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CHARACTERISTICS OF MERGERS AND ACQUISITIONS TARGETS IN THE EUROPEAN UNION FOOD INDUSTRY

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Abstract

Title	Characteristics of Mergers and Acquisitions Targets in the European Union Food Industry
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Key words	Mergers and acquisitions, logit model, characteristics, food and beverage manufacturing industry, European Union
Purpose	This study aims at determining the financial characteristics of takeover targets in the food industry operating in the European Union. By using the logit model, the researchers intend to identify firm targeting behavior that might explain corporate takeover decisions of food and beverage companies in 1999 to 2008 period.
Theoretical framework	The theory is based on explaining the motives behind takeover targets, mainly with a focus on the economic perspective. This is because the study's central issue concerns financial characteristics of targeted firms. Four different but commonly known economic theories are presented, to each of them hypotheses are formulated.
Methodology	Financial data of M&A deals occurred in the food and beverage manufacturing industry in the European Union between 1999 and 2008 is gathered. A control group of non-target firms representing the same industry and matched by year is used. In order to find the drivers of targets involving in takeover bids, a logit regression is applied using the historical ratios estimated for targets and non-targets.
Conclusion	Two variables, liquidity and market-to-book, are found as statistically significant, indicating an increased target probability among firms with a specific level of ratio values. Merging and acquiring companies tend to takeover food and beverage manufacturers that are less liquid and whose assets have high market values. No significant evidence is found on the other variables.

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1 Introduction

1.1 Background

In the past two decades, many industries throughout the world have experienced a wave of intensified mergers and acquisitions (M&As) activities (Hyun and Kim 2010). Companies in different sectors, sizes and capital structures have signed tendencies for approaching consolidations or other restructuring activities. However, there are certain trends that imply a change in the M&A industry. One significant trend is the growth in M&As beyond the U.S. and U.K. markets. Historically, the U.S. market has been the dominant market for corporate takeovers. During 2007, M&As involving European targets surpassed M&A activity in the United States for the first time in recent history (Moschieri and Campa 2009).

Considering the market in Europe, the European Commission has harmonized the market of takeovers for its member states in terms of corporate practice and regulations, which in turn changes the pattern of merger activities in Europe (Moschieri and Campa 2009). Besides the four free movements of goods, services, persons and capital within the European Internal Market, another harmonized standard is the simplified legislative framework in order to facilitate cross-border mergers of limited liability companies (EUROPA – Summaries of EU legislations: Cross-Border Mergers of Limited Liability Companies). For example, the companies that are being merged or acquired cease to exist; all assets and liabilities of the targeted companies are transferred to the new entity where either the merging or acquiring company is responsible for. Once the new entity has been set up, the national legislative framework only becomes applicable in the member state in which the new entity is registered.

Looking specifically at the food industry, M&A activity is relatively high compared with similar activity in other industries. The food industry typically ranks among the largest in size and make up a large proportion, by value, of total M&A activity. A study, made on predicting

mergers and acquisitions in the food industry, shows that during for ten of the eleven years of 1985 to 1995 the industry belonged among the top ten most active industries (Adelaja et al. 1999). For six out of the eleven years, the food industry was also included as the top four. As of 1995, two of the largest five transactions in M&A history had been of food companies. Another study of mergers and acquisitions in the food industry shows that in 1982 and 1991, food acquisitions ranked fifth in the value of merger transactions; three times in the late 1980s the industry recorded the largest merger transactions ever (Adams et al. 1997).

Previous academic studies of the drivers of M&A activities are much generalized and industry-specific drivers have, in particular, not been examined in a wider context. Most research has been either devoted to the consequences or the motives of aggregate M&A on a general basis. A subject that has received much attention in the research on M&A activity is the identification of differentiating characteristics of companies that are potential takeover targets. A number of these studies have been focused on understanding the reasons that lie behind the attempt to take corporate control (Powell 1997; Cudd and Duggal 2000; Alcalde and Espitia 2003) while other studies have had the objective of developing predictive statistical models (Powell 2004; Brar et al. 2009). However, the results of these studies are not always coinciding and sometimes they are even contradictory.

A few studies focus on the food industry. Adams et al. (1997) examined the determinants of merger and acquisition activity in the food industry. Their study examined the food processing, food retailing and food service sectors and concluded that merger and acquisition activity in the food industry is influenced by anti-trust activity, profitability and real gross domestic product. Adelaja et al. (1999) identified differentiating characteristics of companies that are potential takeover targets, using data on large public companies in the U.S. food manufacturing sector from 1985 to 1994 and developed a model predicting the likelihood of a company being targeted for M&A. The author estimated two models: a “target model” predicting the likelihood of a firm being targeted for M&A and a “takeover model” predicting the likelihood of a targeted firm being taken over. The target model proposes that liquidity, leverage, profitability, growth in sales and market-to-book ratio are significant variables when predicting the likelihood of a company being targeted for M&A. The takeover model proposes that the attitudes surrounding the transaction, the number of prior bids and the involvement of the bidder and target in other takeovers during negotiations are important factors when predicting the likelihood of a targeted firm being taken over.

1.2 Problem Discussion

For the first time in recent history, European companies surpassed their U.S. counterparts in terms of volume of M&As. Moschieri and Campa (2009) indicate that there is a difference in the market for M&As between Europe and the U.S. The dissimilarity is mainly due to the unique characteristics in the European market for corporate control and to the existence of a harmonized market in Europe. For example, the ownership structure in Europe is much concentrated, which affects the M&A attitude in terms of acquisition techniques, payment methods and premiums. Most of the European transactions are held domestically, paid in cash and the yield premiums are on average lower than the U.S. takeovers. According to Moschieri and Campa (2009), this raises questions concerning the inability to generalize the current research on the M&As in North America into an European context:

"These differences should push researchers to examine European M&As independently and not assume that existing theoretical or empirical frameworks for acquisitions in the United States automatically apply in Europe" (Moschieri and Campa 2009).

In time to the European Union's increased expansion, it is most likely that several companies in different industries have faced the same outcome: tougher competition due to the widely opened borders between countries. Within the European food industry, the high level of maturity, the advancements in information technology (such as the rising home shopping) and the growing internationalization have result in dynamic environment as well as constantly seeking for innovation (Myers 2004; Zenger 2006).

As Charles Darwin once coined the phrase "survival of the fittest", only the best players will survive if they have surpassed market expectations by acclimatizing well in the rapid changing environment. One way of processing innovation is to introduce private label products as many larger food retailers have done (Zenger 2006). Another innovative arrangement is to engage in integration activity where M&As, joint ventures and strategic alliances are represented (Lindblom and Rimstedt 2004). Furthermore, Zenger (2006) has observed that the food industry in the European Union has undergone several transformation activities in order to respond the changing consumer pattern. For this reason, the researchers believe that a study involving characteristics of M&A targets in the European Union food

industry is necessary to provide explanations of why some food companies are upon request for being acquired.

Takeover activity is often explained as arising from differences in the characteristics of the target companies involved in merger and acquisition transactions. Several studies have attempted to investigate the characteristics of target companies that differentiate them from companies not desired for takeovers. Two types of studies can be distinguished. The first type of studies had the purpose of developing predictive models of takeover likelihood (Powell 2004; Brar et al. 2009). An aspect of takeovers is that the share price of targeted companies has a tendency to rise between the time when the bid is announced and the date at which the takeover is completed. Thus, the ability to predict takeover targets successfully before the announcement of a bid provides the basis for an investment strategy. The second type of studies tried to cast light on the characteristics of firms subject to takeover bids and yield insight into the economic forces underlying takeover activities (Powell 1997; Cudd and Duggal 2000; Alcalde and Espitia 2003). Such knowledge can be of potential use to, for example, academics and corporate managers in better understanding the characteristics of companies being targeted for M&A deals. Academics can better understand M&A activity and provide independent advice to companies hoping to avoid being a takeover target. Corporate managers in poor performing companies, that wish to remain independently and want protection from becoming targets, can use this information in developing strategies that may modify their financial characteristics and thus, avoid being a subject of a takeover bid.

Even though the food industry is important, few studies have focused on this area. As stated, the food industry is typically ranked among the largest in size and value of M&A activities. Though, the food industry differs from other industries in many aspects, not only in the concern of transaction size and value, which Adams et al. (1997) has noticed in her research of M&A influences using logit regression analysis. One of the discussed characteristics is the wide supply of components, such as manufacturing and retailing, which makes the general food industry very multifaceted. Consequently, this diverse characteristic may result that the tendencies of takeover targets in the food industry are different from others.

This study attempts to identify the characteristics of companies that become the subject of takeovers by examining whether these companies present differentiating characteristics compared with companies that have not been subjected to takeover bids. The study focuses on

a single industry, food industry, in which the manufacturing sector of food products and beverages is included. The authors believe that previous studies of merged and acquired firms neither offer a consistent view of the characteristics that were important factors leading to their acquisition nor a sufficient explanation to the determinants of targets specific to the food industry.

