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ABSTRACT

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Supervisor(s)	Prof. Kari Lukka, Dr. Terhi Chakhovich		

Abstract

Despite the fact that the literature on mergers and acquisitions is extensive, relatively little effort has been made to examine the relationship between the acquiring firms' financial slack and short-term post-takeover announcement abnormal stock returns. In this study, the case is made that the financial slack of a firm is not only an outcome of past business and financing activities but it also may affect the quality of acquisition decisions. We will hypothesize that the level of financial slack in a firm is negatively associated with the abnormal returns following acquisition announcements because slack reduces managerial discipline over the use of corporate funds and also because it may give rise to managerial self-serving behavior.

In this study, financial slack is measured in terms of three financial statements ratios: leverage ratio, cash and equivalents to total assets ratio and free cash flow to total assets ratio. The data used in this paper is collected from two main sources. A list comprising 90 European acquisition announcements is retrieved from Thomson One Banker database. The stock price data and financial statements information for the respective firms is collected using Datastream.

Our empirical analysis is two-fold. First, we conduct a two-sample t-test where we find that the most slack-rich firms experience lower abnormal returns than the most slack-poor firms in the event window [-1, +1], significant at 5% risk level. Second, we perform a cross-sectional regression for sample firms using three financial statements ratios to explain cumulative abnormal returns (CAR). We find that leverage shows a statistically significant positive relationship with cumulative abnormal returns in event window [-1; +1] (significance 5%). Moreover, cash to total assets ratio showed a weak negative relationship with CAR (significant at 10%) in event window [-1; +1].

We conclude that our hypothesis for the inverse relationship between slack and abnormal returns receives empirical support. Based on the results of the event study we get empirical support for the hypothesis that the capital markets expect the acquisitions undertaken by slack-rich firms to more likely be driven by managerial self-serving behavior and hubris than do those undertaken by slack-poor firms, signaling possible agency problems and behavioral biases.

Key words	Mergers and acquisitions, M&A, financial slack, event study, takeover
Further information	

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TIIVISTELMÄ

X	Pro gradu -tutkielma
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Ohjaaja(t)	Prof. Kari Lukka, KTT Terhi Chakhovich		

Tiivistelmä

Vaikka yritysjärjestelyjä koskeva akateeminen kirjallisuus on kattava, yrityksen taloudellisen liikkumavaran ja yritysostoilmoitusta seuraavan osakkeen hintareaktion yhteys on saanut varsin vähän huomiota osakseen. Tämän tutkielman perusoletus on, että yrityksen taloudellinen liikkumavara ei ole ainoastaan seuraus menneistä liiketoiminta- ja rahoituspäätöksistä, vaan se voi myös vaikuttaa itse yritysostopäätöksiin. Hypoteesimme on, että taloudellisen liikkumavaran ja osakemarkkinareaktion välinen yhteys on käänteinen, koska liikkumavara saattaa vähentää yritysjohdon huolellisuutta yritysostopäätöstä tehdessä ja myös, koska suuri liikkumavara voi luoda olosuhteet yritysjohdon omaneduntavoittelulle.

Tässä tutkimuksessa yrityksen taloudellista liikkumavaraa mitataan kolmen tilinpäätössuhdeluvun perusteella. Nämä ovat: velka suhteessa kokonaisvaroihin, käteisvarojen suhde kokonaisvaroihin sekä vapaa kassavirta suhteessa kokonaisvaroihin. Tutkimuksen aineisto kerätään kahdesta lähteestä. 90 eurooppalaista yritysostoilmoitusta käsittävä luettelo noudetaan Thomson One Banker -tietokannasta. Osakemarkkinainformaatio sekä tilinpäätösluvut yrityksille kerätään Datastreamista.

Kaksiosaisen analyysimme ensimmäisessä vaiheessa suoritamme kahden otoksen keskiarvotestin, jossa havaitsemme paljon taloudellista liikkumavaraa omaavien yritysten osakkeiden keskimääräisesti saavuttavan matalammat ylituotot kuin yritysten, joilla taloudellista liikkumavaraa on vähiten. Tämä havainto on tehty tapahtumaikkunassa [-1; +1] ja se on merkitsevä 5 %:n tasolla. Toisessa vaiheessa käytämme poikkileikkausaineistollista regressiomallia, jossa käytämme selittävinä muuttujina edellä mainittuja kolmea tilinpäätössuhdelukua ja kumulatiivisia ylituottoja (CAR) selitettävänä muuttujana. Havaitsemme, että velkasuhde korreloi tapahtumaikkunassa [-1; +1] positiivisesti ylituottojen kanssa (merkitsevä 5 % tasolla). Lisäksi käteisvarojen suhde korreloi negatiivisesti suhteessa ylituottoihin (merkitsevä 10 % riskitasolla).

Johtopäätöksemme on, että käänteinen suhde taloudellisen liikkumavaran ja ylituottojen välillä saa empiiristä tukea. Tuloksiin perustuen saamme empiiristä tukea hypoteesillemme, että osakemarkkinat odottavat paljon liikkumavaraa omaavien yritysten toteuttamien yrityskauppojen olevan todennäköisemmin seurausta johdon omaneduntavoittelusta sekä ylimielisyydestä kuin vähän liikkumavaraa omaavien yritysten yrityskauppojen, minkä voi nähdä signaloivan päämies-agenttiongelmia sekä johdon epäoptimaalista käyttäytymistä.

Asiasanat	Yrityskauppa, M&A, taloudellinen liikkumavara, tapahtumatutkimus
Muita tietoja	

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FINANCIAL SLACK AND BIDDING FIRMS' TAKEOVER ANNOUNCEMENT STOCK RETURNS

An Event Study

Master´s Thesis
Accounting and Finance

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CONTENTS

List of figures

List of tables

1 INTRODUCTION

1.1 Background and motivation for the study

Making a business grow profitably is a challenge that corporate managers continuously deal with. From a financial point of view, firms are entities that are expected to create profits. In corporate finance context, economic value is created by the profits that a business generates that are in excess of the firm's required rate of return (Stern Stewart & Co, 2013). The required rate of return can be seen as the opportunity cost of capital that is incurred by passing up good investment opportunities elsewhere. On a firm level, the required rate of return is calculated as the weighted average of the costs of its equity and debt (Investopedia, 2013a). The weighted average cost of capital of a firm determines the minimum acceptable return for the capital invested. Any returns that fail to meet this level destroy economic value.

Because firms possess a variety of resources which have their opportunity costs, firms have a natural pressure to deploy these resources in a value-maximizing way. One possible allocation is internal growth which means investing funds into existing business lines. Another possible allocation involves acquiring other firms. In finance theory, the fair value of any financial asset is the present value of all its expected future cash flows (Investopedia, 2013b). What makes corporate acquisitions take place is the deviation in buyers' and sellers' perceptions of these expected cash flows and their respective discount rates. If there's no difference, the buyer's expected payoff would be zero, since the seller would refuse to sell at a price that's below his fair value. However, if transaction costs are taken into account, the total payoff would actually be negative. For this reason, the buyer's perceived fair price has to be higher than the seller's fair price for any transaction to materialize.

Intuitively, one could assume that the selling party is in a better position to value a firm accurately than the buyer because of his better access to relevant information. Should not the buyer have a natural disadvantage then? It is possible that the buyer's higher fair price arises from a flawed business valuation or managerial irrationalism, but it is not likely that all transactions were simply overpaid acquisitions. More plausible explanation is that the acquiring party believes to be able to increase the target firm's future cash flows. Nevertheless, mergers and acquisitions (M&A) business is a large market that probably would not exist if M&A's were systematically bad deals for buyers.

Discussing acquisitions is relevant because, as discussed before, creating value through acquisitions has its challenges. The use of corporate resources is determined by the management whose personal interests may substantially deviate from those of the firm's shareholders. Agency theory, made famous by Jensen and Meckling (1976), is one of the most fundamental concepts of corporate finance. Agency problems arise when managers do not act in the best interests of their firms' shareholders. This is often the case when management only owns a small fraction of the shares of the firm, if at all (DePamphilis, 2011). The firm's managers may get many benefits from the firm but the costs of these benefits are borne by the firm's shareholders. Jensen and Meckling (1976) discussed agency problems in their famous article and came to the conclusion that to fully remove agency problems created by the separation of ownership and control of a firm, the contracts limiting managerial discretion would have to be so detailed that the costs of writing and enforcing such contracts would outweigh the benefits. The conflict of interest between managers and shareholders stems from asymmetric information, the fact that managers in general have a better access to information than outside investors.

It is also relevant to understand the importance of corporate governance mechanisms when discussing acquisitions. Corporate governance in a specific firm can be described as an integrated set of principles under which the firm is managed. Such principles are not only focused on the manager-shareholder agency conflict but also to a larger extent on other stakeholder relations. According to Damodaran (2011), the biggest benefit of good corporate governance is that it reduces the likelihood of long-term mismanagement by allowing for rapid replacement of failing management. The capital markets itself serve as a corporate governance mechanism. The market for corporate control is a term that is used to describe the capital market's role to put pressure on managers. An inefficient management lowers the firm's market valuation and increases the likelihood of a takeover bid. The greater the inefficiency is, the greater is the takeover potential. The fact, that corporate acquisitions are events where substantial amounts of wealth are restructured, higlights the importance of proper management. If there appears to be evidence that the firms that announce M&A transactions underperform relative to the market indices after the acquisition announcement, it implies that the markets believe that the transaction will destroy value. In other words, the net present value of the project is negative.

Academic literature on M&A's is extensive. In summary, the general consensus seems to be that target firms gain in M&A transactions (Bradley, et al., 1988; Roll, 1986; Capron & Pistre, 2002). The evidence regarding acquirers' wealth effects is more disperse. In addition, many scholars have paid attention to how financial slack of the firm relates to firm performance (Cyert & March, 1963; Penrose, 1959; Cheng &

Kesner, 1997; Latham & Braun, 2009). Financial slack can be defined as the financial resources possessed by the firm that are in excess of minimum financial resources that are needed to sustain operations. What has received less attention is the relationship between the firm's financial slack and acquisition announcement abnormal returns. This relationship is assessed in this paper.

What makes the theoretical framework of this study interesting is that the theories of financial slack are concentrated on operational performance effects of slack. Conversely, the three hypotheses of patterns of value creation in acquisitions; synergy, hubris and managerialism hypotheses, do not explicitly state the effects of slack on acquisition performance. The heterogeneous nature of conceptual theories makes the theoretical setting of this paper both interesting and challenging as well. However, the results of previous academic research that are discussed throughout this paper are slightly more inclined toward negative effects of slack. Advocates of the inverse relationship between slack and performance state that slack reduces discipline and gives rise to managerial self-serving behavior (Jensen & Meckling, 1976; Jensen, 1986; Roll, 1986). For this reason, the basis of our analysis is that financial slack is inversely related to announcement returns.

1.2 Research problem and objectives

The research problem of this study can be simplified with Figure 1.

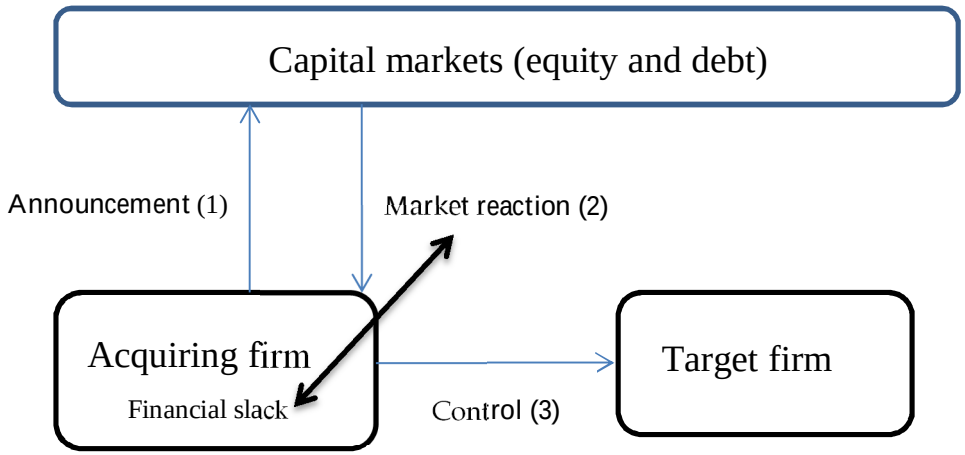

Figure 1: The research context

Figure 1 describes the processes that are related to the context of this study. When a public firm announces its intent to take over another firm (1), the stock market usually responds rapidly to the new information (2). When the takeover is complete the acquiring firm takes control of the acquired firm (3). In Figure 1, the thick arrow represents the research problem. This paper concentrates on evaluating how the possession of financial resources (in this paper: “financial slack” or “slack”) is attributable with the acquiring firms’ shareholder wealth effects following corporate acquisition announcements.

In chapter 4 we present our hypotheses for the empirical study. We will hypothesize that the level of financial slack is inversely related to abnormal returns on announcement. If our empirical study supports this hypothesis, it implies that the capital markets anticipate that the financial flexibility is not used in a value-maximizing way. As the stock price reaction represents a consensus judgment of market participants on the firm’s business decisions, such a finding would be consistent with theories that suggest a managerial self-serving behavior (Jensen & Meckling, 1976). Furthermore, a more unfavorable reaction for slack-rich firms versus slack-poor firms may signal managerial hubris which causes acquirers to overpay in acquisitions (Roll, 1986).

The main interest of this paper is not whether acquirers collectively gain in acquisitions. However, making such a calculation is a necessary step to reach the ultimate research goals of this paper. It is the differential share price reaction between slack-rich and slack-poor firms that is on the focus of our interest. Moreover, we will perform a cross-sectional linear regression model that uses leverage, cash holdings and free cash flow as independent variables to explain the cumulative abnormal returns. These regressions are performed in two event windows in order to ensure that we capture the announcement effect properly.

