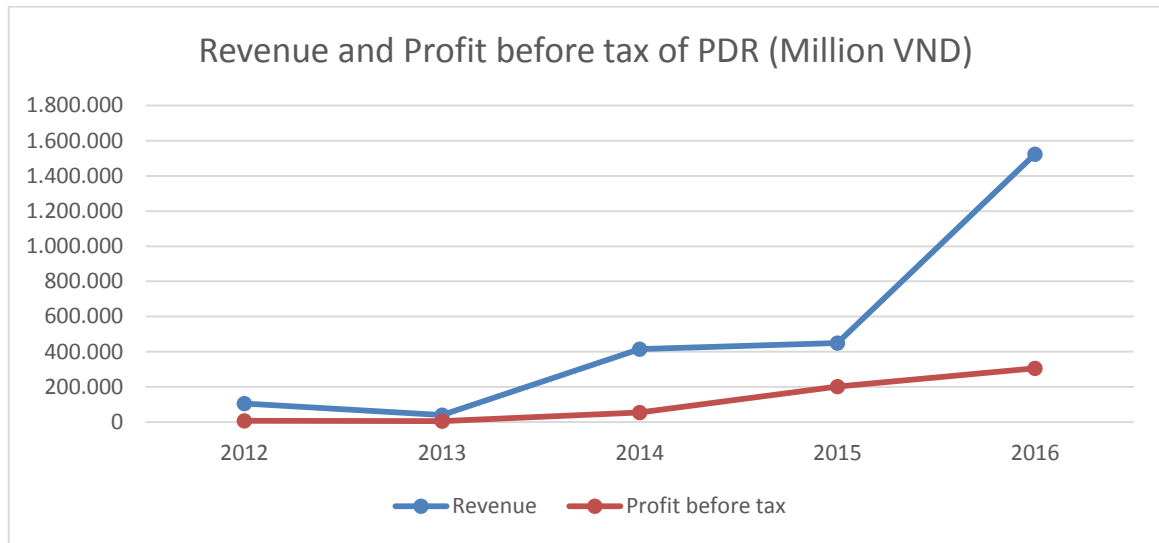


Figure 5: Revenue and Profit before tax of PDR for period 2012 – 2016 (Source: Own processing)

Revenue of PDR had increased for the period 2012 – 2016. Accordingly, profit before tax was also improved. However, the company had experienced a difficult period from 2012 to 2014, when revenue and profit was very low, revenue in 2012 was VND 104 billion, and in 2013 only VND 39.6 billion. The profit of the company before tax was only VND 6.4 billion in 2012 and VND 3.8 billion in 2013. As analyzed earlier, in this period, the company hold large of inventories and could not sell to customers. In 2013, when the real estate market was in trouble, PDR was no exception. However, with the changes in business strategies to improve situation, PDR achieved good results in 2015 and 2016. Especially, the revenue in 2016 was VND 1,524 billion - increased of VND 1,000 billion compared to the year 2015. The firm's profit before tax also increased by VND 100 billion from VND 201 billion in 2015 to VND 305 billion in 2016. But it still cannot be said that the investors and creditors can trust in the firm's prospects. Because according to information publicly, almost revenues of PDR in this period come from M&A activities and transfer projects as well as sell a part of projects that the firm was holding in hand, not small part of them is from selling land. PDR's use of M&A tools is unlikely to bring peace of mind to shareholders who want to see the company's growth from the core activities.

Table 6: Cash flow of PDR for period 2012 – 2016 (Unit: Million VND)

PDR's Cash Flow	2012	2013	2014	2015	2016
Net cash flows from operating activities	-310,648	- 1,007	61,426	-255,146	-193,864
Net cash flows from investing activities	-7,642	-3,464	-56,925	-351,784	-79,829
Net cash flows from financing activities	270,444	1,850	3,988	630,556	391,550
Cash and cash equivalents at beginning of the period	57,900	10,054	7,433	7,946	31,572
Cash and cash equivalents at end of the period	10,054	7,433	7,946	31,572	149,428

Source: PDR's Financial Statement

As presented in table 6, although revenue and profits of PDR were always positive from the year 2012 – 2016, but in this period, the operating cash flow of PDR was positive only in one year (VND 61 billion in 2014), the remaining were negative. Though revenue in 2015 and 2016 increased high, but the cash flow from main activities of the company was still extreme negative. Moreover, almost positive cash flow of PDR was coming from financing activities.

In fact, looking at the financial statement over years, PDR was continuing the story of borrowing new debt to repay old debt. In addition, in 2015, the firm issued additional stocks. The proceed from this activity was VND 650 billion, but the firm still borrowed additional VND 410 billion and paid back VND 430 billion for the due debt. As the debt-holders, they understand that investors, who invested money in the company, is in order to develop business, not give money to business leaders to pay debts. Therefore, they are afraid that the debts of PDR would become more difficult to collect when the firm has the plan to issue more shares. So that, if the business situation is not good, in the next periods, they will afraid to lend to the company.

In fact, PDR has huge land funds that can be the mortgage asset for the creditors to ensure for the loans, not only has the Everich 2 and 3 projects but also has a wealth of land from a number of other projects such as Everich Infinity, River City, Phan Dinh Phung stadium,...

As analyzed before in theoretical part, many studies show that the firm with the high tangible asset can borrow more because they have the trust from debt-holders. The risk associated with the cost of loans will decrease. So that debt-holders are willing to lend for these company. Relying on these land fund as mortgage assets, in the past, PDR could borrow and financed many its projects. But when debts become huge and account for a large part in total asset of the company, investors and existing creditors don't know whether this land fund was taken for the mortgage or not.

Recognizing the difficulty of cash flow, PDR now has a strategic shift, not investing all in the project, even if the project is expected to generate a good profit. With each project, PDR will establish a new company and mobilize for investment capital. At resolution of Annual Shareholders' Meeting 2016, the company has set new business strategies, accelerate sales to bring in cash flow and profits for the company. In addition, the company is implementing BT projects, infrastructure construction, land conversion can bring immediate effects when selling land exchanged from the contract.

11 ANALYSIS OF WORKING CAPITAL

Working capital is money available to a firm to finance for its day-to-day operations. It measures the firm's efficiency as well as its short-term financial health. The formula is:

$$\text{Working Capital} = \text{Current Assets} - \text{Current Liabilities} \quad (13)$$

$$\text{Working Capital Ratio} = \text{Current Assets} / \text{Current Liabilities} \quad (14)$$

The working capital ratio indicates that whether a company has enough short-term assets to cover its short-term liabilities. It also reflects the results of the company activities like inventory management, debt management, revenue collection, and payments to suppliers. This ratio above 1 indicates positive working capital, below 1 indicates negative working capital. Positive working capital generally indicates that a company has the ability to pay back creditors its short-term liabilities almost immediately. In contrast, negative working capital indicates a company doesn't have the ability to do so. The worst-case is the company have to face with bankruptcy. But it should be noted that high working capital isn't always a good thing because it may indicate that the company have too much inventory or they are not investing their excess cash.

There are several ways to evaluate a company's working capital, for example calculating the inventory turnover ratio, the collection period ratio, payable period ratio, liquidity ratios.

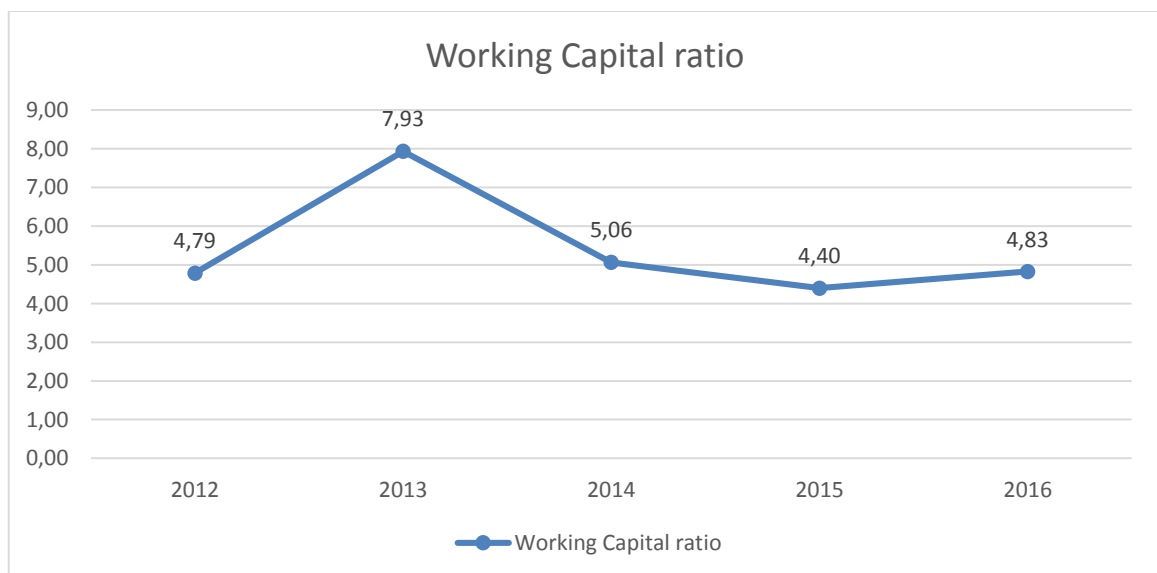


Figure 6: Working capital ratio of PDR for period 2012 – 2016 (Source: Own processing)

As presented in figure 6, working capital ratio of PDR was always high in the period 2012 – 2016, which the lowest ratio was 4.4 time. Especially in 2013, this ratio was extreme high,

which was equal to 7.93 times. It means in PDR, short-term assets was at least 4 times higher than short-term debt. But it could not say that this is a good sign. Because, PDR was holding large amount of inventories, that mentioned before that it accounted for at least 80% of total asset. Money relating to inventory or money that customers still owe to the company cannot be used to repay the company's obligations. It can be said that PDR was operating not efficiently. The inventories situation will be analyzed more detailed when analyzing activity ratio of the company.

12 FINANCIAL RATIO ANALYSIS

This part will analyze the financial health of PDR during period 2012-2016 using financial ratios and propose strategy accordingly.

12.1 Profitability Ratios

In the group of profitability ratios, Return-on-Equity (ROE), Return-on-Asset (ROA) and Return-on-Sale (ROS) will be analyzed.

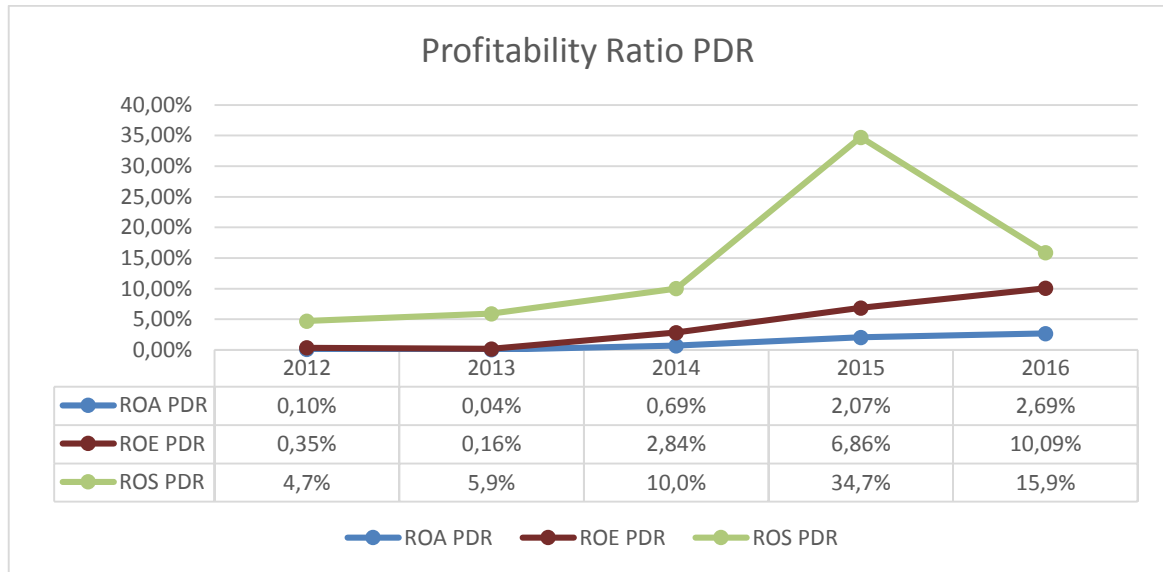


Figure 7: Profitability Ratios of PDR for period 2012 – 2016 (Source: Own processing)

ROA is an indicator that measures how profitable a firm is relative to its total assets and how management use its assets to generate earnings in the efficient ways. The higher ROA is the better, because the firm is earning more money on less investment.

$$\text{Formula ROA} = \text{Net profit} / \text{Total Asset} \tag{15}$$

ROE is the percentage of shareholders equity returned in the form of income. ROE measures a firm’s profitability by revealing how effectively a firm can use the money from shareholders to generate profits and grow the company. ROE is a profitability ratio considered by the investor's point of view, not the firm.

$$\text{Formula ROE} = \text{Net profit} / \text{Equity} \tag{16}$$

ROS is a ratio used to evaluate efficiency in operation of a firm. In other words, ROS is mentioned as a firm's operating profit margin.

$$\text{Formula ROS} = \text{Net profit} / \text{Sales} \tag{17}$$

Table 7: Liquidity ratios of PDR and Real estate industry for period 2012 – 2016

Indicators		2012	2013	2014	2015	2016
ROA	PDR	0.1%	0.04%	0.69%	2.07%	2.69%
	Industry	2%	4%	3%	3%	3%
ROE	PDR	0.35%	0.16%	2.84%	6.86%	10.09%
	Industry	4%	13%	8%	8%	8%
ROS	PDR	4.7%	5.9%	10%	34.7%	15.9%

Source: Own processing

As presented in Figure 7, ROA and ROE of PDR fluctuated as the same trend. Although it was still positive, but it was very low in period 2012 to 2014. Especially in year 2012 and 2013, ROA was only 0.04% to 0.1% and ROE was only 0.16% to 0.35%, much lower than the same ratio of the industry. In this period, it can be explained that PDR had many difficult in business, many projects and products couldn't be sold. This situation has just recovered from 2014 when the firm had some positive changes in operation. At the end of 2014, PDR recorded good results with revenue and the net profit of VND 415 billion and VND 42 billion respectively, a strong growth compared to 2013. In 2015 and 2016, this number increased dramatically with the delivery of Everich projects to customers. This growth represented not only in ROA and ROE but also in ROS when this ratio achieved to 34.7% in 2015 and 15.9% in 2016. This shows the good signs in PDR's business activities.