The purpose of Adelajas et al. (1999) research was to construct a model predicting the likelihood of a takeover and their study has more of an empirical nature. The objective of this study is not to develop a model with a large predictive accuracy, or testing its use to gain abnormal returns in the capital markets. Rather, the objective is to understand and explain the most important characteristics of companies in the food industry being targeted for takeovers in the European Union. This research updates earlier studies using completely new data on European M&A deals and provides new insights in a quite unexplored market. To the authors' knowledge, no similar study of the food industry has been made on the European market since most of them have focused on the U.S. Given the changes that have taken place in the food industry, it is not certain if conclusions from previous studies offer good descriptions of why mergers and acquisitions take place in the European Union today.

1.3 Purpose

This report aims at determining the characteristics of takeover targets in the food industry within the member states of the European Union. By using the logit model, the researchers intend to identify firm targeting behavior in terms of financial variables that might explain corporate takeover decisions of food and beverage companies in 1999 to 2008 period.

1.4 Delimitations

Due to the harmonized construction of European regulations, it is most relevant to include all the 27 member states of the European Union. Those countries that are still outside the EU membership shall not been facing similar changes and thus, this study only concerns current member states of the EU.

1.5 Thesis Outline

In order to provide a clear outline of this study, the researchers have chosen to dispose the report in the following structure:

Chapter 2 presents an overview of the European food industry and a definition of mergers and acquisitions. It also provides a short description of the different types of mergers and the process concerning M&A activities. This section ends with exemplifying some of the M&A events occurred in the specific industry.

Chapter 3 provides different theories of motives for M&A activities, mainly with a focus on the general economic perspective. The researchers' hypotheses are formulated adjacent to each academic theory. A summary of the presented theories including a table is provided in the last section.

Chapter 4 gives the reader a detailed explanation of the used methodology and data collection. Concretely, the researchers discuss the applied research method and approach, following by a presentation of the practical data collection among others. The proposed logit model as well as the different variables is presented. The researchers conclude this section with reflecting on the study's reliability and validity.

Chapter 5 contains empirical findings and analysis based on the performance of regression analysis. Tables are provided in order to conceptualize the outcomes and their relation to the previously presented theories.

Chapter 6 is the final part and it includes conclusions and recommendations of further research. A reflection of the study in general is given, as well as a last discussion of the most important empirical findings. The final section ends with suggestions of potential research topic.

2 Practical Framework

2.1 Food Industry Structure

With 310 000 companies and 4.8 million employees, the European food industry sector is one of the largest and most important manufacturing sectors in the region. Accounting for 14.5 percent of total manufacturing turnover in 2009, the food industry is the second largest (after metal) manufacturing industry in the European Union (European Commission - Enterprise and Industry: Food Industry 2009).

As the consumer demand for food products is comparatively static, the food industry is less cyclic and less affected by economic fluctuations than other industries. Certain sectors of the food industry are mature and shows sign of saturation (Wijnands et al. 2008). However, the industry growth shows significantly modest result than the average (Food Navigator – European Food Industry: the Facts and Figures 2005).

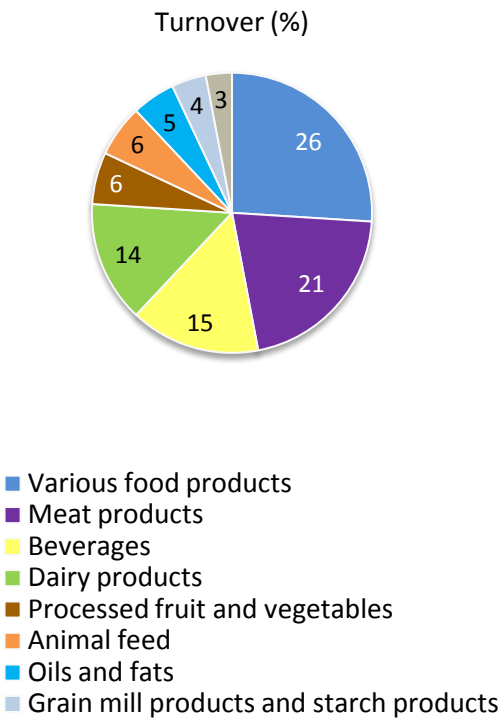
In general, the food industry sector is much characterized by fragmentation; a few European multinational companies (MNCs) such as Unilever and Danone are competing on the global market with a wide range of products and well-established brand names whereas the small and medium sized enterprises (SMEs), which represent 99 percent of the total enterprises in the food industry sector, are serving the local market by focusing on regional preferences (Food Navigator – European Food Industry: the Facts and Figures 2005; European Commission - Enterprise and Industry: Food Industry 2009). Moreover, the specialized SMEs and the cultural differences between the states allow the European food industry to use economies of scope to pursue differentiation in terms of products (Wijnands et al. 2008).

The importance of SMEs is enormous. Based on 2006 data, the SMEs generated 48.7 percent of total food and drink turnover in Europe and 63 percent of employment in the certain industry (CIAA – Data and Trends of the European Food and Drink Industry 2009).

There are four main sectors within the European food industry: various or other food products, beverages, meat processing and dairy products, which together amount to 76 percent of total turnover in the food industry. Representing 26 percent of total turnover, the "various foods products" category is the largest sub-sector within the food industry. Products of this heterogeneous category include baby food, pasta, bakery, pastry, chocolate and confectionaries (CIAA – Data and Trends of the European Food and Drink Industry 2009).

Exhibit 1.

Distribution of turnover in sub-sectors.



Source: Eurostat, SBS, 2006.

Considering the demographic weight of industry, the member states France, Germany, Italy, Spain and United Kingdom are the leaders of food manufacturing in the European Union. These five nations together amount to 65 percent of total turnover and 50 percent of the employment (Food Navigator – European Food Industry: the Facts and Figures 2005). SMEs with fewer than 250 workers tend to concentrate on South Europe while larger firms rather

operate in the Northern markets; the United Kingdom and Denmark employ the highest numbers (60 percent) in large companies (European Commission – Statistics in Focus 2004).

The ambition of unifying the EU region into one single market creates new opportunities for companies, using economies of scale for example, in order to increase productivity and expand across borders. Though, a study commissioned in 2007 by the European Commission DG Enterprise shows that one of the reasons for the weak food industry competitiveness in the European Union is economies of scale, which indicates that food companies do not fully exploit large-scale production and thus, they do not have price advantage on the same scale as their competitors in the Unites States, Canada and Australia (Wijnands et al. 2008).

2.2 Mergers and Acquisitions

Defining companies that buy other companies is sometimes confusing because terms as mergers and acquisitions, takeovers and consolidations are used interchangeably even though the differences between the terms are not consistent with each other (Gaughan 2007).

According to Gaughan (2007), the term *merger* usually refers to the combination of two corporations in which the merging corporation survives and the existence of the merged corporation ceases. *Takeover* is another term that sometimes only refers to hostile transactions, and other times the term refers both friendly and unfriendly mergers. The definition of *consolidation* typically implies business combinations whereby a minimum of two companies join to form an entirely new company.

2.2.1 Types of Mergers

A brief description of the different types of mergers is presented in this section. Prior knowledge about the categorizations of mergers can provide a better understanding of the different motives for the occurrence within the M&As.

A *horizontal merger* is when two companies operating in the same market join together. Therefore, the companies are usually each other's competitors as well (Gaughan 2007).

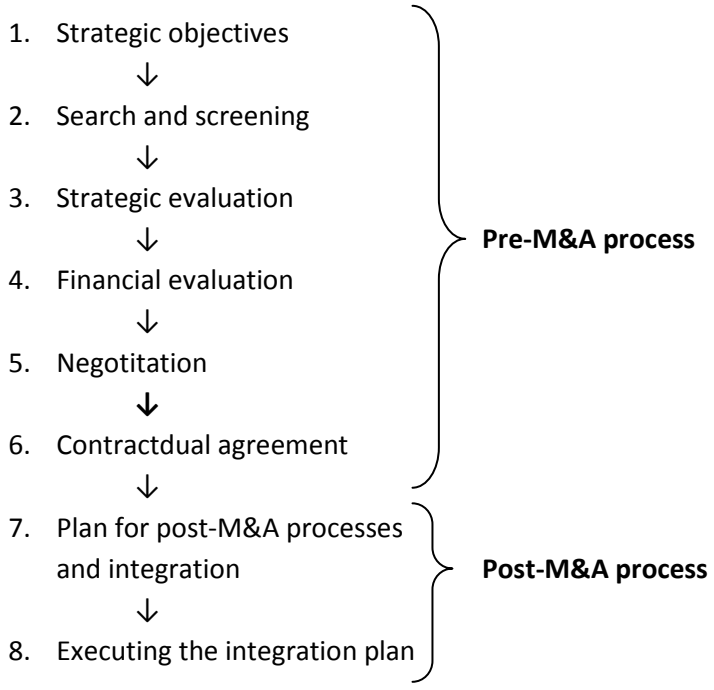
Combined companies that have a buyer-seller relationship are called *vertical mergers* (Gaughan 2007). In general, this type of mergers deals with purchase where the position of target is differently located in the value chain than the merging firm. A vertical merger can either take place one step forward or one step backward in the value chain but it never occurs in the same position since it is traded under the name of horizontal mergers. Furthermore, Gaughan (2007) explains *conglomerate mergers* as business combinations in which the companies are not competitors and do not have a buyer-seller relationship, in other words across industries.