1.3 Research methods

The choice of appropriate research methods is directed by the research problem itself. In Figure 1 we presented our research problem which involves two types of data: stock market and financial statements data. As the data used is quantitative, statistical methods are used to make inferences from the data. We illustrate the five major research approaches with the following figure:

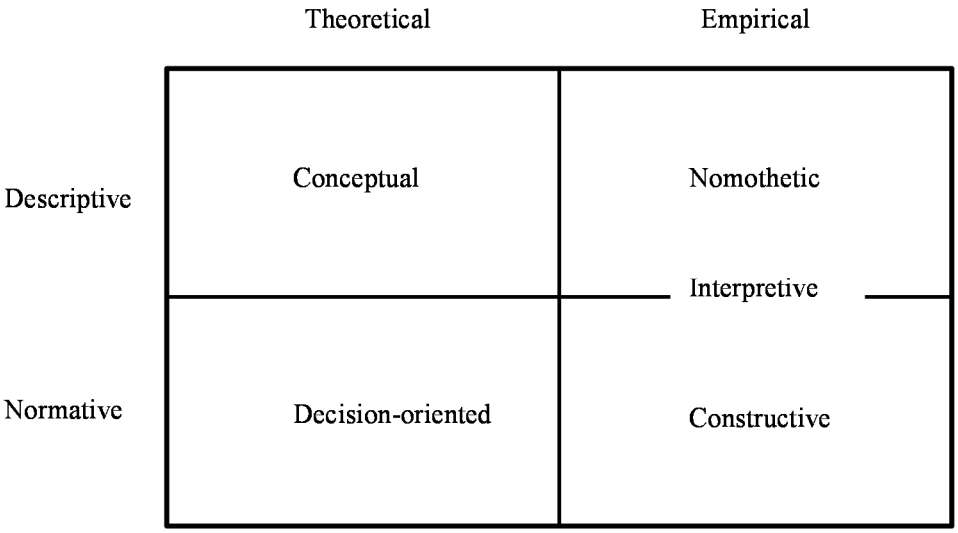

Figure 2: Matrix of major research approaches (Lukka, 1991; Chakhovich, 2013)

Figure 2 shows a matrix that places the major research approaches on two axes: descriptive-normative and theoretical-empirical. Descriptive research aims to observe the existing state of affairs, whereas normative research tries to explicitly suggest actions that should be taken. Theoretical research uses thinking as its main tool, although empirical data may be indirectly involved in the study. Empirical research, on the other hand, is heavily centered around data that has been collected for the study. (Lukka, 1991.)

The fact that our study aims to observe an existing phenomenon by using empirical data, places our study on the upper right-hand corner of the matrix. Despite the fact that the nomothetic and the interpretive approaches are both in the same corner of the matrix these two approaches have fundamental differences. The nomothetic approach seeks to develop law-type generalizations by using large samples of data. The interpretive approach, however, does not directly aim to develop law-type generalizations but tends to involve qualitative data and use of parallel research techniques. Out of these approaches the nomothetic approach can be considered more objective, whereas the interpretive approach is more subjective and tries to analyze individual cases as thoroughly as possible. (Lukka, 1991.)

Because the purpose of this study is to generalize using empirical data, we think that the nomothetic approach is superior to other approaches in this context. The reasoning method chosen is the hypothetico-deductive method. In this method hypotheses are formed based on deduction of some theory. Neilimo and Näsi (1980, pp. 17-18) describe hypothetico-deductive studies as being two-fold. First, the theoretical part aims

to deductively create testable hypotheses. Second, the empirical part tests the plausibility of these hypotheses. If the empirical tests support the hypothesis, the hypothesis is said to have received empirical support. However, if the empirical evidence does not support the hypothesis, the hypothesis is said to be falsified. Hypothetico-deductive reasoning is suitable for this type of a study since there exists sufficient earlier theory to form the hypotheses. Moreover, quantifying these hypotheses can be done with ease.

1.4 Structure of the study

In the second chapter of this paper we present the key concepts related to M&A's, the three hypotheses that explain M&A transactions taking place and also potential sources of wealth creation or redistribution of wealth. The theories are complemented with results of some relevant empirical studies. In the third chapter we shift our focus from M&A to the financial resources of the firm. We present some conceptual theories that discuss the relation of financial slack and performance. Moreover, we present some possible motives that firms have to retain a certain level of financial slack. In chapter 4 we present our hypotheses. Chapter 5 describes the retrieval process of data, characteristics of the sample and methods used in our empirical study. In Chapter 6 we present and discuss our results. Finally, chapter 7 concludes.

2 MERGERS AND ACQUISITIONS

In this chapter we present the key concepts and theories related to M&A's, as well as the possible sources of value creation and reallocation of wealth.

2.1 Key concepts

An acquisition is a corporate event in which a buying firm buys some or all of target firm's shares. After an acquisition the target firm continues to operate but is subject to the influence of the new owner. A merger is a transaction in which at least one firm ceases to exist and the assets of this firm are transferred to a going-concern firm. In a merger, only one legal entity remains. In addition to mergers and acquisitions, there are two more special cases of corporate restructuring. A consolidation occurs when two or more firms combine to form a completely new firm. Merger of equals is a merger where it is not clear which firm is the bidding firm and which is the target firm. (Investopedia, 2013d.)

Takeover is a joint term used both for mergers and acquisitions to describe a process where the bidding firm offers to buy a controlling stake in the target firm. Takeover can be either friendly or hostile. A friendly takeover bid is approved by the target firm's management before it is extended to the target firm's shareholders. In a hostile takeover bid the target firm's management has not given its approval for the bid. Based on this distinction we can classify acquisitions as friendly acquisitions that are carried out in cooperation with the target firm's management. In a friendly acquisition the bidding firm approaches target firm's board of directors. If target management finds the bid sufficient it may recommend their firm's shareholders to accept the bid. A hostile acquisition, however, does not involve target firm's management. The bidding firm approaches the target firm's shareholders directly. (Investopedia, 2013d.) In such a case the management of the target firm may take defensive action.

There are many different kinds of classifications for acquisitions and one classification is: strategic acquisitions, financial acquisitions and conglomerate acquisitions (Sudarsanam, 2010). Strategic acquisitions are closely related to the acquirer's current operations. A strategic acquisition involves operating synergies which predicts that the combined firm is going to be more profitable than two separate firms. Strategic acquisitions can take different forms. In a horizontal acquisition a firm takes over its competitor in related industry. The main sources of value creation in a horizontal acquisition are increased pricing power, cost reductions and creation of new capabilities or business

models that enable involved parties to compete more effectively (Sudarsanam, 2010). A vertical acquisition is an acquisition that occurs between companies that operate in the same supply chain but at the different stages of production cycle. Value creation in a vertical acquisition is likely to stem from better coordination, reduced bargaining and negotiation costs and reduced information asymmetry (Sudarsanam, 2010).

Financial acquisitions, however, are usually not related to the acquiring firm's current operations. In a financial acquisition the bidder believes that the target company is undervalued relative to its intrinsic value. A leveraged buyout (LBO) is a common form of financial acquisition. In an LBO a group of investors buys a public company and turns it into a private company. The acquisition is financed largely by borrowing. The investor group may also involve the firm's management. In such a case the acquisition is called a management buyout (MBO).

The third type of acquisition is a conglomerate acquisition, also known as diversifying acquisition. Conglomerate acquisition is a transaction in which a firm acquires another firm that operates in an industry that is unrelated to the acquiring firm's business lines. Rather than being motivated by operating synergies, conglomerate acquisitions are more likely to create financial synergies, which create value by lowering the involved firms' cost of capital (Hillier & Grinblatt, 2008, p. 716). Conglomerates were particularly popular in the 1960's when a number of large conglomerates were created. Combination of two firms into a conglomerate may also destroy value, if capital is allocated to loss-making businesses that, in the absence of internal capital markets, would be shut down. (Hillier & Grinblatt, 2008, p. 726)

2.2 Hypotheses for mergers and acquisitions

As the research problem of this paper is related to the patterns of value creation in acquisitions, we present the three major hypotheses that are used to explain mergers and acquisitions taking place. A common feature of all these three hypotheses is that target firms' shareholders are expected to gain in acquisitions. The rationale for this is simply the fact that the bid price is bounded from below by the current market valuation of the target firm.

2.2.1 Synergy hypothesis

Under the assumptions of Miller & Modigliani (1958), the value of a firm is independent of its capital structure. This implies that value can neither be created nor destroyed by repackaging securities. For acquisitions to create value, the transaction must increase the expected future cash flows through synergies. The synergy hypothesis is a theory suggesting that corporate acquisitions take place when the value of a combined firm exceeds the value of two standalone firms (Seth, Song, Pettit, 2000). It can be described with the following inequality.

$$V_{AB} > V_A + V_B$$

In the inequality above, V_{AB} is the market value of the combined firm, V_A and V_B are the market values of two standalone firms a and b, respectively. This inequality describes the benefits of a merger but the same idea goes for an acquisition, too. The synergistic gain is the difference between the left-hand side and the right-hand side of the inequality.

Capron and Pistre (2002) discuss that if the expected synergistic gains from a merger stem from resource transfer from the target firm to the acquiring firm, the acquiring firm is not expected to gain abnormal returns. This is caused by the imperfect competition on the market for corporate control. As multiple bidders compete to take over the target firm, the transaction price goes up and the additional value is ultimately captured by the target firm. Conversely, if the synergies are attributable to the resource transfer from the acquiring firm to the target firm, the acquiring firm is expected to capture part of the synergistic gains. As different firms possess unique sets of different resources, the market for corporate control becomes less competitive. This means that the target firm is of different value to different bidders. Empirically, Capron and Pistre find that abnormal returns seem greater when managerial and innovation resources of the acquiring firm are transferred to the target firm. However, marketing resources do not show similar tendency. The main conclusion of Capron and Pistre is that it is the source of synergies that determines who captures the value in M&A's. (Capron & Pistre, 2002.)

Bradley, Desai and Kim (1988) state that tender offers are value-increasing transactions for target shareholders as the winning offer is bounded from below by the current market value of the firm. They find that both acquiring and target firms' shareholders gain in M&A transactions and that major part of this gain is captured by the target firms' shareholders. In average, the target firms experienced an abnormal

return of 28.1% around the event, whereas the bidders only showed an average abnormal return of 0.8%. Finally, they discovered that target firms captured as much as 91% of the dollar gains in transactions.

2.2.2 Hubris hypothesis

In behavioral corporate finance, several psychological factors affecting managerial decisions have been identified. These include hubris, overconfidence and excessive optimism. Hubris, a term referring to corporate managers' exaggerated, arrogant pride, represents a possible explanation for corporate takeover activity. Managerial hubris may be associated with overconfidence as managers believe that they have the necessary skills to reduce the risks associated with an acquisition. Overoptimistic individuals tend to underestimate the likelihood of an unfavorable outcome in situations that involve uncertainty (Sudarsanam, 2010, pp. 355-356).

The hubris hypothesis suggests that corporate managers are likely to overpay in corporate takeovers. Although some firms are active on the M&A market, most individual managers have only a few opportunities to make a takeover bid during their careers. The manager may convince himself that the market price of the target firm's share does not fully reflect the firm's economic value. (Roll, 1986.) The bidding firms whose managers are infected by managerial hubris end up paying too much for the target firms. As a result, the values of the target firms should increase and the values of bidding firms decrease. This phenomenon is often called the winner's curse (DePamphilis, 2011, p. 9). The total value change is expected to be slightly negative due to the takeover costs associated with the bid.

The hubris hypothesis assumes capital markets to be strong-form efficient. On such a market, all security prices incorporate all public and private information. Even though most market participants are not rational, the irrationalities cancel out in the aggregate level. Thus, the market price of a given security represents a fair valuation. In the absence of synergies or other potential takeover gains, some bidding firms believe that such gains exist. The bidder's valuation is considered a random variable whose mean is equal to the market price of the target firm. Any deviation from the market price represents an error. Since the seller will not sell unless the bid price exceeds the market price, only positive errors are observed. In his paper, Roll does not claim that corporate managers intentionally act against shareholder interests. Rather, managers may have intentions that are perfectly consistent with the firm's shareholders' interests but actions may eventually prove out to be suboptimal. (Roll, 1986.)

Hayward and Hambrick (1997) use three proxies for CEO hubris to explain the large premia paid in corporate acquisitions: recent organizational success, media praise for the CEO and CEO's self-importance. They found that takeover premia were positively associated with the measures for hubris and that the bigger the takeover premium, the bigger the shareholder wealth loss.

Billett and Qian (2008) evaluate how the overconfidence of CEOs affects the success of M&A's. They define self-attribution bias as behavior that overcredits one's role in positive outcomes and overcredits external factors or bad luck in bad outcomes. They find that first acquisitions that generate non-negative abrnomal returns tend to be followed by value-destroying subsequent acquisitions. This implies self-attribution bias that leads to overconfidence. Billett and Qian also divide the sample into two subsamples, the first of which includes the first acquisition of a given CEO in a five-year period and the second that includes acquisitions number two or greater. The high-order subsample showed a 1.39% lower cumulative average abnormal returns (CAAR), significant at 5% level. (Billett & Qian, 2008)

2.2.3 Managerialism hypothesis

The third hypothesis that can be used to explain corporate acquisitions is the managerialism hypothesis. The managerialism hypothesis claims that, rather than being a solution for agency problems, acquisitions are manifestations of such problems (Weston, et al., 1998, pp. 81-82). As opposed to the hubris hypothesis, the managerialism hypothesis implies that managers maximize their own utility at the expense of their firm's shareholders by knowingly overpaying in corporate acquisitions (Seth, et al., 2000). In contrast, the hubris hypothesis considers overpaying in an acquisition an inadvertent error. Both the hubris hypothesis and the managerialism hypothesis regard acquisitions as transactions that mostly benefit the target firms' shareholders. Two patterns of managers' self-maximizing behavior associated with acquisitions can be identified: empire building and excessive diversification.

Managerial empire building describes the managerial preference of increasing the size and scope of business under their control, despite the fact that the expansion may weaken the firm's operational performance and, consequently, decrease the value of the firm. Managers are able to behave in this way if monitoring mechanisms, such as financial disclosures, are of poor quality (Hope & Thomas, 2008). In such a case investors are less capable of linking management actions to operating performance. Hope and Thomas (2008) find that the nondisclosure of geographic earnings is associated with

higher growth of sales and lower profit margins. In addition, they find that non-disclosing firms are valued lower than disclosing firms. Hope and Thomas's results imply that the lack of transparency in financial reporting may give rise to managerialism. Jensen (1986) argues that empire building in the form of non-profitable investments can be reduced by increasing leverage and paying out the cash to the firm's shareholders. The lack of managers' accountability to the investors combined with the good availability of funds can exacerbate the empire building problem.

Diversification can be regarded as another type of managers' self-serving behavior. Seth et al. (2000) suggest that managers may have an incentive to engage in acquisitions to diversify the risk that relates to their human capital. The diversification motive for acquisitions can be criticized, since investors can diversify on their own and most probably at lower cost. Despite these criticisms, managers may undertake foreign acquisitions to reduce the riskiness of the firm's earnings, given that there is a low correlation between earnings across different countries (Seth, et al., 2000).

2.3 Sources of wealth gains

2.3.1 Operating synergies or increased efficiency

Operating synergies are means of improving operational performance through economies of scale or scope. Increased value can be achieved when two separate firms are operating at levels of output that do not fully allow the firms to utilize the potential of economies of scale. Economies of scale can be realized when the fixed costs of machinery, personnel, software, maintenance, marketing and other functions can be spread over a larger quantity of production (DePamphilis, 2011, pp. 4-5). As a result, the potential operating synergies are larger for firms that proportionally have higher fixed costs.

Economies of scope are operating synergies that can be realized by extending existing capabilities that have been developed for existing products, to new products (Weston, et al., 1998, pp. 76-77). For example a consumer goods company can extend its marketing capabilities to the products of the target firm. While economies of scope are a good motive for an acquisition, it is closely related to a diversification of the business. Buying a firm whose main business is different from that of the acquiring firm is called a diversification acquisition or a conglomerate acquisition.

