**Czech University of Life Sciences Prague**

**Faculty of Economics and Management**

**Department of Economics**

**Diploma Thesis**

# Economic analysis of selected construction company

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# CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

Faculty of Economics and Management

# DIPLOMA THESIS ASSIGNMENT

BURAK EKER, BSc

Business Administration

Thesis title

**Economic Analysis of Selected Construction Company**

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**Objectives of thesis**

This thesis was dedicated to the investigation of the role of economic analysis in the effective business development of companies, and to the practical use of economic analysis on the example of one multinational construction corporation, namely French-based Vinci.

The aim of the thesis was to reveal through the use of economic analysis where Vinci acts successfully in its business, and where the company either has drawbacks or faces threats which affect its ultimate financial performance.

The objective of the thesis were the following: to investigate the key theoretical aspects related to economic analysis and its functions, different types, users, and the benefits it might bring to its users; to understand how different tools and techniques of economic analysis can be used effectively in corporate business practice; to run a deep economic analysis of Vinci, one of the world's largest multination construction corporations; to develop recommendations for Vinci to improve the performance of its business based on the results of economic analysis; and to make appropriate conclusions in line with the aim of the thesis.

In the practical part of the thesis, it is investigated a case study of Vinci, one of the world's major multinational corporations. Within the case study, its applied financial analysis, SWOT analysis, PEST analysis, and Porter's five forces model, as well as elements of technical and fundamental analysis. Deductive thinking and synthesis were used in order to summarize the findings of the research, develop appropriate recommendations for improving Vinci's business, and to draw conclusions in line with the aim of the thesis.

**Methodology**

The methodology will be based on to find the financial ratios, key items of financial statements and company's last 4 years financial performance including with bench marking with competitors.

I. Horizontal Analysis: The valuable informations on the company's financial performance by showing the trends and tendencies in the dynamics of different indicators representing specific aspects of the corporation's activities. Also the analysis of the trends persisting in Vinci's key financial indicators.

II. Vertical Analysis – Focusing on the structure of Vinci's key items of financial statements, namely assets, liabilities, and equity. The changing of assets, liabilities and the equities during the years and the importance and effects of this changings to the company's current situations.

III. Analysis of Financial Ratios will be done under five head lines which are ;Liquidity ratios, Profitability ratios, Indebtedness ratios, Activity ratios and Capital market ratios. All of the headlines will have sub-items that will significantly and seperately will be evaluated to identify company's current market value.

In addition of these evaluations, financial ratios of Vinci will be compared with key market competitors " such as Grupo ACS and SKANSKA" in order to understand Vinci's market position in the competititon.

**The proposed extent of the thesis**

60 pages

**Keywords**

Economic analysis, financial performance, financial ratios, liquidity, market value, profitability, SWOT analysis, Vinci

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**Recommended information sources**

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**Declaration**

I declare that I have worked on my diploma thesis titled "Economic analysis of selected construction company" by myself and I have used only the sources mentioned at the end of the thesis. As the author of the diploma thesis, I declare that the thesis does not break copyrights of any their person.

In Prague on the 29th of March 2018 ______________________________

**Acknowledgement**

I would like to thank my supervisor Ing. Petr Procházka, MSc, Ph.D. and my colleagues, for their advice and support during my work on this thesis.

# Economic analysis of selected construction company


**Abstract**

The thesis analyzes the importance of economic analysis in business activities of commercial entities. The findings of the research prove that economic analysis should help companies understand both how effectively their business policies are implemented and the impact which factors of the external environment have on their business. The focus of practical analysis is put on Vinci, one of the world's leaders in the construction market. The findings of the research reveal that the company is enduring some problems with gross profitability and accounts receivable turnover. Also, global construction market has been declining lately, and major competitors impose threats on Vinci's performance. Vinci is recommended to improve its business strategy for covering new geographic markets and raise the share of concessions in the portfolio of its services. Also, the company should maximize the effectiveness of continuous economic analysis. Overall, Vinci's activities can be deemed effective, and the fulfillment of those recommendations should contribute to the corporation's effective performance in the long term.



**Keywords:** economic analysis, financial performance, financial ratios, liquidity, market value, profitability, SWOT analysis, Vinci.

# Ekonomická analýza vybrané stavební firmy

**Abstrakt**

Práce analyzuje význam ekonomické analýzy v podnikatelských aktivitách komerčních subjektů. Výsledky výzkumu dokazují, že ekonomická analýza by měla pomáhat společnostem pochopit jak efektivně jsou prováděny jejich obchodní politika, tak dopad, který mají faktory vnějšího prostředí na jejich podnikání. Praktická část je věnována analýze společnosti Vinci, jedné ze světových lídrů na stavebním trhu. Výsledky průzkumu ukazují, že společnost má problémy s hrubým ziskem a výnosy z obratu. Také globální stavební trh v poslední době klesá a hlavní konkurenti ohrožují výkon Vinci. Vinci se doporučuje zlepšit svou obchodní strategii pro pokrytí nových geografických trhů a zvýšit podíl koncesí v portfoliu svých služeb. Také by společnost měla maximalizovat efektivitu nepřetržité ekonomické analýzy. Celkově lze činnosti Vinci považovat za efektivní a splnění těchto doporučení by mělo dlouhodobě přispět k efektivnímu výkonu společnosti.

**Klíčová slova:** ekonomická analýza, finanční ukazatele, finanční výkonnost, likvidita, SWOT analýza, tržní hodnota, Vinci, ziskovost.

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# 1 Introduction

## 1.1 Background of the Study

The competition in markets is high as of today due to the impact of technological progress and the liberalization of trade on global scale. In those circumstances, companies need to apply efforts in order to overcome their competitors in terms of their business effectiveness, and thus to achieve better performance. Here, simply designing a high-quality product to enjoy demand on the part of customers is insufficient. In order to succeed truly in their business activities, companies need to monitor constantly the indicators of their performance and to make corresponding adjustments to their business strategies and policies.

There are many tools which companies can use for the purpose of fulfilling the aim stated above. One of such tools is economic analysis. It comprises different approaches and techniques which are helpful for both preliminary analysis preceding the start of particular business activities, and for review and follow-up. Thus, companies can use economic analysis in order to plan the development of their business, but also to monitor and control it, so as to maximize their ultimate financial performance.

Analysis of economic environment helps reveal the overall structure of the target market, its key relevant parameters, the level of competition, and thus in the long run to assess the extent to which this market is potentially beneficial to the company. Financial analysis allows understanding in detail the company's financial position across a set of different criteria, and to reveal where the company's performance is not as effective as it could be, and where the company has reserves for improvement. The assessment of the company's market value allows understanding how attractive it might be to investors.

## 1.2 Development of the Construction Sector in the World

The global construction market embraces all construction activities and associated services provided on the global scale. The sector is characterized by the domination of large multinational corporations, but at the same time by a great number of small actors performing their activities locally. According to Matouzko (2012), the logistics of the global construction market have been improving steadily in recent years. An important role is also played by the growing requirements to the compliance with the environmental

standards in force, and the common trend for the greater corporate social responsibility of major actors in the construction market.

According to the Financial Times (2017), the main tendencies in the global construction market which have been persisting lately include an overall contraction of demand, namely due to the decreasing demand on the part of developing countries, and the rapid growth of Chinese construction companies which are able to expand quickly on the global scale thanks to their high cost effectiveness.

The existing opportunities and threats of the global construction market make it important for the companies operating in it to analyze thoroughly the existing market infrastructure and to make their grounded managerial decisions.

# 2 Objectives and Methodology of Thesis

## 2.1 Objectives

This thesis will be dedicated to the investigation of the role of economic analysis in the effective business development of companies, and to the practical use of economic analysis on the example of one multinational construction corporation, namely French-based Vinci.

The **aim** of the thesis is to reveal through the use of economic analysis where Vinci acts successfully in its business, and where the company either has drawbacks or faces threats which affect its ultimate financial performance.

The **goals** of the thesis are the following: to investigate the key theoretical aspects related to economic analysis and its functions, different types, users, and the benefits it might bring to its users; to understand how different tools and techniques of economic analysis can be used effectively in corporate business practice; to run a deep economic analysis of Vinci, one of the world's largest multination construction corporations; to develop recommendations for Vinci to improve the performance of its business based on the results of economic analysis; and to make appropriate conclusions in line with the aim of the thesis.

The **research questions** of the thesis are the following:

RQ1: What are the main negative factors affecting Vinci's business activities?

RQ2: What measures could the company undertake for the purpose of improving the situation?

The **hypothesis** to be tested in the course of this research is the following: Vinci's current performance is hindered by the company's excessive dependence on borrowed funding typical of the construction market.

## 2.2 Methodology

The **methodology** to be used for running this research will be based on a number of different approaches and techniques. Thus, secondary research will be used in the theoretical part of the thesis in order to collect appropriate data on the topic of the research and to provide an extensive overview of this theoretical information prior to proceeding to the practical part of the thesis. The practical part of the thesis will be a case study of Vinci. Here, financial analysis will be used in order to investigate in detail the company's

financial condition and the main factors affecting in an either positive or negative way. SWOT analysis, PEST analysis, and Porter’s five forces model will be applied in order to analyze deeply the corporation’s market environment. Finally, the assessment of the company’s market value should be helpful for understanding its attractiveness to investors. Deductive thinking and synthesis will be used in order to summarize the findings of the research, develop appropriate recommendations for improving Vinci’s business, and drawing conclusions in line with the aim of the thesis.

The bibliographic sources to be used for writing this thesis will include different academic sources either in print or in electronic form, as well as information drawn from online websites of reputable media agencies, and from the official corporate website of Vinci and other reputable web sources. Among other bibliographic sources, the following ones will be used: Lee, J.C. and Lee, C.F. (2016). *Financial Analysis, Planning & Forecasting: Theory and Application*; Faccarello, G. and Kurz, H.D. (2016). *Handbook on the History of Economic Analysis Volume III: Developments in Major Fields of Economics*; Dunning, J.H. (2014). *Economic Analysis and Multinational Enterprise*; Venanzi, D. (2011). *Financial Performance Measures and Value Creation: the State of the Art*; Gibson, C.H. (2012). *Financial Reporting and Analysis*; etc.

The findings of the thesis should constitute particular added value through the provision of practical recommendations for Vinci to improve its business activities and financial performance.

# 3 Literature Review

## 3.1 Economic Analysis: Definition and Key Components

In order to understand what economic analysis is, let's consider first its definition. According to Morris et al. (2007, p. 3), economic analysis is about *"decisions and choices about the production and consumption of economic goods, defined as any good or service that is scarce relative to our wants for it."* From this definition, it can be stated that economic analysis focuses on the optimization of decision-making in relation to production and consumption, and serves to reveal the inherent specificities and particular aspects of those phenomena.

Akdeniz (2015, p. 21) states that economic analysis is used mostly for two key purposes. The first and most important purpose of economic analysis is *"a logical comprehension of how portions of goods and services, scarce resources, are really determined."* This is positive analysis, as it aims not to comprehend the external surroundings, but also to provide particular and precise figures to be used subsequently in practical decision-making. The second purpose of economic analysis is to provide grounds for normative examinations to strengthen the impact of the aforesaid positive analysis. Therefore, economic analysis serves to deliver information on corporate business activities for the purposes of subsequent corporate decision-making. Economic analysis is indispensable for companies to reveal their own performance and the impact of external and internal factors on the dynamics of such corporate performance.

According to Dunning (2008, p. 347), economic analysis is inherently complex, which is first of all due to the fact that it needs to take into account a wide range of different actors; activities and specific factors which cause an impact on the analyzed environment. Namely, speaking of companies, it can be stated that such economic actors' activities are affected by the effectiveness of the organization of their own internal corporate policies, activities of competitors and partners which operate in the market, consumers which purchase corporate products, public authorities which set the rules of play in the market and regulate the activities of entities, and so on. Therefore, when performing economic analysis and interpreting its outcomes, companies need to take into account all the aforesaid factors and reveal the complexity of ties and interdependences between them.

Sorger (2015, p. 11) states that economic analysis is most beneficial when it is carried out dynamically and not statically. This means that the findings of economic analysis provide the best benefits to the company when they reveal its dynamics within a particular time period. Static economic analysis allows understanding the current conditions of the investigated economic environment, while dynamic analysis allows revealing its changes and the trends and tendencies persisting in it and predefining its development scenarios.

Faccarello and Kurz (2016, pp. 1-3) state that economic analysis has existed in either of its forms since the ancient times, as the need for such analysis arose with the formation of societies and the distribution of wealth within such societies. However, the first steps to systematize economic analysis and make it a fully fledged branch of scientific research and practical activities were done by economists such as Petty and Ricardo in the 17$^{th}$ century. Subsequently, economic analysis has been developing with the changing conditions of the global economic environment. Today, when the international market is dominated by tendencies of globalization and the environment is subject to constant metamorphoses, companies are vulnerable to an even greater number of threats.

Sorger (2015, p. 11) also emphasizes that economic analysis is a complex set of activities, and it encompasses a broad range of tools and techniques. Namely, within economic analysis companies apply different tools for analyzing their economic environment and for revealing particular specificities of corporate financial performance. The most widespread techniques used in analysis of the economic environment include methods such as SWOT (revealing the company's strengths, weaknesses, opportunities, and threats), PEST (political, economic, social, and technological factors), and Porter's five forces analysis (analysis of the company's competitive environment). At the same time, financial analysis covers a broad range of techniques and approaches destined to analyze the company's financial statements and reveal relevant issues and reserves for improving corporate business activities.

Now, it is possible to focus specifically on the analysis of the economic environment and consider more in detail its different tools and techniques.

## 3.2 Analysis of the Economic Environment

In this chapter of the thesis, the main methods and techniques used for analyzing the economic environment are going to be analyzed, namely SWOT analysis, PEST

analysis, and Porter's five forces analysis. This should allow understanding how those different methods and techniques can be applied effectively in the practice of corporate economic analysis and what benefits they might bring to the company.

### 3.2.1 SWOT Analysis

Griffin (2011, p. 68) notes that *"SWOT analysis is a careful evaluation of an organization's internal strengths and weaknesses as well as its environmental opportunities and threats."* SWOT analysis is used by companies first of all for formulating their distinctive business strategies and policies, and for making changes and amendments to such strategies and policies. The main goal of SWOT analysis is to reveal the factors of key importance which influence corporate business both positively and negatively, and to understand what advantages and disadvantages the company has in order to response to those factors of influence. As Griffin (2011, p. 69) further notes, "The goal is then to develop good strategies that exploit opportunities and strengths, neutralize threats, and avoid weaknesses." So, in the long run, SWOT analysis serves to maximize corporate business performance through effective corporate activities.

As can be seen from the acronym "SWOT", SWOT analysis includes four key components, namely strengths, weaknesses (internal factors), and opportunities and threats (external factors). Below each of these elements is going to be considered more in detail.

According to Griffin (2011, p. 68), organizational strengths are "skills and capabilities that enable an organization to conceive and implement its strategies. Strengths may include things like a deep pool of managerial talent, surplus capital, a unique reputation and/or brand name, and well-established distribution channels." Therefore, strengths are those internal advantages which companies possess and can use for the sake of achieving their business excellence. Munizzo and Musial (2010, p. 75) note further that strengths typically arise from the past or present activities of the company and represent positive attributes which the company has right now. Strengths are in fact competitive advantages which the company may use to its benefit for leveraging the best business effect.