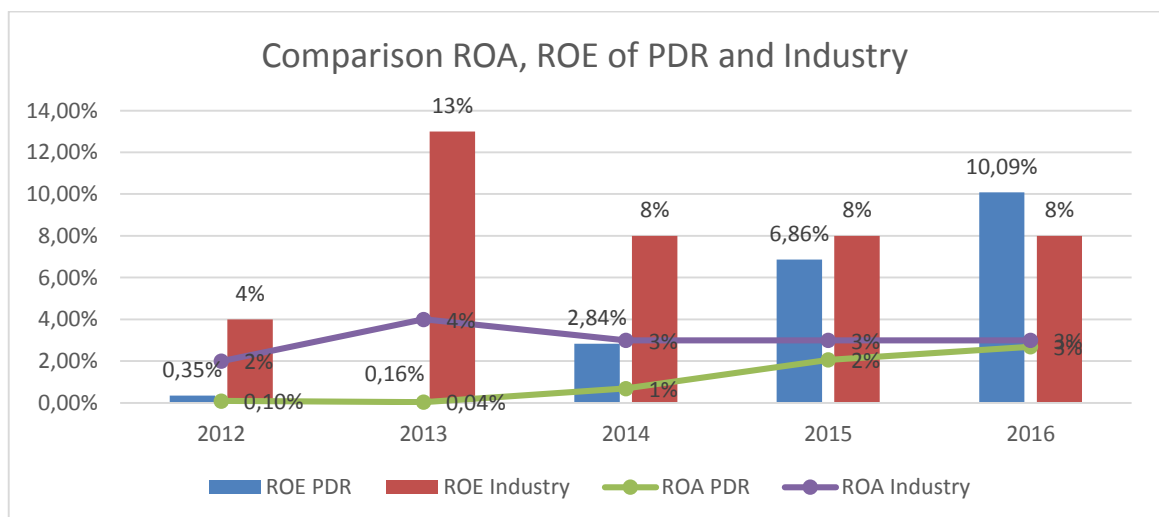


Figure 8: Comparison ROA, ROE of PDR and Industry over period 2012 – 2016 (Source: Own Processing)

As present in Figure 8, PDR's ROA and ROE were getting better over time and not fluctuated too much comparing with the rest of the industry. The biggest difference was seen in 2013, when ROE of the whole industry was very high, reaching 13% with the explosion of leading real estate companies while PDR's ROE was only 0.16%.

The business results of PDR have been continuously growing from 2013 until now, when revenue and profit respectively from VND 39.6 billion and VND 2.3 billion in 2013 increased to VND 1,524 billion and VND 242.5 billion in 2016. ROE was also gradually improving, and by the end of 2016, this ratio was approximately 10%. With these two factors, as of now, PDR has also entered the list of preferred stocks of investors.

In 2017 and 2018, PDR continues its strategy of acquiring and developing projects within 3km of HCMC center and reducing the size of apartments so that product prices are more affordable to consumers. With such a clear strategy, PDR believes that is able to achieve its profit goals.

However, it should be noted that although profitability of PDR was still positive and quite good in 2015 and 2016, but it was not stable. In this case, it's difficult to say that the company should borrow to take advantage of interest tax shield or use retained earnings for operation. It should consider to the debts and interest expenses that PDR are holding on hand, which can lead the firm to the bankruptcy.

12.2 Liquidity Ratio

Liquidity ratios measure the ability of a firm to pay off its short-term obligation as they come due. Liquidity ratios measures not only how much cash a firm has but also measures how easy it will be to raise enough cash or convert its assets into cash.

Liquidity ratios can provide signs to identify problems with cash flows or give the forecast about business failures. Generally, higher liquidity ratios are good signs, because it shows the level of safety that the firm possess to meet its current liabilities. However, some liquid assets (for instance: cash, cash in banks, marketable securities) do not earn particularly high of return, so the firm has to balance the safety for liquidity and return need to generate for investors.

Formulas:

$$\text{Current ratio} = \text{Current Assets} / \text{Current Liabilities} \quad (18)$$

$$\text{Quick ratio} = (\text{Current Assets} - \text{Inventory}) / \text{Current Liabilities} \quad (19)$$

$$\text{Cash ratio} = (\text{Cash \& cash equivalent} + \text{Invested Funds}) / \text{Current Liabilities} \quad (20)$$

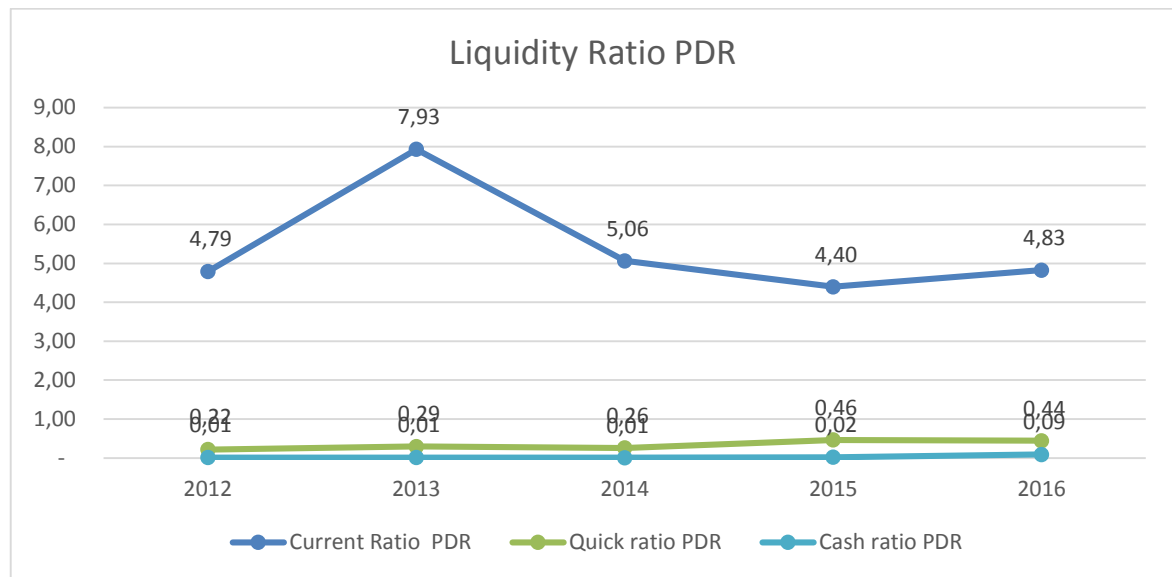


Figure 9: Liquidity ratio of PDR for the period 2012 – 2016 (Source: Own processing)

Look at figure 9, we see that PDR had some problem with liquidity. Although the company's current ratio was very high for the period 2012 to 2016, about 4-5, especially in 2013, it increased to 7.93, which showed an impressive ratios comparing with other companies in any sectors of economics, however, quick ratio and cash ratio were much lower than current ration. In the period 2012 – 2016, the quick ratio moved in the range between 0.2 and 0.5. It means that the liquidity of PDR depended primarily on inventory. For this period, inventory accounted for 80-90% total assets of the firm while this ratio of real estate industry was only about 40-50%. The quick ratio is more conservative than the current ratio when assessing the liquidity of a company, because it excludes inventories from current assets. Generally, inventories take time to be converted into cash, and if they have to be sold quickly, the company may have to accept a lower price than the book value of these inventories. Although with the characteristic of the industry, it's normal for a real estate firm which inventories account for significantly in total assets, it's still not a good sign for the liquidity, particularly in the case of PDR. If PDR cannot convert inventories to cash on time, it may not meet its obligations when they come due, the management won't be able to react on any unpredicted risk.

Table 8: Liquidity ratios of PDR and Real estate industry for period 2012 – 2016 (Unit: times)

		2012	2013	2014	2015	2016
Current ratio	PDR	4.79	7.93	5.06	4.4	4.83
	Industry	1.67	1.63	1.58	1.39	1.27
Quick ratio	PDR	0.22	0.29	0.26	0.46	0.44
	Industry	0.7	0.67	0.7	0.7	0.6
Cash ratio	PDR	0.01	0.01	0.01	0.02	0.09
	Industry	0.09	0.14	0.17	0.13	0.12

Source: Own processing

As presented in table 8, although PDR has current ratio much higher than average ratio of real estate industry (while current ratio of PDR move in the range between 4-5, this ratio of industry is only from 1.3 to 1.7), its quick ratio was even lower than quick ratio of the industry (Quick ratio of real estate industry was quite stable about 0.6 – 0.7 comparing to quick ratio of PDR was about 0.2 to 0.5). PDR was showing the problems that it was holding too much inventories in hand while old inventories had not been processed, and it impacted to the firm's liquidity. With such liquidity, creditors also could not be reassured to make a new loans to the firm to supplement their working capital, since good liquidity is one of the conditions to get their trust. And it can leads the firm to financial distress.

In 2014, PDR changed many business strategies for two Everich projects, such as dividing apartments smaller to 65-90m² in order to increase liquidity. However, the inventory of Everich 2 and 3 projects in 2014 remained at VND 3,591 and VND 1,571 billion respectively in total VND 5,413 billion inventories. Although sales of 2014 had a part from the sale of some of the Everich 2 project's apartments, there was a part from the sale of land. It means that PDR still has difficulties.

In fact, inventory is the problem not only for PDR but also for many real estate businesses in Vietnam as they account for a large proportion of total assets. This reflected the market downturn when the retained earnings of real estate companies were insignificant while they keep investing in many projects at the same time. It has increased both existing and new level of inventories in the industry.

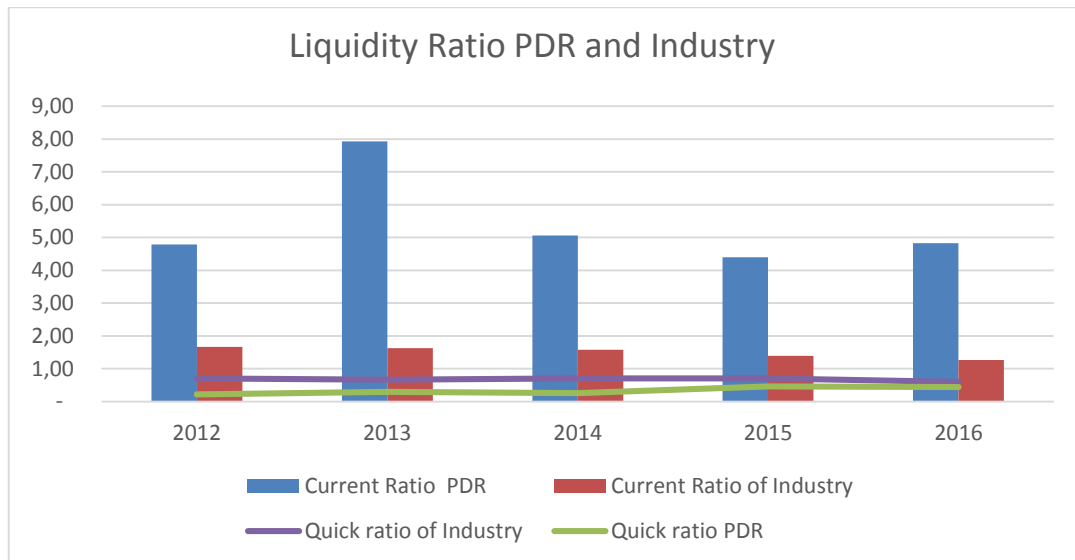


Figure 10: Liquidity ratio of PDR and Real Estate Industry for period 2012 – 2016 (Source: Own processing)

Good liquidity can help the firm to keep going concern in operating business. Having good liquidity is more important than profitability ones. Because if liquidity of a firm is good, it still can keep operating in short-run even if the firm cannot make profit at that time. In contrary, the firm is not liquid but it has profit, it may face a distress in near future, and even more, leads to the bankruptcy.

In the case of PDR, although profitability ratios were recovered from 2014 and showed the good signs in 2015 and 2016, but with such the liquidity ratio, the creditors may be hesitant to lend to the company.

So in the next period, PDR should concentrate on improving its liquidity, planning to handling inventories so that keep the company in the safety of liquidity.

12.3 Activity ratio

Activity ratios analyze efficiency of a firm to be able to generate revenue in the form of cash and sales based on its asset, liability and capital share accounts.