In an acquisition, the total value increase may stem from improved efficiency. If a relatively efficient bidder acquires a relatively inefficient target, value can be increased

by improving the efficiency of the target company (Weston, et al., 1998, p. 76). After an acquisition or a merger, the involved firms may achieve a better utilization of their fixed assets. Another way of achieving improved efficiency through corporate acquisitions is through better use of managerial skills. The view that acquisitions increase value by allowing for more efficient use of assets is consistent with Penrose's (1959) resource-based view that is presented in the third chapter.

2.3.2 Financial synergies

Financial synergies can be derived from mergers and acquisitions if the transaction decreases the cost of capital of the firms involved. In theory, the cost of capital can be reduced if the cash flows of the firms are not perfectly correlated. In the capital asset pricing model, the differential costs of equity between different companies are caused by different risk levels. Combining two or more cash flows that are not perfectly correlated reduces the riskiness of the resulting entities. This argument can be questioned since the investors are able to diversify on their own and thus they are likely to be unwilling to pay any premium for the reduced risk (Hillier & Grinblatt, 2008, p. 723). However, the reduced riskiness may reduce the firms' expected bankruptcy costs and consequently increase the involved firms' debt capacity and allow the firms to better utilize the tax shield on interest expense (Weston, et al., 1998, p. 78).

Another source of financial synergy is based on the relative inexpensiveness of internal financing as opposed to external financing. Two or more firms may have differential cash flows and differential investment opportunities. The involved firms can form an internal capital market that allows the firm with excess cash flow to lend money to the firm that has good investment opportunities but that has insufficient cash flow to fund the project internally (Hillier & Grinblatt, 2008, p. 724). Due to the fact that funding projects externally can be costly, it is also possible to realize economies of scale in flotation and transaction costs of securities (Weston, et al., 1998, p. 78).

2.3.3 Strategic realignment

One possible explanation for M&A's taking place is the fact that it can be used as a means of implementing a strategic realignment. M&A's can be seen as a response to changes in external business environment. Such rapid changes can take place in the form of regulatory or technological change. (DePamphilis, 2011, pp. 7-8.). When the

market changes, new capabilities and are needed. Developing capabilities internally is possible, but it may be quicker to acquire these capabilities through an M&A transaction (Weston, et al., 1998, p. 78). The fact that M&A seem to occur in waves supports this proposition.

There is evidence that the takeover activity within a certain industry is driven by a shock affecting the industry (Mitchell & Mulherin, 1996). Mitchell and Mulherin (1996) also argue that there is variance between M&A activity between different industries. Mulherin and Boone (2000) find that during the 1990's half of the firms included in their sample of 1305 firms engaged in an M&A activity. They conclude that restructurings are significantly clustered within industries which supports the notion that environmental shift plays an important role in restructuring activity.

2.3.4 Information

The information hypothesis implies that the shares of the target firm are revalued due to the information revealed on the announcement of a takeover bid (Bradley, et al., 1983). Bradley et al. (1983) distinguish two forms of this information hypothesis. The first form argues that takeover bid reveals information that the target firm's shares are undervalued and as a result, market revalues the shares. This is called "sitting-on-a-goldmine" explanation for the information hypothesis (Weston, et al., 1998). The other explanation is that the bid makes the target firm's management implement enhanced strategies for better value creation. This theory, which suggests that the bid disciplines target management to act in the best interests of the firm's shareholders is often called "kick-in-the-pants" explanation (Weston, et al., 1998).

Another view is that the revaluation following the announcement of the takeover bid stems from the anticipation of the subsequent, higher bid (Bradley, et al., 1983). Based on the empirical evidence that the upward revaluation seems to disappear over time back to the pre-offer level, the latter explanation seems more plausible (Bradley, et al., 1983). As the efficient market hypothesis, made famous by Eugene Fama, states, markets that are strong-form information efficient reflect all available information. If the revaluation should take place because of the new information revealed, we would expect the effect to be observable almost instantly following the announcement (Bodie, et al., 2009, pp. 348-349).

2.3.5 Signaling

The value of the firm can be affected by the actions that the company and its insiders take. These actions may convey information to the market. Signaling in the context of corporate takeovers can take two different kinds of forms. First, using stock as the means of payment for the acquisition can signal a possible overvaluation of the firm. Second, decisions taken by the insiders of a firm whether to sell or purchase shares convey information to the markets.

The choice of financing of the M&A's can signal information regarding future prospects of the firm. Rational investors know that whenever stock is used to pay for the transaction, possible overvaluation of the firm's stock is signaled to markets. Conversely, if the transaction is paid in cash, it signals that the stock is undervalued. (Myers & Majluf, 1984)

Signaling may also be a result of corporate insiders' decisions whether to buy or sell shares of the company. For example, in a tender offer, the corporate insiders' decision not to tender shares signals favorable information about the firm's future prospects, since the insiders believe that the firm is more valuable than the bid price. Another way for managers to signal favorable information, which is unrelated to acquisitions, is through share repurchase programs.

2.3.6 Mitigation of agency problems

While it is possible that M&A's are manifestations of agency problems, as suggested by Weston et al. (1998, pp. 81-82), the situation may not necessarily be that simple. A case can be made that M&A's, in general, can serve as a means of mitigating agency problems. Agency problems create costs since the existence of asymmetric information makes it necessary for the firm's shareholders to establish monitoring mechanisms, the costs of which are borne by the shareholders themselves (Jensen & Meckling, 1976).

The best defense against hostile takeovers for a public firm is to pursue value-maximizing strategies at all times. Management whose own interests deviate from shareholders' interests is unlikely to perform in a value-maximizing way. Thus, the market valuation of the firm is lowered. Manne (1965) states that the risk of getting taken over is bigger when the share price of the firm is significantly lower, relative to what it could be if the firm had a more efficient management. Thus, market for corporate control can be seen as an external corporate governance mechanism that incentivizes corporate managers to refrain from self-serving actions.

2.4 Gains from redistribution of wealth

2.4.1 Increased market power

Acquisitions may benefit the buying firm through redistribution. Firm's market power can be improved by buying out a competitor. This reduces competition on the market and allows for pricing that would be unsustainable with the pre-acquisition level of competition. Reduced competition redistributes wealth from customers to the firm's shareholders. For this reason, antitrust laws are in place to oppose monopolization through acquisitions.

Economists do not completely agree whether the concentration of an industry causes monopoly or if the concentration is a result of intense competition. It can also be argued that competition happens in concentrated industries because, even with fewer firms, decisions regarding production take place on many separate levels (Weston, et al., 1998, p. 83).

In the context of the European Union, antitrust policies to restrict detrimental concentration of any industry are based on two main principles. These principles are written in the Treaty on the Functioning of the European Union. First, the Article 101 prohibits arrangements between two or more parties that restrict competition. Article 101 covers both horizontal and vertical arrangements. Second, the Article 102 prohibits firms with dominant position on the market abusing that position. Such abuses may include the charging of unfair prices or restrictions of production. (European Commission, 2012.)

2.4.2 Wealth transfer from other stakeholders

The social desirability of M&A can be questioned, if the value creation takes place at the expense of other stakeholders. Tax benefits arising from acquisitions are possible when the target company has accumulated tax-loss carry forward as a result of past and, possibly, continuing loss-making. Provided that the acquiring firm is making profit, the losses of the acquired firm can be used to ease the acquiring firm's tax burden. Tax gains from acquisitions represent a type of wealth transfer.

Asquith and Kim (1982) discuss that previous research has dominantly concentrated on shareholders' abnormal returns following takeovers. It is also possible for managers to expropriate wealth from bondholders to the firm's shareholders. Based on Jensen and Meckling's (1976) discussion, undertaking high risk projects can yield substantial bene-

fits for the firm's shareholders as they capture most of the gains in the case of success, whereas bondholders only receive the coupon and principal payments. This is particularly an issue for highly levered firms. If the project should fail, bondholders end up paying most of the losses, in spite of the fact that bondholders are senior claimants of the firm. Holding equity in a highly levered firm can be considered as holding a call option. Because increased variance increases the value of the option, the shareholders have a strong incentive in increased risk-taking. Sensible bondholders know this and are likely to add covenants into the bond indenture. Such covenants may include limitations on future capital expenditures, dividends and further borrowings.

Considering that the fair value of a bond is the present value of its future cash flows, the increased riskiness increases the discount rate and lowers the fair value of the bond. This represents a wealth transfer from bondholders to the firm's shareholders. Opposing view is that mergers and acquisitions actually reduce the overall riskiness by combining two separate cash flows that are imperfectly correlated (Asquith & Kim, 1982).

Asquith and Kim (1982) explored conglomerate mergers that took place in the 1960's and 1970's and found that the security holders of the merging firms gained as a whole. However, they found no supporting evidence for the hypothesis that bondholders either incur losses or gains in mergers. They conclude that bondholders can effectively prevent wealth transfers to shareholders by using restrictive covenants.

Warga and Welch (1993) find that bondholders incurred significant wealth losses in leveraged buyouts in 1985-1989. During that period, the typical risk-adjusted wealth loss amounted about 6%. Despite the fact that the loss was significant, it only represented 7% of the shareholders' wealth gain. They also found in a cross-sectional analysis that the LBO's with highest shareholder gains were only weakly associated with the LBO's with largest bondholder losses. Warga and Welch (1993), though, speculate that the statistical insignificance may relate to the sample size and the quality of bond return data.

Billett, Dolly King and Mauer (2004) also suggest that bondholders may also benefit from an acquisition through coinsurance. Coinsurance refers to the acquiring firm's reduced default risk when the acquiring and target firms' cash flows are imperfectly correlated. However, they find empirically, consistent with Jensen and Meckling's (1976) expropriation hypothesis, that the acquiring firms' bondholders experience a significant negative wealth effect on acquisition announcement.

2.5 Merger arbitrage

Merger arbitrage is a trading strategy pursued by some hedge funds. It is an event-driven investment strategy which means that it seeks to take advantage of pricing inefficiencies that follow a corporate event. Distinction must be made whether the transaction is paid in cash or in stock. When cash transaction is announced, the price of the target company typically goes up but stays below the transaction price due to the uncertainty if the transaction will be approved. Profit can be made by buying the target firm's shares in case the acquisition goes through. If the transaction is paid in shares of the acquiring company the procedure changes slightly. The trader short sells shares in the acquiring firm and buys shares in the target firm. The target firm's shares are converted into acquiring firm's shares. These converted shares are then used to cover the short interest. (BarclayHedge Ltd, 2012.)

In finance the term "arbitrage" refers to the simultaneous purchase and sale of assets; possibly enabling investors to earn risk-free profits (Investopedia, 2013c). Merger arbitrage, however, is not risk-free (BarclayHedge Ltd, 2012). The main risk is that the transaction does not go through which may cause the target firm's shares to decrease in value and acquiring firm's shares to increase in value. As hedge funds are major traders and their trading behavior can materially affect stock prices, it is necessary to understand that, especially in stock transactions, the possible negative market reaction for bidding firms may, to some extent, be attributable to merger arbitrage taking place.

Mitchell et al. (2004) suggest that the negative market reaction to stock-financed mergers is, to a substantial extent, caused by the negative price pressure caused by merger arbitrage. They find that the median quantity of shares sold short rises 40 percent around fixed exchange ratio merger announcements. Fixed exchange ratio refers to a predetermined exchange ratio of acquirer shares for target shares. This discovery supports the prevalence of merger arbitrage. Mitchell et al. find a negative -1.20% average abnormal reaction to merger announcements. It can be argued that this signals investors' belief that the transaction is going to be value-destroying. Mitchell et al. suggest that nearly half of the experienced negative reaction is attributable to merger arbitrage. Consistent with the notion of merger arbitrage, they also find that the price effect is more positive for cash-financed transactions.

Even though merger arbitrage can affect stock prices around M&A announcements, there is no reason to believe that the effect of merger arbitrage should be different for firms with differential levels of slack. Because the principal focus of interest of this study is the differential market reaction between slack-rich and slack-poor firms, we do not expect merger arbitrage to distort our results.

3 FINANCIAL RESOURCES OF THE FIRM

This chapter focuses on the capital structure and theories related to the financial slack of the firm. Moreover, possible rationales for firms to retain financial slack are discussed.

3.1 Capital structure of the firm

3.1.1 Theory of the optimal capital structure

The concept of financial slack is closely related to the firm's capital structure. Capital structure refers to the mix of equity and debt that a firm uses to fund its business. The theory of the optimal capital structure of the firm is to a great extent based on Miller and Modigliani's (1958) research. In their famous article, Miller and Modigliani introduced two propositions concerning the relation of the capital structure and the value of the firm. Their first proposition states that, in the absence of taxes, the value of an unlevered firm equals the value of a levered firm. The second proposition concerns the cost of equity which increases linearly as the debt-to-equity ratio increases. Miller and Modigliani's model (1958) can be criticized for its strict and rather unrealistic assumptions. First, the capital market is assumed perfect. Second, there are no taxes. Third, there are no bankruptcy and transaction costs. Fourth, the borrowing rate for individual investors is the same as for corporations. Finally, the markets are characterized by symmetric information between investors and managers.

The assumption of no corporate taxes was later dropped by Miller and Modigliani (1963). The fact that interests paid on debt are tax-deductible whereas dividends are not, lowers the after-tax cost of debt and creates a tax shield. Despite the benefits of debt, Miller and Modigliani do not state that firms should at all times maximize the use of debt because firms have a need to preserve flexibility by retaining a reserve of unused borrowing power. Miller (1977) developed the model further by incorporating the effect of personal taxes on stock and bond income. He stated that, given personal and corporate taxes, firm value is independent of leverage.

As the name suggests the theory of optimal capital structure asserts that there is an optimal capital structure that balances the marginal benefits and marginal costs of debt. Despite the fact that tax shield increases with debt, Miller and Modigliani recognize the possibility that retaining unused borrowing power may allow for greater flexibility in the future.

3.1.2 Pecking order theory of financing

The pecking order theory of financing, made famous by Myers and Majluf (1984), states that firms prefer internal financing to fund their capital investments. If internal funds are insufficient to meet the investment needs, the safest security, debt is issued. Equity financing is regarded as the last option. The pecking order theory states that the management has a natural informational advantage over the firm's shareholders. Financial decisions taken by the managers convey information to the financial markets. Rational investors know that if the firm does not have to issue equity to raise capital for its capital investments an attempt to do so, sends a negative signal over the firm's future prospects.

The target dividend payout ratio is set to a level that reflects the firm's investment opportunities (Myers & Majluf, 1984). Nevertheless, the dividend policies change little over time and the adjustment to the shifts in investment opportunities takes place slowly. Due to the stickiness of dividend policies, firms may find internal cash flows insufficient to meet their investment opportunities. (Myers, 1984.) A problem caused by insufficient financial slack is that a firm may have to pass up profitable investment opportunities because the relative informational disadvantage of outside investors causes them to discount the new issue. Consequently, the benefits of capital investments would be captured by new outside investors. Hence, rational managers would build enough financial slack to avoid such situations in the future.