Of particular importance are those strengths which represent distinctive competences which the company has in the market. Griffin (2011, p. 69) states that such distinctive competences are those competitive advantages which only a limited number of companies have. Organizations possessing and using effectively their distinctive

competences are able to generate the best business results, as they are able either to dominate their target market or to hold firmly their particular business niche.

Another internal factor affecting the company's effectiveness is its weaknesses. According to Munizzo and Musial (2010, p. 69), organizational weaknesses are "skills and capabilities that do not enable an organization to choose and implement strategies that support its mission." Thus, weaknesses are an antonym of strengths. According to Bergman
(2016, p. 10), a company's weaknesses might include poor or sloe service, unreliable performance, insufficiently qualified employees, weak organization of corporate processes, rigid organizational structure, and a wide range of other internal factors which harm the company's ability to generate the desired business results.

Opportunities, according to Munizzo and Musial (2010, p. 75), are those positive factors which arise from the external environment and either bring benefits to the company at present time or might contribute to its business in the future. Organizational opportunities are those factors which favor positively corporate business performance. Bergman (2016, p. 10) states that business opportunities include "prospective partnerships, marketing connections, media vehicles, promotional venues, alternative audiences and other brand-building opportunities that the internal brand team should explore." Threats are in contrast those factors of the external environment which affect corporate business prospects in a negative way, and thus should be dealt with by managers effectively in order to minimize the risks incurred.

Ferrell and Hartline (2012, p. 85) note that SWOT analysis has both its important advantages and inconvenience as a tool for analyzing the economic environment. Thus, the main advantage of SWOT analysis is the fact that it is rather plain and straightforward, and it allows obtaining results which are quite easy to interpret and to obtain a comprehensible visualized image of how the company performs and what particular impact is caused on its activities by both external and internal factors. Ferrell and Hartline (2012, p. 85) state that *"when performed correctly, a SWOT analysis not only organizes data and information, it can be especially useful in uncovering competitive advantages that can be leverage in the firm's marketing strategy."* However, at the same time, this simplicity of the technique also limits its applicability in corporate practice, particularly when there is a need to analyze deeply appropriate figures and calculate expected trends. Also, SWOT analysis is only a framework to organize data, and the ultimate decisions are always to be made by

corporate managers. Therefore, decisions-making based on SWOT analysis is always biased, as each manager might proceed from his own beliefs and assumptions based on the findings of SWOT analysis. Nevertheless, this tool might still be very effective, particularly when combined with other methods and techniques to give a bright and detailed image of the economic environment of corporate business.

Based on the Financial Times (2017), running a SWOT analysis for the construction industry, it is worth noting that the main opportunity for companies operating in this segment is that it generates steady demand, is highly technological and has good logistics. Among the main threats, it is worth noting the recent decline of the industry due to smaller demand on the part of developing states. The SWOT analysis of the industry will be run in greater detail later in this thesis.

### 3.2.2 PEST Analysis

Khosrowpour (2007, p. 108) notes that PEST analysis is *"a popular strategic analysis method used since the 1990s, which aims to identify and evaluate environmental influences on strategy, significant trends, development, opportunities, and threats for an organization or industry."* PEST is an acronym standing for the names of groups of external environment factors analyzed in terms of their impact on the company's activities. Thus, PEST analysis is directed to reveal the impact of the following factors: political, economic, social, and technological. Within the model, those factors are believed to form the external environment which the company needs to adapt itself to. Therefore, the main purpose of PEST analysis is for the company to reveal to which extent each particular factor of the external environment affects its activities, and thus which corrective measures should be implemented for the purpose of minimizing the negative impact and using the existing opportunities.

According to Lindell (2007, p. 95), political factors of the external environment include the political conditions in the countries or regions where the company performs its business activities or where its interests are concentrated. This might include the intensity of political fluctuations, stability of foreign political course, risks of wars or political tensions, degree to which favorable legal preconditions exist for performing effective business activities in this particular territory, and so on. The legal regime of the state is particularly important, as it sets the rules for interaction of all actors, and therefore preconditions the opportunities they have for success. Political stability is favorable for

businesses as well. As of today, a particularly important political factor is also environmental law: companies need to take into consideration how the legislation treats emissions and what requirements exist in that context.

Scholes and Johnson (2001, pp. 41-42) state that economic factors include interest rate, inflation, exchange rates, economic growth, and a wide range of other factors which affect the economic or financial side of the company's activities. Thus, analyzing whether a particular country or industry's economic output is growing, companies have an opportunity to make a grounded decision on when the market should be entered, what strategies should be implemented in them, etc. Exchange rates affect the values of exports and imports. Interest rates reveal the actual prices at which the company can raise borrowed funding. Inflation rates affect the cash flows which the company will generate.

Lindell (2007, p. 95) notes that social factors include a broad range of demographic characteristics (such as population growth rate, age and sex distribution, birth and mortality rates, literacy, etc.), and social characteristics such as health consciousness, education, prevailing role of safety, and so on. Social factors precondition the actual number of workforce available to the company in a particular market, and the structure and quality of such workforce, i.e. the actual opportunities of using such workforce for running effective business activities. Companies can adapt their business strategies and policies to social factors in order to optimize the structure of their business activities and to guarantee maximum customer satisfaction.

Finally, according to Lindell (2007, p. 95), technological factors include the rate of technological change and the current implementation of innovation and technology initiative in the state, intensity of research and engineering activities, automation and computerization, and a number of other similar factors which describe the degree to which the company follows up-to-date trends and is able to maximize the effectiveness of its economic performance through the use of innovative factors. This affects the costs incurred by companies, its various resources spent across different directions of activities, and thus have a direct impact on the company's ultimate financial performance.

All in all, PEST analysis is set to provide companies with a comprehensive picture of how different components of the external environment affect their activities, and how companies might respond to their impact.

Running the PEST analysis of the global construction industry, according to Financial Times (2017), it should be noted that the industry is dependent much on

economic and political factors. Thus, decreasing demand on the part of governments affects in a major way the turnover of construction companies. As licensing is applicable to such enterprises in many countries, the application of any kinds of new legislative requirements and changes in the political conditions impose great risks on construction companies too, including in terms of the standards applicable in the field of environment protection. The industry is also highly technological and dependent on innovations. The PEST analysis of the global construction industry will be run more in detail later in this thesis.

### 3.2.3 Porter's Five Forces

According to Nemati and Barko (2004, p. 29), Porter's Five Forces model is "*a generic framework that deconstructs industry structure into five underlying competitive forces or variables.*" This model serves to analyze the effect of industry-specific forces which affect a company's business. According to Porter's methodology, the external environment is dominated by five types of generic forces, which are going to be analyzed more in detail below.

1. Bargaining power of suppliers. As stated by Carbo et al. (2017, p. 181), this generic force covers the entirety of suppliers which provide the company with its market inputs, i.e. with those products which are required for the company to perform its market activities and to generate outputs, thus achieving desire financial performance in the form of profits. Companies need to build effective relationships with suppliers of raw materials, technologies, components, labor, various services, and so on in order to guarantee a continuous and uninterrupted performance of their business activities. When resources are scarce or unique in an industry, suppliers might raise their prices or refuse to cooperate with the company, as there are competitors willing to buy the same inputs from it. The factors which affect this factor's intensity include supplier switching costs, availability of substitute inputs, supplier concentration ratio, supplier competition, and so on.
2. Bargaining power of buyers. Nemati and Barko (2004, p. 30) state that customers are those persons who buy the results of the company's activities from it, and thus allow the company achieving its ultimate goal, i.e. generation of profits. When there are many buyers choosing from a wide range of similar products, they can put under pressure firms, making them reduce prices or improve the quality of their

products. The main factors within their generic force include buyer concentration, buyer switching costs, price sensitivity of customers, availability of information to such customers, bargaining leverage, etc.

3. Threat of new entrants. According to Nemati and Barko (2004, p. 30), in those industries which allow achieving higher profitability rates, greater interest is generating on the part of potential market newcomers. Such new entrants raise the level of competition and lead to older actors decreasing profits. Therefore, they are undesirable for established market actors. Among the main factors preconditioning this competitive force's intensity, it is worth noting existence of particular market entry barriers, brand equity, product differentiation, economies of scale, customers' loyalty to established brands, and many other factors.
4. Threat of substitute products. Carbo et al. (2017, p. 181) note that substitute products are those products which serve to satisfy the same wants and needs of customers compared to the company's own products, using different technologies and approaches. The availability of substitute products raises the competition between companies for customers in the target market. The main factors affecting this generic force's intensity include buyer propensity to substitute products, switching costs, ease of substitution, and so on.
5. Rivalry of existing competitors. Boone and Kurtz (2014, pp. 41-42) state that this generic force encompasses all economic actors within an industry which affect the level of competitive struggle in this particular sector. Companies compete with each other through marketing policies ranging from the creation of product to its promotion among target customers. Companies need to analyze and be aware of their competitors' activities in order to avoid their negative impact. The main factors preconditioning this force's intensity include competitive advantages achieved through innovation, fir concentration ratio, level of marketing and advertising expenses, and so on.

According to Boone and Kurtz (2014, p. 41), Porter's five forces model is very influential in economic theory and practice, but it also has its important drawbacks. Namely, this model is rather static, as within it, no interaction between buyers, competitors and suppliers is taken into account effectively. Also, it sets low uncertainty levels for

competitors, which might be inappropriate for markets where information is in practice never available in full to everyone.

Now, having analyzed in detail different methods used for understanding companies' economic environment, financial analysis will be considered as another key component of wider economic analysis. The analysis of the global construction industry based on the approach of Porter will be run in the practical part of the thesis.

## 3.3 Financial Analysis: Definition and Functions

Analyzing the existing definitions of financial analysis, it can be stated that there are different formulations which can be found literature, however are all rather similar in terms of how they construct the term and explain the destination of financial analysis in corporate business activities.

Thus, for instance, McMenamin (2002, p. 748) defines financial analysis as *"the evaluation of a firm's past, present and anticipated future financial performance and financial condition… an essential first step towards gaining a sound understanding of a business – its financial strengths and weaknesses, its financial opportunities and risks."* According to McMenamin, financial analysis is thus destined to analyze how the company performs and how it succeeds in its business activities, focusing specifically on revealing its advantages and shortcoming, and those factors which hinder its best financial performance. Financial analysis allows managers identifying where the company has reserves to boost its business growth and using those reserves with the greatest effectiveness. Also, financial analysis is of essential importance for subsequent forecasting and business planning. Using financial analysis, companies are able to compare their planned results with what they actually achieve, and thereafter develop their business plans for the subsequent periods of their activities.

Palepu and Healy (2007, p. 11) state that financial analysis is set to *"use financial data to evaluate the current and past performance of a firm and to assess its sustainability."* The researchers affirm that there are two main preconditions for effective financial analysis. On the one hand, financial analysis should be systematic. It needs to be carried out consistently throughout the company's business activities in order to allow it effectively monitoring the effectiveness of implementation of its business policies and to make appropriate corrective measures for reaching overall better financial performance. On the other hand, financial analysis is always biased: despite the fact that it shows precise

figures on particular sides of the company's activities, ultimate decision-making is always preconditioned by managers' biased opinion and appropriate actions. Therefore, another key factor for ensuring effective financial analysis is the high quality of skills and knowledge of managers involved in such activities.

According to Rajni and Preeti (2015, p. 174), financial analysis can be defined as a method destined to "*diagnose the information given in the financial statements to judge profitability and financial soundness of a firm.*" The authors state that financial analysis might include a wide range of different techniques, tools, and methods, but in the long run, they are directed in their entirety to the analysis of corporate financial statements for the purpose of deriving valuable figures depicting the current condition of corporate business and the main advantages and disadvantages in the policies the company is implementing. Among such financial statements, the main role is played by the balance sheet, profit and loss account, and cash flow statement. Indicators contained in the balance sheet allow evaluating the structure of the company' financing with own and borrowed funds, structure and dynamics of its assets, equity and liabilities. The profit and loss account allows understanding the structure and dynamics of revenues and profits the company generates and the structure of costs it incurs. Analyzing the cash flow statement is important for understanding how the company performs on different directions of its activities, and which costs and revenues such different directions generate.

Thus, it can be stated based on the information presented above that the given definitions of financial analysis are quite similar in their essence. Financial analysis can be deemed indispensable for commercial entities who want to remain effective over the long term.

The range of persons who are users of financial analysis data is quite range. Thus, as stated by Nikolai et al. (2009, p. 256), all such users can be divided conditionally into internal and external. Internal users are corporate managers and employees for whom the use of such information is of essential relevance for their decision-making linked directly with the ultimate financial performance demonstrated by the company. At the same time, external users for whom financial analysis might be of particular value include investors and regulatory bodies: those financial data allow them understanding better the company's position and making appropriate actions related to the entity.

Financial analysis is destined to perform a range of functions, with the ultimate aim of improving corporate management and guaranteeing better financial performance in

subsequent time periods. The main functions of financial analysis are overviewed below based on Shim and Siegel (2007, pp. 245-246).

1. Analysis of factors affecting corporate business

Running financial analysis, corporate managers evaluate the dynamics of their company's performance on particular time intervals, and thus get an opportunity to track how particular figures changed under the impact of particular events. This allows revealing to which internal or external factors the company is most vulnerable. It is a key precondition for improving business performance, as managers understand which response can be expected in particular typical or non-typical situations and which impact this might cause on the company. As financial analysis needs to be held regularly, it also allows tracking how the range of factors affecting corporate business tends to change with the course of time.

2. Control over the fulfilment of plans

Companies use planning in the course of their activities in order to understand what outcomes they might expect from particular investment decisions, and how much time such or other initiatives might take to yield commercial benefits. At the end of particular time periods, corporate managers evaluate the degree to which the initial plans were fulfilled. This allows understanding where the company did well and where it underperformed. Financial analysis provided a significant degree of precision here, and thus allows revealing those fields of activities in which companies need to make additional efforts subsequently to improve their performance. This also allows making timely changes to corporate business policies in order to avoid excessive expenditures and ensure balanced budgets.

3. Identification of reserves for improving corporate business growth

As financial analysis allows investigating deeply corporate financial statements for revealing where the company underperforms, it also indicates in which fields leverage for boosting business results exists. When done thoroughly and in a justified manner by corporate managers, financial analysis brings findings which can be integrated effectively into corporate business growth strategies and policies.

4. Implementation of measures for achieving business improvements

Based on the results of financial analysis, corporate managers design and implement particular actions and measures destined to raise the quality of corporate business and to improve the entity's ultimate financial performance.

Therefore, it can be stated that the range of functions performed by financial analysis is indeed of major importance to entities, and thus financial analysis serves to improve corporate business performance through effective managerial decision-making.

### 3.3.1 Financial Analysis of the Construction Sector

Considering the approach to financial analysis inherent of the construction market, it is worth noting the following. According to Homaid and Tijani (2015, pp. 80-81), financial analysis in the construction industry doesn't differ significantly from the general approach to financial analysis, and it is of the same importance to the actors running their activities in the construction industry for the purpose of ensuring their financial stability and effective business performance. However, the authors note that construction companies often find it hard to deal with their liquidity, as the projects are long-term, and therefore corporate managers might pay smaller attention to the need to cover current liabilities to third-party creditors. Therefore, construction companies should include effective liquidity management in the list of their strategic priorities and run such activities appropriately within the framework of their wider corporate activities.