2.2.2 The Process of M&A

There is a wide range of defining the process of M&A but it is commonly viewed as a procedure where several stages are included. The one that has the more simplified definition is Adelaja et al. (1999), who suggests that there are two primary stages in the process of M&As: the targeting stage and the actual takeover of a target. Canina et al. (2010) refers to the "typical M&A division", which includes the pre-merger process, the actual deal and the post-merger integration. A similar processual view has been previously supported by Parvinen and Tikkanen (2007) but their perspective, as presented below, is somehow broader.

Exhibit 2.

The processual view of M&A by Parvinen and Tikkannen (2007).



2.2.3 M&A Events in the Food Industry

As previously stated, the food industry has responded to the changing environmental conditions in the European Union by applying several M&A activities. As a result of the wave of mergers and acquisitions that has taken place in the global food manufacturing industry, its revenues from the world's top ten companies were worth amazingly $260 billion in 2002 (Thomas 2002).

Even though only the acquired company is based in the European Union and the sector represents the food retailing, it is worth mentioning that one of the most debated acquisitions in the food industry ever is Wal-Mart's purchase of two German chains, Wertkauf and Spar Handel, in 1997. The American retailer, which is also the largest in the world, began writing its own story of gloom when it entered the European market firstly by acquiring 95 stores of German retail groups (Wertkauf: 21 and Spar Handel: 74) and later on purchased 219 outlets of the U.K. Asda. Wal-Mart left the German market in 2006, after years of low profitability as a consequence of the management's inability to adapt local consumer habits (Pioch et al. 2009).

Turning to M&A events in the food manufacturing industry, some certain companies have also been working actively. In February 1998, British-French joint venture Yoplait Dairy Foods bought family-run Raine Dairy Foods at a price of £66.25 million (Dairy Industries International - UK Dairy Giants round up the Little Guys 1998). Not only Yoplait Dairy Foods acquires smaller players, Icelandic food group Bakkavör's £102 million takeover of chilled convenience food supplier Katsouris, a Greek Cypriot family based firm, in 2002 is another example (Wyman 2002).

The acquisition of Dutch baby food maker Royal Numico by Parisian Group Danone in 2007 is a spectacular event compared with the previous presentations: the price tag ended at €11.8 billion (Didier 2008). However, the acquisition of Numico and the strong demand of its Activia yoghurts seem to have boosted the company's financial performance. The first quarter in 2008, Danone reported a sales growth of 19 percent, excluding currency fluctuations and acquisitions the sales increased 11 percent (Dairy Industries International - Danone sales climb 19% with yogurt demand 2008).

3 Theoretical Framework

3.1 Motives of M&As

In the literature on mergers and acquisitions there are a number of different theories on the motives that lie behind the takeover of companies. However, testing hypotheses based on these theories provides some difficulties keeping in mind that not all takeovers necessarily respond to the same motivation and that a number of motivations can, at the same time, be present in the same transaction (Alcalde and Espitia 2003). Regardless of this, a number of empirical studies have tried to investigate the motives of takeovers. Thus, they have analyzed the characteristics of takeover targets that differentiate them from other companies. In some cases the targeted companies are compared with acquiring companies and, in others, with companies that have not been the subject of takeover bids.

The difficulty lies in selecting a variable that is able to explain each theory in a proper way. A number of variables can be used to test one theory, at the same time one variable can be used for testing various theories. This leads to a great complexity in trying to understand and interpret the results. The process of choosing the most relevant variables to include in the study followed in a large number of studies has been to introduce a set of variables into the model and leaving it to select the most relevant ones. Though, numerous studies have chosen variables not in function of their statistical significance but rather on the basis of the theories on mergers and acquisitions that most frequently appear in the economic and financial literature and in the end formulated several specific hypotheses (Alcalde and Espitia 2003; Powell 2004; Brar et al. 2009).

Next, the researchers present economic theories that most habitually appear in the literature, which analyze the characteristics presented by takeover targets that differentiate them from other companies. Based on these theories, the researchers formulate their own hypotheses.

Although few studies are conducted on the food industry, previous academic findings about M&As in general may provide valuable insights into the underlying forces driving M&A activity in the food industry.

3.1.1 Inefficient Management

The economic theory explaining inefficient management has its origins in the theory of the market for corporate control by Manne (1965). He views the threat of takeover as a useful mechanism for encouraging managers to pursue shareholder wealth maximization strategies. According to Manne (1965), corporate control is a valuable asset actively traded on a market. The operation of this market depends on the link between a firm's share price and the performance of its management. Manne (1965) points out that when a company is managed in an inefficient way other management teams will eventually become aware of this and will then be prepared to take control of that company, replacing the old management and improving it. Jensen (1993), among a few researchers, suggests that the control market represents the most efficient mechanism for controlling management, considering that the internal control systems of large quoted companies have been unsuccessful in aligning the interest of shareholders and management.

Takeovers are motivated by the possible gains that arise when the inefficient managers of the acquired companies are replaced. The takeover motive is based on the finance theory principle that takeovers are a mechanism by which managers of a company who fail to maximize its market value are replaced by more efficient managers (Powell 1997). Companies with inefficient management are likely to experience poor performance. Poor performance relative to other companies operating in the same industry may cause a company's share price to fall below its value under efficient management, which encourages takeover bids from potential new management teams allowing a transfer of control.

The measure used to estimate the inefficient management theory is profitability. However, a number of studies have used different accounting measures of profitability to approximate the theory. In this paper, following the works of Alcalde and Espitia (2003) and Brar et al. (2009), the authors use the return on equity (ROE) of the targeted company to measure the efficiency.

The ROE is measured as an average over three years prior to the announcement of takeover bid.

The empirical evidence testing profitability is not conclusive whether profitability is a significant variable in explaining takeover targets. Adelaja et al. (1999) found that targeted companies were more profitable than non-target companies. Though, Alcalde and Espitia (2003) and Brar et al. (2009) concluded that the profitability of targeted companies does not significantly differ from that of non-target companies.

H1: *Companies that have a lower return on equity than that of other companies operating in the food industry will have a higher probability of being the object of a takeover bid.*

3.1.2 Growth-Resources-Imbalance

This theory argues that growth-resource imbalances within companies that are objects for takeovers offer possible gains to acquiring companies. Companies with a difference between their growth and their financial resources are likely targets. Thus, two types of companies are likely targets: low-growth, resource-rich companies and high-growth, resource-poor companies (Levine and Aaronovitch 1981; Myers and Majluf 1984).

For example, high growth companies with low resources (i.e. low liquidity and high leverage) may be targeted by acquiring companies with the opposite growth-resource imbalance (i.e. low growth, resource rich). This may be the case in a situation where the target companies' projects can be more profitably financed at the acquirers' lower cost of capital or if the target has inadequate financial support but has interesting prospects of high growth. Also, low growth companies with high resources may be targeted by acquiring companies with the opposite growth-resource imbalance (i.e. high growth, resource poor) so as to take advantage of the excess cash flows of the target. This may be the case when the excess resources of acquired companies can be more profitably invested in the acquirers' projects or if a target's managers are not fully utilizing its resources. By taking over a company with the opposite growth-resource imbalance, the value of the combined companies should be larger than the value of the two companies separately (Powell 1997).

Firms with a large amount of available resources and limited growth opportunities are attractive for potential bidders interested in taking advantage of the excess resources. The free cash-flow theory, suggested by Jensen (1986) who looked at the agency conflict between shareholders and management, shows that firms with resources that are in excess of that required to fund their investment projects that have a positive net present value have a higher likelihood of being acquired. Myers and Majluf (1984), analyzing investment and financing decisions under the hypothesis of asymmetric information, suggests that firms with many growth opportunities but limited available resources, also have a higher likelihood of being acquired. The existence of a large cash reserve seems to lead to suboptimal behavior by management.

Growth, liquidity and leverage variables are included in the estimated models. These variables have been used by several studies (Palepu 1986; Alcalde and Espitia 2003; Powell 2004) and appear to be potentially important variables in determining the likelihood of takeover.

Looking at the variables individually the variable growth, as discussed above, could be either high or low and still be an attractive characteristic among targeted firms. A low leverage ratio indicates that the capital structure of a company is proportionally dominated by equity rather than debt. Some researchers have concluded that companies with low leverage are more likely to be subject to takeover bids (Palepu 1986; Adelaja et al. 1999), while other have concluded that companies with high leverage are more likely to be subject to takeover bids (Powell 1997; Alcalde and Espitia 2003). It is pointed out by Lintner (1971) that large companies can gain capital through mergers when refinancing the debt of small target companies at lowered borrowing costs. So bidding companies, which are raising capital through debt to expand the business, rather avoid acquiring highly leveraged companies.

Considering the variable liquidity, there are two aspects. Adelaja et al. (1999) argues that high liquidity reflects short-term solvency of a company and the possibility for the merging or acquiring management to make use of excess cash more efficiently, which agrees with the cash-flow theory by Jensen (1986) discussed above. Another aspect of this is presented by Harford (1999) that investigated corporate cash reserves and acquisitions. The author indicates that a large cash balance is valuable in fighting and deterring takeover attempts. According to Harford (1999) cash provides the flexibility to initiate a defensive repurchase tender offer or the so called Pac Man defense. The consequence of this is that cash-rich firms

in this way remain safe from takeover. However, firms with low level of liquidity are found in some researches as takeover targets (Ambrose and Megginson 1992; Powell 1997). The latter researcher, Powell (1997), concludes that the takeover probability of a firm is higher when the level of liquidity is below the industry average.