Myers (1984) concludes that not only can a firm issue stock to fund a real investment but also in order to buy financial slack. The problem of asymmetric information is still there. Myers sees that a firm should not issue too much debt to avoid the costs of financial distress and also to retain borrowing power for the future. Based on the preceeding discussion, the pecking-order theory sees financial slack as a positive asset that helps reduce the problems caused by the asymmetric information.

3.2 Theories of financial slack

In academic journals, financial slack has been approached from two directions as far its desirability is concerned. The resource-based view and the behavioral theory of the firm are examples organizational theories. The agency theory, on the other hand, questions the alignment of interest between various participants of the firm. In this subchapter we briefly present these theories.

3.2.1 Resource-based view

Edith Penrose (1959) is known for her resource-based view of the firm. Penrose regards the firm as being something more than just an administrative unit. It is a collection of productive resources whose use is determined by the managers of the firm. The resources itself are not valuable. Rather, it is the services that they provide. Typically a firm possesses a variety of resources at its disposal. Such resources can be physical, intangible and human. These resources are used to produce goods or services that are later sold at profit to the firm's customers.

Penrose sees that the profit motive is insufficient to fully explain managerial behavior. She argues that salaried managers do not gain by paying out large dividends to the firm's shareholders. From a manager's point of view it is optimal to pay out no more than what is necessary to satisfy current shareholders and to ease firm's future access to capital. Instead of paying out large dividends, managers prefer reinvesting the profits in the firm. Penrose uses the expression "productive opportunity" to describe all the productive possibilities that an entrepreneur sees and can take advantage of. She states that managerial ambition is a relevant factor that accelerates the growth of the firms. However, the maximum growth rate of a firm is limited by the amount of managerial services in the firm.

A firm may choose to accumulate financial resources to better absorb environmental disruptions. Financial slack in Penrose's resource-based view is not necessarily more attributable to risk management, especially if risk can effectively be managed in other ways, but to the quality of enterprise. Despite this, Penrose says that retaining a certain level of slack resources is necessary to maintain the firm's operations. However, the required level of slack does not increase at the same rate as the firm size. What makes expansion attractive is the fact that resources can be used more efficiently. According to this view, economies of size arise because the proportion of slack resources to total resources can be reduced and thus firms have a natural incentive to expand.

Expanding through the means of M&A has its limits. Penrose sees managerial services as the limiting factor for the expansion through acquisitions. Therefore, a firm can only acquire a limited number of firms during a certain period. Most likely acquisition targets are those that complement and supplement the firm's current activities. When entering a new field, a firm must consider whether it has sufficient resources to stay competitive in the market. In spite of the challenges attributed to external expansion, Penrose states that the possibility of acquiring firms substantially increases the maximum rate of expansion.

Finally, she concludes that those managers that possess substantial financial resources have more choices than the managers of the firms without such slack. Given this greater choice, managers are less likely in large numbers to be attracted in investing low return activities. She admits, though, that much of the M&A activity is driven by the entrepreneurial vision that encourages expansion.

3.2.2 Behavioral theory of the firm

The notion of rationality of traditional economic theory is questioned by Cyert and March (1963). Rationality within firms involves two assumptions. First, firms always look ways to maximize profits. Second, the decisions taken involve no uncertainty. Cyert and March believe that the validity of these assumptions in a real world firm is not realistic. Furthermore, they also state that the way a large business firm operates involves conflicts that may limit the maximization process. Not only does the firm aim to maximize its profits, but also production, inventory, sales and market share goals are important for a large-scale business firm.

Cyert and March consider business firm a coalition of individuals and groups with conflicting goals. Such coalitions may include managers, workers, suppliers, shareholders and other groups with a considerable interest in the firm's operations. To retain this coalition, payments to its members are made. Because of imperfections in factor markets the resources available to the firm are, in general, larger than the payments necessary to maintain the coalition. This disparity is called organizational slack. This organizational slack plays both an adaptive and stabilizing role as it absorbs some of the variability in the business environment. As the environment changes the decisions are taken based on standard operating procedures which are based on long-term learning process within the firm.

Behavioral theory of the firm asserts that the rationality of economic actors is bounded by the limited quantity and quality of information. For this reason firms do not necessarily search for the best solution but a "sufficient" solution. Moreover, the firm's practices and rules are not perfectly matched with the environmental demands. Finally, Cyert and March state that there is a persistent conflict of interest in a firm. It is caused by the fact that it is ultimately people that have goals, not collectivities of people. Thus, the conflict of interest can never be fully resolved.

3.2.3 Agency theory

Jensen & Meckling (1976) regard firm as a "black box operated so as to meet the relevant marginal conditions with respect to inputs and outputs, thereby maximizing profits, or more accurately, present value". Maximization does not, however, occur on a firm level, but individual level. Jensen and Meckling state that when the ownership and control of the firm are separated and when all actors maximize their own utility, it is likely that the managers of the firm will not always act in the best interests of the firm's shareholders. However, if the equity markets work rationally, the prospective shareholders will know that a manager will increase his consumption of perquisites as his fraction of ownership decreases. Thus, the outside investors are willing to pay less for the firm's shares than they would do in the absence of the agent-principal relationship.

To alleviate the agency problems, outside investors (equity or debt holders) can use resources to enhance the manager's opportunity of consuming pecuniary and non-pecuniary benefits. Such expenditures are called monitoring costs. Rational outside investors, though, take the expected monitoring expenditures into account before investing. In addition to monitoring costs, bonding costs are commitments from the manager to undertake or refrain from making certain decisions. Such commitments limit the manager's ability to harm outside investors but they also limit the manager's ability of undertaking some profitable investment opportunities. The third component of the total agency costs is the residual loss which represents the part of the agency costs that is not eliminated with monitoring and bonding costs. (Jensen & Meckling, 1976.)

Agency costs also depend on the capital structure of the firm. In general, the agency costs of debt rise as the debt-to-equity ratio rises. Conversely, the agency costs of equity decrease. The fact that the interest payments on debt are tax-deductible whereas dividend payments are not creates an incentive to use debt. Excessive use of debt, however, may alter managers' behavior towards increased risk-taking. The expropriation hypothesis (see: Jensen & Meckling, 1976), presented in chapter 2, claims that it is possible for managers to transfer wealth from bondholders to shareholders by undertaking projects with high potential payoffs but low chance of success. In the unlikely event of success, the potential benefits are captured by the equity holders but the costs of failure are born by the firm's bondholders. Finally, Jensen and Meckling conclude that developing a reputation of committing to such behavior is likely to influence the terms at which future external capital can be obtained.

Jensen (1986) suggests that the payout of retained earnings to shareholders is a major source of conflict of interest. Payouts to shareholders reduce the financial resources at management's disposal and thus reduce the possibilities of funding projects internally.

The necessity of using external funding will place the firm under the monitoring of the capital markets when it plans to raise new capital. Jensen's free cash flow hypothesis suggests that the managers of companies with low leverage and large free cash flow are more likely to undertake low-benefit or even value-destroying investments. (Jensen, 1986.) The free cash flow hypothesis suggests that managing large investments can, from the manager's point of view, be seen as a perquisite. In other words, an investment may serve other purposes than shareholders' wealth maximization.

3.3 Discussion on financial slack

3.3.1 Defining financial slack

Edith Penrose (1959) sees firm as a collection of productive resources. These resources are used to produce goods and services that are sold in the market at profit. Mishina, Pollock and Porac (2004) define slack resources as the difference between the resources possessed by the firm and the resources needed to run its current business. They argue that firms with more slack resources have more growth potential than do firms with less slack. Wild, Subramanyam and Halsey (2007) use the term financial flexibility to describe the firm's ability to react to new opportunities as they arise. Although these two terms may seem similar, financial flexibility implies that excess financial resources are used in an efficient way. Financial resources are liquid assets, such as cash, marketable securities and working capital accounts (Wild, et al., 2007, p. 539).

The notion of financial slack can be extended from liquidity to cover other financial aspects such as cash flow and debt capacity. The firm's ability to generate cash enables it to meet its obligations. Ultimately, all corporate expenses are paid in cash, not in accounting earnings. Cash starts and ends a company's operating cycle. Operating cycle is the time period during which the cash committed to purchase materials is collected from the customer (Wild, et al., 2007, pp. 196-197). During the operating cycle cash is converted into current assets, such as inventory and non-finished goods and finally back to cash. The cash conversion cycle, closely associated with the operating cycle, measures the time period from the payout of cash to the collection of cash from the customer. In addition to the aforementioned operating cash flow, also cash flows from investing and financing activities are presented in the statement of cash flows.

Considering that holding cash yields little or no return, the potential benefits of financial slack are related to the flexibility it allows. If financial slack allows a firm to

respond more effectively to environmental disruptions, it clearly, if managed well, has value. It has also been argued that financial slack reduces managers' sensitivity to environmental changes (Latham & Braun, 2009). Financial decisions taken by the firm also convey information to the financial markets. Financial slack may serve shareholders' interests if it can avoid issuing shares by using internal funds (Myers & Majluf, 1984). Another point of view hypothesizes that shareholders should limit the financial resources at managers' disposal to minimize the risk of managers making self-interested decisions (Jensen, 1986). These differential views on financial slack and empirical results for these theories are discussed in this section.

3.3.2 Costs and availability of external financing

Internal financing is for most companies the primary source of corporate finance (Tirole, 2006). There are several reasons why firms prefer not to pay out all the earnings to shareholders. Funding projects internally by using retained earnings allows for more flexible use of funds than going to capital markets in order to raise the funds required. Issuing debt or new shares involves flotation costs, the issuance process takes time and it places the issuing firm under the scrutiny of capital markets. Retained earnings can also prove out to be valuable when there is a good investment opportunity but securing a credit is impossible due to economic conditions.

The holding of corporate cash reserves can be considered serving the best interests of shareholders if cash reduces the costs of financing (Mikkelson & Partch, 2003). Issuing new equity or debt involves flotation costs, such as underwriting and legal costs. Using internal funds for financing new investments avoids these costs. Despite the fact that holding cash has its advantages, holding excess cash may decrease the value of the firm if investors believe that there is a sufficient possibility that managers may spend the cash in value-decreasing purposes (Powell & Baker, 2010). On the other hand, if sufficient liquid funds allow a firm to better utilize new investment opportunities as they arise, holding cash can be seen as positive.

Altinkihc and Hansen (2000) find evidence that underwriting costs of external equity follow a U-shaped pattern. Initially, there are economies of scale as the fixed cost of underwriting is spread over a larger issue. However, when the issue gets sufficiently large diseconomies of scale are observed. Altinkihc and Hansen (2000) speculate that this may be related to adverse selection costs (see: Jensen & Meckling, 1976) and over-investment costs (see: Jensen, 1986). It also seems that the relative transaction costs of external financing are smaller for larger firms (Hennessy & Whited, 2007). Hennessy

and Whited (2007) find that for large firms the marginal flotation costs of issuing equity start at 5% of the capital.

3.3.3 Adaptation to environmental disruptions

The retaining of slack resources may also be correlated with firm's forecast investment opportunities (Powell & Baker, 2010). The possibility of having to forego future investment opportunities due to insufficient cash flow or costly external financing may justify increased cash holdings. According to this theory, cash holdings are sort of a precaution that allows firms to act in a value-maximizing way at all times. Opler et al. (1999) suggest that management tends to accumulate cash if it has an opportunity to do so. They find that the firm's flow of funds deficit has more impact on the firm's cash holdings for firms that have cash in excess of their respective target levels.

The notion that the possession of slack resources can lead to competitive advantage (Penrose, 1959) suggests that when firms encounter environmental shifts the firms with more such slack are in a more favourable position to address such a change. Conversely, the slack may also desensitize management to external factors and, thus, adversely affect the adaptation process. Cheng and Kesner (1997) find that the extent of environmental response in U.S. airline industry is not associated with the level of resource slack in an airline, but is more attributable to the way the resources are used. Cheng and Kesner's research suggests that the firms that devote more resources to external market effectiveness, respond to environmental change more effectively than do firms allocating resources in projects enhancing internal efficiency. This result implies that managerial decisions play a significant role in responding environmental changes.

Adding to Cheng and Kesner's (1997) research, Latham and Braun (2009) find mixed evidence regarding the beneficialness of financial slack as they research 450 global IT firms in the context of economic recession. Consistent with the school of thought arguing that financial slack hinders adaptation, their findings indicate that firms with more financial slack experience a faster decline in performance. Conversely, the same firms that face a quickly declining performance later showed a more rapid recovery. Latham and Braum state that although financial slack insulates the firm from its environment, it also enables this firm better to allocate its resources to investments that improve its ability to compete.

In addition to responding environmental changes, slack resources can also be seen to protect the firm's technical core from disruptions in the business environment. In this

view, slack can be seen as a buffer fund that absorbs or reduces environmental variance. In other words, non-core functions absorb the variance, enabling core functions to operate continously. (Bourgeois, 1981.)

3.3.4 Exploration and innovation

Financial slack can also be seen to facilitate exploration and innovation by protecting organizations from unfavorable outcomes of such undertakings (Bourgeois, 1981). Cyert and March (1963, pp. 278) propose that slack allows organizations to experiment with new strategies that would not be approved in the absence of slack resources.

Nohria and Gulati (1996) suggest a curvilinear, inverse U-shaped relationship between slack and organizational innovation. They base this assumption on the fact that both the advocates and opponents of slack share a common point of view that slack facilitates experimentation and innovation. Furthermore, slack also allows for a wider range of possible strategic choices for managers (Penrose, 1959). On the other hand, too much of slack may lead to excessive and undisciplined investments in exploration activities (Jensen, 1986). Hence, Nohria and Gulati (1996) propose the relationship between slack and managerial discipline to be inverse.

3.3.5 Consumption of perquisites and empire-building

In theory, firms should only undertake capital investments that have a positive expected net present value (NPV). Consequently, such investments create value. The agency problems of free cash flow arise due to the managerial preference of reinvesting the free cash flow instead of paying it out to the firm's shareholders. Jensen (1986) defines free cash flow as the residual cash flow after the firm has undertaken all positive NPV investments. According to Jensen (1986), managers have incentives to increase the scope of their business beyond the optimal size. First, growth increases the managers' power with greater amount of resources under their control. Second, growth is associated with higher management compensation. Third, rewarding policies based on promotion create an organizational tendency towards growth.

The possibility of using internal financing only can also be misused by the management. The need for external financing forces managers to go to the capital markets which helps to control the agency conflict between managers and shareholders (Harford, 1999). Jensen (1986) argues that acquisitions are one of the major ways for managers to

spend the corporate cash. As large cash reserves are actually accumulated free cash flows, the Jensen's free cash flow hypothesis predicts that the agency conflict is most severe in cash-rich firms. There is evidence that cash-rich firms actually do behave the way that the free cash flow hypothesis predicts (Harford, 1999). Harford finds that cash-rich firms are more likely to make acquisitions. He also finds, consistent with the free cash flow hypothesis, that the acquisitions made by cash-rich firms are on average value-decreasing transactions as measured by subsequent stock price and operating performance.