De Sutter (2017, pp. 11-14) states that the current strategies of construction companies always include an important emphasis put on investment in research and development for the sake of generating innovations. This raises the overall costs the companies have to incur in the course of their business activities, and thus prompts such companies to seek funding from third-parties. Therefore, within their financial analysis, construction companies should pay particular attention to their cost dynamics and the effectiveness of cash flow management.

Niranjan and Nihil (2017, pp. 369-370) emphasize that cost management is important for construction companies, but in general terms, the scope of financial analysis and its particular types applied by construction enterprises do not tend to differ anyhow from customary financial analysis.

Now, taking into consideration those findings, it is worth considering the main types of financial analysis and the specificities of their practical use.

## 3.4 Types of Financial Analysis

The types of financial analysis are complexes of specific techniques and tools of financial analysis which allow examining in detail and revealing the main aspects of

corporate business activities from different perspectives. In this chapter of the thesis, three main types of financial analysis are going to be considered, namely horizontal (historical) analysis, vertical (structural) analysis, and analysis of financial ratios.

### 3.4.1 Horizontal (Historical) Analysis

Horizontal analysis, also commonly referred to as historical, dynamic or trend analysis, is a specific kind of financial analysis destined to reveal the dynamics of a company's financial indicators with particular timeframes. As noted by Bose (2011, p. 262), within horizontal analysis, corporate financial data are analyzed for at least several financial periods, most often years. Indicators are compared with the same ones achieved in previous periods, and conclusions are derived on how the company's performance changed during this period. Horizontal analysis can be performed either on a year-by-year basis, or against a chosen base year. In the former case, comparison is done between each particular financial period and the preceding period; in the latter case, one financial period is taken as a basis for analysis, and subsequent comparison is performed against this period's values.

Bose (2011, p. 262) notes further that horizontal analysis can be either absolute or relative. Absolute horizontal analysis reveals the absolute differences which exist between an indicator's values for the appropriate time periods considered. Such values are presented in basic units, and they are appropriate for understanding the total amount of monetary losses or gains endured by the company, accrual of assets or liabilities, and so on. On the contrary, figures in relative horizontal analysis are presented as percentages. They are more convenient for analyzing different groups of indicators, regardless of the units in which they are measured, thanks to reducing comparison to a 100-percent scale. In practice, absolute and relative analysis are most often use together and complement each other.

Carlberg (2007, p. 237) states that horizontal analysis is helpful for companies, as it allows demonstrating clearly how their performance has been changing throughout recent years, and thus where positive and where negative trends persisted. However, this type of analysis also has important drawbacks. First of all, it doesn't have any exact referential figures to be analyzed against (i.e. analytical ratios which can be considered as normal or recommended), and also fails to provide a picture on the structure of corporate business,

only giving an insight to the persisting trends. For the latter case, vertical (structural) analysis can be used by corporate managers.

According to the Financial Times (2017), running the financial analysis of the global construction sector, it can be stated that its revenues have been decreasing in recent years, which is a negative trend for the companies operating in this sector.

### 3.4.2 Vertical (Structural) Analysis

Warren et al. (2011, p. 125) explain that vertical analysis is a type of analysis destined to compare the amounts of particular items given in financial statements with total amounts from the same statements. Hence, another common name of this analysis, structural analysis, reveals well its target destination: to understand the share of a particular item of financial statements in the total amount stated in such financial statements. Vertical analysis is important for corporate managers, as it allows understanding what particular improvements need to be done right now in order to avoid excessive risks for the company' financial condition, and thus overall long-term financial performance. Most often, vertical analysis is applied in order to reveal the share of costs and profits in the company's revenues, shares of liabilities and shareholders' equity in the structure of its funding, shares of current and non-current assets, current and non-current liabilities, and so on. Based on those indicators, the company can reveal its specific advantages and weaknesses, and also reserves for improvement.

As noted by Nikolai et al. (2009, p. 276), vertical analysis is most helpful when it is combined with statistical analysis, and therefore the structure of the company's particular financial characteristics is analyzed against other periods, and not per se: *"when vertical analysis is used for comparisons of financial statements from several periods, trends or changes in the relationships between items are more easily identified."* Therefore, in practice, vertical and horizontal analysis is most often used together, and it helps corporate manages identify dynamic changes in the structure of assets, liabilities, equity, financial performance, and rather important characteristics of the company's business activities.

Warren et al. (2011, p. 125) also note that while vertical analysis is beneficial to corporate managers, in some cases its finding might be insufficient, as they are limited to the structure of individual parameters, and do vertical analysis does not allow combining

several indicators for tracing their more complex interconnection. This is the case when analysis of financial ratios can be applied effectively.

### 3.4.3 Analysis of Financial Ratios

Kumar (2008, p. 102) defines financial ratio analysis as *"the technique of the calculation of a number of accounting ratios from the data or figures found in the financial statements, the comparison of the accounting ratios with those of the previous years or with those of other concerns engaged in similar line of activities or with those of standard or suitable ratios, and the interpretation of the comparison."* Financial ratio analysis is destined to reveal specific characteristics of corporate business activities through the analysis of aggregated sets of data with the use of target-specific formulas. Thanks to this sophisticated approach, financial analysis allows penetrating more into the details of the company's financial performance, thus revealing more effectively in which terms it is enduring issues and where it is required to improve specifically its business activities. Ratio analysis requires greater effort for being performed and for subsequent interpretation, however it also provides managers with more extensive information for their responsible decision-making.

Financial ratios are specific indicators calculated based on raw data contained in financial statements in order to reveal specific traits of corporate business activities. In the practice of financial analysis, several groups of financial ratios are most often analyzed, namely liquidity, profitability, indebtedness, activity, and capital market ratios. Below these ratios will be analyzed more in detail based on Lee and Lee (2016, pp. 121-124), Gibson (2012, pp. 241-245), and Fabozzi (2009, p. 194).

1. Liquidity ratios

The general aim of liquidity ratios is to analyze the degree to which the company's own current assets are sufficient for covering its current liabilities. In fact, those ratios serve to understand how effectively the company can operate its borrowed funds in the short-term perspective. This is important for corporate managers, as it shows how the company can react quickly to arising issues, and thus maneuver in its business policies. Below are analyzed the most widely used liquidity ratios.

- Current ratio

Formula: $Current\ ratio = \frac{current\ assets}{current\ liabilities}$

Current ratio is destined to evaluate to which extent the company's own liquid assets (i.e. current assets which can be converted into cash more quickly compared to non-current assets) are sufficient for covering its current liabilities. The recommended value of this ratio is at least 1.5, while lower values might indicate that the company incurs excessive risks in terms of the sufficiency of its current assets against the existing current liabilities. However, it should be noted that larger corporations can have even considerably lower values of this ratio without significant risks. This is due to the fact that large companies have greater opportunities of financial leverage and thus can rely more on borrowed funds thanks to their market reputation and the willingness of creditors to cooperate with them. Therefore, it is important for companies to monitor this ratio's dynamics across several financial periods in order to make some grounded conclusions.

- Acid-test ratio

Formula: $Acid - test\ ratio = \frac{current\ assets - inventories}{current\ liabilities}$

Acid-test ratio is similar in terms of its interpretation to current ratio, but instead of analyzing current assets, it takes into account their more liquid part, subtracting inventories from current assets. Inventories take more time to be sold for covering liabilities. The optimum value of this ratio is believed to be at least 0.6, which illustrates the company's good opportunity to cover current liabilities using the more liquid part of its current assets.

- Cash ratio

Formula: $Cash\ ratio = \frac{cash}{current\ liabilities}$

Cash ratio analyzes the sufficiency of corporate cash for the purpose of covering the company's current liabilities. Thus, it investigates the sufficiency of only cash, as the most liquid current asset, to cover current liabilities to creditors. The minimum appropriate value of this ratio is believed to be 0.3, but similarly to the two previous ratios, large companies can have even smaller values of this ratio for greater financial leverage.

- Net working capital

Formula: $Net\ working\ capital = net\ assets - net\ liabilities$

Net working capital shows the total absolute value of the company's assets against its liabilities. The greater this value, the more assets are remaining in the company's ownership for financing business activities using own funds. There are no recommended values for this ratio, and companies can have different net working capital values, depending on the direction and field of their activities, particular situation in the external

environment, and so on. Therefore, the task of managers is to monitor this ratio's dynamics.

2. Profitability ratios

Profitability ratios reveal the actual effectiveness of the company's business in terms of the profits it is able to derive from its activities.

- Gross profit margin

  Formula: $Gross\ profit\ margin = \frac{gross\ profit}{net\ sales}$

Gross profit margin reveals the value of gross profit which the company can generate from its sales, i.e. profit after subtracting cost of goods sold from revenue. Gross profit illustrates the company's stability on the long-term perspective in terms of its financial performance. Each company should seek maximizing this ratio's value. There are no recommended values, as all profitability margins tend to vary across different industries, types of companies, countries and so on.

- Operating profit margin

  Formula: $Operating\ profit\ margin = \frac{operating\ income}{net\ sales}$

Operating profit margin differs from gross profit margin, as it analyzes the share of operating incomes (earnings before interest and taxes) in the company's net sales. There are no recommended values for this ratio, but the greater it is, the higher the company's ultimate financial performance.

- Net profit margin

  Formula: $Net\ profit\ margin = \frac{net\ income}{net\ sales}$

Net profit margin reveal the net profitability of the company, i.e. the share of net income (profit after interest and tax) in the company's revenues. Net profit shows the ultimate amount of funds which the company has on hands, and therefore each company should seek maximizing this ratio. In contrast to gross profit margin, it rather shows the condition of profitability in the short-term perspective.

- Return on equity (ROE)

  Formula: $ROE = \frac{net\ income}{average\ shareholders'equity}$

ROE illustrates the effectiveness with which the company uses its shareholders' equity for generating net profit. The higher the value of ROE, the more effectively the

company uses its equity for generating the best financial performance. This indicator provides the most valuable information when analyzed in dynamics for several periods.

- Return on assets (ROA)

  Formula: $ROA = \frac{net\ income}{total\ assets}$

  ROA describes the effectiveness of the company's use of own assets for generating net income. The higher this ratio's value, the better for the company. Similarly to ROE, it should better be analyzed in dynamics.

3. Indebtedness ratios

   Indebtedness ratios characterize to which extent the company is dependent on external funding sources compared to the use of own financing.

- Debt ratio

  Formula: $Debt\ ratio = \frac{total\ liabilities}{total\ assets}$

  Debt ratio serves to analyze the share of the company's liabilities against its assets, i.e. the entity's dependence on external funding. The higher this ratio's value, the more the company is dependent on external borrowed funds. The recommended value of this indicator is 0.7 or lower. However, similarly to liquidity ratio, indebtedness might vary across different companies, and larger corporations might have opportunities to raise greater debts without incurring excessive risks in the long-term perspective.

- Long-term debt to equity

  Formula: $Long-term\ debt\ to\ equity = \frac{long-term\ debt}{shareholders'equity}$

  Long-term debt to equity reveals the ratio between non-current liabilities and shareholders' equity. The greater this value, the greater the risks incurred by the company in the long-term perspective.

- Long-term debt to assets

  Formula: $Long-term\ debt\ to\ assets = \frac{long-term\ debt}{total\ assets}$

  Long-term debt to assets is investigates the ratio between long-term debt and total assets. The greater the ratio's value, the higher the company's risks.

4. Activity ratios

   Activity ratios serve to describe how effectively the company operates the available assets and how the promptness of its operations with such assets contributes to its financial performance.

- Inventory turnover

  Formula: $Inventory\ turnover = \frac{cost\ of\ sales}{inventories}$

Inventory turnover describes how quickly the company is able to sell and replace its inventories, i.e. it reveals the overall effectiveness of the company's production and sale. The higher this ratio's value, the greater the intensity of the company's inventory turnover, and this is positive for it business, as it testifies that the company is able to perform the associated processes more quickly.

- Average age of inventory

  Formula: $Average\ age\ of\ inventory = \frac{365}{inventory\ turnover}$

Average age of inventory shows the number of days required for the company to replace and sell its inventories. Thus, the smaller this ratio's value, the better.

- Accounts receivable turnover

  Formula: $Accounts\ receivable\ turnover = \frac{net\ credit\ sales}{trade\ receivables}$

This indicator shows how quickly the company is able to collect indebtedness from its debtors. The greater this indicator's value, the better for the company, as it means that the entity is able to return its funds more quickly, thus getting additional room for financial maneuver and the financing of own business operations.

- Average collection period

  Formula: $Average\ age\ of\ inventory = \frac{365}{accounts\ receivable\ turnover}$

Average collection period shows the average number of days required for the company to collect debts from debtors. The smaller this ratio's value, the better for the company.

- Operating cycle

  Formula:

$$Operating\ cycle = average\ age\ of\ inventory + average\ collection\ period$$

Operating cycle combines average age of inventory and average collection period. The smaller this ratio's value, the more quickly the company is able to complete its business processes, which is favorable for its overall better financial performance.

5. Capital market ratios

Capital market ratios illustrate the analyzed company's market value and the interest it represents for potential investors. They characterize the brand value which the company has.

- Earnings per share (EPS)

  Formula: $EPS = \frac{net\ earnings}{number\ of\ shares}$

EPS illustrates the amount of net earnings generated per share of the company's shareholders' equity. The greater this ratio's value, the better for the company, as it means its better financial performance. Investors are more interested in financing the activities of such companies, as they have opportunities to obtain greater profits.

- Dividends per share (DPS)

  Formula: $DPS = \frac{dividends}{number\ of\ shares}$

DPS reveals the amount of dividends paid per share of corporate equity. Investors are interested in greater profits obtained through dividends, and therefore higher DPS values contribute to their greater interest in investing in the company.

- Payout ratio

  Formula: $Payout\ ratio = \frac{dividends}{earnings}$

Payout ratio illustrates the share of earnings paid to shareholders as dividends. The greater this ratio's value, the greater the investor's interest.

- Dividend cover ratio

  Formula: $Dividend\ cover\ ratio = \frac{EPS}{DPS}$

Dividend cover is inverse to payout ratio, and therefore companies might benefit from lowering this indicator's value.

Analyzing the combination of all the abovementioned financial ratios allows corporate managers understanding in detail the different sides of the company's business activities, and making appropriate modifications to the entity's business strategies and policies.

In the next chapter, the focus will be put on how the company's value can be assessed.

## 3.5 Assessment of the Company's Value

Assessing the company's overall value is important for the purpose of understanding its generalized position in the target market. This creates opportunities for comparing different companies from the same sectors or industries and tracking their dynamics of business performance compared to each other. It is also of essential importance to current and potential investors who can evaluate how the company's brand equity is changing, and thus what benefits investment in such an entity might provide. There are many different methods which can be used for evaluating a company's value. Below three widely used of such techniques will be considered, namely Economic Value Added (EVA), Market Value Added (MVA), and Weighted Average Cost of Capital (WACC).