Formulas:

$$\text{Inventory turnover} = \text{Cost of Goods Sold} / \text{Inventory} \tag{21}$$

$$\text{Average age of inventory} = 365 / \text{Inventory turnover} \tag{22}$$

$$\text{Average collection period} = (\text{Receivables} / \text{Annual Sale}) * 365 \tag{23}$$

$$\text{Average payment period} = (\text{Payables}/\text{Cost of Goods Sold}) \times 365 \quad (24)$$

$$\text{Total asset turnover} = \text{Sales}/ \text{Average Total Assets} \quad (25)$$

$$\text{Total equity turnover} = \text{Sales}/ \text{Average Total stockholder equity} \quad (26)$$

Table 9: Activity ratio of PDR for period 2012 – 2016

	2012	2013	2014	2015	2016
Inventory turnover	0.013	0.002	0.062	0.042	0.149
Average age of inventory (days)	27,864.4	156,651.9	5,865.8	8,596.6	2,455.7
Average collection period (days)	451	901	138	352	99
Average payment period (days)	54.26	916.76	50.51	246.38	32.39

Source: Own processing

As mentioned earlier, PDR showed problems with inventory in this period. Inventory turnover of PDR was very low, especially in the year 2012 was 0.013 and in 2013 was 0.002. In 2016, this ratio increased at 0.149. But the inventory turnover of PDR was still low and of course, it directly affected the profit. Average age of inventory presents how many days of inventory the firm has on hand. In other words, it measures how many days the firm need to sell its product. In the case of PDR, this number in 2012 and 2013 was extreme high. But it had improved over time, and to the year 2016, this number was only about 2,500 days.

About the inventories problem, at the end of 2016, PDR's inventories continued to increase to VND 7,356 billion, up VND 1,300 billion compared to the year 2015 at VND 6,035 billion. In which, Everich 2 and 3 projects accounted for more than 90% of inventory value, nearly VND 3,900 billion and VND1.600 billion respectively. The Everich projects are positioned in the high-end segment of the real estate market and are also considered as a key factor in the company's growth strategy. Starting the Everich 1 project in 2009, PDR was immediately successful when all apartments in Everich 1 were sold out in the year 2010. With this success, PDR continued to develop the Everich 2 and 3 projects. However, the time starting this two projects Everich 2 and 3 respectively in 2010 and 2011, real estate market, especially the high-end segment, falls into recession. As a result, PDR faced many

difficulties. During the three years from 2011 to 2013, PDR's products could not be sold, pushed the number of inventory up. By 2014, with many business strategies such as dividing apartments from 65 - 90m² to fit the pocket money of consumers, promote M&A activities, the financial health of PDR was gradually improved.

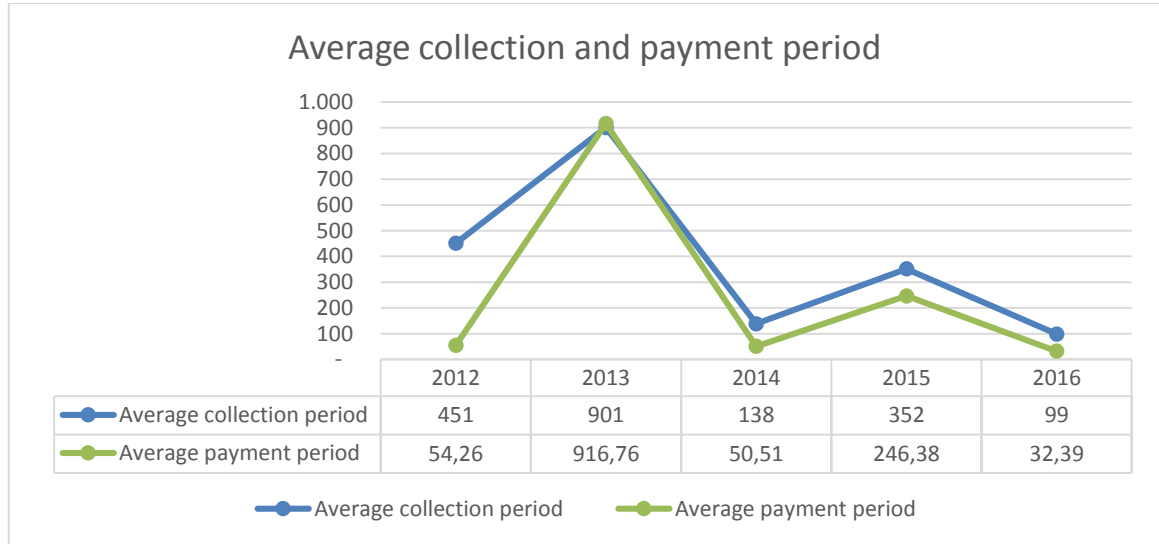


Figure 11: Average collection and payment period of PDR for the period 2012 – 2016 (Source: Own processing)

In the period 2012 – 2016, average collection period was higher than average payment period (Except in 2013, the number days of collection was a little bit lower than the number days of payment). It means that PDR might have difficulties to repay its liabilities. To have money for paying back liabilities, sometimes the firm needs to borrow to insure for working capital. This ratios still had the fluctuations and was not stable. As analyzed before about the financial situation of PDR, it is clearly understandable. In 2016, these ratio was quite good with the number days of payment was about 1 months, and the number days of collection was about 3 months. It's a good sign in the firm's operation.

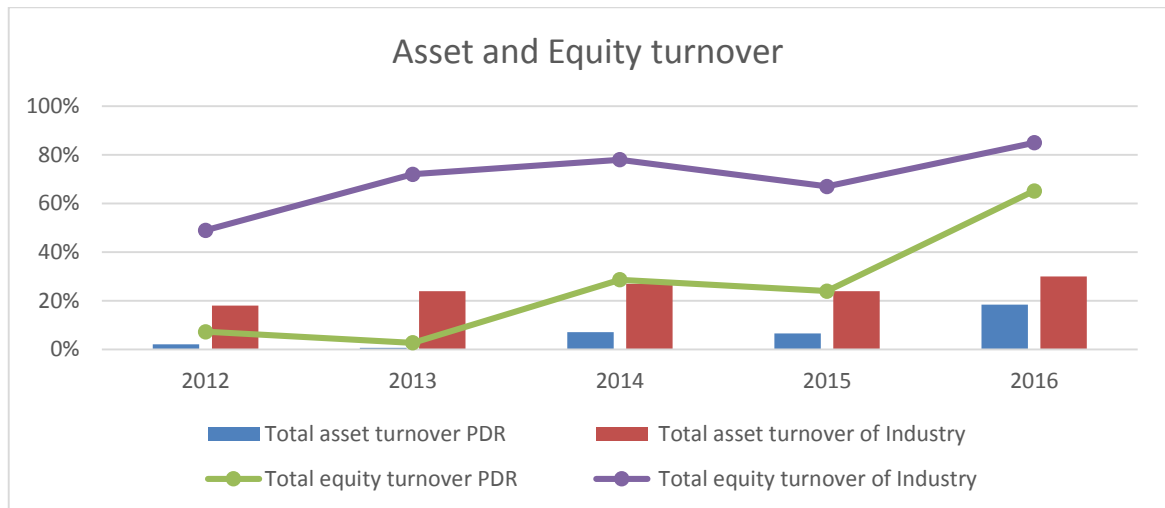


Figure 12: Total asset turnover and Total equity turnover of PDR and Real Estate Industry
(Source: Own Processing)

Look at the figure 12, we can see that PDR was not using its assets and equity as efficient as the industry. Generally to be able to say, total asset turnover of PDR was moving the same direction but much lower than average of the sector in the period 2012-2016. The differences between these ratios of PDR and the sector was narrowed down gradually, which states that the firm was improving the operating efficiency.

Despite showing signs of financial recovery, but with business results in this period, creditors will still question whether they continue to lend to the firm, because they don't know whether the firm's strategies are long-term, or just trying to make up the financial statements cleaner.

12.4 Leverage Ratio

As mentioned in theoretical part, the firm relies on a mixture of owners' equity and debt to finance its operations. A leverage ratio is any one of several financial measurements that look at how much capital comes in the form of debt (loans, debts with interest rate), or assesses the ability of a company to meet financial obligations.

Formulas:

$$\text{Liabilities to equity} = \text{Total liabilities} / \text{Total equity} \tag{27}$$

$$\text{Debt to equity} = \text{Total debt} / \text{Total equity} \tag{28}$$

$$\text{Debt to assets} = \text{Total debt} / \text{Total assets} \tag{29}$$

Table 10: Leverage ratio of PDR for period 2012 – 2016

		2012	2013	2014	2015	2016
Liabilities to equity	PDR	263.75%	296.35%	312.25%	232.07%	274.51%
	Industry	192%	198%	170%	181%	191%
Debt to equity	PDR	194.37%	194.29%	188.63%	121.08%	134.86%
Debt to asset	PDR	53.43%	49.02%	45.76%	36.46%	36.01%

Source: Own processing

As presented in table 10, PDR had liabilities to equity ratio higher than the ratio of sector, the ratio was over than 230%. The highest ratio was seen in the year 2013 and 2014, when it recorded to about 300%. Meanwhile, this ratio of real estate industry was quite stable, about 170-200%. It means that in this period, PDR had more payable obligations than many companies in the sector. Look at the debt to equity ratio, it can be said that almost obligation of PDR came from debt, when it accounted for at least 50% of liabilities. PDR's liabilities continued increasing over time. As the end of 2016, liabilities raised to more than VND 6,600 billion, up VND 1,300 billion compared to the end of 2015. In which, borrowings accounted for over VND 3,200 billion.

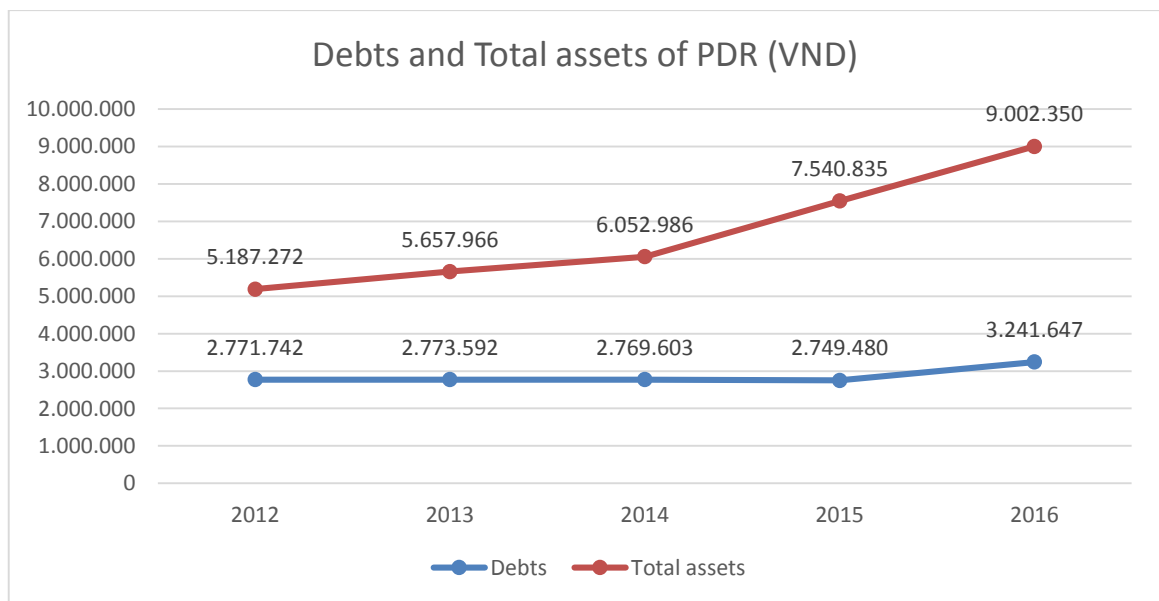


Figure 13: Debt and total assets of PDR for period 2012 – 2016 (Source: PDR’s Financial Statement)

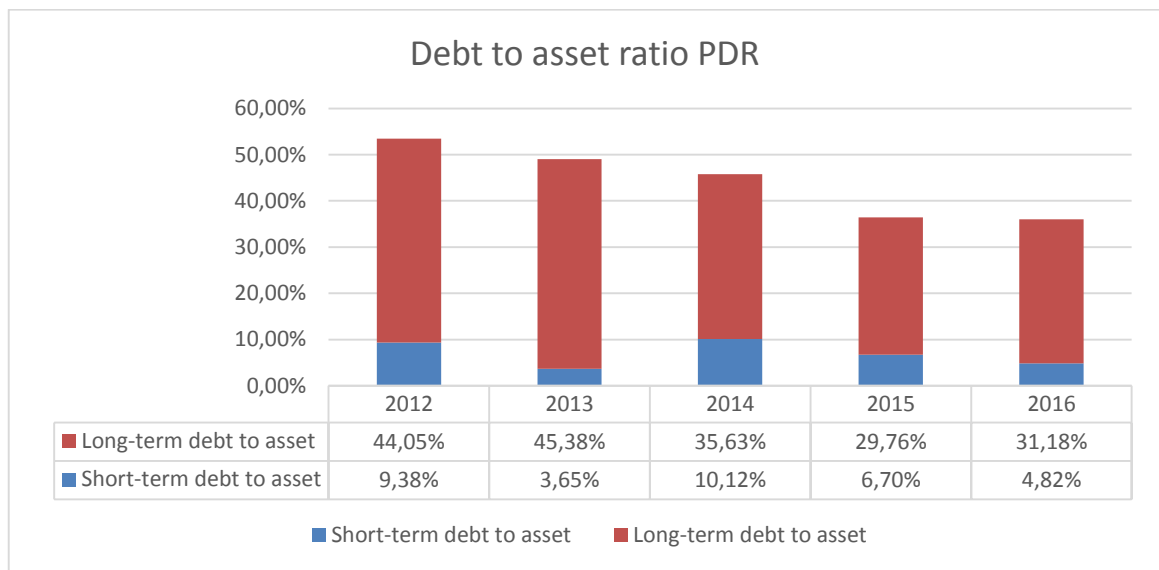


Figure 14: Debt to Asset Ratio of PDR for period 2012 – 2016 (Source: Own processing)

Look at the figure 14, debts with interest rate accounted for a large part in total asset of PDR. It means the firm had high pressure on paying debt. Especially in three years from 2012 to 2014, this ratio was about 50% in total asset. It shows that PDR might not ensure for cash flow and had to borrow to finance its operations. However, although the debts were continuing to rise, debt to asset ratio was gradually decreasing over time. It shows that the company was increasingly independent on debt.