Agency problems created by excess free cash flow and large cash holdings can be addressed in many ways. Debt can serve as a monitoring mechanism in a couple of ways. First, by taking the cash out of the firm shareholders can prevent management from spending it in value-destroying investments or perks. Second, debt is a commitment by its issuer to repay it in the future. This incentivizes the management to generate enough cash flow to meet these future obligations. Third, in the case of financial distress, the firm's failure to meet its obligations toward its creditors, gives creditors right to force the firm into bankruptcy. This gives creditors some indirect power over firm's policies. With debt holders being more conservative than equity holders they tend to be willing to limit risk by cutting investment and new projects. (Tirole, 2006).

Whereas organizational theorists regard slack as a valuable asset, agency theorists claim that agency problems within a firm may breed inefficiency (Tan & Peng, 2003). Financial slack represents a cost in a way that the excess financial assets possessed by the firm need to be financed on the liability side of the balance sheet. In contrast to organizational theories, agency theory rejects the view that retaining slack benefits the firm as a whole. Rather, retaining slack is regarded as serving managerial interests (Jensen & Meckling, 1976).

4 HYPOTHESES

The eventual stock market reaction following a corporate event is defined by the consensus opinion of the market participants on how the decision taken will affect the present value of the firm's future cash flows. A positive stock price reaction after the announcement signals that the capital markets believe the acquisition to be value-increasing. Furthermore, a positive reaction is consistent with the synergy hypothesis discussed earlier. A negative reaction can signal expected value-destruction or it can be a sign of merger arbitrage in the case of stock-financed transactions. Consistent with the hubris and managerialism hypotheses, the market expects a firm to overpay in an acquisition. The previous sections also discussed the evidence which shows that, in general, after the announcements, bidders' shareholders normally do not significantly gain in acquisitions (Capron & Pistre, 2002; Bradley, et al., 1988; Agrawal, et al., 1992). Taken together, the previous literature suggests that the acquirer returns are close to zero or slightly negative.

Scholars' views on financial slack are even more disperse. Penrose (1959) made a strong case for financial slack saying that the firm's competitive advantage lies primarily in the resources possessed by the firm, provided that they are effectively deployed. She also hypothesized that resource-rich firms are more likely to make good business decisions because they have a wider range of choices. Cyert and March (1963) see resources as a means of alleviating the persistent conflict of interest within a firm. Moreover, slack resources play an adaptive and stabilizing role in environmental changes. Myers and Majluf (1984) also see financial slack in a good light. They claim that slack allows firms to behave in a value-maximizing way in situations where internal funds are insufficient to meet the investment needs. Issuing external equity involves asymmetric information which may cause firms to pass up profitable capital investments.

Whereas the theories stated above see slack as an important asset that enables firm to take advantage of opportunities as they arise, another school of thought regards slack as negative as it gives rise to the possibility for corporate managers to engage in self-serving behavior. Jensen and Meckling (1976) state that, in the context of separated ownership and control, salaried managers maximize their own utility which also involves consumption of non-pecuniary benefits. Because of this possibility, shareholders are likely to engage in monitoring activities. Jensen (1986) regards free cash flow as the source of conflict of interest and suggests that excess cash flows should be paid out to the firm's shareholders as dividends. Roll (1986) and Weston, et al.

(1998, pp. 81-82) consider acquisitions value-destroying transactions for the buying firms because managers, advertently or inadvertently, tend to overpay in acquisitions.

Given the fact that the general performance of acquirers has been observed to be poor, it is not likely that the market anticipates these transactions to create value for acquirers. The challenge from the acquirer's point of view is that, while the transaction itself may create value, most of this value is captured by the target firm's shareholders (Capron & Pistre, 2002). In such a case the transaction represents a wealth transfer from the acquirer to the target firm (Roll, 1986). It is also possible that the value transfer is also attributable to either managerial overconfidence (Billett & Qian, 2008) or self-serving behavior (Jensen & Meckling, 1976; Jensen, 1986). Due to these concerns we hypothesize that the severity of agency problems and reduced discipline is more pronounced in firms with most financial slack. Consequently, we hypothesize the abnormal returns for slack-rich firms to be lower than for slack-poor firms. Thus, our hypotheses are as follows.

H1: Firms with least financial slack experience a more favorable market reaction to acquisition announcements than do those with most slack. The market reaction is measured in terms of cumulative average standardized abnormal returns (CASAR).

The first hypothesis is based on the hubris and managerialism hypotheses that state that corporate managers tend to overpay in acquisitions (see: Roll, 1986; Seth et al, 2000). The first hypothesis is also consistent with Jensen and Meckling's (1976) article where they claim that managers' interests may deviate from those of their respective shareholders. We would expect the magnitude of this problem to increase along with the level of financial slack.

H2: The leverage to total assets ratio is positively associated with the market reaction following acquisition announcements.

Given that issuance of debt is a commitment to repay it in the future, the second hypothesis relies on the assumption that debt incentivizes management to pursue value-maximizing strategies at all times. The view that debt increases managerial discipline is based on Jensen's (1986) free cash flow hypothesis.

H3: The cash and cash equivalents to total assets ratio is negatively associated with the market reaction following acquisition announcements.

H4: The free cash flow to total assets ratio is negatively associated with the market reaction following acquisition announcements.

The third and fourth hypotheses both measure cash relative to total assets. The difference between these is that H3 measures accumulated cash and equivalents, capturing a longer-term effect of past cash flows. The fourth hypothesis, on the other hand, measures the free cash flow during the period that immediately precedes the acquisition announcement. The purpose of having both of these hypotheses is the distinction between short-term and longer-term cash generation within the business. Tan and Peng (2003) claim that slack may breed inefficiency. This view was previously adopted by Jensen (1986) and Jensen & Meckling (1978). In addition, large cash holdings may give rise to value-destroying acquisitions undertaken by managers infected by hubris (Roll, 1986).

5 DATA AND METHODS

5.1 Retrieval of data and characteristics of the sample

The data for the event study is collected from several sources. The list of acquisition announcements is collected from Thomson One Banker database. To limit the size of the sample and to better address the research problem, some criteria for the transactions are set. Transactions that satisfy following criteria are included in the sample.

- Both the acquiring and the target firm are based in a European country.
- Acquiring firm is a publicly listed company.
- Both the acquiring and the target firm are non-financial firms.
- Deal value is higher than $1 million.
- Deal value represents more than 10% of the acquiring firm's net assets.
- Deal has been completed.
- Percentage of shares acquired in transaction is higher than or equal to 50.1%.
- Percentage of shares owned after the transaction is 100%.

The rationale for only including firms from 17 European countries is eliminating the possible effects of differential accounting standards which could distort the calculation of financial variables. Only public acquirers are included in the sample because the stock market data that is used as the basis of the abnormal returns analysis is only available for publicly listed firms. The 10% requirement for the deal value-to-assets ratio is reasonable because to materially affect the stock price, the magnitude of the deal has to be significant. In many event studies, financial firms, such as banks and insurance companies are excluded from the sample due to their industry-specific financial and regulatory characteristics. This is the case for this study, too. In addition, the requirements for the percentage of shares to be acquired in and owned following the transaction are set to emphasize the informational value of the announcement.

Some observations were dropped due to insufficient availability of data or thin trading. Thin trading refers to a situation where stocks are so rarely traded that including them into sample would make no sense for due to statistical reasons. With these criteria the sample size becomes 90 announcements (see: Appendix 1), which is sufficient for statistical inference, although suboptimal. The acquisition announcements in the sample took place between 1 January 2006 and 31 May 2012. The stock market data is retrieved from Thomson Datastream database. The daily continuous-time returns (aka. logarith-

mic returns) of the sample firms are compared to the market returns of the firm's home market (see: Appendix 2) to calculate the abnormal returns. Datastream is also used as the source of financial statements information which is needed for the calculation of proxies for financial slack. The financial ratios were calculated from the latest financial report preceding the acquisition announcement. On average, the financial ratios were calculated approximately 193 days before the acquisition announcement.

Different currencies do not distort the results because all financial ratios are expressed in relative terms, not in any specific currency. In addition, the abnormal returns of each share are not distorted by exchange rate fluctuations because they are calculated against the market index that is denominated in the same currency as the share itself.

Acquiror country	n	%	Domestic	%	Cross-border	%
Belgium	*1*	*1,1 %*	*1*	*1,1 %*	0	*0,0 %*
Finland	*2*	*2,2 %*	*1*	*1,1 %*	1	*1,1 %*
France	*9*	*10,0 %*	*4*	*4,4 %*	5	*5,6 %*
Germany	*3*	*3,3 %*	*0*	*0,0 %*	3	*3,3 %*
Greece	*1*	*1,1 %*	*1*	*1,1 %*	0	*0,0 %*
Ireland	*2*	*2,2 %*	*1*	*1,1 %*	1	*1,1 %*
Italy	*3*	*3,3 %*	*1*	*1,1 %*	2	*2,2 %*
Netherlands	*8*	*8,9 %*	*3*	*3,3 %*	5	*5,6 %*
Norway	*1*	*1,1 %*	*1*	*1,1 %*	0	*0,0 %*
Spain	*1*	*1,1 %*	*0*	*0,0 %*	1	*1,1 %*
Sweden	*6*	*6,7 %*	*6*	*6,7 %*	0	*0,0 %*
Switzerland	*1*	*1,1 %*	*0*	*0,0 %*	1	*1,1 %*
United Kingdom	*52*	*57,8 %*	*50*	*55,6 %*	2	*2,2 %*
Total	**90**	**100,0 %**	**69**	**76,7 %**	**21**	**23,3 %**

Target country	n	%	Domestic	%	Cross-border	%
Belgium	*3*	*3,3 %*	*1*	*1,1 %*	*2*	*2,2 %*
Denmark	*1*	*1,1 %*	*0*	*0,0 %*	*1*	*1,1 %*
Finland	*1*	*1,1 %*	*1*	*1,1 %*	*0*	*0,0 %*
France	*4*	*4,4 %*	*4*	*4,4 %*	*0*	*0,0 %*
Greece	*1*	*1,1 %*	*1*	*1,1 %*	*0*	*0,0 %*
Ireland	*1*	*1,1 %*	*1*	*1,1 %*	*0*	*0,0 %*
Italy	*1*	*1,1 %*	*1*	*1,1 %*	*0*	*0,0 %*
Netherlands	*6*	*6,7 %*	*3*	*3,3 %*	*3*	*3,3 %*
Norway	*3*	*3,3 %*	*1*	*1,1 %*	*2*	*2,2 %*
Spain	*1*	*1,1 %*	*0*	*0,0 %*	*1*	*1,1 %*
Sweden	*9*	*10,0 %*	*6*	*6,7 %*	*3*	*3,3 %*
Switzerland	*1*	*1,1 %*	*0*	*0,0 %*	*1*	*1,1 %*
United Kingdom	*58*	*64,4 %*	*50*	*55,6 %*	*8*	*8,9 %*
Total	**90**	**100,0 %**	**69**	**76,7 %**	**21**	**23,3 %**

Sample by announcement year

Year	n	%	Domestic	%	Cross-border	%
2006	*16*	*17,8 %*	*12*	*13,3 %*	*4*	*4,4 %*
2007	*27*	*30,0 %*	*17*	*18,9 %*	*10*	*11,1 %*
2008	*16*	*17,8 %*	*13*	*14,4 %*	*3*	*3,3 %*
2009	*16*	*17,8 %*	*16*	*17,8 %*	*0*	*0,0 %*
2010	*5*	*5,6 %*	*3*	*3,3 %*	*2*	*2,2 %*
2011	*9*	*10,0 %*	*8*	*8,9 %*	*1*	*1,1 %*
2012	*1*	*1,1 %*	*0*	*0,0 %*	*1*	*1,1 %*
	90	**100,0 %**	**69**	**76,7 %**	**21**	**23,3 %**

Sample by type of payment

	n	%
Cash only	*44*	*48,9 %*
Cash + other means of financing	*46*	*51,1 %*
Total	**90**	**100,0 %**

Table 1: Descriptive data of the sample

Table 1 shows the distribution of observations by country, time and type of transaction. The years of highest acquisition activity in the sample were 2006-2009. Years 2010-2012 were characterized by significantly lower activity. The majority of the transactions (76.7%) were domestic transactions.

5.2 Event study method

The event study method is a commonly used method for evaluating the effect of some economic event on the firm's share price. There are different ways of conducting an event study, but the process, in general, comprises of the following stages (MacKinlay, 1997):

- Identifying the event of interest and the period over which the share prices of the firms involved will be examined (the event window).
- Determining the selection criteria for the inclusion of a firm in the study.
- Calculating the normal returns for a given security over a certain period (the estimation window).
- Calculating the abnormal returns.
- Statistical analysis of the (cumulative) abnormal returns.

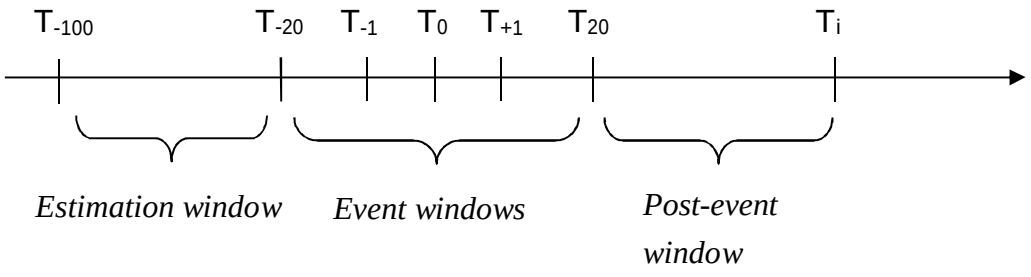

Figure 3: The structure of an event study

Figure 3 illustrates the general structure of an event study. The post-announcement stock price effect of an acquisition is calculated using an event study method. To estimate the normal returns for a share the ordinary least squares market model is deployed. In this study, the estimation window of [-100;-21] is used. It is followed by the event windows [-1; +1] and [-20; +20]. The post-event window is not applicable to this study. In a financial event study it is important that the estimation window and the event win-

dow do not overlap in order to avoid the event itself from distorting the estimated parameters (MacKinlay, 1997).

The normal returns for each share are calculated using the market model. The regression equation for the market model can be expressed as follows:

$$R_{i,t} = \alpha_i + \beta_i R_{M,t} + \varepsilon_i \quad (1)$$

In equation (1) the $R_{i,t}$ is the expected return for a stock i on day t. $R_{M,t}$ is the market return on day t. α_i and β_i are market model parameters for stock's alpha and beta, respectively. Alpha is the intercept term of the equation and beta is the slope term. ε_i is the error term that has an expected value of zero. The unbiased estimate for market model is:

$$\hat{R}_{i,t} = a_i + b_i R_{M,t} \quad (2)$$

In equation (2) $\hat{R}_{i,t}$ is the estimated value for share i's daily return with respect to market return. Coefficients a_i and b_i are estimated as follows:

$$b_i = \frac{Cov(R_i,R_M)}{Var(R_M)}, \; a_i = \bar{R_\iota} - b_i\overline{R_M} \quad (3, 4)$$

In equation (4), $\bar{R_\iota}$ is the mean of observed returns for stock i and $\overline{R_M}$ is the mean for market returns. The event windows are defined as [-1; +1] and [-20; +20]. On day zero the acquiring firm announces its tender offer for target firm's shareholders. The abnormal returns in the event window are calculated as:

$$AR_{i,t} = r_{i,t} - a_i - b_i R_{M,t} \quad (5)$$

The abnormal return for share i, on day t ($AR_{i,t}$) is calculated in equation (5). The observed return is denoted as $r_{i,t}$. From this observed return the normal return, calculated in equation (2) is subtracted.