Nikolai et al. (2009, p. 276) state that EVA is a measure used to evaluate a company's financial performance based on residual wealth, which means that it is destined to evaluate the ultimate wealth which belongs to the firm after all costs of capital investment, hence it is an indicator aimed to measure the so-called true economic profit, instead of accounting profit. EVA is calculated using the following formula:

$$EVA = Net\ Operating\ Profit\ After\ Taxes\ (NOPAT) - Invested\ Capital \times Weighted\ Average\ Cost\ of\ Capital\ (WACC)$$

Thus, EVA actually represents the differences between the company's net operating profit after taxes and its capital invested in the business. The value of invested capital is multiplied by WACC in order to take into account the opportunity cost of alternative investment. This can be explained by the fact that when investing in this particular company, shareholders make a choice and thus lose their opportunity to invest elsewhere: this cost is not an accounting cost, but it is an actually existing opportunity cost.

As Ehrhardt and Brigham (2016, p. 83) point out, "*economic Value Added measures the extent to which the firm has increased shareholder value. Therefore, if managers focus on EVA, they will more likely operate in a manner consistent with maximizing shareholder wealth.*" Also, as stated by Venanzi (2011, p. 67), EVA can be applied for measuring either the value of a company as a whole or of its particular divisions, which might be useful for the company in order to understand which particular divisions perform well and which fail to provide the best financial performance.

As for MVA, Ehrhardt and Brigham (2016, p. 83) note that this indicator serves to evaluate the difference between the value of the company' stock and the cumulative amount of equity delivered by the company's shareholders. Within the concept, the core assumption is that maximizing the aforesaid difference contributes to the maximization of shareholders' wealth. The formula for calculating MVA is the following:

$$MVA = Market\ value\ of\ stock - Equity\ capital\ supplied\ by\ shareholders = (Shares\ outstanding) \times (Stock\ price) - Total\ common\ equity$$

Ehrhardt and Brigham (2016, p. 83) further note that *"for most companies, the total amount of investor-supplied capital is the sum of equity, debt, and preferred stock. We can calculate the total amount of investor-supplied capital directly from their reported values in financial statements. The total market value of a company is the sum of the market values of equity, debt and common stock."* Nikolai et al. (2009, p. 276) note that when comparing EVA and MVA, it can be stated that EVA is rather historic in its essence, while MVA allows companies analyzing their ability to add value in the future.

Analyzing the nature of WACC, Hitchner (2006, p. 189) states that WACC can be defined as "*the blended cost of the company's capital structure components, each weighted by the market value of that capital component.*" Thus, the formula for calculating WACC is the following: $WACC = \frac{E}{V} \times R_e + \frac{D}{V} \times R_d \times (1 - T_c)$, where *E* is the market value of the company's equity, *D* is the value of debt, *V* comprises the total value of the company's financing (which includes debt plus equity), $R_e$ stands for cost of equity, $R_d$ is cost of debt, and $T_c$ is corporate tax profit rate. The main idea behind WACC is the fact that each company uses two key sources for financing its business activities, namely own funding and borrowed funding. WACC aims to bring together the two indicators by weighing them appropriately. As Hitchner (2006, p. 189) notes, WACC *"can be appropriate when the objective is to value the entire capital structure of the enterprise or invested capital, such as in an acquisition where the buyer believes the current capital structure may not be optimal or where he or she intends to change it."* WACC can thus be used effectively when there are several investment alternatives, and a decision is to be made on which of those alternative is more appropriate and commercially justified. However, this technique's main disadvantage is that it is quite complex and hard to measure, as the cost of equity is an unstable figure, which might be subject to quite frequent and important changes.

# 4 Practical Part

## 4.1 Research Design

The practical part of the research is going to be based on a complex economic analysis of Vinci, a French-based multinational construction company. The analysis of the company's economic environment and financial condition will be based on the use of secondary bibliographic sources, including information on the company's target market and financial figures provided by the corporation in its official reports. Based on this information, the author's analysis will be applied.

First of all, Vinci's economic environment will be investigated. This will be based on the use of techniques described earlier in this thesis, namely SWOT analysis, PEST analysis and Porter's five forces analysis. The use of SWOT analysis will be destined to reveal information on the company's own internal strengths and disadvantages, and at the same time the opportunities and disadvantages which are inherent of its external environment. PEST analysis will serve to analyze in detail different factors of the country's external environment which are relevant for its activities and which impact such activities to a considerable extent, including different political, economic, social, and technological factors. Finally, Porter's five forces analysis will be used as a tool to reveal the situation in the company's competitive environment and the impact of competitive forces on it. Overall, this part of practical analysis should allow better understanding the overall economic background of Vinci's business activities and the extent and vectors of influence on the company on the part of the external environment.

Next, financial analysis will be applied. In this section of practical analysis, the company's financial reports, namely balance sheet, profit and loss account and cash flow statement will be analyzed in detail for the purpose of revealing recent trends and tendencies in terms of Vinci's financial performance across particular aspects. Namely, financial analysis of Vinci will include horizontal analysis, vertical analysis, and analysis of financial ratios. This will allow forming a comprehensive understanding of the company's own internal strengths and weaknesses in terms of financial performance, and should indicate where measures might be undertaken by Vinci's for the purpose of improving the situation and generating better financial results.

Finally, an assessment of the company's market value will be run in order to reveal how the company's values has been changing in recent years. This should allow

understanding the stability of Vinci's market position in terms of its attractiveness to target investors, and its overall opportunities to perform effectively over the long term.

Based on the findings of the three kinds of analysis performed as described above, a discussion of the results will be provided, and recommendations will be developed for Vinci to improve the current situation based on the author's own interpretation of analysis results.

## 4.2 Overview of the Chosen Company (Vinci)

The company chosen for this research is Vinci, a French-based multinational corporation specialized in the construction market and being one of the key players in this market on global scale. The corporation was established back in 1899 under the name Société Générale d'Entreprises S.A., and has since then been gradually expanding in the construction market of France and beyond. As of today, the company has over 180,000 employees in its staff worldwide, with its headquarters located in Rueil-Malmaison, France. The company's construction works are performed worldwide. The portfolio of construction works offered by the corporation to its customers includes building, civil engineering, hydraulic construction and specialized kinds of construction activities such as construction of pipelines.

Describing its own goals, Vinci (2017a) states on its official website: *"because VINCI's business activities are positioned at the intersection of mobility, urban development and the energy transition, they will benefit from substantial and sustained investments designed to address buoyant long-term trends in these sectors. VINCI's goal is to open up new sources of value creation by harnessing its exceptional range of expertise as an investor, builder, operator and service provider to build comprehensive solutions commensurate with these challenges."* The company positions itself as a socially responsible provider of construction services focusing on the minimization of harmful effect brought by the corporation to the natural environment. At the same time, Vinci claims to be committed to workforce-related performance and social performance of its business. Thus, the company declares its striving to create long-term shared value with its customers, shareholders, employees and partners, which is seen by Vinci as one of the key preconditions for guaranteeing its market growth based on the principles of responsibility and commitment.

The company’s construction activities are performed based on two different schemes. The first scheme is contracting, which accounts for the greatest part of the company’s portfolio. It is based on the performance of contracting works for customers. According to the company’s statements, its current focus in terms of contracting is put on the energy sector: *“further development will be fuelled both by organic growth and by acquisitions, as the sector presents numerous opportunities due to its low degree of consolidation. The energy transition is expected to generate substantial investment in the reconfiguration of energy networks and the improvement of energy efficiency in buildings.”* (Vinci, 2017a). At the same time, within the direction of concessions, the company focuses first of all on transport infrastructure, and namely on construction works associated with motorways and airports. While contracting operations are seen by the company as a source of profit-yielding activities, its concession works are considered as a key source of sustained business growth over the long-term perspective.

Vinci’s activities are based largely on the use of innovations. According to Vinci (2017a), the company’s yearly budget for research and development activities amounts to approximately 50 million euros, and every year the company files for 30 patents on the average. Vinci (2017a) notes that: “*While each of these business lines develops its own research priorities, VINCI's research and development policy focuses primarily on urban development, sustainable mobility, environmental responsibility, the energy performance of buildings and infrastructure and digital transition.*” Thus, as can be seen from this quote, the corporation’s research and development activities are based largely on the analysis of the existing environmental issues and the implementation of innovative technologies contributing to sustainable development. Vinci aims to accelerate innovation across its entire value chain, as the company believes it to be a key opportunity for maximizing the effectiveness of its business operations and achieving steady growth. For this sake, the company also cooperates with its suppliers and partners, and promotes the use of sustainable and innovative technologies on all components of the value chain.

The main governing body of Vinci is the company’s Board of Directors. The task of the Board of Directors is to define the direction of the company’s strategic development, and to elaborate appropriate strategic plans to guide its business growth over the long-term perspective. The Board of Supervisors watches over the effective implementation of the company’s strategies and provides advice to the Board of Directors. At the same time, it should be understood that the corporation has its subsidiaries in a number of different

fields and geographic sectors, and those subsidiaries have their own structure of management. The Board of Directors of the parent corporation is thus focusing on the coordination of all subsidiaries' work, and acts as a body of overall regulation. For instance, the company's divisions include VINCI Autoroutes specialized in road construction works, VINCI Airports focusing on airport-related works, VINCHI Highways, VINCI Railways, VINCI Stadium, VINCI Energies International & Systems, and so on. The company's structure is designed to ensure its optimum business performance on all market segments and the implementation of the most effective business solutions in each particular sector. In total, the company's subsidiaries are located in 116 countries around the globe, in Europe, Africa, Asia and the Middle East, and the Americas (Vinci, 2017a).

Vinci is also involved in a range of corporate social responsibility (CSR) activities, providing funding for social projects in medicine, education, environment protection, cultural events, and so on. This is seen by the corporation as an important contribution to socially important sectors, and at the same time contributes to it positive image as a socially responsible brand.

## 4.3 Analysis of Vinci's Economic Environment

### 4.3.1 SWOT Analysis

The SWOT analysis of Vinci should reveal the company's key internal strengths and weaknesses, and outline the opportunities and threats provided to or imposed on it by the external construction market environment.

Table 1 SWOT analysis of Vinci

| Strengths | Weaknesses |
| --- | --- |
| 1. Positive brand image<br>2. Large customer portfolio<br>3. Innovative technologies<br>4. Effective integration with suppliers<br>5. Strong market positions | 1. Declining gross profitability<br>2. High costs<br>3. Rather weak positions in Asia<br>4. High dependence on contracting works |
| **Opportunities** | **Threats** |
| 1. Developing online channel<br>2. Improving global construction logistics<br>3. Adoption of new construction standards by developing countries<br>4. New international environmental policies ensuring equal competition | 1. Overall declining global construction market<br>2. Rapid growth of major Chinese construction service providers<br>3. High level of market uncertainty<br>4. Rising levels of wages<br>5. Exchange rate fluctuations |

Source: Vinci, 2017b; Nikkei Asian Review, 2016; Matouzko, 2012; NBS, 2016; Financial Times, 2017; Hua, 2013, pp. 4-5; AGC, 2017

Now, let's consider the abovementioned factors more in detail.

**Strengths**

1. Positive brand image

One of Vinci's key strengths is its reputation as a reliable brand providing high-quality construction services to target customers, and the company uses this for the purpose of maximizing its revenues. According to Brand Finance (2017), Vinci is among the world's 500 most reputable brands. This means that the company's brand is known among the customers, and its positive image favors the effective development of Vinci's business operations.

2. Large customer portfolio

According to Vinci (2017a), in 2016, the company was carrying out as much as 270,000 projects in more than 100 countries around the globe. The company's customer portfolio includes a wide range of multinational corporations, large companies, governments, municipal authorities, airports, infrastructure networks, and so on. Thanks to the wide customer portfolio and thanks to the use of both concessions and contract works, the company is able to diversify its portfolio, which is its important advantage for the long-term perspective.

3. Innovative technologies

Another strength of Vinci is the fact that the company makes its business innovative and technological. According to Vinci (2017a), the company's yearly budget for research and development is EUR 50 million, and *"some 50 research programmes and*

*collaborative ventures, with 12 competitive hubs including Advancity, devoted to sustainable cities and mobility. Every year, some 30 patents are filed – VINCI has a worldwide active patent portfolio of around 3,300 patents."* Thanks to its extensive research and engineering, the company is able to improve steadily the quality of its services for the benefit of target customers.

4. Effective integration with suppliers

As noted in Vinci (2017a), the company seeks maintaining long-term partnership ties with its suppliers around the globe for the sake of guaranteeing the best quality of services on a steady level. Vinci has a code of conduct for its partners, and seeks to build partnership with those companies, which follow the ideas of sustainable development and environment protection. Thanks to this, the corporation not only achieves the highest standards in its business activities, but also consolidates its positive brand image.

5. Strong market positions

Vinci holds firm global market positions, and is seen as one of the top providers of construction services to corporate customers all over the world. This contributes to steady effectiveness of the company's business activities and allow Vinci remaining among market leaders.

**Weaknesses**

1. Declining gross profitability

As for the downsides in Vinci's activities, it can be stated that the company has been losing its gross profitability lately, which means negative tendencies in terms of the company's long-term availability of own profits for funding its business growth. For more details, see 3.4.3. Analysis of Financial Ratios.

2. High costs

As can be found in Vinci (2017b), the company's main problem causing the declining profitability rates is the fact that the cost of goods sold is currently growing. This trend is namely due to the growing prices for raw materials in the primary market. High costs affect negatively the company's business prospects.

3. Rather weak positions in Asia

According to Nikkei Asian Review (2016), one of the company's weaknesses is its weak positions in the Asian market, where demand for construction services is high: here the company runs effective business activities in Japan, but loses to Chinese construction companies otherwise.

4. High dependence on contracting works

As can be found in Vinci (2017b), the company is to a large extent dependent on contracting works, which makes its business more vulnerable to external shocks. This means that the company lacks sufficient diversification in the context of the directions of its business activities. In order to avoid the inherent risks, Vinci should focus on improving the balance between contracting works and concessions in its business portfolio, at the same time paying sufficient attention to the corporation's risk management activities.

**Opportunities**

1. Developing online channel

Among the main opportunities which Vinci has in the global construction market, it is worth noting the development of the online channel of sales, which is particularly important in times of an overall market downturn (Vinci, 2017b). According to Stewart (2012, p. 24), *"The value of Business to Business activities exceeds Business to Consumer transactions by a ratio of 5:1, and this hints at the potential for B2B ecommerce transactions in the construction industry. These ecommerce systems require reengineered processes, revised work practices, a re-skilling of staff, computer hardware and software and finally a connection to the Interne*t." Therefore, in the years to come, subsequent growth of the online segment should be expected across the construction industry, and Vinci can benefit from the situation.

2. Improving global construction logistics

As stated by Matouzko (2012), global construction logistics has been improving in recent years, which is another opportunity for Vinci, as it means potentially lower costs associated with transport. Thanks to improving global logistics, construction companies are able to get their materials and components more quickly and at cheaper prices. Thanks to this, the overall effectiveness of their business grows.

3. Adoption of new construction standards by developing countries

A positive role is played by the improvement and harmonization of construction in developing countries in line with developed states, as this lowers the level of uncertainty and makes it easier to operate effectively in such geographic markets.

4. New international environmental policies ensuring equal competition

The establishment of standards for environment protection around the globe, and namely in developing countries, is positive for all major construction service providers, as it establishes the equal rules of play for all of them (NBS, 2016).

**Threats**

1. Overall declining global construction market

However, there are also considerable threats for Vinci. Thus, the global construction market has been declining lately, which means limited opportunities for expansion. As shown in this research, the current declines in the global construction market is primarily due to the declining demand on the part of developing countries. If the situation persists, this will have significant negative consequences of Vinci's subsequent business prospects.