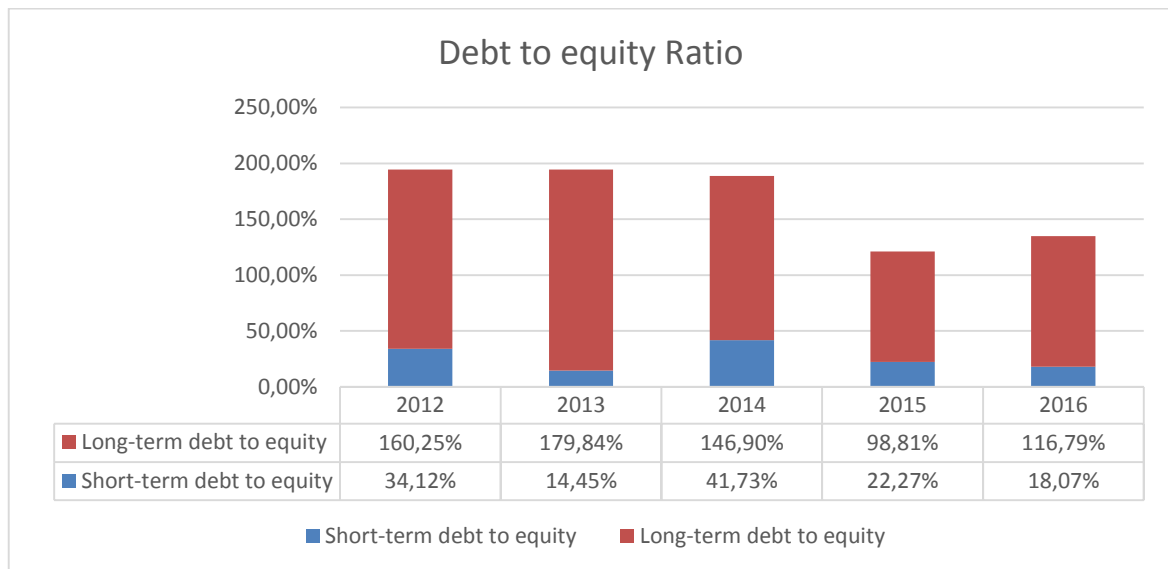


Figure 15: Debt to equity ratio of PDR for period 2012 – 2016 (Source: Own processing)

In PDR, debts was always higher than equity in capital structure. From the year 2012 to 2014, debt was higher twice equity. Debt to equity ratio was decreasing as the firm's strategies to reduce debts. In 2015 and 2016, debt and equity were the same. But with this ratio, the firm might face many risks and pressure to pay debts back. In the case of PDR, although profitability was improved and showed the positive signs, but the firm still had many problem about inventories, liquidity, debts amount and interest expense, that leads to distrust both from lenders and investors. If the firm cannot resolve its problem in the right way, the firm cannot raise enough cash flow to finance for its operation and it can lead the firm to bankruptcy. Although debt was large, PDR had restructuring debt in the direction of long-term debt more than short-term debt in order to reduce the debt payment pressure in a short time. However, interest rate on long-term loans is quite high, the average is 15% per year, so that each year PDR had to pay hundreds of billions of interest expense.

Looking back on PDR's business results, the financial report for the period of 2012 - 2016 had the outstanding inventory till the end of 2016 VND 7,350 billion. The large inventory but not a small part of this was the interest expense that was capitalized on the inventory balance. Particularly, the total capitalized interest expense for PDR's projects had reached 2,200 billion VND. It means in this period, for every VND 10 PDR spent for business, it had to carry about VND 3 for interest expense.

In Vietnam, now the corporate tax rate for real estate industry is 20%, meanwhile the average interest rate of debt that PDR is holding is 15%. In the period from 2012 to 2016, the profit before tax of PDR was still positive, the year 2012 was VND 6.4 billion; 2013 was VND 3.9 billion; 2014 was VND 54 billion; 2015 was VND 201 billion and 2016 was VND 304 billion (Source: PDR's financial statement). So that the firm could take advantage from interest tax shield. But it is not easily to say that the advantage the firm can receive from interest tax shield is enough to offset with cost of financial distress due to such the larger debts and high burden of interest expenses. The company will have to face the risk of debt default anytime.

As mentioned before, the real estate market has strong relationship with the capital market and cannot thrive and sustainability without a healthy capital market. But in the case of PDR, when interest expenses create pressure to the financial health, the firm should consider that whether it should continue borrowing from bank or financial institution. And in the creditors' point of view, they will also consider should they lend to the company with such of large debt and financial situation.

In the period 2012 - 2016, debts and inventory have been large, the unstable revenue can lead the firm to the hard situation how to approach the capital market. It will be difficult for the firm to borrow or raise capital to develop a series of unfinished projects if it doesn't have trust from investors and creditors. In addition, PDR is holding a large debt. If the company doesn't solve the debts, interest expenses from loans can quickly "eat" all profits.

13 COMPARISON OF PDR'S FINANCIAL HEALTH WITH OTHER COMPANIES IN THE SAME INDUSTRY

As mentioned earlier, optimal capital structure varies with industry. The characteristics of the sector where the enterprise is operating will contribute to determining the capital structure of the enterprise. With the characteristics of the real estate industry, investment projects often need a large amount of capital, but almost business usually don't have enough capital to invest in the projects. So using loans and raising capital from investors are unavoidable. The real estate industry is one of industries most often using debt to invest in land acquisition, construction of projects. In addition, with the number of land funds and constructions, companies in the industry will easily access funding from banks and financial institutions based on these collaterals.

In the past, when the real estate market boomed, it was very easy for the firms to get a profit when they invest in one project. Because of the large profit that has attracted many businesses to enter this sector. However, the real estate market has shown signs of excess supply in all segments of the market such as apartment, office, hotel & resort, etc. The use of financial leverage may become a burden on the business of the firms.

To analyze whether the current capital structure of PDR is reasonable or not, the best comparison is between the company and other companies with the same size in the same industry.

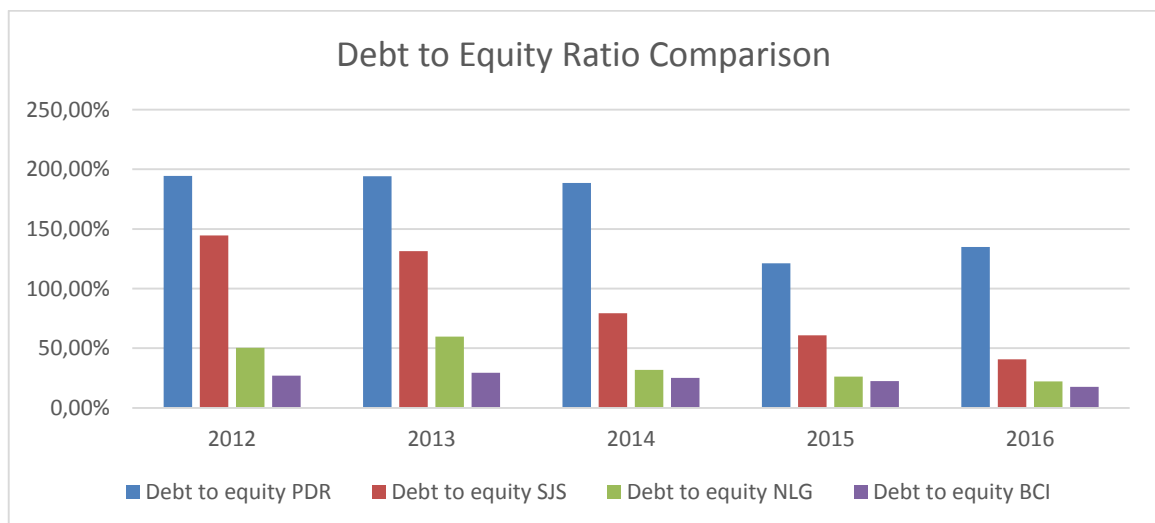


Figure 16: Comparison Debt to Equity (D/E) Ratio between PDR and other companies for period 2012 – 2016 (Source: Own processing, <http://finance.vietstock.vn>)

Firstly, it is easily seen that PDR had highest debt to equity ratio compared to other companies with the same size in the industry, these are the firms with the same amount of capital. Especially, Binh Chanh Construction Investment Shareholding Company (BCI) and Nam Long Group (NLG) had much lower ratio than, which was quite low and stable, in which this ratio of BCI was only about 20% for this period. These are companies with healthy capital structure and strong internal resource. In which, NLG has foreign strategic partners which can provide strong support in not only financing but also improvement of corporate governance.

But as can be seen in figure 16, all these companies have the same trend: the debt to equity ratio was decreasing over time, even if the debt to equity ratio was quite low as NLG and BIC. Although in 2016, interest expense was quite stable, it's about 9 -11% for medium and long term loan, but the period 2008 – 2013, this rate was very high (20% in 2008, 18% in 2011), that led to the pressure of interest expenses to these companies. Dependence on bank credit had pushed many companies into trouble when the real estate market was in difficulty. Relying on financial statement of these companies, we can see that not only PDR, these companies also had trouble with inventories that were holding in hand. In this period, the highest proportion of inventory in the total assets of these companies respectively was: SJS is 81% in 2014, NLG is 66% in 2014, BCI is 65% in 2015 (Source: Financial statement of SJS, NLG and BCI; own processing). So that in this period, all companies had been trying to solve inventories problems.

In the past, even if the project is not completed, investors can still sell the project and make the significant profits. However, the situation has changed. At the present, even if the project has been completed, the investor still has difficulty in reselling the project. Dependence on previous loans has made interest rate pressures on total outstanding loans in these companies. Even if in the case of BCI, the companies have lowest debt ratio among these companies, until 2016, this company had total debts balance is VND 351,352 billion. But the interest expense and capitalized interest expense until this year is VND 32,900 billion. Obviously, we can see that all of companies are trying to restructure debts.

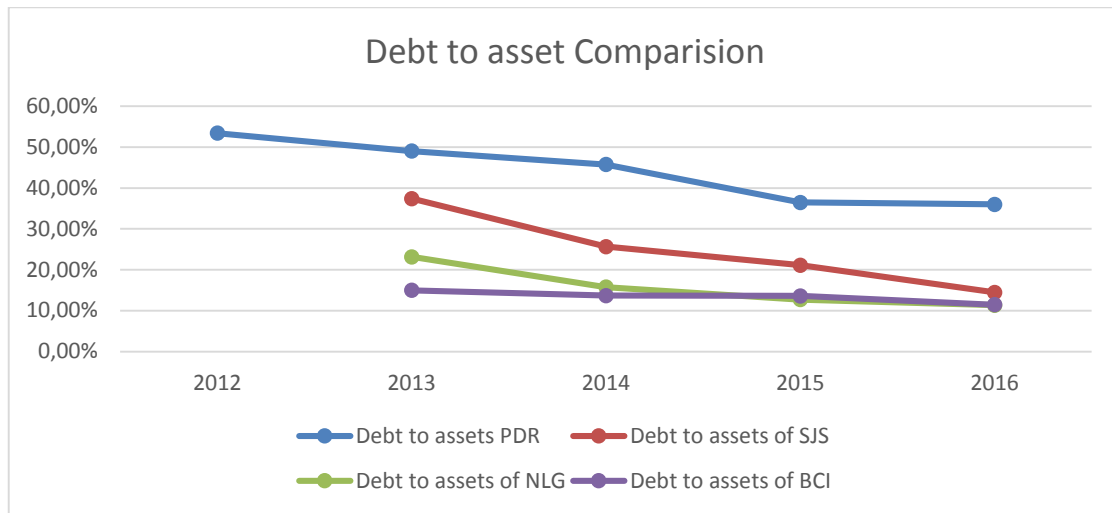


Figure 17: Comparison Debt to Asset Ratio between PDR and other companies for period 2012 – 2016 (Source: Own processing, <http://finance.vietstock.vn>)

Look at figure 17, it's is easy to see that PDR had highest debt to asset ratio among the same size companies in the sector, that means PDR was higher dependence on debt capital than other companies. BCI was still the company with the lowest dependence on debt. But the chart of all companies was moving in the same trend with the decreasing of debt to asset ratio. For this period, PDR had reduced the debt to total assets ratio from 53.43% (2012) to 36.01% (2016). BCI had also reduced this ratio from 14,97% (2013) to 11,46% (2016).

With difference in capital structure and business strategies, each company had different profitability ratio.