The average abnormal return (AAR) for the cross-section of observations (equation 6) is a simple arithmetic mean of each individual abnormal return. Using AAR better makes it possible to assess the systematic announcement effect because individual stock prices are significantly affected by firm-specific factors.

$$AAR_t = \frac{1}{N}\sum_{i=1}^{n} AR_{i,t} \quad (6)$$

Finally, the average abnormal returns are cumulated for the event window. This is simply done by summing the daily AAR's.

$$CAAR_{[-d;+d]} = \sum_{t=-d}^{d} AAR_t \quad (7)$$

In equation (7) CAAR is the cumulative average abnormal return for the period. After the calculation of CAAR the statistical significance of these observations is tested. The test statistic for CAAR's is presented in equation (8).

$$t - stat = \frac{CAAR}{S(CAAR)} \sim t(n-1) \quad (8)$$

T-statistic for CAAR follows t-distribution at n-1 degrees of freedom. n denotes the number of observations. S(CAAR) is the standard deviation of CAAR.

The problem with the above presented method for calculating test statistics for CAAR is the assumption of equal variances of the residuals. For this reason, in addition to the aforementioned method, a method that allows for heteroscedastic residuals is used. Boehmer, Musumeci and Poulsen (1991) suggest that this method (BML method) is more suitable for cross-sectional analysis than the regular method presented above.

$$SAR_{i,t} = \frac{AR_{i,t}}{S(AR_i)} \quad (9)$$

The BML method starts with the calculation of standardized abnormal returns (SAR) for each individual stock (9). Each abnormal return in the event window is standardized with the standard deviation of the abnormal returns of share i (denoted $S(AR_i)$) from the estimation window.

$$CSAR_{i(t1,t2)} = \sum_{t=t1}^{t2} SAR_{i,t} \quad (10)$$

$$CASAR_{(t1,t2)} = \frac{1}{N}\sum_{i=1}^{N} CSAR_i(t1,t2) \quad (11)$$

Second, the SAR's are cumulated (CSAR) over a certain window (10). In equation (11), the cumulative average standardized abnormal returns (CASAR's) are calculated as the simple average of individual CSAR's.

$$\hat{\sigma}\big(CASAR(t1,t2)\big) = \sqrt{\frac{1}{N(N-1)}\sum_{i=1}^{N}(CSAR_i(t1,t2) - CASAR(t1,t2))^2} \quad (12)$$

For t-statistic, the standard deviation of CASAR's is calculated in equation (12).

$$t - stat = \frac{CASAR(t1,t2)}{\hat{\sigma}(CASAR(t1,t2))} \sim t(n-1) \quad (13)$$

Finally, the t-test statistic can be calculated as in equation (13).

5.3 Student's test for two samples of unequal variances

Student's t-test is a statistical method that is used to evaluate whether two sample averages differ statistically from each other. In this paper, the following method for conducting the t-test is used. It is assumed that the two samples are independent of each other and have unequal variances.

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{{s^2}_1}{n_1} + \frac{{s^2}_2}{n_2}}} \sim t(f) \quad (14)$$

$$\frac{1}{f} = \frac{c^2}{n_1 - 1} + \frac{(1-c)^2}{n_2 - 1} \quad (15)$$

$$c = \frac{\frac{s_1}{n_1}}{\frac{{s^2}_1}{n_1} + \frac{{s^2}_2}{n_2}} \quad (16)$$

Equation (14) is the test-statistic for two samples. $\bar{x}_1$ and $\bar{x}_2$ are the two subsample averages, n_1 and n_2 numbers of observations, ${s^2}_1$ and ${s^2}_2$ are variances of the two subsamples and f denotes the degree of freedom. Equations (15) and (16) are used to calculate the appropriate f.

To test whether firms with most financial slack experience differential market reaction than do those with least slack, the sample is divided into two subsamples based on "slack index" (SI) which is calculated as follows.

$$SI_i = \frac{1}{3}\left[\frac{(1-LVR_i) - (1-\overline{LVR})}{S(1-LVR)} + \frac{CCE_i - \overline{CCE}}{S(CCE)} + \frac{FCF_i - \overline{FCF}}{S(FCF)}\right] \quad (17)$$

Slack index in equation (17) is the average of equity ratio (1-LVR), cash and cash equivalents to total assets ratio (CCE) and free cash flow to total assets ratio (FCF), all of which are standardized with respect to the average and standard deviation of these

variables across the sample. The reason for using equity ratio (1-LVR) instead of leverage ratio (LVR) is the fact that the variables should describe the underlying phenomenon in the same direction. This means that when the value gets bigger, the firm has more slack. 35 firms with the highest slack index were categorized into one subsample and the lowest 35 firms into another. To further emphasize the difference, the 20 firms in the middle were dropped from this t-test. Although the slack index is a somewhat arbitrary measure for ranking firms based on amount of slack, it gives equal weights for the three dimensions of slack and it standardizes the values to the same scale. Thus, we find it a good measure for overall slack of the firm.

5.4 Cross-sectional analysis of abnormal returns

5.4.1 The regression model

After performing the standard abnormal returns analysis, it is common to examine how the abnormal stock performance relates to firm-specific factors. For a cross-section of sample firms, abnormal returns are regressed against relevant firm-specific variables (Khotari & Warner, 2006). An ordinary least squares regression model is deployed to test the explanatory power of different variables for abnormal returns. Based on the previous discussion, the regression model is specified as follows:

$$CAR_{i,t} = a_i + b_1 \times LVR_i + b_2 \times CASH_i + b_3 \times FCF_i + b_4 D_{UK,i} + b_5 D_{CASHONLY,i} + b_6 D_{DOMESTIC,i} + u_i \quad (18)$$

In equation (18) the cumulative abnormal return is estimated with respect to several independent variables which are discussed next.

The following Table 2 shows the descriptive data for the financial variables.

	Mean	Std.Dev.	Median	F25%	F75%
LVR	*0,1780*	*0,0158*	*0,1804*	*0,0488*	*0,2682*
CASH	*0,1720*	*0,0201*	*0,1125*	*0,0502*	*0,1974*
FCF	*0,0261*	*0,0093*	*0,0284*	*-0,0218*	*0,0689*

Table 2: Financial ratios of the sample firms

5.4.2 Leverage ratio (LVR)

Leverage ratio (LVR) is a measure that can be used to assess a firm's capital structure. It is defined as follows (19):

$$LVR = \frac{Total\ debt}{Total\ assets} \tag{19}$$

Total debt in this study is defined as the sum of current and non-current debt. To ensure comparability between different sized firms, the debt is divided by total assets, giving us the leverage ratio.

5.4.3 Cash and cash equivalents to total assets –ratio (CASH)

CASH is a standardized measure for a firm's cash holdings. It can be used to evaluate the extent of liquid assets under managerial discretion.

$$CASH = \frac{(Cash+Cash\ equivalents)}{Total\ assets} \tag{20}$$

Cash and cash equivalents are an asset class that includes, in addition to cash money, marketable securities, such as treasury bills, commercial papers and other money market instruments. The cash holdings are once again standardized by the firm's total assets to ensure comparability between firms.

5.4.4 Free cash flow to total assets –ratio (FCF)

Free cash flow to total assets ratio is a standardized measure to evaluate a firm's ability to generate cash. There are multiple definitions for free cash flow, but in this paper the free cash flow is defined as:

$$FCF = (\frac{Cash\ flow\ from\ operations - Capital\ expenditures}{Total\ assets}) \tag{21}$$

By dividing the FCF by total assets, the free cash flow can be scaled for each firm for better comparability.

5.4.5 Dummy variables

Finally, three dummy variables were used to control for certain aspects of the sample. First, the UK dummy variable gets the value 1 (otherwise 0) if the acquirer is based in the United Kingdom. This dummy variable is used because more than half of the sample transactions were carried out by acquirers from the UK. We do not expect this variable to differ from zero. Second, the CASHONLY dummy variable gets a value 1 if the transaction is fully paid in cash. Using cash only for paying for the acquisition sends a positive signal to the markets as it signals a possible undervaluation of the acquirer's shares. Hence, we expect the coefficient of this dummy variable to be positive. Third, the DOMESTIC variable gets a value 1 if the acquiring firm and the target firm are based in the same country. We do not expect this variable to differ from zero.

5.5 Econometric concerns

In an ordinary least squares (OLS) regression model there are issues that need to be considered for the results to be accurate and statistically robust. Properties of the regression coefficients are heavily dependent on the disturbance term u. These assumptions are called Gauss-Markov conditions and they should be satisfied for OLS regression to give the best possible results (Dougherty, 2002, pp. 70-113). These conditions are:

$$E(u_i) = 0 \quad \text{(G1)}$$

$$\sigma_{u_i}{}^2 = \sigma_u{}^2, for\ all\ i \quad \text{(G2)}$$

$$Cov(u_i, u_j) = 0 \quad \text{(G3)}$$

$$u\ is\ distributed\ independently\ of\ the\ explanatory\ variables. \quad \text{(G4)}$$

The first condition (G1) defines the expected value of the disturbance term u to be zero. If the condition G1 is satisfied the estimator said to be unbiased. The second condition (G2) is the requirement for homoscedasticity. Homoscedasticity is reached if and only if the variance of the disturbance term is constant for all observations. The condition (G3) assumes that there exists no autocorrelation between disturbance terms of each observation (ie. their covariance is zero). Finally, the disturbance term should also be distributed independently of the explanatory variables (condition G4).

The second Gauss-Markov condition is often violated, as the regression errors may be heteroscedastic. Heteroscedasticity does not bias the OLS regression coefficients (Dougherty, 2002). However, there are two reasons why heteroscedasticity matters. First, in the absence of heteroscedasticity, the OLS regression coefficients are best linear unbiased estimators (BLUE). If heteroscedasticity exists it is possible to find unbiased estimators with smaller variance. Second, the estimators of the standard errors of the regression coefficients are distorted as they are calculated based on the assumption of homoscedasticity. The standard errors of the regression coefficients do not have a standard normal distribution even with large samples. For this reason, homoscedasticity-only standard errors are inappropriate if heteroscedasticity exists (Stock & Watson, 2012). In such a case the standard errors of the regression coefficients tend to be underestimated. As a result, the test statistics are inflated. This may lead to the conclusion that the regression coefficients are statistically significantly different from zero, even if this is not the case.

Another econometric concern is multicollinearity. An econometric model is considered multicollinear when two or more independent variables are highly linearly correlated. In a model with multiple independent variables the extent of multicollinearity may be difficult to detect. A linear relationship between independent variables does not necessarily mean that the variables are pairwise correlated. (Dougherty, 2002.) Imperfect multicollinearity does not bias OLS estimators but it may cause one or more coefficients of individual independent variables to be misestimated (Stock & Watson, 2012). Imperfect multicollinearity is often not an error but a feature of an OLS model. The regression model itself can explain the underlying phenomenon well but it may not explain the effects of individual variables on the dependent variable.

In the regression model used in this paper to explain cumulative abnormal returns it is plausible that there exists heteroscedasticity in the regression model that is not insignificant. To reduce the severity of heteroscedasticity (G2) and possible autocorrelation (G3), we use heteroscedasticity and autocorrelation-consistent (HAC) standard errors that are calculated by EViews. Such standard errors are also called Newey-West standard errors. This study does not violate G1 as the residual plots of the regression models did not reveal any evidence of such violations. G4 is not violated in this study since covariance analysis of residuals and independent variables did not show meaningful interdependency.

6 RESULTS AND DISCUSSION

The first part of the empirical study is the abnormal post-announcement return analysis. The core of the research problem is not, however, if the acquisition announcement returns differ from zero. The problem in question is whether the stock market reaction is systematically different for slack-rich and slack-poor firms. Furthermore, a further analysis is conducted using financial data as independent variables to explain cumulative abnormal post-announcement returns.

6.1 Abnormal announcement returns

In the first part of the event study, two separate cumulative average abnormal return (CAAR) tables are calculated.

Event window	CAAR	Std.Deviation	T-stat	P-value
[-20;0]	*-0,0108*	*0,0118*	*-0,9147*	*0,3628*
[-1;+1]	*-0,0090*	*0,0061*	*-1,4724*	*0,1445*
[0;20]	*0,0078*	*0,0101*	*0,7754*	*0,4402*
[-20;+20]	*0,0030*	*0,0158*	*0,1920*	*0,8482*
[0]	*-0,0060*	*0,0050*	*-1,2079*	*0,2303*
n=90				

Event window	CASAR	Std.Deviation	T-stat	P-value
[-20;0]	*-0,3858*	*0,5723*	*-0,6741*	*0,5020*
[-1;+1]	*-0,1992*	*0,2761*	*-0,7212*	*0,4727*
[0;20]	*0,3067*	*0,5109*	*0,6002*	*0,5499*
[-20;+20]	*0,1672*	*0,8153*	*0,2050*	*0,8380*
[0]	*-0,2463*	*0,2029*	*-1,2136*	*0,2281*
n=90				

Table 3: Cumulative abnormal post-announcement returns (two-tailed test)

In Table 3 the upper part analyzes the CAAR's assuming that all stocks have equal variances. From the upper part can be concluded that the CAAR's are insignificantly different from zero as the p-values are between 0.14 and 0.85. In statistical terms, the event window [-1; +1] shows the strongest evidence of non-zero market reaction, but fails to reach the significance level of 10%.

Assuming that all stocks in the sample have the same variance is not completely realistic, especially because the sample was drawn over a 6 year horizon. To overcome this

issue, in the lower part of the table 3, the average returns were calculated in terms of cumulative average standardized abnormal returns (CASAR). This method drops the assumption of equal variances. The abnormal returns for each stock were standardized using their individual variances as calculated in the estimation window [-100;-21]. The CASAR analysis does not change the overall conclusion that the average abnormal returns do not significantly differ from zero.