2. Rapid growth of major Chinese construction service providers

At the same time, Chinese construction companies benefitting from low labor-associated expenses and rapid technological growth have been able to expand significantly not only in the Asian market, but also beyond (Financial Times, 2017). Given Vinci's overall weak position in the Asian construction market, it can be stated that the company's subsequent prospects in this geographic segment can be impaired significantly.

3. High level of market uncertainty

The level of uncertainty in the construction market is high, which means higher risks. This is stated namely by Matouzko (2012), who argues that construction companies are significantly dependent on both their suppliers and possible force majeure events which might either delay the delivery of projects or impact negatively the company's image in the eyes of customers.

4. Rising levels of wages

Construction staff wages tend to keep growing under the impact of different factors, including the growing role of trade unions and the overall economic tendencies in the marker. This means that construction companies' expenses should be expected to keep rising in aggregate (AGC, 2017).

5. Exchange rate fluctuations

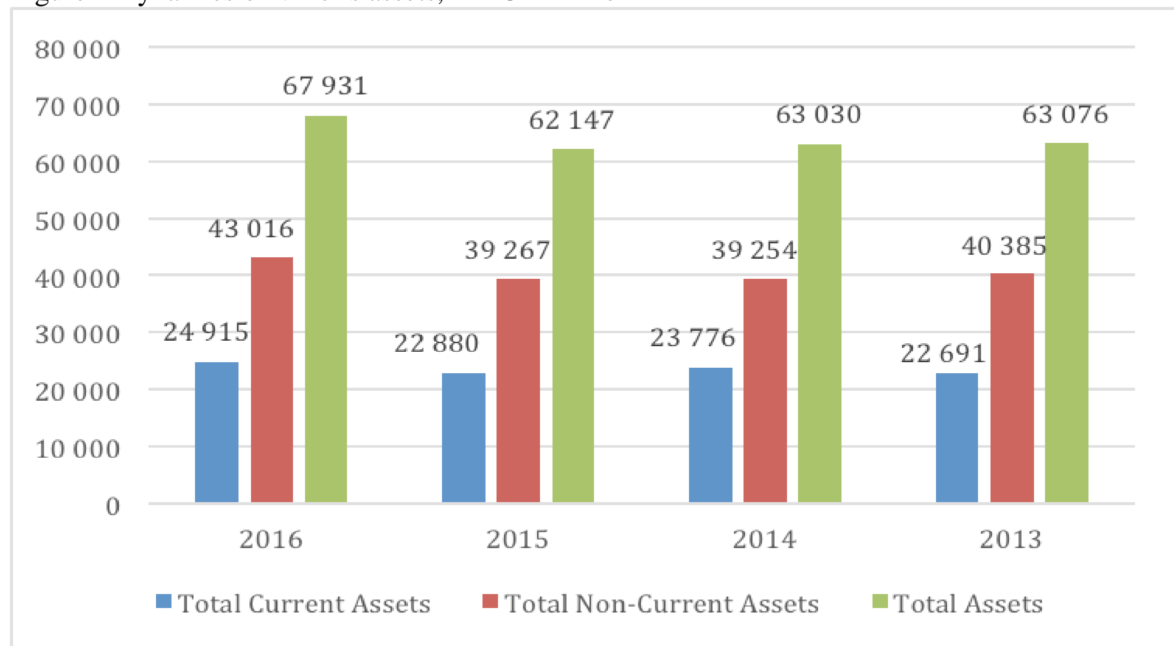
According to Hua (2013, pp. 4-5), exchange rate fluctuations impose direct threats on international construction companies, which is due to the fact that such corporations run their activities in a great number of countries at once, and the projects are most often long-term. Therefore, this factor might affect Vinci's expected profitability as well.

## 4.4 Financial Analysis of Vinci

### 4.4.1 Horizontal (Historical) Analysis

Proceeding to horizontal analysis, it should be remembered that this tool can provide valuable information on the company's financial performance by showing the trends and tendencies in the dynamics of different indicators representing specific aspects of the corporation's activities.

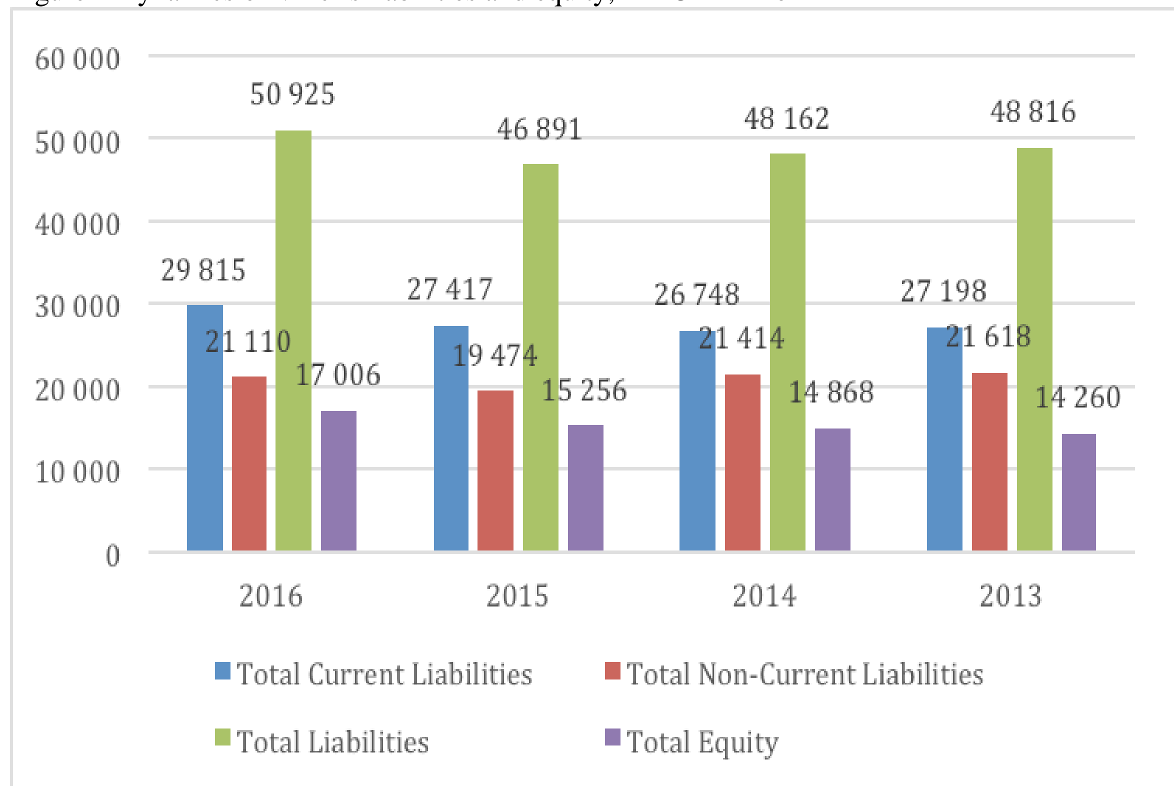
Figure 1 Dynamics of Vinci's assets, in EUR million




Source: Vinci, 2017b

As can be seen from the chart above, Vinci's total assets have been growing in recent years. Thus, from 2013 to 2016, the company's total assets rose by 4,855 million euros, or by 7.7 %. It is important to note that this growth was driven by the growing values of both non-current and current assets: the former rose by 2,631 million euros, or 6.5% during the aforesaid period, while the latter grew by 2,224 million euros, or 9.8 %. The fact that the company's assets have been growing lately is positive for Vinci, as it testifies that the company's business activities have been developing, and the own funds for financing its activities have been growing. At the same time, it should be noted in particular that the company's current assets have been growing at a more rapid pace compared to its non-current assets. This tendency can be deemed positive for the corporation as well, since it testifies that the company's liquidity has been on the rise lately, which contributes definitely to its business stability.

Figure 2 Dynamics of Vinci's liabilities and equity, in EUR million

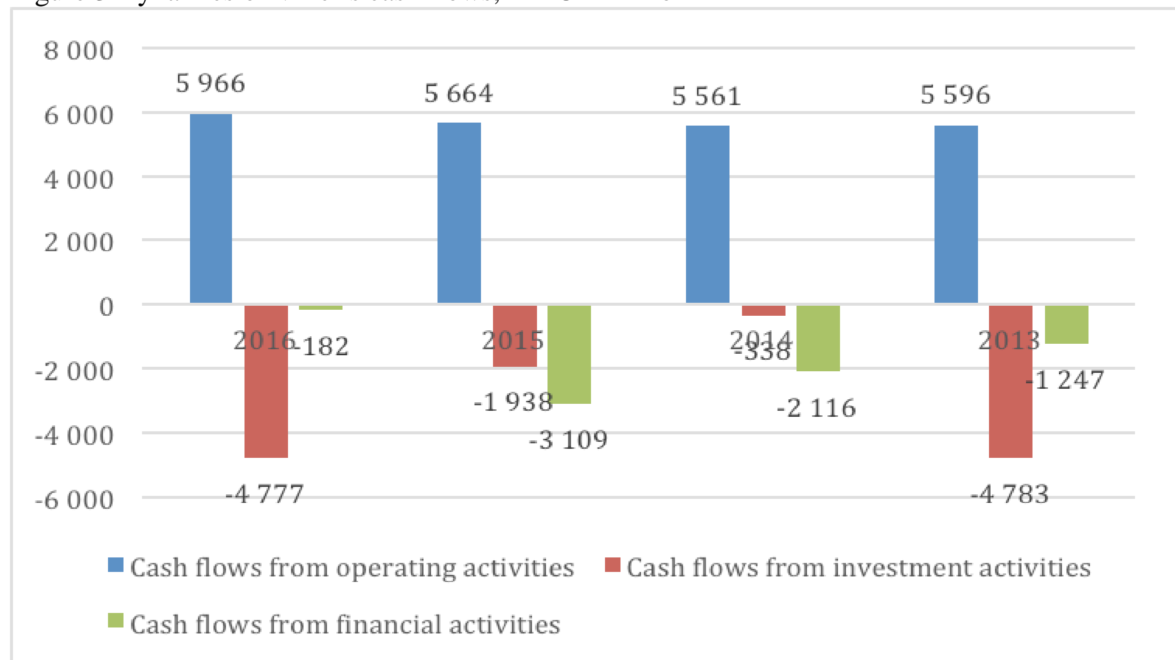



Source: Vinci, 2017b

As the chart provided above illustrates, Vinci's total equity and liabilities have been growing lately together with the company's assets. Thus, it is important to understand what contributed to this growth. The corporation's total liabilities grew by 2,109 million euros, or by 4.3 % from 2013 to 2016. At the same time, the company's shareholders' equity rose by 2,746 million euros, or 19.3 % in the same period. This trend is positive for Vinci: it illustrates that the company has greater opportunities for funding its business growth using own equity. This means Vinci's smaller dependence on external funding, and thus is overall positive for the company's financial stability.

At the same time, taking a closer look at Vinci's dynamics of liabilities, it can be stated that the company's non-current liabilities dropped by 508 million euros, or 2.4 %, while its current liabilities grew by 2,617 million euros, or 9.6 %. On the one hand, this trend can be deemed rather positive for the company, as it demonstrates its lesser dependence on borrowed funding in the long term. On the other hand, Vinci should pay substantial attention to the availability of quickly convertible assets for the purpose of being able to cover effectively its existing current liabilities.

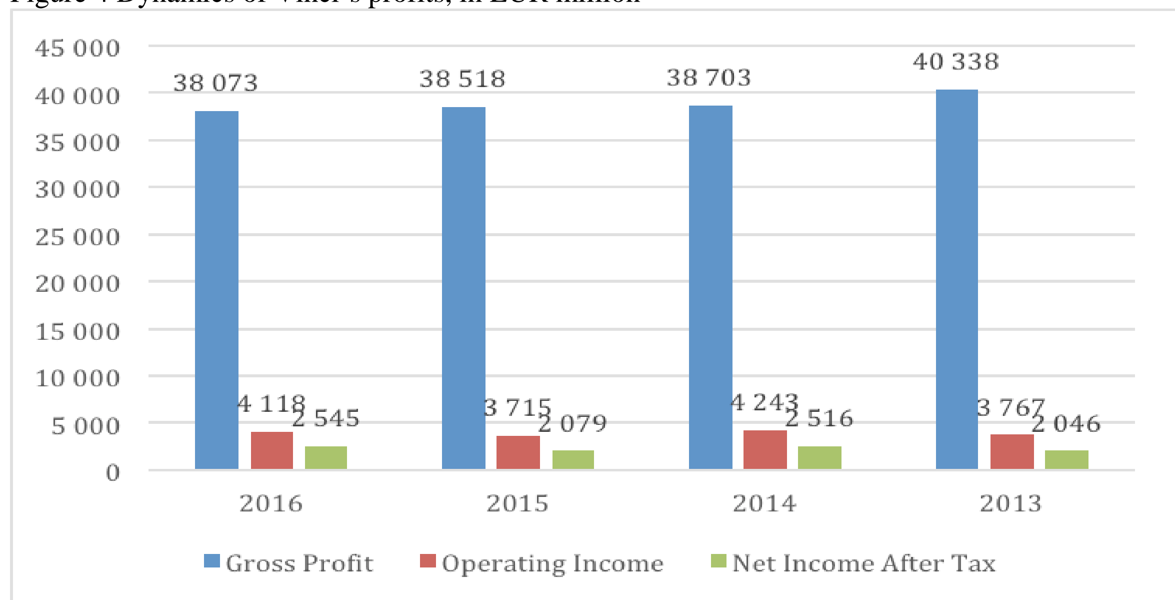
Figure 3 Dynamics of Vinci's cash flows, in EUR million




Source: Vinci, 2017b

As revealed by the chart presented above, Vinci's cash flows have remained negative from investment and financing activities, while positive growth has been demonstrated by cash flows from operating activities: such cash flows grew by 370 million euros, or 6.7 %, from 2013 to 2016. This illustrates that the company's main activities are operating activities in which cash flows are the greatest.