A few studies have tested this theory through the differences observed in the liquidity, leverage and growth of target and non-target firms. Following Palepu (1986) and Alcalde and Espitia (2003), the researchers have additionally included a dummy variable that takes the value 1 for those firms with a combination of high leverage, low liquidity and growth expectations or low leverage, high liquidity and limited growth opportunities, and the value 0 for the other firms.

Growth is measured as average sales growth over the period of three years prior to the observation year. *Liquidity* is measured as the ratio working capital to total net assets, and *leverage* is measured as the debt to equity ratio. Both these latter variables are averaged over three years prior to the observation year.

H2: *Companies that have an imbalance between available resources and growth opportunities compared to other companies operating in the food industry will have a higher probability of being the object of a takeover bid.*

3.1.3 Firm Size

The size of the target companies is one aspect that influences the likelihood of whether the transaction will be successful, as well as the more or less costly character of this for the bidding firm. Its influence on the likelihood that a company will be the object of a takeover is, therefore, not justified from the point of view of the economic motives that drive the acquisition, but rather from the point of view of its influence on the costs of the transaction for the bidder (Alcalde and Espitia 2003).

This firm size theory suggests that larger companies are less likely to become acquisition targets due to the greater costs of integrating the acquired company into the organizational structure or framework of the acquiring company, and also due to the difficulties that may

come up of overcoming the opposition of the management team of the target firm. Larger companies have the ability to engage in more prolonged and costly takeover defenses. With respect to size, various authors (Levine and Aaronovitch 1981; Powell 1997; Alcalde and Espitia 2003) have pointed to the existence of transaction costs associated with the size of the acquired firm. Therefore, the researchers can expect a negative influence to be exerted by size on the likelihood that the firm would be a takeover target. This relationship has been confirmed in a significant number of studies, such as those of Hasbrouck (1985), Palepu (1986), or Barnes (1999).

The logarithm of total sales, as a measure of the size of the firm, is included in the models. Size is measured as a sales average over three years prior to the reference year, after that the logarithm of the mean value is calculated. The logarithm is used because all values are transferred to the base of ten, meaning that the sales are "neutralized" and comparable with others.

H3: *Companies with a smaller size than those of other companies operating in the in the food industry will have a higher probability of being the object of a takeover bid.*

3.1.4 Asset Undervaluation

This theory argues that companies whose market values are low compared to their book values are viewed as undervalued and are likely takeover targets. The economic rationale behind this idea is that companies with low market-to-book (MTB) ratios signals undervalued or under-utilized assets and are "bargains" (Powell 1997). By finding companies with low MTB ratios an acquiring company takes over "cheap" assets.

While low MTB ratio means undervalued assets, high MTB ratio indicates growth opportunities. Firms that have higher MTB ratios tend to be more profitable and face significantly lower borrowing cost (Chen and Zhao 2006). The higher MTB ratio, the more can be borrowed since debt is cheaper for firms whose market values are high.

Marris (1964) suggested that the main motivation for the merger and acquisition of companies was the search for assets that were undervalued by the market. For a firm interested in

introducing itself in a sector, the acquisition of an undervalued firm would appear to be an interesting option from a financial point of view (Hasbrouck 1985). It could also be the case that the objective of the acquiring company could be to take advantage of market bargains, in order to afterwards resell the assets at a higher price. The empirical evidence in this regard is not conclusive. The results of some studies (Hasbrouck 1985; Brar et al. 2009), confirm that takeover targets are undervalued. However, there are others (Palepu 1986; Powell 1997; Barnes 1999; Alcalde and Espitia 2003) which show that the valuation ratio has no significant effect on the probability that a firm will be the subject of a takeover bid.

The ratio of the market value of common equity to the book value of common equity serves as the market-to-book variable and is calculated for the year immediately prior to when the observation is drawn. MTB is predicted to carry a negative sign in the logit model.

H4: *Companies that have a valuation ratio lower than that of other companies operating in the food industry will have a higher probability of being the subject of a takeover bid.*

3.2 Summary

To summarize, the four hypotheses presented above appear most frequently in the literature on identifying the characteristics of takeover target companies that differentiate them from other non-taken over companies. The researchers have followed the approach of several studies (Barnes 1999; Alcalde and Espitia 2003; Powell 2004; Brar et al. 2009), which consist of choosing variables to include in a logit regression model based on theories on mergers and acquisitions and finally formulating a number of hypotheses based on the theories. As a general conclusion these studies do not produce a consistent picture of the typical companies that are the object of takeovers and are not of use in supporting or refusing various characteristics of targeted companies. A number of reasons can be discussed for the inconsistency in the literature. First, the literature covers a variety of time periods and most of the studies have been done on either the U.S. or the U.K. Research results suggests that whatever characteristics (motives) are important may change over time. Each period seems to be characterized by particular causative factors, but factors that differ in each period (Sorensen 2000). Second, the studies presented above are very general and apply data into their models taken from several industries.

To the authors' knowledge only one study that is similar to theirs, Adelaja et al. (1999), is conducted on the food industry. However, Adelajas et al. (1999) study is more of an empirical study as it investigates the reasons that can explain takeovers by introducing a set of variables into their prediction model and leaving it to select the most relevant ones. Also, their study uses data from the U.S. market for the period for the period 1985-1994. This research differentiates from Adelajas et al (1999) study by trying to examine the characteristics of takeover targets with motives based on economic theories. The authors feel that this approach yields more insight into the economic forces underlying takeover activity. Also, the researchers use more recent data on an unexplored market, the European market. Given the differences that exists between the U.S. market and the European market concerning M&As and also given the changes that have taken place in the food industry since Adelajas et al. (1999) study the authors believe that this study might yield conclusions specific for the food industry that haven not appeared in economic literature before.

Table 1.

Summary of formulated hypotheses and their effects on the probability of being targeted.

Summary of Hypotheses			
Hypothesis	Variable	Definition	Coefficient expected sign
Inefficient Management	Profitability	Net profit/Equity	Negative (-)
Growth-Resources-Imbalance	GRDUMMY		Positive (+)
	Growth	Average sales growth	(+/-)
	Leverage	Debt/Equity	Negative (-)
	Liquidity	Working capital/Total assets	Positive (+)
Firm Size	Size	Natural logarithm of total sales	Negative (-)
Asset Undervaluation	Market-to-book ratio	Market value of equity/Book value of equity	Negative (-)

4 Methodology and Data Collection

4.1 Research Method and Approach

The aim of this study is to empirically examine the motives behind the selection of target firms in the takeover market and hence, pursuing a quantitative research method is the most suiting way of obtaining adequate results. Since the research requires a high level of objective mindset when working with financial measurements and statistical analyses (Bryman and Bell 2005), the quantitative method allows a sense of formality in terms of research control and at the same time, it is characterized by a distanced approach to the source of information (Holme and Solvang 2001).

In this study, previous theories and models are used to examine and conclude the tested outcomes based on theoretical concepts. Thus, the deductive approach is most suitable and effective since numerous academic studies contribute lots of relevant information in which the hypotheses are aimed to be submitted to criticism in the empirical study (Bryman and Bell 2005). In addition, due to the explanatory nature of this research, adopting a deductive model direct the researchers from the specific to the general where theories are used to explain the empirical observations and observations are, in turn, suggested to modify economic theories (Ryan et al. 2002).

4.2 Source of Information

Different sources of information are needed to accomplish the research. Most of the used information is consisted of secondary sources where the researchers already have revised its material. In order to theoretical backgrounds and other scientifically based information, numerous academic articles distributed via Lunds University Electronic Library, Elin@Lund,

have been used. The databases SSRN (www.ssrn.com) and SSCI (www.isiknowledge.com) are used as supplementary sources of information to Elin@Lund since the university's database, in this case, is considered as the most reliable.

For gathering financial data, the databases Reuters 3000Xtra and Datastream are needed. Reuters 3000Xtra provides description about all M&A activities in any countries during a specified time framework. Financial information about companies' balance sheet and income statement are founded in the statistical database called Datastream.

4.3 Definitions

The definition of *food industry* refers to the manufacturing of food products and beverages. In this study, the researchers are satisfied with using these components since the Reuters 3000Xtra classification is adapted in the research. An overview of the classification is presented in "4.4.1 The Classification of Food Industry".

When referring to *target* and other closely related designations, it concerns food and beverage companies that have been subject to takeover bids, which allow them to be differentiated from other firms. The companies are considered either as merging or non-merging, which means that some of the takeover deals are completed and some are not. The study includes both completed and cancelled M&A negotiations.

4.4 Data Collection

In this section, the practical methodology is presented. All the gathered data of completed and cancelled M&A deals in the 27 member states of the European Union are distributed via the database Reuters 3000Xtra. Since the purpose of this study is to identify characteristics among targets operating in the food and beverage manufacturing industry, the authors have left the acquirers unobstructed from industry-specific requirements. Basically, it means that the acquirers of M&A activities can either serve the food industry or elsewhere.

Table 2.

Member States of the European Union included in the study.