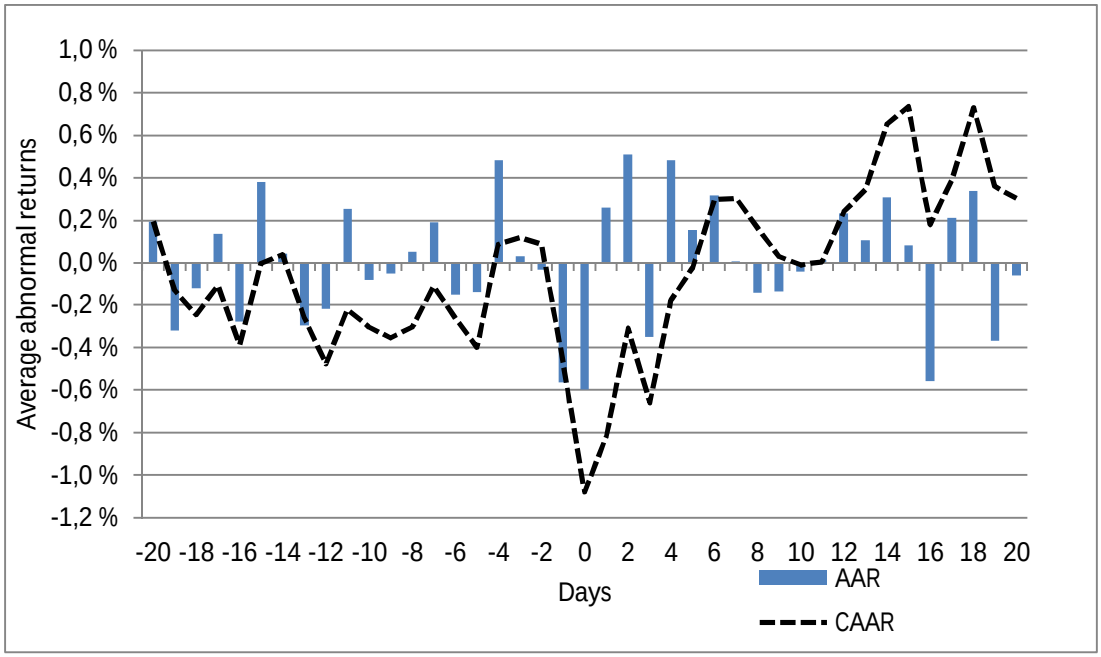

Figure 4: The average abnormal returns (AAR) and cumulative average abnormal returns (CAAR) in event window [-20; + 20]

From Figure 4 it can be seen that the CAAR graph stays very close to x-axis until day zero. When the announcement is made the average market reaction is negative. After immediate negative reaction the CAAR moves towards zero.

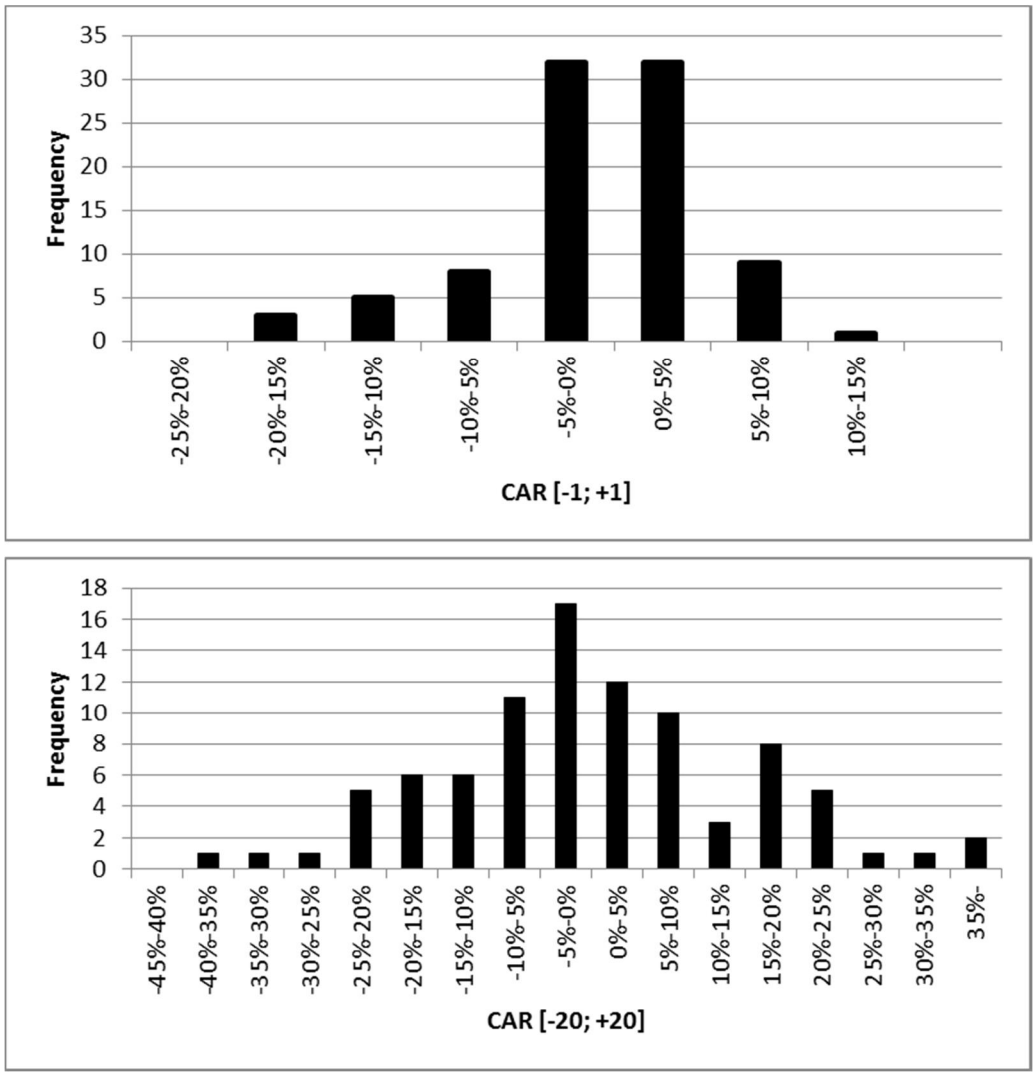

Figure 5: Frequency distributions of observed cumulative abnormal returns (CAR) in event windows [-1; +1] and [-20; +20].

From Figure 5 can be seen that the CAR's are clustered around zero. The distribution of the CAR's is also fairly symmetric.

6.2 Two-sample t-test

Section 6.1 concluded that in aggregate level the announcements in the sample did not cause abnormal wealth effects for the bidding firms' shareholders. To determine whether the reaction was different for slack-rich and slack-poor firms, two-sample t-test is used. The total sample of 90 observations was divided into two groups of 35 observations based on the level of slack. 20 observations in the middle were dropped so that the

effect of slack would be better captured. Two event windows were used for further analysis [-1; +1] and [-20; +20].

Event Window	Most slack	Least slack	n
CASAR [-1;+1]	*-0,7421*	*0,6459*	*35*
CASAR [-20;+20]	*-0,3209*	*0,4936*	*35*
St.dev [-1;+1]	*2,4666*	*2,8204*	
St.dev [-20;+20]	*7,9187*	*8,5889*	

Student's Test	T-stat	Df	P-value (1-tail)
[-1;+1]	*-2,1917***	*48*	*0,0155*
[-20;+20]	*-0,4125*	*38*	*0,3405*

**** Denotes significance at 5%.**

Table 4: Two-sample t-test

From Table 4 it can be concluded that the firms with most slack experience a negative market reaction whereas firms with least slack experience a positive reaction. This observation is valid for both event windows. In the t-test we discover that the averages of these two subsamples differ significantly each other at significance level of 5% in the event window [-1; +1]. Nevertheless, this does not apply to the event window [-20; +20]. Based on this analysis we conclude that, indeed, firms with most slack experience more negative immediate stock price reaction than do firms with least slack.

6.3 Regression analysis

In the two sample t-test shown in section 6.2 we found a significant negative relationship between slack and post-announcement returns in event window [-1; +1]. The analysis is now extended to individual financial variables. The formal presentation of the hypotheses H2-H4 presented in Chapter 4 is as follows:

$H2$: $b_{LVR} > 0$
$H3$: $b_{CASH} < 0$
$H4$: $b_{FCF} < 0$

Event window [-1;+1]	1	2	3	4
Intercept	**-0,0468**	**-0,0250**	**-0,0296**	**-0,0467**
LVR	**0,0806**			**0,0809**
	*1,9408***			*1,5783**
CASH		**-0,0333**		**-0,0040**
		*-1,5151**		*-0,1205*
FCF			**0,0037**	**0,0254**
			0,0516	*0,3224*
UK	**-0,0028**	**-0,0044**	**-0,0027**	**-0,003**
	-0,2054	*-0,2973*	*-0,1835*	*-0,1985*
CASH ONLY	**0,0435**	**0,0438**	**0,0444**	**0,0430**
	*3,8467****	*3,7174****	*3,7899****	*3,8342****
DOMESTIC	**0,0049**	**0,0036**	**0,0004**	**0,0052**
	0,3752	*0,2725*	*0,0268*	*0,3952*
R-squared	0,1925	0,1616	0,1501	0,1942
Adj. R-squared	0,1545	0,1221	0,1101	0,1360
Significance F	0,0010***	0,0044***	0,0073***	0,0054***
Observations	*90*	*90*	*90*	*90*

***, ** and *** denote significance at 10%, 5% and 1%, respectively.**

Table 5: Cross-sectional regression in event window [-1; +1] (1-tailed test)

In tables 5 and 6 the upper bolded numbers represent the estimated regression coefficients and the numbers below them are the 1-tailed test statistics that follow t-distribution. From table 5 can be seen that the first regression finds a positive and significant relationship between the leverage ratio and cumulative abnormal returns (CAR[-1; +1]). The second equation suggests a negative and weakly significant relationship between cash and equivalents to total assets ratio and CAR. The third equation finds that CAR is practically independent of free cash flow. Finally, the fourth equation again implies the significance of LVR variable. The second dummy variable, CASHONLY, has a positive coefficient which is significant at 1% level in all regressions. This is consistent with the signaling hypothesis which suggests that using cash to pay for an acquisition sends a positive signal over the firm's future prospects as the reluctance to use stock financing implies a positive undervaluation. The R-squared and Adjusted R-squared values range from 0.11 to 0.19 which is reasonable for an econometric model. Low significance F values suggest that the model is meaningful.

The following table illustrates the similar regression model but the event window is extended to [-20; +20] to capture a longer period effect.

Event window [-20;+20]	1	2	3	4
Intercept	**-0,0534**	**-0,0536**	**-0,0347**	**-0,1092**
LVR	**0,0844**			**0,2070**
	0,7021			*1,7586***
CASH		**0,1349**		**0,2099**
		1,6771		*2,4338*
FCF			**-0,0366**	**0,0617**
			-0,175	*0,3134*
UK	**0,0238**	**0,0307**	**0,0239**	**0,0343**
	0,5795	*0,8354*	*0,5892*	*0,9265*
CASH ONLY	**0,0465**	**0,0502**	**0,0482**	**0,0481**
	*1,5708**	*1,6729***	*1,6577**	*1,6351*
DOMESTIC	**0,0064**	**-0,0116**	**0,0017**	**-0,0074**
	0,1658	*-0,3224*	*0,0454*	*-0,1995*
R-squared	0,0351	0,0566	0,0285	0,0890
Adj. R-squared	-0,0103	0,0122	-0,0172	0,0231
Significance F	0,5463	0,2861	0,6472	0,2441
Observations	*90*	*90*	*90*	*90*

***, ** and *** denote significance at 10%, 5% and 1%, respectively.**

Table 6: Cross-sectional regression in event window [-20; +20] (1-tail)

From table 6 can be seen that the independent variables, LVR and FCF show no statistically significant relationship with respect to CAR. CASH is not significant in 1-tailed test because the hypothesized value of the regression coefficient should have been negative. In the fourth column LVR seems to be statistically significant. Because collinearity poses a problem to the reliability of the regression coefficients' test statistics we cannot conclude that, in event window [-20; +20], LVR and CASH are significant as the correlation between LVR and CASH is high, approximately -0.45. Moreover, R-squared and adjusted R-squared values are close to zero and significance F values are high. Based on this, the regression model for the event window [-20; +20] does not make it possible to draw any reliable conclusions.

6.4 Summary of the results and discussion

In the preceding study we found that, in aggregate level, acquiring firms do not experience abnormal returns that are significantly different from zero. However, when firms are grouped into two subsamples with respect to their level of financial slack we make an interesting observation. Based on the study presented, there is plausible evidence that in the short event window [-1; +1] firms with most financial slack underperform relative to firms with least slack. This observation is significant at 5% level. When the event window is longer [-20; +20] slack-rich firms still underperform relative to slack-poor firms, although the difference in terms of cumulative abnormal returns is not statistically significant.

In our regression analysis we discovered that LVR is positively and CASH negatively associated with CAR's in event window [-1; +1], significant at 5% and 10%, respectively. In event window [-20; +20] none of the financial variables show a statistically significant relationship with CAR's. Moreover, there was evidence that acquisitions paid fully in cash had a positive and significant relationship with CAR's.

Hypothesis	**Findings**
H1: Firms with least financial slack experience a more favorable market reaction to acquisition announcements than do those with most slack.	Our empirical tests do support this hypothesis. In terms of CASAR, the slack-poor firms outperformed the slack-rich firms by 1.39 CASAR units, significant at 5 % risk level.
H2: The leverage to total assets ratio is positively associated with the market reaction following acquisition announcements.	In [-1; +1] event window this hypothesis receives support that is significant at 5% level. In [-20; +20] we find no supporting evidence for H2.
H3: The cash and cash equivalents to total assets ratio is negatively associated with the market reaction following acquisition announcements.	In [-1: +1] event window we only find weak empirical support for H3, significant at 10% level. In [20; +20] window we find no supporting evidence for H3.
H4: The free cash flow to total assets ratio is negatively associated with the market reaction following acquisition announcements.	We reject H4 as empirical tests did not show any statistically significant support for this hypothesis.

Table 7: Summary of the findings

Table 7 summarizes our hypotheses and our findings relating to them. How do these findings relate to existing theory? First, the finding that slack-poor firms tend to outperform slack-rich firms is consistent with Jensen's (1986) and Jensen & Meckling's (1976) writings that regard slack as a facilitator for self-serving managerial behavior and shift of focus from the best interests of the firm's shareholders.

In section 2.2 of this study we presented the three patterns of value creation in M&A's. First, there is the synergy hypothesis that predicts that both the buyer and seller should gain in an acquisition because the two firms together can exploit operational or financial synergies (Seth, et al., 2000). Second, the hubris hypothesis regards M&A's as being catalyzed by managerial hubris which refers to managers' arrogant pride and overconfidence. The hubris hypothesis predicts that the buying party is likely to lose in an acquisition as a result of overpaying (Roll, 1986). Third, the managerialism hypothesis sees M&A's as negative for the buying party since managers knowingly overpay in acquisitions (Seth, et al., 2000).

If we look at these hypotheses in the light of our findings, we see a clear difference between slack-rich and slack-poor firms. The fact that the 35 slack-poor firms had statistically significantly (at 5% risk level) higher CASAR's following the announcement than did the 35 slack-rich firms did, can be understood that the slack-poor firms behaved more as the synergy hypothesis predicted, whereas the slack-rich firms demonstrated a pattern that is consistent with the hubris and managerialism hypothesis. Because our study did not include managerial interviews or other measures to investigate managerial motives, we are not in a position to make distinction between these two latter hypotheses. Making such a distinction could prove interesting and is our suggestion for further research.