Figure 4 Dynamics of Vinci's profits, in EUR million




Source: Vinci, 2017b

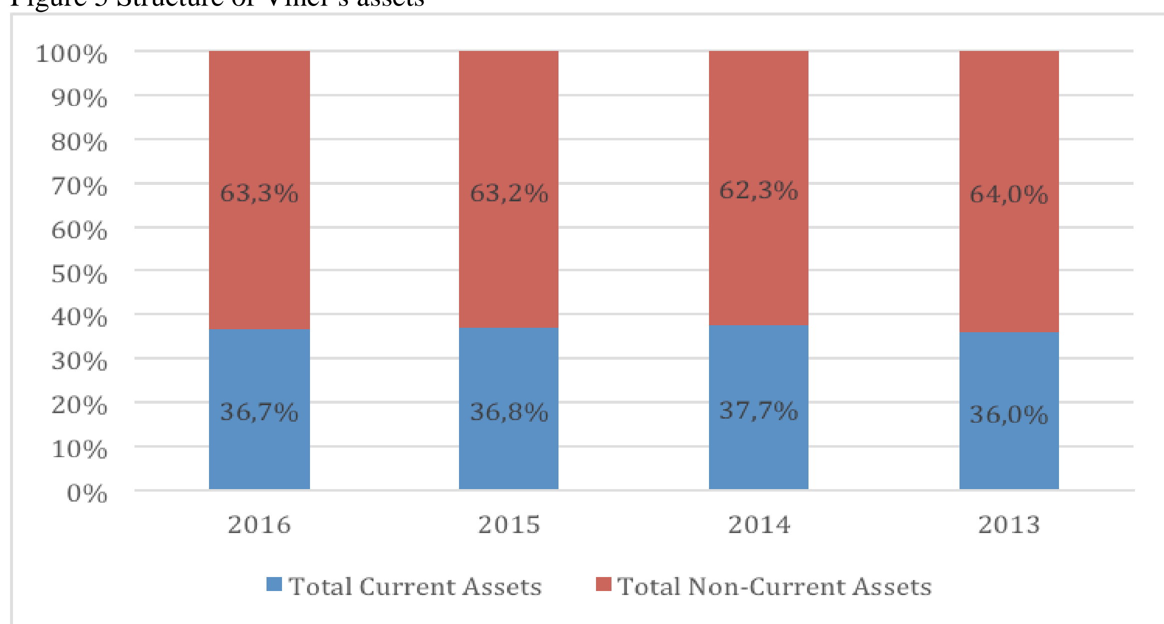
Looking at Vinci's dynamics of profits depicted in the picture above, it can be stated there have been two groups of tendencies lately. Thus, the company's gross profit has been dropping gradually: in the period from 2013 to 2016, this indicator's amount decreased to 2,265 million euros, or 5.6 %. On the other hand, the company's operating and net profit have been rather fluctuating lately. Nevertheless, operating income grew by 403 million euros (10.8 %) and net income after tax grew by 466 million euros (22.4 %) respectively in 2016 compared to 2015. The fact that the company's gross profit has been dropping steadily in recent years is negative for Vinci, as it testifies that the company's commercial effectiveness is dropping in the long-term perspective. Vinci needs to reverse the situation in order to avoid major negative long-term consequences. At the same time, the fact that the company is rather able to keep its operating income and net profit at steady levels is positive for Vinci and illustrates the corporation's short-term commercial effectiveness.

Therefore, based on horizontal analysis, it can be stated that Vinci currently endures problems with its profitability, as the company's gross profit has been steadily declining in recent years. Now, let's proceed to vertical analysis.

### 4.4.2 Vertical (Structural) Analysis

Proceeding to vertical analysis, the focus will be put on the structure of Vinci's key items of financial statements, namely assets, liabilities, and equity.

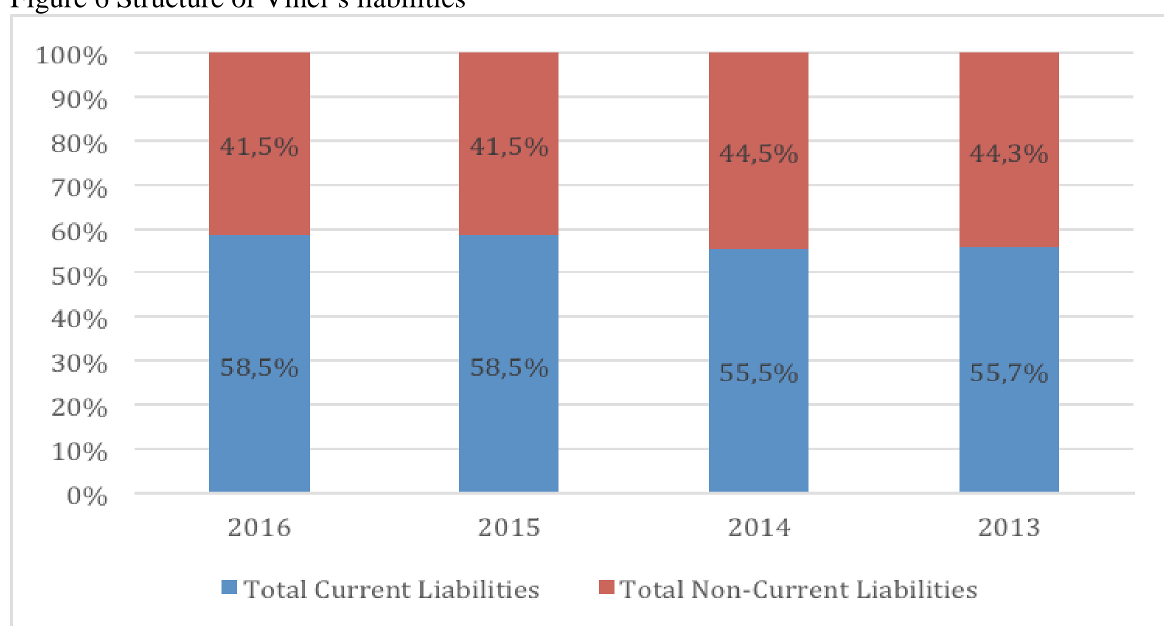
Figure 5 Structure of Vinci's assets




Source: Vinci, 2017b

As can be seen from the chart above, as of today, Vinci ‘s structure of assets is dominated by non-current assets (63.3 %, against current assets’ 36.7 %). This can be explained by the specificities of Vinci’s business. Construction requires the availability of sufficient property, plant and equipment, which is a part of non-current assets. Looking at the dynamics of this structure, it can be state that it has rather remain the same, slightly varying around the nearest figures. Overall, this might be an indicators of stability of the company’s business, which is positive for Vinci’s effective business growth.

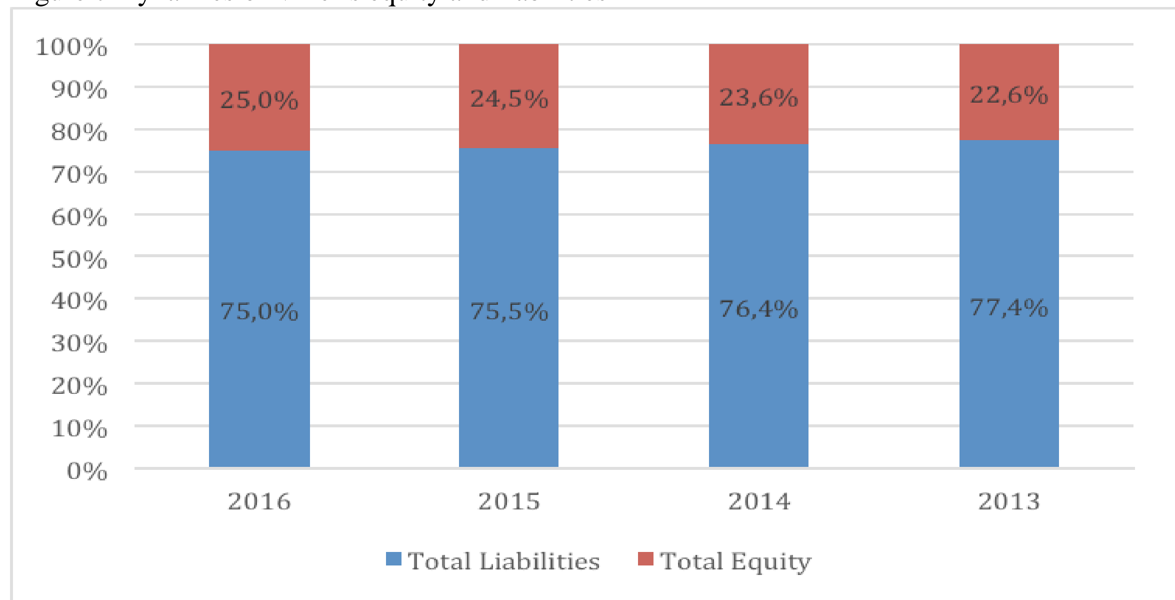
Figure 6 Structure of Vinci’s liabilities




Source: Vinci, 2017b

As can be seen from the figure above, Vinci’s structure of liabilities is dominated by current liabilities (58.5 %, against non-current liabilities 41.5 %). This can be explained by the fact that the company’s primary business activities are contracted construction works, while the share of concessions is substantially smaller. Concessions require greater capital investment, and thus precondition the need for long-term debts. At the same time, contracted works can be performed more effectively using either own funds or short-term loans borrowed from third parties. At the same time, it should be noted that the share of Vinci’s current liabilities in total liabilities has grown in recent years. The lack of long-term dependence on borrowed funding is positive for the corporation. However, Vinci should pay due attention to the growing share of its current liabilities in order to avoid possible problems with liquidity in the near future.

Figure 7 Dynamics of Vinci's equity and liabilities




Source: Vinci, 2017b

As the chart above illustrates, Vinci's structure of liabilities and equity is currently dominated by total liabilities (75 %, against shareholders' equity's 25 %). However, throughout recent years, the share of shareholders' equity has been growing steadily. Thus, in the period from 2013 to 2016, this indicator's value grew by 2.4 percentage points, from 22.6 % to 25.0 %. This tendency is positive for the corporation, as it testifies that the company's own funds available for financing its business growth have been increasing lately, which contributes to the company's greater financial independence and stability.

Thus, in terms of structural analysis, no considerable negative tendencies have been revealed in terms of the items of Vinci's financial statements. Now, in order to understand better the company's financial condition in terms of different financial indicators, an analysis of financial ratios should be done.

### 4.4.3 Analysis of Financial Ratios

Let's start analysis of financial ratios with the analysis of the company's liquidity ratios testifying its ability to cover short-term liabilities using current assets.

Table 2 Vinci’s profitability ratios

| Liquidity ratios | 2016 | 2015 | 2014 | 2013 |
|---|---|---|---|---|
| Current ratio | 83,57 % | 83,45 % | 88,89 % | 83,43 % |
| Acid-test ratio | 80,43 % | 79,94 % | 85,40 % | 79,87 % |
| Cash ratio | 22,40 % | 20,54 % | 23,97 % | 20,61 % |
| Current to total assets ratio | 36,68 % | 36,82 % | 37,72 % | 35,97 % |

Source: Own calculations based on Vinci, 2017b

As can be seen from the table above, Vinci’s current ratio amounts to 0.84. This figure is substantially lower compared to the recommended referential value of 1.5. This can be deemed as a potential problem for Vinci, indicating that the company might incur excessive risks of non-repayment of current liabilities: its current assets are rather small, and this might impose additional difficulties for the corporation, thus impairing its financial stability through potential issues with third-party creditors. However, it should be borne in mind that Vinci is a large multinational corporation with great market reputation and substantial corporate assets. This allows the company raising loans more effectively, as third-party creditors are more willing to provide such loans, and issues are less likely in that context. Taking a closer look at the dynamics of Vinci’s current ratio, it can be stated that its value has remained rather steady in recent years, and no negative tendencies are present. Therefore, in general terms, it can be stated that the company’s current ratio has good values, and it cannot be deemed that there are any problems in that context.

Next, taking a look at acid-test ratio, the tendencies have been rather the same lately. This means that the company has sufficient liquid assets (current assets less inventories which are harder to sell and convert into cash) for covering its current liabilities. Furthermore, it can be stated that Vinci’s acid-test ratio is above 0.6 (recommended referential value) and overall very close to the company’s current ratio, which is due to the small value of the corporation’s inventories (in its turn, this is due to the nature of the company’s activities and the prevailing share of contracting operations, where Vinci doesn’t require any abundant inventories). Thus, this further proves that tendencies are positive in terms of the company’s liquidity.

As for cash ratio, it can be stated that it has been fluctuating only slightly in recent years, and no negative tendencies have persisted. The fact that the ratio is below the recommended referential value of 0.3 doesn’t mean any negative tendencies for the company taking into account the stability of the ratio. Therefore, it can be said that the

company’s most liquid asset (cash) is sufficient for avoiding excessive liquidity risks and covering effectively its current liabilities to third-party creditors.

Finally, the current to total assets ratio has been analyzed in detail within vertical analysis. And there are no negative tendencies in those terms.

Thus, overall, it can be stated that Vinci’s liquidity is sufficient for meeting the company’s short-term liabilities to third-party creditors, and thus the company has financial stability in that context, which is beneficial for its overall effective financial performance.

Table 3 Vinci’s profitability ratios

| **Profitability ratios** | **2016** | **2015** | **2014** | **2013** |
|---|---|---|---|---|
| Gross profit margin | 37,67 % | 37,74 % | 37,93 % | 38,88 % |
| Operating profit margin | 4,07 % | 3,64 % | 4,16 % | 3,63 % |
| Net profit margin | 2,52 % | 2,04 % | 2,47 % | 1,97 % |
| Return on equity (ROE) | 14,97 % | 13,63 % | 16,92 % | 14,35 % |
| Return on assets (ROA) | 3,75 % | 3,35 % | 3,99 % | 3,24 % |

Source: Own calculations based on Vinci, 2017b

As for profitability ratios, it can be seen from the table above, that Vinci’s profitability ratios have been demonstrating differently-vectored dynamics in recent years. Now, let’s analyzed the more in detail.

The previous findings of the research revealed that the company’s gross profit has been declining steadily in the analyzed period. As can be seen from the table above, the dynamics of Vinci’s gross profit margin have remained with absolute gross profit dynamics during those years. Thus, the corporation’s gross profit has been declining gradually the analyzed period, and gross profitability has been declining alongside it. In 2016, the corporation’s gross profit margin amounted to 37.67 %, which was 1.21 percentage points less than the same figure in 2013. Although the absolute change in Vinci’s gross profit margin is not really large, it can be stated that the overall tendency is negative, and thus the corporation should perform effective monitoring in order to reveal in a timely manner any possible aggravation.

In contrast to the company’s gross profit margin, Vinci’s operating profit margin hasn’t been declining lately, and has rather been demonstrating slight fluctuations with certain frames. Overall, it can be stated that this parameter of the company’s profitability

has been fluctuating between 3.63 % and 4.16 %. The fact that there are no negative tendencies proves that overall, there is a kind of stability, which means that despite the company's decreasing gross profit, it is able to operate its costs quite effectively.

As for Vinci's net profit margin, the situation is quite similar: it has been fluctuating between 1.97 % and 2.52 % in recent years. In 2016, this ratio achieved its peak value of 2.52 % in the analyzed period. This means that the company's net income after tax grew against sales, and the company obtained greater funds which can be used thereafter for financing its business activities. This tendency is positive in the short term. However, Vinci should pay particular attention to the negative dynamics of its gross profit, as it means adverse long-term tendencies, which might affect short-term profitability already in the near future.

As for the company's ROE, it increased by 1.34 p.p. in 2016 compared to 2015, but was 1.95 p.p. smaller compared to 2014. A similar tendency has been observed in the company's ROA which was 0.4 p.p. higher in 2016 compared to 2015, but 0.24 p.p. lower compared to 2014. Overall, looking at those fluctuations, it can be affirmed that they are rather small, and it can be deemed that no negative tendencies persist here. Vinci is able to use both its shareholders' equity and assets quite effectively for generating profits, which is positive for the company's overall financial performance.

Table 4 Vinci's indebtedness ratios

| **Indebtedness ratios** | **2016** | **2015** | **2014** | **2013** |
| --- | --- | --- | --- | --- |
| Debt ratio | 74,97 % | 75,45 % | 76,41 % | 77,39 % |
| Long-term debt to equity | 73,48 % | 73,07 % | 82,23 % | 79,38 % |
| Long-term debt to assets | 18,40 % | 17,94 % | 19,40 % | 17,95 % |

Source: Own calculations based on Vinci, 2017b

As can be seen from the information provided above, Vinci's debt ratio has been decreasing lately. Thus, while this indicator had been 77.39 % in 2013, it dropped by 2.42 p.p. by 2016. This trend is positive for the company, as it testifies that Vinci has been lowering its dependence on external funding sources in recent years. The smaller the company's debts to third parties, the wider Vinci's opportunities to run effective market activities thanks to higher financial stability and independence.