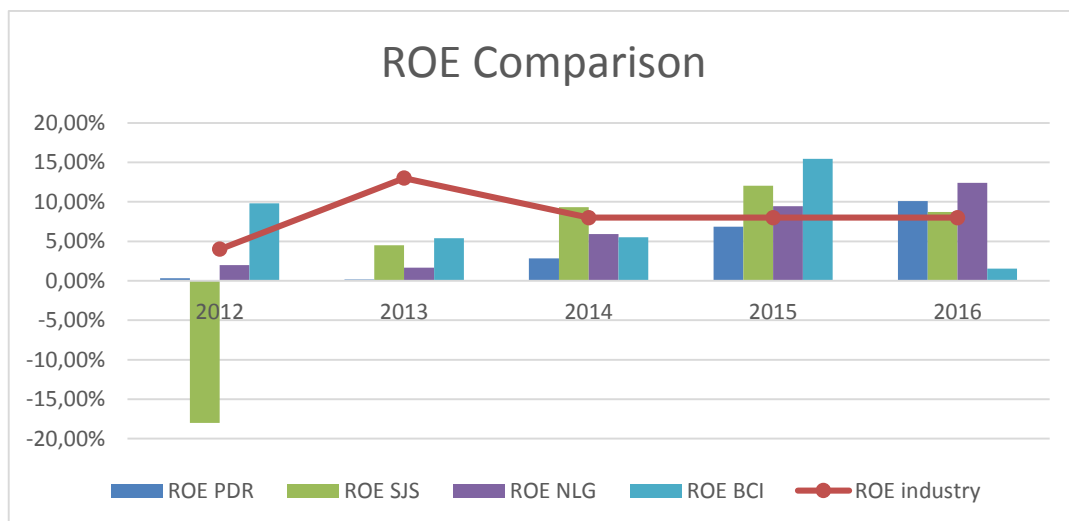


Figure 18: ROE comparison between PDR and other companies for period 2012 – 2016 (Source: own processing, <http://finance.vietstock.vn>)

Look at figure 18, although having highest debt ratio, but ROE of PDR was almost lower than other companies (Except in 2016, ROE of PDR was higher than ROE of SJS and BCI as well as higher than average ratio of industry). But it was still good because when debt ratio had reduced, ROE had also improved over time as analyzed previously. SJS was also the company showing good signs in the business results when ROE increased over time. Although in 2012, ROE of this company was extremely negative, which was -17.98%, but from 2014 to 2016, it was quite stable and higher than average ratio of industry. NLG and BCI was 2 companies which lowest debt ratio, but the ROE was quite good, especially for period 2014 – 2016 (Except ROE of BCI in 2016 sharply reduced.)

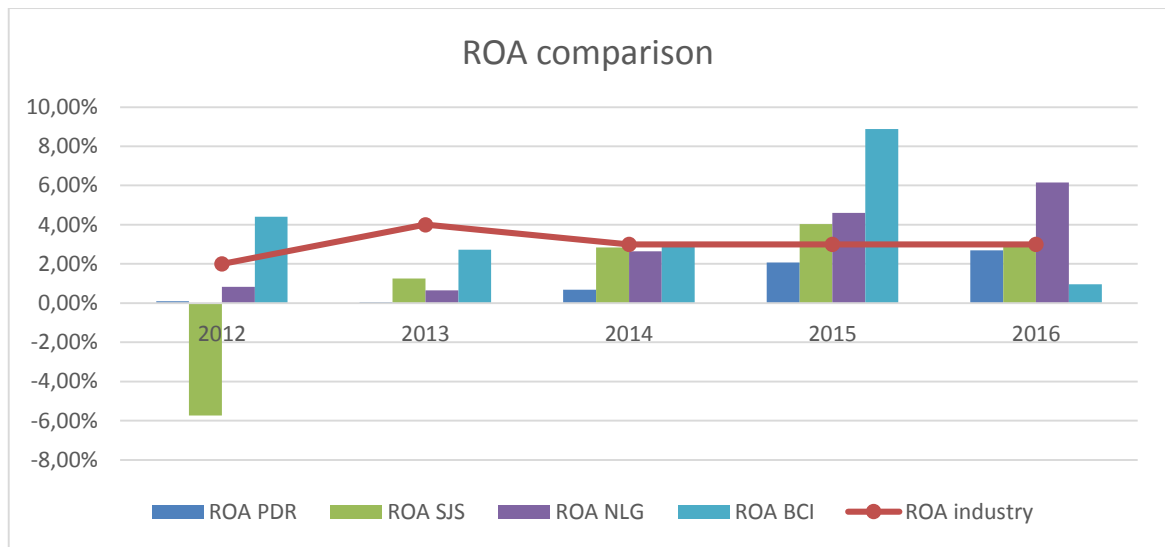


Figure 19: ROA comparison between PDR and other companies for period 2012 – 2016 (Source: own processing, <http://finance.vietstock.vn>)

ROA of all companies changed in the same trend with ROE. As present in figure 19, in this period, we also can see the recovery of PDR and SJS as well as the healthy profitability and the sharply reduction in ROA of BCI in 2016. NLG still showed the steady and sustained development over the years.

14 ANALYSIS OF COSTS OF CAPITAL AND FINANCIAL

LEVERAGE OF PDR

In this part, PDR's costs of capital, financial leverage as well as the relationship between them will be calculated and analyzed.

14.1 Costs of capital

As referred earlier, WACC is a weighted average cost of several composition of the firm's capital structure. The firm can obtain optimal capital structure if it have a particular debt-equity ratio at which possible WACC is lowest. To calculate WACC, first, we need to calculate the costs of each element in the capital structure and multiply it with its proportion in the capital. The sum will present the WACC. The formula of WACC is:

$$WACC = E/(D+E) \times R_E + D/(D+E) \times R_D \times (1-T_c) \quad (30)$$

PDR financed its debts by many sources (banks, individuals, and financial institutions). As presented in the financial statement from 2012 to 2016, it's easy to see that average interest rate for debts is unchanged about 14-15%. So the cost of debt before tax to calculate WACC is about 14-15%.

Table 11: Cost of debt and debt proportion of PDR for period 2012 – 2016

	2012	2013	2014	2015	2016
Cost of debt before tax	15%	15%	14.5%	14%	14%
Tax rate	22%	22%	22%	20%	20%
Cost of debt after tax	11.7%	11.7%	11.31%	11.2%	11.2%
Debt proportion	66%	66%	65.4%	54.8%	57.4%

Source: processing

PDR is public traded company. Cost of equity can be calculated based on CAPM model as below:

$$R_E = R_f + [\beta \times (R_m - R_f)] \quad (31)$$

Where:

The R_f (risk free rate) is the return on risk free assets, in this case is the interest rate of Vietnam Government Bond 10 years.

Beta coefficient (β) measures how much a company's share price reacts against the market as a whole. In this case, beta is calculated relying on stock price of PDR and equal to 0.55.

Market risk premium ($R_m - R_f$) is the difference between risk-free rate and the market rate. It is calculated according to Damodaran Data.

Table 12: Cost of Equity and Equity proportion of PDR for period 2012 – 2016 (Source: Own processing)

	2012	2013	2014	2015	2016
Rfr	10.439%	9.065%	7.93%	6.78%	6.637%
Market Risk Premium (Rm-Rfr)	9.9%	9.9%	9.9%	9.9%	9.9%
Beta	0.55	0.55	0.55	0.55	0.55
Cost of Equity	15.92%	14.54%	13.41%	12.26%	12.11%
Equity proportion	34%	34%	34.6%	45.2%	42.6%

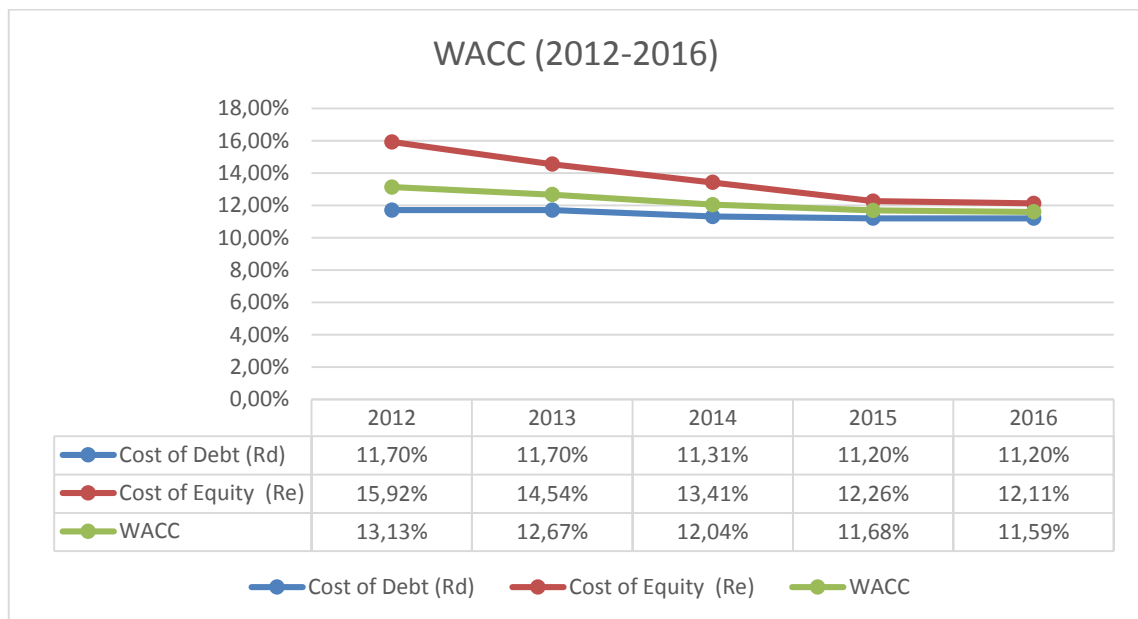


Figure 20: WACC of PDR for the period 2012 – 2016 (Source: Own processing)

As can be seen in figure 20, WACC of PDR didn't fluctuate too much, it was quite stable about 11.5-13%. Cost of equity is always more expensive than the cost of debts. Shareholders will take more risk, so that they will require higher rate of return. But difference between cost of debt and cost of equity of PDR is vague (except in 2012 and in 2013). Cost of debt

was too high. As mentioned earlier, by the end of 2016, PDR held about VND 3,242 billion short-term and long-term debts in VND 9,002 billion of total asset. The firm held large debts, so that which this cost of debt, obviously that the firm had to pay much interest expenses each year for these debts. Debt proportion decreased from 2012 to 2015 (from 66% in 2012 decreases to 54.8% in 2015, and slight increase in 2016 to 57.4%). It means the equity proportion also changed. Because the WACC is the average cost of capital used by the business. Any change in capital structure affects the WACC. Then change the value of the business.

14.2 Financial leverage

Return on capital employed (ROCE) measures a profitability and the efficiency of the company with its capital employed. ROCE is calculated as:

$$\text{ROCE} = \text{Earnings before Interest and Tax (EBIT)} / \text{Capital Employed} \quad (32)$$

Earnings before interest and tax (EBIT) shows how much a company earns from its operations without regard to interest or taxes. Capital employed is the total amount of capital that a company has employed to generate profits. ROCE is calculated based on the average capital employed, which calculates the average of opening and closing capital employed in the period.

$$\text{Capital Employed} = \text{Equity Capital} + \text{Debts} \quad (33)$$

A higher ROCE is better, because it indicates that the company is using capital more effective. ROCE should be higher than the cost of capital of the company. In contrary, it means that the company is not employing its capital efficiently to generate value for the shareholders. ROCE is useful when evaluating the performance of companies in capital-intensive sectors. ROCE provides a better indication to measure financial performance for companies with significant debt. Because it considers debt and other liabilities. Meanwhile, ROE only measure the profitability of a business with only its equity while ignoring its debt.

The proportion of debt, ROCE and interest rate of debt can impact the ROE of a firm. Let's compare 2 case when PDR has different capital structure to understand clearly correlation between ROCE, cost of debt and capital structure, how debts and financial cost affect to the ROE of the company. Case A is when the firm finances its operation mainly with debt. And Case B is when the firm finances primarily with equity.

Table 13: Example about correlation between ROCE, interest rate and ROE of company (Source: Own processing)

	Case 1: ROCE=R _D =12%		Case 2: ROCE=12%, R _D =10%		Case 3: ROCE=12%, R _D =15%	
	A	B	A	B	A	B
Equity	100	900	100	900	100	900
Debt	900	100	900	100	900	100
Capital employed	1000	1000	1000	1000	1000	1000
EBIT	120	120	120	120	120	120
ROCE	12%	12%	12%	12%	12%	12%
Interest expense	108	12	90	10	135	15
Net profit	12	108	30	110	-15	105
ROE	12%	12%	30%	12.2%	-	11.67%

In the case 1, when ROCE is equal to the interest rate, the amount earned by investing the debt is equal to the interest paid. So the capital structure doesn't affect to the ROE of the company. In the case 2, since ROCE is higher than interest rate, the amount earned by investing debt into the business is more than interest paid for the debt. So in this case, the debt can help to boost profits. The firm uses much more debt with respect to its equity, it will create more profits for its equity, while the case firm uses little debt with respect to its large equity, it impact little over its profitability. In the case 3, since ROCE is less than interest rate, the amount earned by investing debt is less than interest paid for the debt, thus either the firm finances with much or little debt, the firm still loses money. If the firm uses much debt with respect to small equity, it will make negative ROE. The case firm has very less debt, its profitability and ROE is more or less intact.

It can be said that a debt-free firm will be more stable than a debt-heavy firm. If a firm can remain stable and keep its ROCE higher than the interest rate, it should borrow debts. In contrast, if its operation is not so stable, and its ROCE is lower than the interest rate, it's well advised not to keep high debt proportion.