The third chapter of this study discussed theories of the capital structure of the firm and also conceptual theories of financial slack. Miller and Modigliani (1958 and 1963) claim that firms have an optimal capital structure. They also recognize the importance of debt as a tool to create a tax shield. On the other hand, Miller and Modigliani note that firms a need to retain some unused borrowing power for future flexibility. The pecking order theory states that firms prefer to use internal funding for its projects. External financing is used only if internal funds are insufficient to meet the investment needs. (Myers & Majluf, 1984.) It has also been pointed out that financial slack desensitizes management to external shifts in competitive environment (Latham & Braun, 2009). Jensen (1986) claims that acquisitions are a major way for managers to spend the financial slack. This proposition has been supported by Harford (1999). This discussion is attributable to discipline. Nohria and Gulati (1996) proposed an inverse relationship between managerial discipline and slack. Because slack reduces managerial discipline

over the use of corporate funds we hypothesized that leverage is positively related to market reaction on acquisition announcements. In short event window we found empirical support for this hypothesis (H2).

The last two hypotheses measure two different dimensions of cash. The cash and equivalents to total assets measures accumulated cash whereas the free cash flow to total assets measures the change in cash during a certain period. The former of these measures is more long-term oriented and the latter short-term oriented. As Penrose (1959) defined, the competitiveness of a firm lies primarily in its managers' ability to effectively deploy its resources. Cyert and March (1963) regards slack as a necessary bunch of extra resources which is needed for payments necessary to retain the coalition of individuals that forms the organization. Despite the fact that there are many motives for firms to hold cash (Mikkelson & Partch, 2003; Altinkihc & Hansen, 2000; Hennessy & Whited, 2007), the main interest of this study is the disciplining effects of cash. It has been noted by Cheng and Kesner (1997) that the level of environmental response is not attributable to the level of resources but to the allocation of them between internal efficiency and external effectiveness. Opler et al. (1999) found that managers tend to accumulate cash if they have the opportunity to do so. Given that managers also tend to expend this cash (Jensen, 1986) shows that accumulation of cash may breed inefficiency and worsen agency problems as predicted by Jensen and Meckling (1976).

Our findings, however, do not support the hypothesis that large cash holdings in terms of cash to total assets or free cash flow to total assets are negatively related to acquisition announcement market reaction. We only find weak evidence (significant at 10% risk level) that CASH could have a negative relationship to abnormal returns. Based on our analysis we reject the hypothesis 4 as we have not found no statistically significant relationship between FCF and abnormal returns.

7 CONCLUSIONS

In this study we have examined the immediate shareholder wealth effects of corporate acquisition announcements. The sample consisted of 90 European acquisitions that were announced between 1 January 2006 and 31 May 2012. There were two main objectives in this study; first to evaluate whether the announcement effect of acquisition is differential for firms with most financial slack as opposed to those with least slack and second, to find any statistically significant relationship between cumulative abnormal returns following the announcement and financial variables for leverage, cash holdings and free cash flow.

Although not explicitly stated, "discipline" is the word that has been the leading thought behind this study. This study has attempted to shed more light on the disciplining effects of financial slack in the context of corporate acquisitions. In summary, the results of this study are more consistent with theories that regard financial slack as a facilitator for less disciplined managerial behavior and hubris (Jensen & Meckling 1976; Jensen, 1986; Roll, 1986; Seth et al, 2000; Nohria & Gulati, 1996) than those that see slack as a valuable asset enabling more effective managerial actions (Cyert & March, 1963; Penrose, 1959).

The first part of the empirical study was the calculation of abnormal returns for each firm. In aggregate level we find that cumulative average abnormal returns (CAAR) do not significantly differ from zero. However, we find statistically significant evidence that the firms with most slack in this sample had a less favorable market reaction in the event window [-1; +1] than did the firms with least slack. The difference between cumulative average standardized abnormal returns (CASAR) of these two subsamples was 1.39 CASAR units, significant at 5% level. The same effect was not visible for [-20; +20] event window. Because event window [-1; +1] captures the purest announcement effect, we find empirical support for the hypothesis (H1) that slack-rich firms underperform relative to slack-poor firms.

Finally, we assess whether three financial variables; leverage to total assets, cash to total assets and free cash flow to total assets of the acquiring firms show a statistical relationship with post-announcement CAR's. Out of these financial variables we found a statistically significant (at 5% risk level) positive relationship between leverage and CAR's and a weakly significant (at 10% risk level) negative relationship between cash to total assets and CAR's. This observation was only visible in event window [-1; +1]. Similar model was used for event window [-20; +20] but it did not find any statistically significant relationships. In addition, we find that transactions that were fully paid in cash showed a more favorable market reaction. This observation is consistent with the

hypothesis that using cash payment instead of shares signals a possible undervaluation of the acquirer's shares. Moreover, it is also consistent with the merger arbitrage strategy which involves short-selling of acquirers' shares in stock-paid transactions.

These results imply that financial slack plays some role in announcement returns in the short event window but when the event window gets longer, the effect gets less apparent. For this reason, a possible topic for further research could be creating proxies for managerial hubris and self-interest and comparing these measures against the value-creation in M&A's. As the firm's share price reflects a consensus opinion of the capital markets on the present value of the firm's future cash flows, a negative market reaction signals that the funds are expected to be used in a value-destroying way. Because the true financial performance of the acquisition remains unclear at the moment of announcement, this paper does not suggest that the acquisitions in this sample ultimately turned out as the market anticipated. Another possible topic for further research could be to compare the initial announcement effect with the true operational long-term performance of the acquirer to evaluate a possible reversal pattern.

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APPENDIX 1: SAMPLE TRANSACTIONS

Target Name	Target Nation	Date Announced	Acquiror Name	Acquiror Nation
AHED Ltd	United Kingdom	12.15.2006	The BSS Group PLC	United Kingdo
ATI Oil PLC	United Kingdom	04.03.2009	Northern Petroleum PLC	United Kingdo
Active 24 ASA	Norway	06.09.2006	Mamut ASA	Norway
Alfred McAlpine PLC	United Kingdom	10.16.2007	Carillion PLC	United Kingdo
Altrix Healthcare PLC	United Kingdom	12.20.2006	Concateno PLC	United Kingdo
Andvord Tybring-Gjedde ASA	Norway	08.29.2006	Buhrmann NV	Netherlands
Annehem Fastigheter AB	Sweden	04.17.2009	Peab AB	Sweden
Aricom PLC	United Kingdom	01.09.2009	Peter Hambro Mining PLC	United Kingdo
Baggeridge Brick PLC	United Kingdom	08.17.2006	Wienerberger Finance Service	Netherlands
BioPhausia AB	Sweden	04.11.2011	Medivir AB	Sweden
BioXell SpA	Italy	11.18.2009	Cosmo Pharmaceutical SpA	Italy
Birse Group PLC	United Kingdom	06.26.2006	Balfour Beatty PLC	United Kingdo
Braemore Resources PLC	United Kingdom	07.03.2009	Jubilee Platinum PLC	United Kingdo
Brantano NV	Belgium	10.29.2007	Macintosh Retail Group NV	Netherlands
Brixton PLC	United Kingdom	05.22.2009	Segro PLC	United Kingdo
Broca PLC	United Kingdom	02.05.2009	2ergo Group PLC	United Kingdo
Business Interactif	France	11.15.2007	Publicis Groupe SA	France
CODA PLC	United Kingdom	01.14.2008	Unit 4 Agresso NV	Netherlands
Careforce Group PLC	United Kingdom	03.05.2007	Mears Group PLC	United Kingdo
Central African Mining & Expl	United Kingdom	09.16.2009	Eurasian Natural Resources	United Kingdo
Chieftain Group PLC	United Kingdom	09.30.2008	Redhall Group PLC	United Kingdo
Christian Salvesen PLC	United Kingdom	10.02.2007	Groupe Norbert Dentressangle	France
ComputerLand UK PLC	United Kingdom	03.11.2008	The Capita Group PLC	United Kingdo
Cornwell Mgmt Consultants PLC	United Kingdom	04.24.2007	Serco Group PLC	United Kingdo
Cozart PLC	United Kingdom	09.05.2007	Concateno PLC	United Kingdo
Cumerio NV/SA	Belgium	06.24.2007	Norddeutsche Affinerie AG	Germany
Cybernetix SA	France	11.04.2011	Technip SA	France
Dolmen Computer Application NV	Belgium	12.20.2007	Real Software NV	Belgium
Draka Holding NV	Netherlands	11.22.2010	Prysmian SpA	Italy
Education Dvlp Int PLC	United Kingdom	03.07.2011	Pearson PLC	United Kingdo
EnCore Oil PLC	United Kingdom	10.05.2011	Premier Oil PLC	United Kingdo
European Motor Holdings PLC	United Kingdom	12.15.2006	Inchcape PLC	United Kingdo
FKI PLC	United Kingdom	02.04.2008	Melrose PLC	United Kingdo
FirstAfrica Oil PLC	United Kingdom	11.15.2006	Bowleven PLC	United Kingdo
Foseco PLC	United Kingdom	10.02.2007	Cookson Group PLC	United Kingdo
Friends Provident PLC	United Kingdom	05.05.2009	Friends Provident PLC	United Kingdo
Getaz Romang SA	Switzerland	03.05.2007	CRH PLC	Ireland-Rep
Guyenne et Gascogne SA	France	12.12.2011	Carrefour SA	France
Howle Holding PLC	United Kingdom	09.28.2006	Elektron PLC	United Kingdo
IBS OPENSystems PLC	United Kingdom	06.05.2008	The Capita Group PLC	United Kingdo
ICI PLC	United Kingdom	06.18.2007	Akzo Nobel NV	Netherlands
ICM Computer Group PLC	United Kingdom	01.18.2007	Phoenix IT Group PLC	United Kingdo
IDN Telecom PLC	United Kingdom	11.30.2006	Redstone PLC	United Kingdo
Innovata PLC	United Kingdom	11.17.2006	Vectura Group Plc	United Kingdo
Island Oil & Gas PLC	Ireland-Rep	10.15.2009	San Leon Energy PLC	Ireland-Rep
Isotron PLC	United Kingdom	10.26.2006	Synergy Healthcare PLC	United Kingdo
Kego AE	Greece	01.15.2007	Nireus Aquaculture SA	Greece
Koninklijke Econosto NV	Netherlands	03.31.2008	Eriks Group NV	Netherlands
Koninklijke Grolsch NV	Netherlands	11.19.2007	SABMiller PLC	United Kingdo

Koninklijke Numico NV	Netherlands	07.09.2007	Groupe Danone SA	France
Lindex AB	Sweden	10.01.2007	Stockmann Oyj	Finland
MAMA Group PLC	United Kingdom	12.23.2009	HMV Group PLC	United Kingdo
Mediasurface PLC	United Kingdom	05.16.2008	Alterian PLC	United Kingdo
Medical House PLC	United Kingdom	09.24.2009	Consort Medical PLC	United Kingdo
Minster Pharmaceuticals PLC	United Kingdom	01.04.2010	Proximagen Neuroscience	United Kingdo
Mobile Doctors Group PLC	United Kingdom	11.04.2011	Quindell Portfolio PLC	United Kingdo
Netwise AB	Sweden	06.05.2006	Telefonaktiebolaget LM	Sweden
PanAlarm AB	Sweden	10.21.2008	Panaxia Security AB	Sweden
Peab Industri AB	Sweden	10.15.2008	Peab AB	Sweden
Protherics PLC	United Kingdom	09.18.2008	BTG PLC	United Kingdo
Quantica PLC	United Kingdom	07.23.2007	Berkeley Scott Group PLC	United Kingdo
RHM PLC	United Kingdom	12.04.2006	Premier Foods PLC	United Kingdo
Red Squared PLC	United Kingdom	09.25.2007	Xploite PLC	United Kingdo
Renewagy A/S	Denmark	11.27.2008	Colexon Energy AG	Germany
Resurs CNC AB	Sweden	11.30.2011	Wise Group AB	Sweden
Revenue Assurances Services	United Kingdom	07.30.2007	Spice PLC	United Kingdo
SSL International PLC	United Kingdom	07.21.2010	Reckitt Benckiser Group PLC	United Kingdo
Scottish Power PLC	United Kingdom	11.28.2006	Iberdrola SA	Spain
Simrad Optronics ASA	Norway	05.06.2010	Rheinmetall AG	Germany
Sirius Financial Solutions PLC	United Kingdom	05.08.2007	SSP Holdings PLC	United Kingdo
Sumus PLC	United Kingdom	03.11.2008	Lighthouse Group PLC	United Kingdo
Supporta PLC	United Kingdom	12.18.2009	Mears Group PLC	United Kingdo
Sylis SA	France	07.07.2008	Groupe Open SA	France
Synchronica PLC	United Kingdom	01.03.2012	Myriad Group AG	Switzerland
Tamfelt OY AB	Finland	11.05.2009	Metso Oyj	Finland
Taylor Nelson Sofres PLC	United Kingdom	05.04.2008	WPP Group PLC	United Kingdo
Tele Atlas NV	Netherlands	07.23.2007	TomTom NV	Netherlands
Tellings Golden Miller Grp PLC	United Kingdom	12.20.2007	Arriva PLC	United Kingdo
Telvent GIT SA	Spain	05.31.2011	Schneider Electric SA	France
The Capital Pub Co PLC	United Kingdom	07.19.2011	Greene King PLC	United Kingdo
VEGA Group PLC	United Kingdom	11.29.2007	Finmeccanica SpA	Italy
Vedior NV	Netherlands	11.30.2007	Randstad Holding NV	Netherlands
Virotec International PLC	United Kingdom	04.04.2008	HydroDec Group PLC	United Kingdo
WM-data AB	Sweden	08.21.2006	LogicaCMG PLC	United Kingdo
Wilson Bowden PLC	United Kingdom	02.05.2007	Barratt Developments PLC	United Kingdo
XPonCard Group AB	Sweden	02.19.2008	Oberthur Technologies SA	France
Xansa PLC	United Kingdom	07.30.2007	Steria SA	France
Xploite PLC	United Kingdom	03.11.2010	Avisen PLC	United Kingdo
coffeeheaven intl PLC	United Kingdom	12.11.2009	Whitbread PLC	United Kingdo
fountains PLC	United Kingdom	07.15.2009	Connaught PLC	United Kingdo

APPENDIX 2: STOCK INDICES

Country	Index
Belgium	*BEL20*
Finland	*OMXH*
France	*CAC40*
Germany	*DAX*
Greece	*Athex20*
Ireland	*ISEQ*
Italy	*FTSE italia*
Netherlands	*AEX*
Norway	*OBX*
Spain	*IBEX35*
Sweden	*OMXS*
Switzerland	*SMI*
United Kingdom	*FTSE100*