Member States of the European Union			
Austria	Finland	Latvia	Romania
Belgium	France	Lithuania	Slovakia
Bulgaria	Germany	Luxembourg	Slovenia
Cyprus	Greece	Malta	Spain
Czech Repuclic	Hungary	Netherlands	Sweden
Denmark	Ireland	Poland	United Kingdom
Estonia	Italy	Portugal	

The researchers intend to have a time framework of ten years, from 1999 to 2008, which means that both the announcement date and completion date must have appeared no earlier than 1st January in 1999 and no later than 31st December in 2008. It is reasonable to adopt this time framework given the conditions to make this research properly. The financial crisis has probably resulted in recessions of the M&A activities, which indicates that including the two recent years, 2009 and 2010, is not necessary in the time framework.

Table 3.

Annual distribution of M&A deals included in the final sample.

Annual distribution of M&A deals	
Year	Number of deals
1999	3
2000	4
2001	2
2002	5
2003	6
2004	3
2005	3
2006	8
2007	13
2008	6
Total deals in the final sample	**53**

The gathered data consists of 130 completed and cancelled deals. According to Powell (1997) a completed deal is defined as a friendly deal whereas a cancelled deal occurs when the target management rejects the initial bid due to the hostile nature. However, due to the lack of financial information in both Datastream and Reuters 3000Xtra several deals needed to be excluded in the sample. Furthermore, the authors have not included Reuters 3000Xtras "investment deals" since concrete M&A deals are wanted. In total, 53 deals are included in the final sample.

Next step is gathering historical financial ratios distributed by Datastream and Reuters 3000Xtra. The researchers have decided to collect historical data three fiscal years prior to the announcement date of takeover bids, which seems consistent with several similar studies on predicting mergers and acquisitions (Powell 1997; Adelaja et al 1999).

There are a number of food and beverage companies that have, within a short time period in same the fiscal year, been involved twice or more as candidates in takeover deals. In order to deduct the effect of these deals, the researchers have only taken account of using financial data for 44 deals.

In several M&A deals, the gathered financial data is provided in other currencies than the Euro (€), which is logically considered as the standard currency of this study. To covert these ratios into euro, an exchange rate-database of the Swedish Central Bank (Sveriges Riksbank – Interest & Exchange Rates: Cross Rates) is used. All deals in other currencies than the Euro are converted with the annual averages of exchange rates, such as GBP and DKK against EUR. Consequently, in each case and for every reference year the domestic currency is converted to the certain annual average of exchange rate into the Euro.

4.4.1 The Classification of Food Industry

When gathering the data of M&A deals, the tobacco sector that Reuter 3000Xtra classifies as subgroups to the food industry, has not been taken into consideration. This is due to the unsuitability of referring the sector to the food industry where the researchers specifically include the food products and beverages in the study.

Exhibit 3.

The Reuter 3000Xtra's classification of the food industry.

- Consumer Staples
  - Food, Beverage & Tobacco
    - Beverages
    - Food Products
      - Agricultural products
      - Packaged Foods & Meats

4.4.2 Control Sample

A control sample of non-target firms in the food and beverage manufacturing industry, matched by year, is selected from Reuter 3000Xtra. In each reference year of the control sample, the percentage of M&A activity relative to the entire sample period of 1999 to 2008 is matched. If, for instance, approximately 4 percent (5 deals divided by 130 deals in the initial sample) of the gathered M&A deals take place in 1999, the researchers randomly assign 4 percent of the non-targets in the control group to 1999. This matched-pair approach for constructing the control group is in line with several similar studies, such as Powell (2001) and Brar et al. (2009). Moreover, Alcalde and Espitia (2003) argue that using the same number of targets and non-targets in the control sample can give raise to problems when estimating the maximum likelihood of a firm being targeted of the logit model. In order to solve this problem, they suggest using a sample of proportioned targeted and non-targeted firms.

The researchers consider using the proportion taken from the initial sample when constructing the control group. This is because the initial sample reflects the total amount of M&A activity, which is desired when estimating the annual distribution of deals of non-targets. Using the final sample would not give a correct illustration in the construction of control group.

The 104 companies from the non-target population represent the same industry, food and beverage manufacturing industry, as the experimental companies. Furthermore, the non-target firms are selected on the basis that they have not been the subject of a takeover bid during a

period of 1999 and 2008, and whose financial data is stored either on the Datastream or Reuter 3000Xtra. It is also worth mentioning that the each non-targeted company is only assigned once in the control group, which basically means that none of the 104 companies is represented more than once in the total control sample.

4.5 Logit Regression Model

A logit model is carried out in order to estimate the effect that financial variables has on the probability of firms being targets of takeover. Numerous research studies have run logit regression model to find characteristics of target firms in different industries (Sorensen 2000; Alcalde and Espitia 2003). Few academic literatures have practiced logit regression with the purpose of determining M&A targets in the food industry. Adelaja et al. (1999) is one of those who are exempted from this phenomenon since two lines of the logit model; target and takeover model, are used in predicting M&As in the U.S. food manufacturing industry. As the authors experience, it is time for renewal in terms of applying the logit model in the European Union and inserting values from recent data.

Another reason for carrying out the logit model is that the dependent variable of this study only can take values between 0 and 1: targeted and non-targeted. The logit model assures that the predicted values will never be outside the range [0, 1] of the dependent variable, which is no assurance when running an ordinary regression model (Ramanathan 2002).

Multiple discriminant analysis (MDA) is another statistical tool to use the ratio data for developing a linear model to discriminate the targeted group from the non-targeted group (Stevens 1973; Sorensen 2000). However, Dietrich and Sorensen (1984) argue for using logit analysis instead of MDA when predicting mergers in order to avoid some problems associated with the use of the latter one. For instance, the logit model does not rely upon the assumption that independent variables are distributed multivariate normal, which is required by the use of MDA. Second, using logit will give a direct interpretation of the different explanatory coefficients. The coefficients distributed from MDA are only unique up to a factor of proportionality, which makes interpretation of their significance difficult.

The logit regression model, run in the econometric software EViews, is used to specify the relationship between the financial characteristics of a firm and the probability of it being merged or acquired. The function of the logistic model can be expressed as (Ramanathan 2002; Alcalde and Espitia 2003):

$$\ln\left[\frac{P}{1-P}\right] = \alpha + \beta X + u \quad (1)$$

where *P* is the value of the dependent variable [0, 1]. Solving the formula for *P* as follows:

$$P\ (i,t) = \frac{e^{\alpha+\beta X+u}}{1+e^{\alpha+\beta X+u}} = \frac{1}{1+e^{-(\alpha+\beta X+u)}} \quad (2)$$

where $e^{\alpha+\beta X+u}$ is the linear function of observable independent variables and $P(i,t)$ the probability that a firm is subject to takeover in period *t*. As the equitation implies: if $\beta X \rightarrow -\infty$, then P approaches the value 0, and 1 when $\beta X \rightarrow +\infty$. Hence, P can never be outside the range [0,1] (Ramanathan 2002). The likelihood of being a merger target can be measured as:

$$P(i,t) = P\left(Y_{i,t} = \frac{1}{x(i,t-1)}\right) = F(x(i,t-1)\beta) \quad (3)$$

where $x(i,t-1)$ expresses the vector of observed financial characteristics of the firm i in a period prior to that of the announcement of the takeover bid, β represents unknown parameters that has to be estimated and F is the cumulative distribution function of a random variable with uniform distribution in the intervals of 0 and 1 (Alcalde and Espitia 2003).

4.5.1 Dependent Variable

Since the logit model is applied, the dependent variable must be dichotomous which means that it only can take two values (Ramanathan 2002):

(1) $Y_{i,t} = 1$ if the firm was targeted; or
(2) $Y_{i,t} = 0$ if the firm was not targeted

These above values are chosen to support the main duty of this research, which is identifying the financial characteristics of targeted companies, and hence, the chosen dependent variables must be able to separate targets and non-targets.

4.5.2 Independent Variable

While the dependent variables describe whether a firm was targeted, the independent variables explain the outcome of the first-named, in other words, why some firms became targets and why some did not. The variables that have been extracted are the ones that have been presented in Table 1 in the previous chapter: profitability (ROE), growth (growth of net sales), leverage (long-term debt/equity), liquidity (working capital/total net assets), size (natural log of net sales) and market-to-book ratio (market value of equity/book value of equity).

4.5.3 Dummy Variable

A dummy variable is needed to capture the effects of qualitative independent variables on the dependent variable (Ramanathan 2002). In this study, the researchers have included a dummy variable with the purpose to investigate the correlation of the variables in the growth-resources-imbalance hypothesis presented in the theoretical framework. As previously stated, the dummy variable can take the value 1 for those companies with a combination of high leverage, low liquidity and growth expectations or low leverage, high liquidity and limited growth expectations, and the value 0 for the rest of the companies (Alcalde and Espitia 2003). In consistency with Palepu (1986), the dummy variable takes the following values:

$A = 1$ if the firm had high leverage, low liquidity and high growth; or
low leverage, high liquidity and low growth

$A = 0$ if the firm did not fulfill the above combinations

Each of the leverage, liquidity and growth variables is defined as “high” if its values for a firm equals or is greater than the mean value of the total investigated population (including

targets of 44 and non-targets of 104). Otherwise, it is defined as “low”. For example, if the average growth value is 9 percent, firms must have 9 percent or higher in growth to be considered as having “high” growth expectations. However, the firm takes the value 0 even if it fulfils one or two of the requirements in each combination.