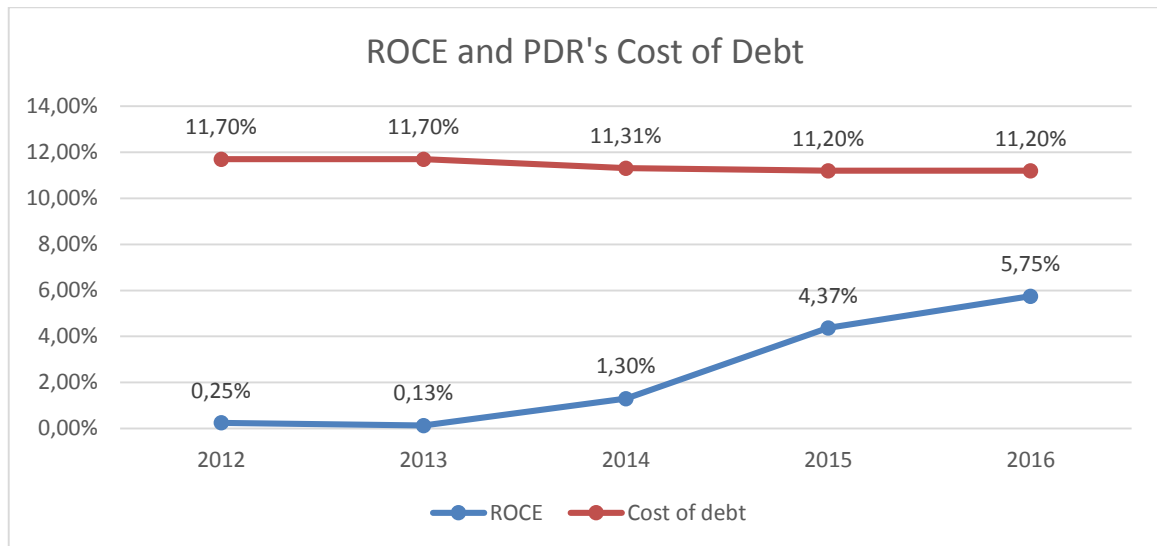


Figure 21: ROCE and PDR’s Cost of Debt for the period 2012 – 2016 (Source: Own processing, PDR’s financial statement)

In PDR, for the period 2012 – 2016, the cost of debt was high which was stable at 12%. But ROCE in this period was very low, especially in 2012 and 2013, it was only 0.25% and 0.13% respectively. Although when debt ratio decreased, the ROCE also increased, but it was still much lower than interest cost. It means although the company performance had been improved, but the company was not using its capital effectively. Relying on this ratio, PDR should reduce debts in its capital.

14.3 Relationship between costs of capital and financial leverage

As analyzed before, WACC includes 2 components: Cost of debt and cost of equity. Cost of debt is interest expenses from loans. Cost of equity relates to the issuing new share. Any change in debt-equity ratio will affect to the WACC of the business, then change the firm’s value. Debts increases will also lead to increase in interest expense that will directly affect to the profit of the company. The firm should consider an optimal capital structure at which the firm can use its capital effectively.

In the case of PDR, for the period 2012 – 2016, ROCE was always much lower than interest rate. That is, business used loans inefficiently. It borrowed too much. In other words, interest expenses are too high than capital efficiency.

15 RETAINED EARNINGS AND DIVIDEND POLICY

As a firm earns profits from its operations, it has two options to do with those profits. One is retaining them - reinvesting them into the firm to create more profits and therefore further stock appreciation. The other is to distribute a portion of the profits to shareholders in the form of dividends.

Dividend policy is a policy that determines how the company's profit is distributed. Profits will be retained for reinvestment of the company or paid to shareholders. Retained earnings provide investors a source of potential future profit growth, while dividends provide them with a current distribution. Dividend policy, also known as distribution policy, is one of three important financial decisions in an enterprise, and it is closely related to the two remaining fiscal policies: financing policy and investment policy. In a joint stock company, it is important to distribute dividends to shareholders. It is not just a distribution of profits to shareholders, it is also closely related to the financial management of the company. The reasons given for explaining the importance of dividend policy are as follows:

- First, dividend policy directly affects the interests of shareholders. Dividends provide shareholders with a tangible return on their investment and are the only source of income that investors can get right now when they invest in the company. Therefore, the company's maintenance of a stable or not stable dividend payment affects the investor's view of the company, so it can lead to a change of the firm's stock value on the market.
- Second, the dividend policy affects the firm's financing policy. By deciding the dividend policy, the firm also determines the financing policy. Because retained earnings are an important source of equity financing. As a result, dividend policy influences the amount of equity in the firm's capital structure as well as the cost of capital. In addition, if pay dividends, businesses must compensate for the lack of funding by raising capital from outside with more complicated and more expensive procedures.
- Third, dividend policy affects the company's investment policy. With low-cost source from retained earnings, the cost of capital used by businesses is relatively low. And at the same time, retained earnings are readily available at the business. As a result, businesses can flexibly choose to invest in high-yielding projects. As a result, retained earnings can stimulate future profit growth and, thus, may affect the value of a firm's stock in the future.

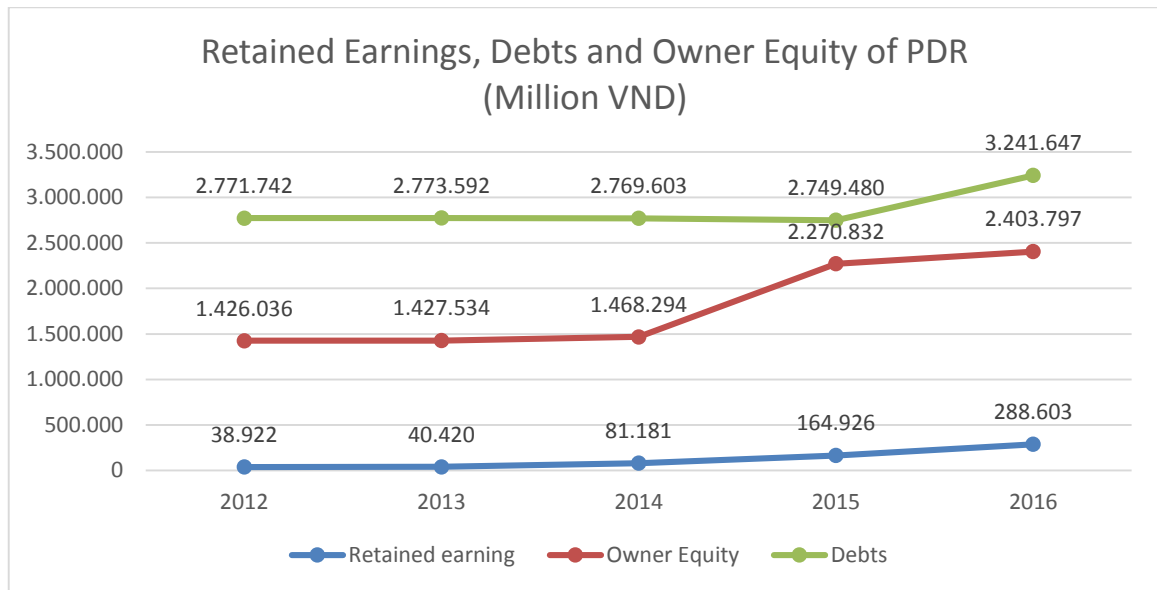


Figure 22: Retained Earnings, Debts and Owner Equity of PDR for the period 2012 – 2016 (Source: Own processing)

As presented in figure 22, we can see that retained earnings of PDR had increased over last 7 years. This amount did not change too much in period 2012 – 2014, but retained earnings in 2016 was higher 7 times than in 2012. Retained earnings is amount of money that the firm retained to reinvest in its projects. But compare to scale of debts capital and equity capital, retained earnings for this period only accounted for a small part of total money the firm need to finance for its operation. As mentioned earlier, in 2015, PDR issued shares and raised capital from VND 1,468 billion to VND 2,271 billion. In addition, 2016, total debt increased from VND 2,749 billion to VND 3,242 billion. It means that although in 2015 and 2016, retained earnings of PDR increased, but it was not enough. The firm still need more other sources to finance for its projects.

In 2015, in addition to issuing additional shares, PDR also completed the distribution stock dividend 5% to existing shareholders. Based on business results in 2016, at “resolution of Annual Shareholders' Meeting” in March 2017, PDR also expects to pay 10% dividend in shares to shareholders. The decision to issue stock dividends to existing shareholders is not only in the plan to expand the capital to serve business plans, but also express gratitude to investors, who have been with PDR all the time. This can be seen as a move to reassure investors.

As mentioned previously in the financial health of the company, the debt of PDR was too high, the financial situation was not good enough for banks or financial institution to continue lending. Moreover, retained earnings is not enough to finance for its operations. Therefore, it has no way but to raise funds by use more equity capital to finance its operation, although equity is always more expensive than debt.

16 MANAGER'S APPROACH TO RISK AND EFFORTS TO MAINTAIN CONTROL OF THE BUSINESS

At “resolution of Annual Shareholders' Meeting” in March 2017, management of PDR answered some questions of investors relating to the company's operation and efforts to control the business. At the meeting, the chairman of PDR emphasized: Currently, the company's focus is on financial restructuring, inventory reduction, cash flow generation and the special focus on BT projects.

There are some highlights as follows:

- Debt situation of the company:

The debts of PDR are primarily used to finance specific projects and is secured by the assets of the project itself. PDR's current largest debt is loans from DongA Bank, to finance the Everich 2 project. The company has worked with DongA Bank to review, restructure repayment schedule and interest payments. Expected in 2017 and 2018, the company will focus its revenue to pay off debts to DongA Bank.

- Business plan in 2017:

According to the business plan in 2017, PDR focuses on selling all apartments completed from the Everich 2 project and the Everich Infinity project. The company will use the proceeds mainly to repay debts to DongA Bank - PDR's biggest lender, as well as reduce debts from bonds. The company is also planning to transfer the Everich 3 project. If the transfer is successful, the company can pay off its debts to the DongA Bank with amount VND 2,000 billion.

The high-end sector of real estate market is showing signs of slowing down. However, the management of PDR believe that PDR's projects have clean land, good location, and full legal procedures, so the market situation does not affect the business plan of the company.

- Plans for the development of land funds are paid from the BT project.

With PDR's new strategy of reducing inventory, reducing debt to equity, and increasing investment efficiency, some of its projects will be considered for transfer and some other projects will be continued to invest in development.

The BT projects that PDR is implementing include: Phan Dinh Phung Stadium, Trauma and orthosis hospital, Thu Thiem Bridge 4, ... and with swap land fund from these projects will

help PDR invest, develop projects in the long-term plan, bring positive results in the coming time.

- Expected revenue in 2017:

The expected revenue and profit after tax of PDR in 2017 are VND 2,000 billion and VND 336 billion, respectively. The revenue and profit plan of PDR in 2017 is considered prudent and feasible. Specifically, the results are expected from the following projects:

+ Everich Infinity Project: VND 370 billion

+ Bau Ca project: VND 30 billion

+ Block C Everich 2 project: VND 20 billion

+ If you transfer Everich 3 project, profit in 2017 will be much better.

- Borrowing and using cash flow plans in 2017:

The investment plan of PDR in 2017 is VND 3,000 billion, plus the repayment debt to DongA bank is VND 1,000 billion, so the company will need VND 4,000 billion. However, PDR's management said that in 2017, the company had no plans to borrow from the bank. The company will use internal sources to reduce debt and invest in developing projects, without additional bank loans.

- Seek investment partners at home and abroad:

PDR plans to develop stable and sustainable. So the company wants to look for partners, financial institutions, real estate companies in the country and abroad to invest, helping the company more and more development to bring high efficiency for shareholders.

17 PROJECT OF OPTIMIZING CAPITAL STRUCTURE

It would be difficult to figure out what is the exactly optimal capital structure of any business. Because of differences in business characteristics, operating environment will greatly affect the financial leverage decision of the management. In the case of PDR, to get the optimal capital structure, obviously the company should reduce debts in its capital and increase size of equity capital. As analyzed above, now the company has high pressure with debts and interest expense. Although cost of equity is more expensive than cost of debt, but since internal sources as retained earnings is not enough to finance for the company's operation, moreover, since PDR is considered as a medium and small size company, with such the financial health, currently the company will have difficulty to continue borrowing from banks or financial institutions. In addition, the plan of company is reducing debts and no additional borrowing from the banks. Therefore, to continue financing for its projects, PDR should consider to the plan of issuing new stocks to have enough money serving for its operation. With this change, the company also change its capital structure with the decrease of debt to equity ratio.

The main goal of this project is to define the essential step to raise the capital for PDR from issuing new stocks. With this activity, the company will optimize its capital structure as well as have enough money to finance for both of existing and new projects. However, this project is considered to be working in short-term strategies. For long time, the strategies to optimize capital structure depend on many factors, such as business results, loans interest rate, the company's position in the market. To get the optimal capital structure in long-term, the company should consider all factors that can affect to its performance. But these factors changes over time. So that it will be difficult to say that whether such the capital structure of this time will be fit on the other time. In the long time, with the increase in size of equity capital and the improvement in business result, the company got the trust from investors and banks, then the company can borrow from banks or financial institution more easily. At that time, the company should borrow more to take advantage from interest tax shield.

In fact, the capital needs of the business at each stage of growth is different, usually due to volatility of factors such as cash flow, investment demand and the development of market share. Due to the influence of the life cycle of the enterprise, risk factors, financial positions

also change, creating different advantages or disadvantages in mobilizing capital. The company should understand and exploit the characteristics of each stage of its development, from which having the appropriate funding decisions.

The project will start with the identification objectives of project, followed by the analysis of how it will be conducted such as the process of issuing stocks, market research process, how much the company should issue, determining potential customers, estimated time of issue, the impact to the capital structure as well as to the EPS.

In addition, the cost analysis can help the project be more applicable to the case of PDR. Risks and how to control them during the projects also is the important factor influencing the success of the projects. So that they are also assessed during the projects time.

In the last part, the completed project will be evaluated.

17.1 Setting objectives of project and project plan

17.1.1 Project objectives

The main objective of project is optimizing capital structure of the company with the change in debt to equity ratio, and increase size of equity capital in total capital structure. Through analysis of financial health of PDR, the company is facing with high pressure of debts and interest expenses. Moreover, the average interest rate is high, about 15% that put high pressure for the company to pay interest cost for the debt-holder as the cash flow of the company is not good. Together with the plan to reduce debts of PDR, the issuing of new common stocks is not only improve capital structure of the company, but also raise capital to finance for its operation. Now PDR are having many projects that are unfinished.