As for the company's long-term debt to assets and equity, it can be stated that those ratios' values have been fluctuating lately, but there have been no evident negative dynamics. This means that the company isn't enduring considerable difficulties with the amount of its long-term liabilities against own funds, and thus Vinci isn't vulnerable in those terms.

Overall, rate the recent dynamics of Vinci's indebtedness ratios can be rated as favorable and as contributing to the corporation's effective market performance.

Table 5 Vinci's activity ratios

| **Activity ratios** | **2016** | **2015** | **2014** | **2013** |
|---|---|---|---|---|
| Inventory turnover | 67,38 | 65,81 | 68,01 | 65,83 |
| Average age of inventory | 5,42 | 5,55 | 5,37 | 5,54 |
| Accounts receivable turnover | 8,85 | 9,54 | 9,31 | 9,44 |
| Average collection period | 41,25 | 38,25 | 39,21 | 38,67 |
| Operating cycle | 46,66 | 43,8 | 44,58 | 44,22 |

Source: Own calculations based on Vinci, 2017b

As can be seen from the table above, the company's inventory turnover has been varying lately. However, if the last two years are taken into account, Vinci's inventory turnover grew from 65.81 to 67.38. This is positive for the company, as it proves that Vinci is now able to sell and replace its inventories more effectively, thus optimizing the effectiveness of its operating performance. This tendency can also be seen on the company's average age of inventory which decreased from 5.55 days in 2015 to 5.42 days in 2016. The company can benefit from further lowering this indicator's value further, for instance through the optimization of organizational processes and effective distribution of tasks and roles within the organization. This can also be improved by improving the company's partnership ties with suppliers and raising the effectiveness of its logistics system.

However, as for Vinci's accounts receivable turnover, it can be seen that this indicator's value has been dropping lately. In 2016, this ratio's value was 8.85, or 0.69 p.p. smaller compared to the previous year. At the same time, the company's average collection period grew from 38.25 days to 41.25 days in the same period. This trend is negative, as it

means Vinci's deterioration of effectiveness in the work with debtors. In order to avoid those negative trends, the company should provide its counterparties with a stimulus to incite their prompter payments. For instance, this can be achieved through the provision of bonuses for timely payments, or through the establishment of fines for delayed payments.

Negative trends in terms of accounts receivable affect the company's operating cycle, which has been increasing in length lately. This tendency means that the company needs greater time for performing its business operations and generating profits, which is negative for Vinci's overall performance.

Table 6 Vinci's capital market ratios

| Capital market ratios | 2016 | 2015 | 2014 | 2013 |
|---|---|---|---|---|
| Earnings per share (EPS) | 4,24 | 3,66 | 4,43 | 3,54 |
| Dividends per share (DPS) | 2,1 | 1,84 | 1,77 | 1,77 |
| Payout ratio | 49,53 % | 50,27 % | 39,95 % | 50,00 % |

Source: Own calculations based on Vinci, 2017b

Analyzing the company's capital market ratios, it can be seen that the company's earnings per share have been fluctuating lately. Those fluctuations are due to the company's changing net profit values. Generally, it is better for investors to see steady profitability. However, as the available dynamics are not dominated by any distinct negative tendencies, it can be stated that the situation is rather steady as of today.

Furthermore, analyzing the company's dividends per share, this ratio's value has been steadily growing despite the lack of homogeneous dynamics in terms of EPS. In 2016, Vinci's DPS amounted to 2.1 EUR, and thus was 14.1 % higher compared to 2015, or 18.6 % higher compared to 2013-2014. This means that despite dropping gross profit and fluctuating operating and net profit, the company is able to keep increasing the payout of dividends to shareholders. This situation is favorable for Vinci's financial performance, as it testifies that the company is becoming more attractive to investors (who know that their profits from the associated activities are growing, and thus this boosts their interest in the company).

Against that background, the company's payout ratio has remained around 50 % in recent years, which means that the company pays around 50 % of its earnings to shareholders as dividends.

Overall, the situation with capital market ratios is positive and favorable for the corporation. If the company is able to maintain its profitability and the abovementioned capital market ratios, it will enjoy opportunities of steady business growth.

In general terms, it can be stated that the financial condition of Vinci is stable based on the analysis of financial ratios, and the corporation is performing effectively in its business activities. There are only two major negative tendencies which the company should pay substantial attention to: dropping gross profitability and decreasing effectiveness of operations with accounts receivable. Otherwise, the corporation has good short-term profitability, good liquidity, isn't excessively dependent on long-term external funding, and is able to generate steady interest on the part of investors.

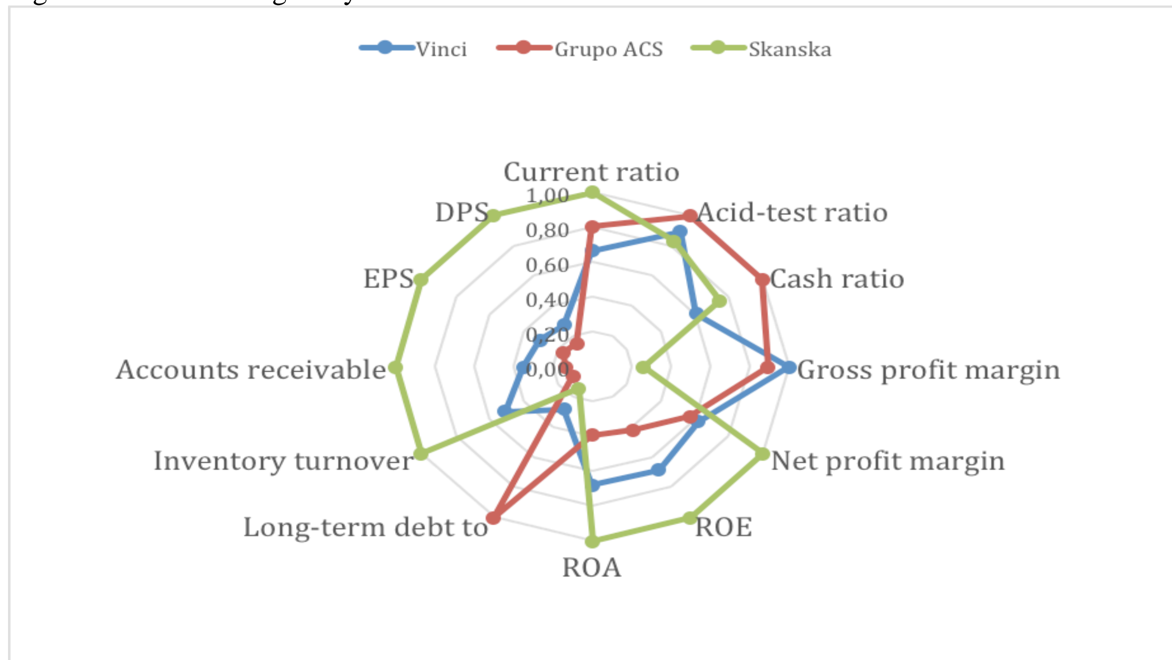
Now, it is worth comparing Vinci's financial ratios against the same ratios of its key market competitors, namely Grupo ACS and Skanska. For the purpose of running this benchmarking research, the three companies' basic financial ratios will be taken, their maximum value will be calculated, and each value will be weighed against max for subsequently plotting the results on a chart.

Table 7 Raw data for benchmarking analysis

| | Absolute values | | | | | Values against MAX | |
|---|---|---|---|---|---|---|---|
| | Vinci | Grupo ACS | Skanska | ***MAX*** | Vinci | Grupo ACS | Skanska |
| Current ratio | 0,84 | 1,01 | 1,26 | ***1,26*** | 0,67 | 0,8 | 1 |
| Acid-test ratio | 0,8 | 0,89 | 0,74 | ***0,89*** | 0,9 | 1 | 0,83 |
| Cash ratio | 0,22 | 0,36 | 0,27 | ***0,36*** | 0,61 | 1 | 0,75 |
| Gross profit margin | 0,38 | 0,34 | 0,1 | ***0,38*** | 1 | 0,89 | 0,26 |
| Net profit margin | 0,025 | 0,023 | 0,04 | ***0,04*** | 0,63 | 0,58 | 1 |
| ROE | 0,15 | 0,093 | 0,22 | ***0,22*** | 0,68 | 0,42 | 1 |
| ROA | 0,038 | 0,022 | 0,056 | ***0,056*** | 0,68 | 0,39 | 1 |
| Long-term debt to equity | 0,73 | 2,61 | 0,37 | ***2,61*** | 0,28 | 1 | 0,14 |
| Inventory turnover | 67,38 | 14,78 | 132,04 | ***132,04*** | 0,51 | 0,11 | 1 |
| Accounts receivable turnover | 8,85 | 3,4 | 25,41 | ***25,41*** | 0,35 | 0,13 | 1 |
| EPS | 4,24 | 2,32 | 13,88 | ***13,88*** | 0,31 | 0,17 | 1 |
| DPS | 2,1 | 1,15 | 7,49 | ***7,49*** | 0,28 | 0,15 | 1 |

Source: Morningstar, 2017

Figure 8 Benchmarking analysis results




Source: Morningstar, 2017

As can be seen from the chart above, Vinci's liquidity ratios are slightly worse compared to its competitors. However, taking into account the fact that they are overall sufficient for effectively covering the company's liabilities, it cannot be stated that any major problems exist in these terms. Vinci has the highest gross profit margin against the competitors, despite the recent negative tendencies. This is good for the company's long-term market prospects. In terms of the net profit margin, ROE and ROA, Vinci performs better than Grupo ACS but worse than Skanska, and thus has room for improvement. The same situation is observed in terms of indebtedness ratios. Of particular importance is the fact that the earnings per share and dividends per share of Skanska are significantly higher compared to both Vinci and Grupo ACS.

Let's focus more in detail on some key parameters in the chart above. First of all, the net profit margin should be considered as the ultimate indicator of corporate financial performance. The rate of the net profit margin in Skanska is the highest. Therefore, in the chart above, it was assigned a score of 1. It can be seen how considerably both Vinci and Grupo ACS lag behind Skanska in terms of the net profit margin: on this one-point scale their respective scores are 0.63 and 0.58. This means that Vinci's profitability is more than 1/3 lower compared to Skanska, even though being slightly higher than in Grupo ACS. The situation when Vinci's net profitability is significantly lower compared to the one of its main competitors is quite negative for the company, as it proves that Skanska's commercial effectiveness is higher, and thus the company has greater financial resources which it can use for boosting its business growth compared to Vinci. But there is one important fact which should be takne into account. In terms of the gross profit margin, Vinci is significantly higher compared to Skanska. This proves that the surge in net profitability might be of short-term nature for Skanska, while high figures of the gross profit margin testify long-term commercial effectiveness. Therefore, Vinci's positions in these terms are solid against its competitors.

In terms of accounts receivable turnover, Vinci's effectiveness is 0.35 as low as the one of Skanska, while Grupo ACS' relative figure is 0.13. Taking into account the fact that the companies operate in the construction sector, with many customers at once, and are implementing large-scale projects, the lack of effectiveness in the operations with accounts receivable might entail major financial problems. This situation proves that Vinci fails to return debts quickly from its debtors. The company should work on this issue in order to improve its turnover by raising the volume of funds available for its operating activities.

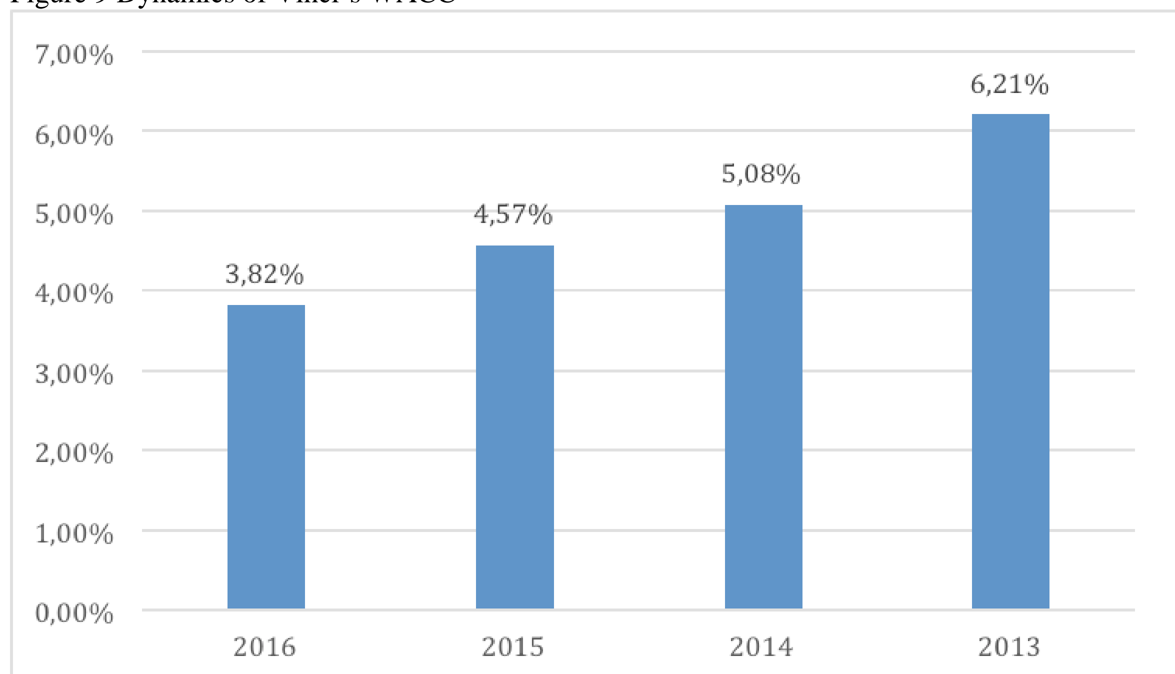
Finally, the absolute amount of dividends per share should be taken into account. Vinci and Grupo ACS have DPS of 0.28 and 0.15 respective shares against the value of DPS achieved by Skanska. This means that Skanska is more attractive to investors in these terms, and thus has greater chances to raise investor funding. Raising gradually profitability and dividends per share is an important step toward raising corporate value in the market, and thus for making it more attractive to investors.

Therefore, in overall terms, this analysis shows that Skanska has the best financial ratios, and Vinci has significant room for improvement.

## 4.5 Assessment of Vinci's Market Value

For the purpose of assessing Vinci's market value, the three techniques analyzed in the theoretical part of the thesis can be used, namely EVA, MVA, and WACC. However, the data published by the company in its official annual reports and other publicly available materials do not present all required figures in order to run necessary calculations. As a result, it is impossible to cover effectively all the three rates. However, there are pre-calculated data available on the company's WACC, which are going to be analyzed below.