4.5.4 Variable Adjustment

In some researches (Frecka and Lee 1983; Konings and Roodhooft 1997; Cudd and Duggal 2000), the estimated financial ratios are adjusted towards industry targets. Generalizing the variables means that, for instance, the distributional effects of cross-sectors and merger types do not disturb the accuracy of a study. Although the benefits of adjusting the gathered financial ratios, none of them in this research are generalized neither for sector-specific nor merger-specific distributional effects. Since the main emphasis of this study is laid on the targeting stage of the M&A process (Adelaja et al. 1999), in which the purpose is to explain why some food and beverage manufacturers become candidates for takeovers, the researchers do not believe that variable adjustment is necessary. If the actual takeover of a target-stage was approached, then the generalization of ratios would be relevant in the context. Second, the study only stresses the food industry where two sectors, food products and beverages, are included. Therefore, the risk of distributional effects of cross-sectors should be negligible as a consequence of the low grade of sector disturbances, which the researchers suggest. Third, no matter what types of M&As the deals are: horizontal, vertical or diagonal, they are not consistently matched in the study’s main core and thus, merger-specific distributional effect should be not taken into account.

4.6 Reliability and Validity

The reliability of this study is considered as high since same measure values would probably be obtained if a new study would be carried out again, referring to Bryman and Bells (2005) definition of terminology. As the financial databases, Datastream and Reuters 3000Xtra, are used it increases the reliability as well. Additionally, several premier tiers of finance and accounting journals such as *Journal of Accounting Research, Journal of Accounting and Economics, Journal of Business Finance and Accounting* and *Journal of Economics and*

Business have contributed useful theories to the research (Ryan et al. 2002). Using highly cited journals imply that the publications are well-reputed and hence, it further supports the study's reliability.

In the study, a sample of 130 deals in the European Union during 1999 to 2008 is gathered but only 53 of them have available financial information. The huge number of existing observations falls away, which decreases the study's level of being representative. Moreover, the researchers acknowledge the limitation with only applying historical ratios of 44 deals but it is considered as a deliberate action. Otherwise, without excluding some of the "extra" deals, the reliability and validity would be even lower.

Generally, validity refers to the measurement of an intended concept and its comparison of what really have been measured in the study (Bryman and Bell 2005). The researchers consider this study being valid because the key point of identifying characteristics of targets in the food and beverage manufacturing industry is fulfilled by running historical ratios in a logit regression analysis.

5 Empirical Findings and Analysis

5.1 Empirical Findings

A *t*-test is conducted to investigate the existence of significance difference in estimated mean values, for each of the six variables used in this study, between two samples consisting of target and non-target companies, respectively. The researchers have considered applying a *t*-test in order to examine whether the following hypothesis should be accepted or rejected (Brooks 2008):

$$H_0: \beta = \beta^*$$
$$H_1: \beta \neq \beta^*$$

The null hypothesis refers to the meaning that there is no significant difference in estimated mean values between targets and non-target companies. The hypothesis is tested at the significant levels of 1 percent, 5 percent and 10 percent.

In this section, the empirical findings of the logit regression are presented. Three different combinations of the logit model are presented. The first model includes four independent variables in addition to a constant term. These four variables represent the four hypotheses formulated earlier in this study. The second model includes seven variables in addition to a constant term and is a re-estimation of the first model. Three additional variables, the ones used in defining the variable GRDUMMY, have been added. Finally in the third model the dummy variable, GRDUMMY, has been excluded and thus, the model includes six variables. The objective with the third model is to examine which of the three variables defining the dummy variable that is predominant in the sample.

5.1.1 Result from *t*-test

Table 4 includes the mean and median values for each of the variables in the two samples consisting of target and non-target companies. As previously mentioned, a *t*-statistic (with unequal sample and unequal variance) is used in Excel to test the significant approach of independent variables between target and non-target companies. Mean values for each variable in the two samples, consisting of the target and non-target companies are estimated and applied in the hypothesis test. The researchers have applied a two tailed test; the value of the *t*-statistic appears in the last column of Table 4. The results indicate that all of the variables except the market-to-book ratio (MTB) are statistically insignificant. The MTB variable is significant at the level of 5 percent, that is to say, there is a difference in the mean value between target and non-target companies. The sign in front of the *t*-value is positive which implies that target companies, on average, have higher market-to-book ratios than non-target companies.

Table 4.

T-test for differences in mean values between targets and non-targets (control sample). Unless otherwise indicated, mean values are shown as percentage.

	Target firms	Non-target firms	t-test for difference
	Mean	Mean	in mean values
Profitability	6.70	8.16	-0.33
Growth	10.91	8.48	0.27
Leverage	4.13	1.89	1.07
Liquidity	8.35	15.13	-2.23
Size*	8.24	8.31	-0.44
MTB	2.70	1.91	2.19**

* Shown in logarithmic terms as 10^X, where x either corresponds the mean or median value.
** Statistically significant at the 5 percent level.

5.1.2 Result from Logit Regression Model

The estimation sample includes 44 target and 104 non-target companies. The researchers estimate a variety of the model specified by Equation (1). Table 5-7 present estimation results reported in the regression output from EViews, i.e. parameter values and *z*-statistics, for three different versions of the model. The column "coefficients" represents the estimated coefficients of the independent variables included in the model. A coefficient showing a positive sign indicates that an increase in the corresponding variable increases the probability

of a firm being subjected of takeover bids. Reversely, a negative sign in front of the coefficient signals that the risk of involving as candidate in mergers or acquisitions decreases as the corresponding variable increases or vice versa. The *z*-statistics is used to test the statistical significance of these effects and is calculated for each coefficient. The z-statistics test the null hypothesis that a coefficient is equal to zero. To interpret the z-statistics, the last column "Prob." is examined in order to observe the probability that the coefficient is equal to zero. For example, a *p*-value lower than 0.05 is taken as evidence to reject the null hypothesis of a zero coefficient at the 5 percent significance level. The row 'LR statistics' is the result of testing the null hypothesis that all coefficients except the constant are equal to zero. The alternative hypothesis in this case is that at least one of the coefficients is not equal to zero. This statistic is used to test the overall significance of the model. The row 'Probability (LR stat)' is the *p*-value of the LR rest statistic.

Table 5 presents the result of the estimation of Model 1. Model 1 uses four variables – profitability, size, MTB and the dummy variable, GRDUMMY, which is a combination of growth, leverage and liquidity. This model is used to test the four hypothesis discussed earlier in this study.

Table 5.

Logit model results for Model 1 using EViews, including four variables – profitability, size, MTB and a dummy variable, GRDUMMY.

	Coefficient	Std. Error	z-Statistic	Prob.
PROFITABILITY	-0.006501	0.009900	-0.656689	0.5114
SIZE_LOG	-0.117672	0.209312	-0.562185	0.5740
MTB	0.270696	0.119564	2.264023	0.0236**
GRDUMMY	-0.506993	0.412338	-1.229557	0.2189
C	-0.280898	1.752673	-0.160269	0.8727
McFadden R-squared	0.048023	Mean dependent var		0.297297
S.D. dependent var	0.458621	S.E. of regression		0.452162
Akaike info criterion	1.226232	Sum squared resid		29.23637
Schwarz criterion	1.327490	Log likelihood		-85.74120
Hannan-Quinn criter.	1.267373	Restr. log likelihood		-90.06642
LR statistic	8.650440	Avg. log likelihood		-0.579332
Prob(LR statistic)	0.070456			

** Statistically significant at the 5 percent level.

The result presented in Table 5 shows that only one variable, the market-to-book ratio is found to be statistically significant. However, the sign of the coefficient is opposite to the suggested asset undervaluation hypothesis. The sign of the coefficient of the MTB variable is positive which means that an increase in MTB increases the probability of a company being targeted for takeover bids. The *p*-value of the LR statistic shows a value of 0.07, implying that the model is statistically significant at the 10 percent level.

Table 6 presents the result of the estimation of Model 2. Model 2 uses seven variables – profitability, growth, leverage, liquidity, size, MTB and the dummy variable, GRDUMMY, which is a combination of three variables: growth, leverage and liquidity. In this model, an attempt is made by the researchers to include the three variables that define the variable GRDUMMY in order to find if one of these variables is pre-dominant in this sample.

Table 6.

Logit model results for Model 2 using EViews, including seven variables – profitability, growth, leverage, liquidity, size, MTB and a dummy variable, GRDUMMY.

	Coefficient	Std. Error	z-Statistic	Prob.
PROFITABILITY	-0.004168	0.010675	-0.390413	0.6962
GROWTH	0.146832	0.494805	0.296748	0.7667
LEVERAGE	0.020845	0.041350	0.504123	0.6142
LIQUIDITY	-2.058663	1.376387	-1.495701	0.1347
SIZE_LOG	-0.163251	0.217823	-0.749468	0.4536
MTB	0.249027	0.118738	2.097282	0.0360**
GRDUMMY	-0.130316	0.475481	-0.274071	0.7840
C	0.182697	1.851892	0.098654	0.9214
McFadden R-squared	0.066990	Mean dependent var		0.297297
S.D. dependent var	0.458621	S.E. of regression		0.452016
Akaike info criterion	1.243687	Sum squared resid		28.60455
Schwarz criterion	1.405698	Log likelihood		-84.03284
Hannan-Quinn criter.	1.309512	Restr. log likelihood		-90.06642
LR statistic	12.06716	Avg. log likelihood		-0.567789
Prob(LR statistic)	0.098372			

** Statistically significant at the 5 percent level.

The result presented in Table 6 shows a similar result as the first model. Only one variable, the market-to-book ratio, is found to be statistically significant, the sign of the coefficient is still opposite to predicted hypothesis based on the asset undervaluation theory. The sign is

still positive which means that an increase in MTB increases the likelihood of a company being targeted for takeover. The *p*-value of the LR statistic shows a value of 0.09, so even this model is statistically significant at the 10 percent level.