With the issuance of additional common stocks, the company will have more cash to:

- Meet capital requirements for important projects: Now PDR are holding many unfinished projects that are expected to bring huge profits for the company when it's successful to sell to customers, such as projects Everich 3, Everich Infinity, CMT8,...
- Have enough money to carry out BT projects: with BT projects, the company don't need to wait for a long time to get positive profits. But these projects need not a small capital to invest.

- Increase the size of capital to ensure that the company has sufficient capital, help business operations normally, without interruption.
- Save interest expense on bank loans
- Create liquidity for the company and increase promoting the business's image to the investors.
- Attract strategic partners that have the potential to support the company's development in the future

17.1.2 Project planning

It's necessary to have a detailed plan for projects to not waste time and money of the company. Therefore, schedule's project will be planned with the time duration so that the company can control it. In general, the stock issuance process will include the following steps:

Table 14: Project plan for issuing stocks process (Source: Own processing)

Action	Time (Week)
To decide to set up a project team to prepare for the issuance of stock by the Board of Directors.	1 weeks
To conduct market research, conduct the valuation of issued securities, setting implementation plan.	4 weeks
To prepare procedures for convening shareholders' meetings	1 weeks
To prepare documents and send the registration document for sale to the State Securities Commission (SSC)	1 week
To modify or supplement the dossier if the information is inaccurate or missing that is needed to explain	1 week
After being issued with a license, the company must issue a notice of issuance on the mass media.	1 weeks
To prepare report on the results of the issuance to the SSC and make capital registration with the competent authority.	1 week

In case the company meets the conditions for listing, it compiles the additional listing document to the SSC and the Stock Exchange where the company is listed.	2 weeks
Official trade of additional listing shares	

The company should control each activity in a certain period of time to not waste time and money for it. This plan is expected to save time and improve the performance efficiently.

The project is designed to implement in the year 2017. However, there are some limitations in project. Because all financial analysis relies on financial statement and public information, so the time to implement project is not exact. In fact, the management of the company might have other plans to improve its performance, not by increasing equity capital.

17.2 Organizing project team

One of other important step is arranging a project team. This team will be the persons planning and conducting the project on behalf of the company as well as controlling project activities. In general, in order to ensure efficient supervision, allocation and use of mobilized capital, shareholders will authorize the board of directors to develop feasible investment plans and detailed using capital plans on the basis to ensure the profitability of the project and the interests of shareholders of the company. The board of directors will also be authorized to allocate and use the proceeds from the issue to allocate them in line with the progress of the projects and to use the available funds the company currently has to compensate for the shortage of capital needed for projects.

The team members of project team can be chosen by board of director. They can be employees of the company who are working in accounting department, finance department, business department. But because it’s not an easy task, and it’s not for a long-term strategy, so that PDR also should hire specialists outside. The project team should include 5 member, in which there are 2 specialists hired from outside and 3 member who are working for the company. These 3 member should be trained to understand the issuance process to support for the specialist in order to conducting project more effectively.

In addition to the tasks mentioned above, the main function of the project team is to prepare dossiers of application for issuance for submission to the State management agency in charge of securities and securities market; choose an issuance underwriter (if needed), an auditing

firm and an advisory organization and, together with these organizations, develop an issuance plan and make a prospectus to provide to the investors. This team should be learned about conditions to issue stocks as well as the process of the issuing. In addition, the team must be together with other organizations as underwriter, audit firm, consultant firm, developing an issuing plan and implement it in the most beneficial way for the company.

Choosing members of the project team is very important because its wrongdoing may lead to wrong decisions and waste time as well as money of the company. It can be said that the success of conducting project is also based on the project team members. Therefore, they must be trained and informed about the project as well as they have to know their responsibility before conducting the project.

In the case of PDR, the project team should consider to select an issuance underwriter. Because an issuance underwriter with a great reputation and its extensive network will help smooth the distribution of the securities. Therefore, the selection of the good underwriting organization is very important and crucial to the success of the issuance.

17.3 Conducting market research

Firstly, when prepare for the project, the company must check the condition to issue stock to the public. In Vietnam, there are some condition for a company to issue stock as following:

- An enterprise with a charter capital contribution at the time of registration of the offering of VND 10 billion or more calculated according to the book value;
- The business operation of the year preceding the year of registration of the offering must be profitable and at the same time, there are no accumulated losses up to the year of offering registration;
- The issuance plan and the plan for using the proceeds from the offering are approved by the General Meeting of Shareholders.

PDR is currently listed on the Ho Chi Minh City Stock Exchange (HOSE). The company meets all the condition of issuance, so that project is feasible.

17.3.1 Market research process

Market research is a very important part in this project. Before issuing ordinary shares, companies often conduct market research to determine the public's interest. These studies allow

companies to determine the amount of stock they will provide. In addition, market research helps the management anticipate the relative results of the offering.

In general, market research is a time consuming and costly process. However, it is a systematic approach to providing necessary information. In this project, this step is conducted by project team together with professional team from issuance underwriter.

For effective market research, PDR should follow these steps:

Step 1: Determine the target

In market research, the most important step is to determine the objective of the project.

Before every market research is done, imagining a complete market research report is also the answer to questions in business. Businesses can approach in the direction of simulating a market research report with hypothetical data and ask the interviewer: "If a market research report looks like this, does information the company need was complete?" If the answer is yes, then it is time for the business to embark on real data collection. If the answer is no, continue working with the research until a clear goal is identified. With PDR, first part of project referred to the need of increase equity capital of the company. So that the objective of research is to determine the interest of public to stock of the company. They have to answer some question such as: How much shares the company should issue? Which price is reasonable? Project team should understand clearly these targets to set an appropriate plan.

Step 2: Decide on method of market research

Once the purpose of research is set, it is time to plan what kind of market research is most appropriate to get the data the company need. The company need to determine specifically how to choose a sample for research: what customers are being pursued, where they can be found, how to encourage them, etc. Generally, at this stage, the enterprise will have to decide on the market research method: analyzing data, using survey, group interview. It is also time to determine how market research is conducted: by phone, face-to-face, mail, online, etc. For the issuance of stocks, the PDR should conduct a quantitative description research. The purpose of this type of descriptive research is to measure some of the areas of interest and quantitative. The company can use surveys or questionnaires to determine the interest of existing shareholders or potential customers to the company.

Besides, the company can use method of collecting financial data of the own company and other similar companies in Real estate industry which are collected from stock exchange to

serve for calculating appropriate and comparable ratios, since can calculate an appropriate number of stocks issued and its price.

Step 3: Design and preparation of market research tools

In this step of market research, the company design market research tool. With survey method, the company begins to question and design the questionnaire. With interview method, the business prepares the questions and equipment needed for the performer. This is the planning step in the whole process of market research.

Here is some question that can be included in the questionnaire or interview:

- Are you interest in the stock of PDR?
- Which price are you willing to pay for a stock of PDR?
- How much is the budget you can use to buy stocks of PDR?
- What/Who influences on your decision of buying stock?

Step 4: Data collection in market research

This is the core of the market research project. Answers, selections and observation points were collected and note. Each information is important and contributes to the final conclusion of market research.

Step 5: Analysis of data in market research

From data collected, now PDR's project team and other organizations who are responsible for planning and evaluating stock have a better view and insight into the existing data. Data should be transcribed by some qualitative data analysis software such as Excel, SPSS,... This is the start of creating a content that the company wants to express and conclude. They can anticipate which each of prices, how many stocks they can sell to the customers. From that, they can make the appropriate decisions.

Step 6: Present the results

Based on the useful information collected, now the company can come up with a specific implementation plan.

The following table is a summary of the market research process when issuing shares at PDR.

Table 15: Summary of market research in the project of PDR (Source: Own processing)

Market research	Works
1. Determine the target	Determine interest of public to the stock of PDR
2. Decide on method of market research	<ul style="list-style-type: none"> - Selecting target sample - Using quantitative description research (Survey, interview) to assess attitude and demand of customers. - Using number data collected of PDR and some companies in the Real estate industry from stock exchange for analysis
3. Design and preparation of market research tools	Designing questionnaire or question for survey/interview
4. Data collection in market research	Collecting data
5. Analysis of data in market research	Regression analysis
6. Present the results	Using result received to design an implementation plan.

17.3.2 Looking for potential customers

The step is small part of market research. Normally, when issuing shares, the company will target to potential customers. Identifying customers is also essential step, because it will determine whether stocks can be sold out or not. At General Meeting of Shareholders, shareholders should unify the way of offering shares, the potential customers the company is aiming for. The issuance of shares may distort ownership and may result in the loss of control of the founding shareholders. In addition, the structure of ownership of the company is always fluctuations due to the impact of daily stock transactions. So that selecting a form of offering and consider its disadvantages is what shareholders have to take into account.

Beside existing shareholders, the PDR can consider to looking for some new investors who can contribute to the development of the company in the future. It could be domestic and

foreign investors. Currently, in Vietnam, there are many companies developing with the strong financial supporting from foreign investors. This can be potential partners that the company should notice.

17.3.3 Calculating the number of stocks issued

The aim of market research is to determine the number of stocks PDR should provide to the market. At the general meeting of shareholders, in addition to seeking approval for the issuance of securities to the public, shareholders will have to unify the purpose of mobilizing capital; the amount of capital to be mobilized; the type and quantity of securities to be issued; expected object of distribution.

To serving for plan of issuing new stocks, the first question is “How much securities the firm should issue?” and “What is the price of a stock issued? The amount of securities issued will impact directly to the capital structure of the company. It will decrease the debt to equity ratio and then change the cost of capital. It also impact directly to the price of the stocks that stocks are circulating and EPS of the company. The number of stocks the company should issue depend on the capital the company need to finance for its projects and the impact to the capital structure of the company. Currently analyzed, the company has a high debt to equity ratio, high interest expense pressure. A safe capital structure will help the company improve its financial capacity. Especially, it will help businesses to access loans more easily in the future. So that the firm should calculate carefully the number of stocks issued in order to capital structure can be most effective.

In addition, it can be said that securities valuation is the most difficult and complex stage when issuing securities to the public. If the stock price is too high, it will be difficult to sell. If the stock price is too low, it will cause damage to the issuer. Therefore, the valuation of securities must be reasonable so that buyers and sellers can accept. This work is very important and need to be coordinated by issuance underwriter, the audit firm and the consulting firm.

17.4 Developing implementation plan

After setting a project team, determining objectives and potential customers of project, valuing the stock price issued, the project team has to build a detailed implementation plan. This plan will include many processes and detailed contents.

17.4.1 The content of implementation plan

The content of detailed plan should have information as following:

- Information on additional issuing stock: This part has some information such as name of the stock in stock exchange, type of stock, stock price, number of stock expected to be issued, number of shares in circulation, charter capital of the company before and after issuance.
- The purpose of issuances: As mentioned in the objective of project, in this part, PDR has to explain why they decide to issue the stock to raise capital.
- The customers of issuances: In this part, PDR has to show the customers that they are aiming for. The result is come from the step to determining the potential customers.
- Method of issuances: There are a number of options of issuance method that the company can choose, for example by exercising the option to purchase additional issuing stocks according to the proportion, transferring stock purchasing rights (Apply to the existing shareholders), direct offerings (Apply to the employees or to the public)
- Estimated time of issuances: In general, this plan will take at least 3 or 4 months to complete. However, the specific time may be decided by the Managing Board after completing the procedures prescribed by the current law and decided by the competent State bodies.
- Principles of determining the offering: Generally, based on the liquidity of the company's shares on the stock exchange, the company's capital needs, the book value of the company, the financial market situation, the expected selling price for each customer object will be determined.
- Dilution risk: When issuing shares, dilution risks can arise, including dilution of earnings per share (EPS), dilution of share price, dilution of shareholding and rights voting. The company have to calculate these impacts and represent it in the detailed implementation plan.

All of these contents are necessary to present in the implementation plan and decide to the feasibility of the project.

17.4.2 Implementation time table

During estimated time to conduct project, this table show works and expected time period to complete these works.

Table 16: Implementation time table of project (Source: own processing)

	Works	Time	
		Start	Finish
I. Issuance of stocks to the public			
1	Prepare procedures for convening shareholders' meetings Conducting market research and implementation plan	Week 1st – Week 4 th	
2	The General Assembly of Shareholders (GAS) approves the plan to increase capital.	Week 4 th	
3	Prepare the prospectus for sale and the documents related to the issuance of stocks	Week 1st	Week 4 th
4	To amend and unify the contents of the prospectus and related documents	Week 4 th	Week 5 th
5	To compile documents on the issue of stocks to increase of capital, the board of director shall approve the documents of issuance for submission to the State Securities Commission (SSC)	Week 5 th	Week 5 th
6	To submit document of issuance to SSC.	Week 5 th	
7	To explain and supplement the dossier for the SSC	Week 6 th	Week 9 th
8	SSC accepts the offer dossier and issues the certificate of public offering.	Week 9 th	Week 10 th
9	To discloses the information for sale.	Week 10 th	
10	To announce closing investors list, collecting money from investors and processing the number of shares not yet issued (if any).	Week 10 th	Week 13 th

11	To report the issue to the State Securities Commission	Week 14 th
12	To compile additional listing dossiers and supplement the dossiers if necessary	Week 14 th - Week 16 th
13	To officially trade listed additional shares.	Week 17 th

17.5 Submitting registration document and issuing shares to the public

After preparing all necessary document, the company has to submit to the state management agency for securities and securities market. This is the job of the project team. This team should know what documents should be prepared and how to submit them, where they should be submitted to not interrupt the process and waste the time. Here are some documents that should be included in the applications for issuance:

- A certificate of offering of shares;
- The prospectus made according to the form attached to the financial statement;
- Company rules;
- Decision of the General Assembly of Shareholders approving the issuance plan and the plan for using the collected capital;
- Undertaking to underwrite (if any);
- The report on the use of capital of the latest public offering of shares already registered with the State Securities Commission (if any).