Figure 9 Dynamics of Vinci's WACC




Source: GuruFocus, 2017

As can be seen from the data presented in the figure above, Vinci's WACC has been decreasing steadily in recent years. This, in 2016 the company's WACC amounted to only 3.82 %, or 2.39 p.p. less than in 2013. This trend is definitely positive for the corporation, as it testifies that the cost of the company's capital (i.e. its associated expenditures) is decreasing, and so its financial effectiveness is rising. It should be borne in mind that higher weighted average cost of capital entail higher risks associated with companies' business operations. Vinci's decreasing WACC value testifies that the company now pays less for the financing of all its activities: to put it briefly, the company now has to pay to its investors 0.0382 euros for each additional euro of funding, instead of 0.0621 euros, as was in 2013.

At the same time, WACC is lower compared to the company's profitability ratio which has been analyzed earlier in this thesis. This proves that as of today investors should have no concerns regarding the company's financial stability, and thus this contributes to greater confidence on their part and to Vinci's opportunity to raise additional funding through leverage.

Now, let's calculate the company's discounted cash flow using the DCF model. The formula is the following: $DCF = \frac{CF_1}{(1-r)^1} + \frac{CF_2}{(1+r)^2} + \cdots + \frac{CF_n}{(1+r)^n}$, where *CF* stands for the net cash flow from the company's activities, *r* is the discount rate (WACC), and *n* is the total number of years in the analyzed period. The average WACC for 2013-2016 is 0.0492. Taking into account these facts, the findings of the DCF analysis can be presented below.

Table 8 DCF model calculations for Vinci

| | **2016** | **2015** | **2014** | **2013** | |
|---|---|---|---|---|---|
| CF (cash flow) | 4,35 | 4,52 | 3,63 | 3,65 | |
| r (WACC) | 0,0492 | | | | **TOTAL** |
| 1+r | 1,0492 | | | | |
| $(1+r)^n$ | 1,0492 | 1,1008 | 1,155 | 1,212 | |
| DCF | 2,122.78 | 2,151.54 | 1,684.47 | 1,650.235 | ***7,609.024*** |

Source: Own calculations

As can be seen from the table above, Vinci's discounted cash flow is positive, which testifies that the company can achieve a substantial net present value. The above figures of DCF can be used for running subsequent financial analysis for the corporation.

Figure 10 Dynamics of Vinci's stock price

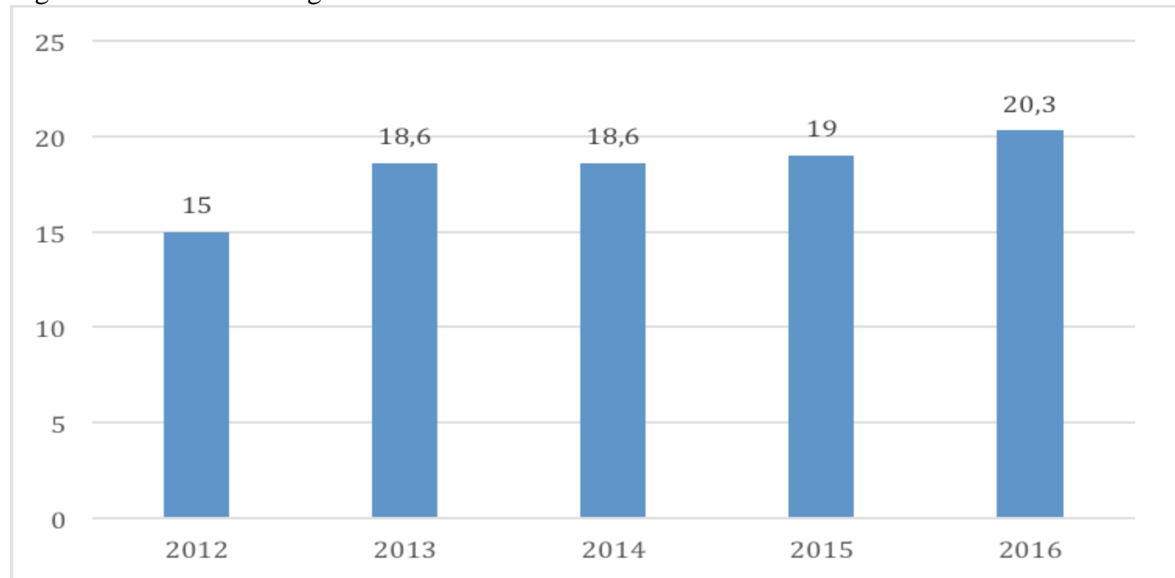
Source: Yahoo! Finance, 2018

The chart above provides an overview of the dynamics of the company's stock price. As can be seen from the figure, Vinci's stock price has been rising steadily throughout the last five years, and grew from EUR 38 to EUR 85 during this period. This proves that the company's market value has been on the rise lately, which is definitely positive for the corporation's financial performance and the company's attractiveness to target investors.

Overall, based on the information available, it can be stated that there have been no negative tendencies with Vinci's market value in recent years, and this further proves that the company's market performance dynamics have remained rather positive lately.

Now, let's also see how the company has been performing in terms of its price-to-earnings ratio lately.

Figure 11 Price-to-earnings ratio of Vinci




Source: Morningstar, 2017

As can be seen from the chart, Vinci's price-to-earnings (P/E) ratio has been growing steadily in recent years. This proves that the company has been performing effectively in the market: its market value has been growing at a more rapid pace compared to its earning. Thus, the company has been able to keep raising its attractiveness to investors, which positive for its opportunities of long-term financial stability in the market.

Taking into account the results of our analysis, it is now possible to proceed to discussion and recommendations.

## 4.6 Discussion and Recommendations

The findings revealed throughout this research prove that as of today Vinci is one of the global leaders in the construction market. The company's business model seems to be quite effective, as it allows Vinci remaining among the leaders of the market. However, the company should think over several important issues in order to improve its business effectiveness and raise its ultimate financial performance.

First of all, it should be noted that Vinci's gross profitability has been dropping recently, which might be a sign of long-term negative tendencies for the corporation. Investigating the reasons for this, it can be stated that major negative impact is caused by the external environment. Namely, negative construction market dynamics in developing countries limit Vinci's opportunities for market expansion. At the same time, Chinese companies' active expansion in Asia and beyond further affect Vinci's business

opportunities and impair the company's gross profit. The subsequent tendencies might be negative as well. Therefore, Vinci should focus on developing a long-term business strategy to be implemented under market contraction, so as to maintain its business positions. Probably, the company could benefit from raising the share of concession works in its business portfolio. This could allow Vinci strengthening its positions in developed countries, as the corporation would be able to continue generating profits from markets where its positions are less vulnerable. At the same time, Vinci could focus more on boosting its activity in developing countries other than Asia, where the impact of competitors is smaller, and high technologies are still valued much. In this context, Vinci could benefit particularly from the corporation's positive business image, availability of advanced technologies and scale of activities. The company needs to develop a business strategy which would allow it withstanding the impact of powerful competitors.

In terms of the company's internal processes, Vinci should pay particular attention to the company's situation with accounts receivable. Recent dynamics have been rather negative, and they testify that the corporation has been enduring negative tendencies in those terms. There are several recommendations which might be offered to the company for improving its performance in terms of this indicator. Thus, Vinci might provide its customers with bonuses or discounts for early payments: this can motivate clients to pay earlier. For customers which have past due payments, the company might offer payment plans, which could allow achieving the reimbursement of at least a part of payments. The corporation should also improve its invoicing system and post-sales communication with its customers. The company could also implement a stage-by-stage automated monitoring system which would allow it tracking the non-payment of debts throughout particular time periods. Finally, Vinci might benefit from considering the opportunity of resorting to third-party debt collection service provider, thus outsourcing this part of its activities. All in all, the implementation of those recommendations should allow the company raising the speed and quality of repayment of debts on the part of customers, thus improving its overall management of funds.

In addition to this, it should be noted in particular the importance of the company's market analysis. Vinci should focus on maximizing the effectiveness of such procedures, which is due to the fact that the company operates on many different geographic markets at once. Thus, for the purpose of improving its business performance, the company needs to be totally aware of all economic, political and social processes occurring in the countries

where it runs its market activities. This is particularly true speaking of developing countries, where the situation might change quite rapidly and the company might incur quite significant losses due to lack of effective and quick adaptation.

Finally, it should be noted that as of today, Vinci demonstrates a balanced structure of financial ratios, and the company should continue monitoring their dynamics in order to prevent possible deterioration of its performance and to anticipate the occurrence of potential negative events, so as to implement the required preventive measures.

# Conclusion

The findings of this research prove that economic analysis is indispensable for entities to evaluate effectively the effectiveness of their business activities and its dynamics, and thus to make actions for improving the current situation. This is particularly true in situation where the market is evolving quickly: economic analysis thus becomes essential as a continuous set of activities destined to reveal the existing threats and opportunities, and thus to minimize risks and maximize possible benefits. Economic analysis includes numerous tools and techniques, which can all be used for analyzing effectively both the company's internal business activities and the impact of the outer business environment on its performance.

This was proven in particular by the analysis of Vinci, a French multinational corporation, which is also one of the global leaders in the construction market. In the course of the research, information was collected for answering the given research questions.

RQ1: What are the main negative factors affecting Vinci's business activities?

Based on the findings of the thesis, it can be stated that there are a multitude of factors affecting Vinci's business activities and financial performance. This is due to the fact that the international construction market is quite complex, and is characterized by simultaneous impact of many factors. It should be understood that Vinci operates in many different countries at once. The corporation is vulnerable to any changes in such countries' economic, political, social or technological environment. This is particularly true of developing countries where Vinci is fulfilling its contracting projects. Risks of non-completion and loss of funds are quite high. Also, global construction market has been declining lately in terms of its volumes, which means Vinci's limited opportunities for generating profits. Another threat is the growing role of Chinese construction service providers. They are expanding further beyond their traditional Asian markets, thus becoming major competitors for Vinci even in countries where the company holds leading positions. At the same time, there are several problems which the company endures in terms of its internal business processes. Thus, first of all, the corporation's gross profitability has been decreasing lately, which means negative tendencies in the long-term perspective. The company is also vulnerable to decreasing accounts receivable turnover, which means its impaired opportunities of financial maneuver. However

RQ2: What measures could the company undertake for the purpose of improving the situation?

There are measures which Vinci might implement for improving the current situation. For instance, the company should focus on increasing its gross profitability. For this sake, Vinci should modify its current strategy, for example, by raising the share of concession works in developed countries in its business portfolio, or by focusing on rapid expansion into those geographic segments where the company's powerful Chinese competitors currently do not have solid positions, and therefore Vinci might take market leadership. The company should also improve its management of accounts receivable, and might benefit from providing bonuses for early payments to its customers, or by offering repayment plans for past due debts. Finally, the company should perform effectively its market monitoring so as to detect in a timely manner all existing threats and respond to them quickly. By minimizing its risks through continuous market analysis, Vinci might achieve steady financial performance over the long term.

Also, in the research, the following hypothesis was tested: Vinci's current performance is hindered by the company's excessive dependence on borrowed funding typical of the construction market.

This hypothesis can be disapproved. Thus, through financial analysis, it has been revealed that the company performs effectively in terms of both operations with its long-term and short-term debts. Vinci is not excessively dependent on borrowed funding, and combines own sources and third-party loans effectively within the current structure of its business portfolio. The company's main problem is the negative dynamics of gross profitability, but it has no evident problems with borrowed funding.

Overall, it can be stated that Vinci is a powerful actor in the global market of construction services. The company's business activities can be deemed as overall effective, and the fulfillment of the recommendations outlined above should contribute further to the corporation's strengthened positions in the target market and its subsequent business growth.

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# Appendix

## Annex A Selected Financial Statements of Vinci

| Balance sheet | | | | |
|---|---|---|---|---|
| **In EUR million (except for per share items)** | **2016** | **2015** | **2014** | **2013** |
| Cash & Equivalents | 6 678 | 5 632 | 6 411 | 5 605 |
| Short Term Investments | 370 | 364 | 426 | 367 |
| Accounts Receivable - Trade, Net | 11 422 | 10 696 | 10 960 | 10 993 |
| Total Inventory | 935 | 964 | 932 | 969 |
| Other Current Assets, Total | 5 510 | 5 224 | 5 047 | 4 757 |
| **Total Current Assets** | **24 915** | **22 880** | **23 776** | **22 691** |
| Property/Plant/Equipment, Total - Gross | 4 468 | 4 241 | 4 316 | 4 550 |
| Long-Term Marketable Securities | 1 505 | 1 404 | 1 309 | 1 265 |
| Goodwill, Net | 8 113 | 7 296 | 6 994 | 7 000 |
| Intangibles, Net | 409 | 387 | 255 | 248 |
| Other Long Term Assets, Total | 28 521 | 25 939 | 26 380 | 27 322 |
| **Total Non-Current Assets** | **43 016** | **39 267** | **39 254** | **40 385** |
| **Total Assets** | **67 931** | **62 147** | **63 030** | **63 076** |
| Accounts Payable | 7 740 | 7 590 | 7 620 | 7 493 |
| Current Provisions | 4 172 | 4 053 | 4 061 | 3 246 |
| Other Current liabilities, Total | 17 903 | 15 774 | 15 067 | 16 459 |
| **Total Current Liabilities** | **29 815** | **27 417** | **26 748** | **27 198** |
| Bonds | 12 496 | 11 147 | 12 226 | 11 320 |
| Other Non-Current Liabilities, Total | 8 614 | 8 327 | 9 188 | 10 298 |
| **Total Non-Current Liabilities** | **21 110** | **19 474** | **21 414** | **21 618** |
| **Total Liabilities** | **50 925** | **46 891** | **48 162** | **48 816** |
| Issued Capital | 1 473 | 1 471 | 1 475 | 1 504 |
| Retained Earnings (Accumulated Deficit) | 2 505 | 2 046 | 2 486 | 1 962 |
| Accumulated Other Comprehensive Income | 13 028 | 11 739 | 8 633 | 8 212 |
| **Total Equity** | **17 006** | **15 256** | **14 868** | **14 260** |
| **Total Liabilities & Shareholders' Equity** | **67 931** | **62 147** | **63 030** | **63 076** |
| Total Shares | 5 217 242 | 5 470 820 | 5 753 421 | 5 811 123 |

| Income statement | | | | |
|---|---|---|---|---|
| **In EUR million (except for per share items)** | **2016** | **2015** | **2014** | **2013** |
| **Total Revenue** | 101 075 | 102 056 | 102 027 | 103 755 |
| **Cost of Revenue, Total** | 63 002 | 63 445 | 63 388 | 63 789 |
| **Gross Profit** | 38 073 | 38 518 | 38 703 | 40 338 |
| **Total Operating Expense** | 33 955 | 34 803 | 34 460 | 36 571 |
| **Operating Income** | 4 118 | 3 715 | 4 243 | 3 767 |
| **Net Income After Tax** | 2 545 | 2 079 | 2 516 | 2 046 |

| Cash flow statement | | | | |
|---|---|---|---|---|
| **In EUR million (except for per share items)** | **2016** | **2015** | **2014** | **2013** |
| **Cash flows from operating activities** | 5 966 | 5 664 | 5 561 | 5 596 |
| **Cash flows from investment activities** | -4 777 | -1 938 | -338 | -4 783 |
| **Cash flows from financial activities** | -182 | -3 109 | -2 116 | -1 247 |
| **Earnings per Share** | 4,24 | 3,66 | 4,43 | 3,54 |
| **Dividends per Share** | 2,1 | 1,84 | 1,77 | 1,77 |

Source: Vinci, 2017b