Table 7 presents the results of the estimation of model 3. Model 3 uses six variables – profitability, growth, leverage, liquidity, size and MTB. Since the dummy variable, GRDUMMY, is not a statistically significant variable in Model 1 and Model 2 presented above it is excluded in Model 3. This model attempts to find explanatory variables within the three variables that define the GRDUMMY.

Table 7.

Logit model results for Model 3 using EViews, including six variables – profitability, growth, leverage, liquidity, size and MTB.

	Coefficient	Std. Error	z-Statistic	Prob.
PROFITABILITY	-0.004089	0.010671	-0.383217	0.7016
GROWTH	0.172831	0.485533	0.355962	0.7219
LEVERAGE	0.020903	0.041859	0.499375	0.6175
LIQUIDITY	-2.231764	1.238003	-1.802713	0.0714*
SIZE_LOG	-0.161432	0.217934	-0.740739	0.4589
MTB	0.252103	0.117807	2.139970	0.0324**
C	0.136509	1.846216	0.073940	0.9411

McFadden R-squared	0.066572	Mean dependent var	0.297297
S.D. dependent var	0.458621	S.E. of regression	0.450450
Akaike info criterion	1.230682	Sum squared resid	28.60962
Schwarz criterion	1.372442	Log likelihood	-84.07047
Hannan-Quinn criter.	1.288279	Restr. log likelihood	-90.06642
LR statistic	11.99189	Avg. log likelihood	-0.568044
Prob(LR statistic)	0.062150		

* Statistically significant at the 10 percent level.
** Statistically significant at the 5 percent level.

The result presented in Table 7 differs from the results of the two previous models discussed above. Two variables, liquidity and the market-to-book ratio are found to be statistically significant. The MTB variable is significant at the 5 percent level, while liquidity is significant at the 10 percent level. The sign of MTB ratio is still positive and in the opposite direction to what have been predicted by the asset undervaluation hypothesis. The sign of the variable liquidity is also in the opposite direction to what have been predicted based on

previous studies. The liquidity variable possesses a negative sign, which implies that an increase in liquidity decreases the probability of a company being targeted for merger and acquisitions activities. The *p*-value of the LR statistic shows a value of 0.06, even this model being significant at the 10 percent level. This model shows the lowest *p*-value for the LR statistic compared to the two previous models, indicating that this model is the most statistically significant.

5.2 Analysis

Like the empirical result from the *t*-test, all findings of the three combinations from the logit regression indicate that the market-to-book ratio is significant in explaining takeover targets. The valuation ratio, which is another term for defining the MTB variable, does not consistently support the researcher's formulated hypothesis about the firms' lowered valuation ratio and their increased likelihood of being involved as a candidate for takeover target. The result from the logit regression shows that the higher MTB ratio of a firm, the higher probability of it being subject of a takeover bid or vice versa. The suggested inverse relationship between MTB ratios and the likelihood of a firm being a target is rejected. For this reason, the researchers cannot conclude that the food and beverage manufacturing companies were takeover targets because of their low market values. A possible explanation is that the merging and acquiring companies have faced such a high competition in the global food manufacturing industry that they have been forced to quickly takeover companies even though they are not yet considered as "bargains". The merging and acquiring companies might think that the premium paid for overvalued assets will offset by gains from future growth within the industry, which currently is one of the largest in the European region and is less affected by cyclical variations. A proactive behavior of merging and acquiring companies can be seen as strategic tool of achieving sustainable competitive advantage, in which it is likely presumable that overcharged targets are included.

Another potential reason of targeting firms with high market-to-book ratios is that the variable indicates growth opportunities. The positive relationship between market-to-book ratios and the chances of being takeover targets may be explained by the fact that the targeted companies have certain advantages to offer the buyers. In a fragmented industry as the food and beverage manufacturing sector where large companies compete on the global market and small

companies compete locally, the large business players may have continuously looked for different ways to at least keep their market shares at a sufficient level. By taking over companies, “newcomers”, with high market values, growth opportunities are theoretically served, which is seen from the buyer’s point of view as beneficial. In addition, the buying company can raise more debt at a lower borrowing cost due to its takeover of a highly valued target. Raising more debts means that the merging or acquiring company can make investments with the purpose to growth further.

The liquidity variable is, in the last presented combination of the logit regression, negatively and significantly associated with the takeover probability at the level of 10 percent, which is in line with some of the outcomes from previous studies. Consequently, no evidence is found to support the hypothesis about a positively related significance between target takeover and high liquidity. A possible reason of explaining the inverse relationship is that low liquidity does not always have to be a bad sign. A dynamic industry as the food and beverage manufacturing industry is likely to have a varied cash flow depending on the season. For instance, the Christmas sales from the food retailers might be higher than general resulting that the producers within the food and beverage industries may face low inventories, high cash and accounts receivable because their business is dependent on the food retailers. Since the liquidity is measured at a given time date based on the availability of financial statements, it does not capture a satisfactory dimension of the entire cash situation. Related to this study, the estimated annual liquidity variable is based on accountings for one year basis, which means that the level of liquidity actually might be different due to the seasonality and the timing of sales. In summary, the misrepresentation of the liquidity level might explain why low liquid targets are significantly more likely to be exposed for takeovers.

The results of the empirical model show that four variables are statistically insignificant; these are profitability, leverage, growth and size. Even though these variables are insignificant, they put forward results worth mentioning and analyzing, especially in the case when the results differ from previous studies. The insignificance of a variable could reveal some important characteristics about the food and beverage manufacturing industry in the European Union market that differentiates it from other industries and other markets as well.

Studies evaluating the European food industry points out that some markets of the food sector during the period of this study have showed signs of being saturated. A saturated market

indicates that the supply of a product provided has been maximized at the current state of the market. Thus, companies operating in this market cannot achieve further organic growth at this state if, for example, the consumer demand does not rise. However, the consumer demand for food products is comparatively static; the industry is less affected by economic fluctuations than other sectors. The reason why there is no significantly difference in growth between targets and non-targets can be that all companies within the food and beverage manufacturing industry have been affected by the saturated market and company have achieved any considerable levels of growth.

A comparison between the growth and market-to-book variable can be made in order to analyze the impact of approaching these variables. Merging and acquiring companies are perhaps more eager of gaining future growth by following the estimation of MTB ratios rather than growth as an individual variable. While the latter one indicates historical growth of targets, which cannot be guaranteed in the future within the rapid changing environment of food industry, a high MTB variable gives the merging and acquiring companies more flexibility to adapt their business depending on the market development. As a result of the increased flexibility, the buying companies get more growth opportunities to strengthen their business position. This can explain why the results show a significantly positive association between MTB ratios and the likelihood of target takeovers whereas growth, as a single variable, does not have any significant effect on the takeover probability.

As mentioned earlier, the European food and beverage industry is characterized as being fragmented. The food and beverage market in Europe is unique in a way since the cultural differences between different countries give rise to the existence of many small and medium sized companies specialized on satisfying the needs of local and regional markets. At the same time, there are multinational companies competing on the global market focusing on satisfying the need of a broader market. Furthermore, the food industry reveals the existence of a demographic weight of the industry. The larger firms tend to operate in the Northern markets while the small and medium sized firms tend to concentrate on South Europe. Thus, size could be an important variable in explaining takeover activity because they reduce the cost of the transaction associated with acquiring larger firms, but in a different way. Smaller firms, which represent a large part of the total enterprises in the industry, focused on satisfying local preferences in South European countries might not be an attractive target for the multinational companies focused on reaching a global market with standardized products.

However, they might be an attractive target for medium sized companies expanding on regional markets. Instead the multinational companies acquire the larger firms that operate in the Northern markets. This could explain why size is an insignificant variable in explaining takeover activity since the takeover targets represent both smaller and larger firms.

The insignificance of the profitability variable indicates that it is hard to distinguish any difference in profitability between takeover targets compared to the non-takeover targets. An explanation of why profitability is insignificant is that it can indicate different characteristics of the company. The food and beverage manufacturing industry in the European Union consists of several thousands of companies competing with different strategies. Companies, with a price competition strategy and have low profitability, can be attractive takeover targets, since it indicates that these companies have inefficient management and are run badly. However, companies with a differentiation strategy that are generating profitability indicate that they have succeeded with introducing innovative products, can also be desirable seeing from the buyers' point of view.

Leverage is found as an insignificant variable since the variable alone does not offer much explanation to the differentiating characteristics of takeover targets; it is a characteristic that explains the capital structure and how the company has chosen to finance itself. It is rather in combination with other variables as it offers an explanation of takeover targets.