The company submits the file to the SSC. Often issuers will be asked to grant or refuse to grant licenses within a certain period of time from the date of submission of application for issuance. In this process, the company will be ask to explain and supplement the document if necessary. After the Securities Commission accepts the offer and issues the certificate of public offering, PDR will have to disclose the offering information to the public on the mass media, then issue a report to the SSC.

17.6 Cost analysis

For issuance of the stock project, PDR should also pay much attention to the cost factors. Because this process is often very costly. In cost analysis part, all costs will be considered

so that the company can minimize cost of project, at the same time to provide financial prediction for project.

Cost of hiring issuance underwriter

During about 3 month of projects, PDR will sign contract of issuance with Underwriter. Normally, the company has to pay for one contract of issuance around VND 150 million. It includes the money paid for specialists to research and evaluate value of stock of the company as well as guarantee for issuance.

Cost of establish project team

It requires a team of 5 members for preparing and conducting project together. The wages are estimated for each specialist are VND 25 million for each person per month. For 3 member of project team, the estimated wage for each person is VND 10 million each person per month. The project is expected to finish in about 4 month, so that total cost for project team is about: $2*25*3+ 3*10*3=$ VND 240 million.

Cost for consult firm

For whole process, PDR will need the consults from specialist from consult firm to understand clearly about law and regulation. The expense estimated for each month is about VND 15 million. Total expense that PDR have to pay for consult firm is $15*3=$ VND 45 million.

Cost for working with audit firm

To conducting evaluation of stock for issuance, PDR has to work with audit firm. The expense estimated for each month is about VND 15 million. Total expense that PDR have to pay for audit firm is $15*3=$ VND 45 million.

Cost for announcement issuance information to the public

The estimated expense for this step is around VND 10 million.

Advertising expense

For whole project, advertising activities is also important step that help to introduce image and information of issuance of the company to public. The cost depend on type of advertising options PDR choose. The budget for 2 months is about VND 50 million.

The table below is summary all expenses during the whole project.

Table 17: Cost analysis of project (Source: Own processing)

No.	Cost description	Estimate expense (Million VND)
1	Cost of hiring issuance underwriter	150
2	Cost of establish project team	240
3	Cost for consult firm	45
4	Cost for working with audit firm	45
5	Cost for announcement issuance information to the public	10
6	Advertising expense	50
Unforeseen budget 10% (reserves)		54
Total		594

Market research and the process of issuing stocks are costly for business owners. Of course, in the case of successful share offerings, these costs will be recovered easily.

17.7 Risk analysis

Preparation for issuing stock is expensive, complex and time consuming. In fact, some risks can happen during the time of conducting project. They can reduce the effectiveness of project and can cause other problems that lead to higher expenses for the company. Thus predict possible risks and suggest some plans to avoid or minimize the damages of risk is necessary.

Here, we consider 2 type of risks. One is risks results from the company. And other is come from the market.

First is some risks that arise in the process of issuing stock.

Risk of leaking information before issues

The information in the pricing process leaks before the issue can affect the value of the company's stock as well as the public interest in the company's shares. Then the job at that time is no longer meaningful. It can lead to many consequences, damage the whole project as well as increase dramatically expenses. Thus, a training program is necessary for all member taking part in the project to aware them about the importance of information security. In addition, before starting project, all members of project team and other organizations participating in project must have sign a contract about information security.

Risk of inappropriate information during data collection process

By researching market, the company can determine the public's interest to the stocks of the company, since they can anticipate the number of stock that should be issued. However, data collected may include some inappropriate information. This can lead to the wrong in valuing stock or proposing an ineffective plan. The inappropriate information result from many reasons such as errors in wrong sample survey, data collected from competitors is not generalized and cannot comparable, identifying wrong potential customers, etc.

To minimize this risk, with the cooperation with specialist and consultants, the company should have a careful and detailed plan before conducting the market research. The member taking part in the research have to be trained and understand clearly about their tasks and their responsibility. The steps of pre-testing questionnaire, sampling should be conducted carefully.

Risk of wrong calculation in valuation of stocks

As mention earlier, valuing of stock is the most difficult and complex part when issuing securities. It can be caused by many reason such as lack of knowledge of the participants in the valuation process, lack of cooperation between implementing organizations. Wrong in valuing stock can affect to the success of the project. So that this process should be implement cautious. Each members taking part in this process is required to have enough ability as well as proves that they have enough knowledge to participate in project. In addition, the team leader of each organization, the company, issuance underwriter, audit firm, consult firm have responsibility to set a schedule in which, they have connection with another organization in the project. Every week, these organizations have to set a meeting together about 1-2 hour to update the progress of the project.

Risk from lack of knowledge and responsibility

This risk can be minimized if CEOs, CFOs, and all board members of the company understand the rules and laws promulgated by the government. All know individual responsibility and general responsibility for the report, information disclosed to the public and accountable to the law. Because the lack of knowledge and responsibility can be severely affected in terms of benefits as well as the reputation of the company.

Risk from the market

In the context of the surge in stock supply, the stock market is downturn and investor sentiment is unstable, it can raise the risk of unsuccessfully in the offering. However, this is an uncontrollable risk.

17.8 Project evaluation

The project of issuing common stock of PDR is expected last in 4 months. This is a short-term project to adjust capital structure of PDR and raise capital for operation. In the future, with the changes in business results, market situation, the financial position of the company, the capital structure of PDR can also change.

The whole project is divided into 2 main parts. The first part is focusing on analyzing of company background, overview about market and the company with SWOT analysis and PEST analysis, the financial health as well as capital structure of it and other companies with the same size in the same industry. From this deep analysis, the second part is dealing with the project of how to raise equity capital by issuing common stock. In this project, cost analysis and risk analysis are conducted to measure better for the whole project.

CONCLUSION

The main purpose of this master thesis is to design a project of the optimal capital structure of Phat Dat Real Estate Joint Stock Company.

The whole thesis is divided into 2 main parts: theoretical part and practical part. The theoretical part presented literature review focused on the company's capital structure, describes aspects of the company's capital structure such as definition, composition as well as some main theories and factors affect the capital structure of the company.

The practical part began with some introductions about PDR and its business operation, followed by PEST analysis and SWOT analysis of the industry as well as of the company. On the basis of selected financial indicators and current capital structure PDR, its financial performance was analyzed with emphasis on the capital structure, evaluated and compared with other companies in the same industry, to find out the optimal capital structure for the company. The practical part showed that in the period 2012 – 2016, PDR have trouble with its capital structure. The company had large of debt that put high pressure on the company to repay debt and pay interest expense each year. It's obvious that the company should focus on reducing its debts and restructuring its capital structure.

Relying on theoretical knowledge and analysis of PDR's financial data for 5 years, a plan was designed to optimize capital structure of the company. In the project part, a project was designed to raise capital for the company by issuing new stocks. With this project, the company optimized its capital structure as well as had enough money to continue financing for its operations. The project indicated full details and steps which the company should implement to issuing stocks. In the project, cost analysis, time schedule and risk management was discussed to help the company to prepare in finance and reduce risk as much as possible.

In conclusion, in this master thesis, the financial analysis relies on the financial statement and public information of the company. So that there are some limitations in the project. But according to the current situation of PDR, 2017 is the suitable time for doing this project to improve the company's performance.

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LIST OF ABBREVIATIONS

CAPM	Capital Asset Pricing Model
GDP	Gross Domestic Product
PV	Present value
ROA	Return on Asset
ROE	Return on Equity
ROS	Return on Sales
WACC	Weighted Average Cost of Capital

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APPENDIX P I: BALANCE SHEET

Balance Sheet	2012	2013	2014	2015	2016
A. SHORT-TERM ASSETS	4.890.275	5.362.887	5.705.424	6.745.183	8.100.625
I. Cash and cash equivalents	10.054	7.433	7.946	31.572	149.428
III. Short-term receivables	208.076	183.833	280.267	665.869	590.825
1. Short-term trade accounts receivable	129.064	97.804	157.247	432.577	412.465
IV. Inventories	4.667.318	5.164.363	5.413.250	6.034.609	7.356.019
V. Other short-term assets	4.827	7.257	3.961	13.134	4.352
B. LONG-TERM ASSETS	296.997	295.080	347.563	795.652	901.725
I. Long-term receivables				174.671	282.233
II. Fixed assets	193.904	197.053	202.167	427	2.295
III. Investment properties				118.154	193.553
IV. Long-term assets in progress				137.821	61.123
V. Long-term financial investments	45.000	45.000	97.000	345.762	345.550
VI. Other long-term assets	58.093	53.027	48.395	16.786	16.971
VII. Goodwill				2.030	
TOTAL ASSETS	5.187.272	5.657.966	6.052.986	7.540.835	9.002.350
A. LIABILITIES	3.761.236	4.230.432	4.584.692	5.270.003	6.598.553
I. Short -term liabilities	1.021.620	676.216	1.126.777	1.534.318	1.678.062
10. Short-term borrowings and financial leases	486.551	206.278	612.681	505.607	434.359
II. Long-term liabilities	2.739.616	3.554.217	3.457.915	3.735.685	4.920.491

8. Long-term borrowings and financial leases	2.285.191	2.567.314	2.156.922	2.243.873	2.807.288
B. OWNER'S EQUITY	1.426.036	1.427.534	1.468.294	2.270.832	2.403.797
I. Owner's equity	1.426.036	1.427.534	1.468.294	2.270.832	2.403.797
1. Owner's capital	1.302.000	1.302.000	1.302.000	2.018.100	2.018.100
11. Undistributed earnings after tax	38.922	40.420	81.181	164.926	288.603
TOTAL OWNER'S EQUITY AND LIABILITIES	5.187.272	5.657.966	6.052.986	7.540.835	9.002.350

APPENDIX P II: INCOME STATEMENT

Income Statement	2012	2013	2014	2015	2016
1. Revenue	104.440	39.618	415.282	448.650	1.523.980
2. Deduction from revenue				46.136	27.314
3. Net revenue	104.440	39.618	415.282	402.514	1.496.666
4. Cost of goods sold	61.138	12.033	336.841	256.222	1.093.341
5. Gross profit	43.302	27.585	78.441	146.292	403.325
6. Financial income	201	69	52	855	3.224
7. Financial expenses	3.895	1.551	1.521	1.521	2.378
Of which: Interest expenses	3895	1.551	1.521	1.521	1.996
8. Share of associates and joint ventures' result				-2.238	-1.930
9. Selling expenses	7.268	6.200	2.808	12.619	55.473
10. General and administrative expenses	29.168	21.440	22.138	30.977	42.488
11. Operating profit	3.172	-1.536	52.025	99.793	304.279
12. Other profit	3.282	5.401	1.517	100.775	151
13. Profit before tax	6.454	3.865	53.542	200.568	304.430
16. Current corporate income tax expenses	1075	1.109	8.859	44.843	63.141
17. Deferred income tax expenses	440	415	3.040		-1.231
18. Net profit after tax	4.938	2.342	41.642	155.725	242.520
19. Earnings per share (VND)	38	18	320	922	1.136

APPENDIX P III: CASH FLOW

Cash flow	2012	2013	2014	2015	2016
I. CASH FLOWS FROM OPERATING ACTIVITIES					
1. Profit before tax	6.454	3.865	53.542	200.568	304.430
2. Adjustments for:					
Depreciation of fixed assets and properties investment	1.598	1.233	786	789	604
(Reversal of provisions)/provisions	288		133	-10	2.722
Loss/(profit) from investment activities	-18.558	-69	-48	-98.135	-169
Interest expense	3.895	1.551	1.521	1.521	1.996
Adjustments for:					
3. Operating profit before changes in working capital	6.323	6.579	55.934	104.733	309.583
(Increase)/decrease in receivables	91.489	23.159	244.193	-441.511	1.250.945
(Increase)/decrease in inventories	-192.951	-63.780	-150.312	-385.923	-1.644.851
Increase/(decrease) in payables (other than interest, corporate income tax)	-35.046	-16.234	-199.266	451.327	-61.385
(Increase)/decrease in prepaid expenses	-2.341	4.812	933	53.131	4.002
Interest paid	-205.643	-4.983	-2.709	-5.470	-4.788
Corporate income tax paid	-3328	-2.536	-1.237	-25.814	-43.191
Other receipts from operating activities	89.199	70.106	132.051		
Other payments for operating activities	-45.704	-18.130	-18.162	-5.619	-4.178
Net cash flows from operating activities	-310.648	-1.007	61.426	-255.146	-193.864

II. CASH FLOWS FROM INVESTING ACTIVITIES					
1. Payment for fixed assets, constructions and other long-term assets	-8.738	-3.533	-4.973	-127.489	-79.997
2. Receipts from disposal of fixed assets and other long-term assets	895			25.000	
5. Payments for investment in other entities				-250.145	
6. Collections on investment in other entities			-52.000		
7. Dividends, interest and profit received	201	69	48	849	169
Net cash flows from investing activities	-7.642	-3.464	-56.925	-351.784	-79.829
III. CASH FLOWS FROM FINANCING ACTIVITIES					
1. Receipts from equity issue and owner's capital contribution				650.680	
3. Proceeds from borrowings	358.848	19.850	91.737	410.399	613.720
4. Principal repayments	-88.404	-18.000	-95.725	-430.523	-121.553
6. Dividends paid, profits distributed to owners					-100.618
Net cash flows from financing activities	270.444	1.850	-3.988	630.556	391.550
Net cash flows during the period	-47.846	-2.621	512	23.626	117.857
Cash and cash equivalents at beginning of the period	57.900	10.054	7.433	7.946	31.572
Cash and cash equivalents at end of the period	10.054	7.433	7.946	31.572	149.428