Only two variables, liquidity and market-to-book, in the empirical findings are statistically significant. The researchers do not believe that the findings depend on any obvious measurement errors. Instead, previous studies within this research field are much generalized, resulting that a study conducted on the European food industry is needed to contribute knowledge about the characteristics of the specific industry and geographic region. In this study, the researchers have succeeded to empirically prove that the splintered nature of industry has significant effects on the characteristics of explaining why some food and beverage manufacturing companies become targets. In detail, it is statistically proved that the general studies do not hold for all industries, such as the food and beverage manufacturing industry. Besides the findings of two significant variables, it is found that the variables are in contrast with what has been academically concluded before. Theories from previous studies have inspired this research but not all of them provide a consistent or a deeper understanding specifically about the food and beverage manufacturing industry.

6 Conclusion and Further Research

6.1 Conclusion

Coming to this section, it means that the end of research is close and it is time for conclusion. Reflecting backwards, to the introduction chapter to be more precisely, the researchers have successfully filled a gap in the academic knowledge of what financial characteristics that drive certain companies to be involved as targets either in mergers or acquisitions. Several academic studies were presented but none of them were sufficient enough to apply in the food and beverage manufacturing industry of the European Union. It is widely documented that takeover characteristics are included in a research field where much attention have already been paid. However, this study touched the same research field but it is more concentrated on the food industry-specific drivers, which makes the entire study unique. Another aspect of creating uniqueness is the empirical outcomes, stating that previous general academic studies are inapplicable into this context.

The researchers find no evidence that the hypotheses of inefficient management, growth-resource imbalance and firm size have any significant effects on targeted firms for engaging in M&A activities. The only hypothesis that has an effect on the target probability is the asset undervaluation, despite the fact that the supported theory does not exactly hold since the findings indicate a positive relationship between market-to-book ratios and the probability of a firm being subjected to a takeover bid whereas the hypothesis suggests an inverse relationship. This may be a response of assuming (from the merging or acquiring companies' side) an offset of the overpaid premium by gains from future competitive advantage and/or that benefits can be obtained by taking over companies with high market values indicating potential growth opportunities. Briefly, the nature of business industry might explain why firms in the food and beverage sector with high market to book ratios become targets for takeover bids.

The growth-resource imbalance hypothesis is rejected but the included liquidity is, as an individual variable, statistically significant. An inverse relationship between the liquidity of a firm and the likelihood of it being targeted for mergers and acquisitions is found, in contrast to the suggested findings from previous studies. The outcomes may be a result of perversion in the liquidity values caused by seasonality and different timing of sales within the value chain of food and beverage products, suggesting that the manufacturers are affected by the business of the food grocery sector. In fact, merging and acquiring companies target low liquid food and beverage producers but it does not necessarily indicate disaster because the values are sometimes fallacious depending on the time of measurement.

The variables in the empirical model that show insignificant results are useful in revealing some differences in the characteristic of the European food and beverage manufacturing industry. They further prove that the general conclusions yielded by previous studies do not apply on the European Union market. The multifaceted European food industry suggests that earlier takeover models are insufficient in explaining which characteristics that differentiate takeover targets from non-takeover targets. The existence of a saturated market can explain why organic growth of companies is not a variable that explains takeover targets since the presence of companies with high organic growth in a saturated market is limited.

It is concluded that size does not offer the same advantages in the European Union market as it offers in other industries or other markets due to the existence of a fragmented market and large differences in tasters, food habits and preferences between European countries. Profitability is a variable that depends on the strategy chosen by the company and thus, both companies presenting high and low profitability could be attractive takeover targets. The conclusion about the leverage variable is that it does not offer an explanation of the characteristic of the company alone; it is rather in combination with other variables that leverage can explain why certain companies make good takeover targets.

6.2 Further Research

Since similar studies on the European food industry have never been conducted before, it is worth examining the same research field but pointing from another angle. Several studies are needed because, seeing from the researchers' point of view, there is still a lack of knowledge

contribution within the food industry in general. A potential research carried out on cross-border dimensions in terms of countries and merger types would lift the topic into a higher level. In that case, the focus might be most appropriate in dealing with a strategic perspective rather than an economic perspective. This study has not considered adjusting variables due to previously discussed reasons. Though, a similar study with added cross-border dimensions has to adopt variable adjustments in order to make the measurements reliable. The cross-border dimension raises questions that most likely would not appear in a non-cross-border study. These questions are the future researcher's task to identify and respond.

Another suggestion is to run a logit regression analysis with independent variables that have not been taken into consideration in this study. The researchers consider that the used variables are sufficient enough but carrying out another study with different variables will possibly discover other characteristics of the specific industry.

To reach further insight into what differentiates the companies involved in merger and acquisition activities from others, one feasible way is to include the characteristics of acquirers and compare them with the characteristics of takeover targets. Merger and acquisition deals give rise to synergy effects and thus, an understanding of the combination of characteristics between the acquirer and the acquired firm is required in order to yield conclusions about the factors driving takeover activities.

7 References

7.1 Published Sources

Adams, Wendi L, Love, H. Alan and Capps, Oral, Jr. (1997). Structural Analysis of Mergers and Acquisitions in the Food Industry. *Journal of Food Distribution Research*, vol. 28:2.

Adelaja, Adesoji, Nayga, Rodolfo and Farooq, Zafar (1999). Predicting Mergers and Acquisitions in the Food Industry. *Agribusiness*, vol. 15:1.

Alcalde, Nuria and Espitia, Manuel (2003). The Characteristics of Takeover Targets: The Spanish Experience 1991–1997. *Journal of Management and Governance*, vol. 12:1.

Ambrose, Brent W. and Megginson, William L. (1992). The Role of Asset Structure, Ownership Structure, and Takeover Defenses in Determining Acquisition Likelihood. *Journal of Financial and Quantitative Analysis*, vol. 27:4.

Barnes, Paul (1999). Predicting UK Takeover Targets: Some Methodological Issues and an Empirical Study. *Review of Quantitative Finance and Accounting*, vol. 12:3.

Brar, Gurvinder, Giamouridis, Daniel and Liodakis, Manolis (2009). Predicting European Takeover Targets. *European Financial Management*, vol. 15:2.

Brooks, Chris (2008). *Introductory Econometrics for Finance*. Cambridge University Press: 2nd edition, Cambridge.

Bryman, Alan and Bell, Emma (2005). *Företagsekonomiska forskningsmetoder*. Liber, Malmö.

Canina, Linda, Kim, Jin-Young and Ma, Qingzhong (2010). What We Know about M&A Success: A Research Agenda for the Lodging Industry. *Cornell Hospitality Quarterly*, vol. 51:81.

Chen, Long and Zhao, Xinlei (2006). On the Relation between the Market-to-Book Ratio, Growth Opportunity, and Leverage Ratio. *Finance Research Letters*, vol. 3:4.

Cudd, Mike and Duggal, Rakesh (2000). Industry Distributional Characteristics of Financial Ratios: An Acquisition Theory Application. *The Financial Review*, vol. 35:1.

Danone sales climb 19% with yogurt demand (2008). *Dairy Industries International*, vol. 73:6.

Didier, Martin (2008). An Overview of French M&A Activity and Legal Reforms in 2007. *International Financial Law Review*, vol. 27:0.

Dietrich, J. Kimball and Sorensen, Eric (1984). An Application of Logit Analysis to Prediction of Merger Targets. *Journal of Business Research*, vol. 12:3.

Frecka, Thomas J. and Lee, Cheng F. (1983). Generalized Financial Ratio Adjustment Processes and Their Implications. *Journal of Accounting Research*, vol. 21:1.

Gaughan, Patrick A. (2007). *Mergers, Acquisitions and Corporate Restructurings*. Wiley: 4th edition, Hoboken.

Harford, Jarrad (1999). Corporate Cash Reserves and Acquisitions. *Journal of Finance*, vol. 54:6.

Hasbrouck, Joel (1985). The Characteristics of Takeover Targets. *Journal of Banking and Finance*, vol: 9:3.

Holme, Idar Magne and Solvang, Bernt Krohm (2001). *Forskningsmetodik*. Studentlitteratur, Lund.

Hyun, Hea-Jung and Kim, Hyuk Hwang (2010). The Determinants of Cross-border M&As: The Role of Institutions and Financial Development in the Gravity Model. *The World Economy*, vol. 33:2.

Jensen, Michael C. (1986). Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers. *American Economic Review*, vol. 76:2.

Jensen, Michael C. (1993).The Modern Industrial Revolution, Exit, and the Failure of Internal Control Systems. *Journal of Finance*, vol. 48:3.

Konings, Jozef and Roodhooft, Filip (1997). Financial Ratio Cross-Section Dynamics: A Non-Parametric Approach. *Journal of Business Finance and Accounting*, vol. 24:9-10.

Levine, Paul and Aaronovitch, Sam (1981). The Financial Characteristics of Firms and Theories of Merger Activity. *The Journal of Industrial Economics*, vol. 30:2.

Lindblom, Ted and Rimstedt, Anders (2004). Retail Integration Strategies in the EU: Scandinavian Grocery Retailing. *International Review of Retail, Distribution and Consumer Research*, vol. 14:2.

Lintner, John (1971). Expectations, Mergers and Equilibrium in Purely Competitive Securities Markets. *American Economic Review*, vol. 61:2.

Manne, Henry G. (1965). Mergers and the Market for Corporate Control. *Journal of Political Economy*, vol. 73:2.

Marris, Robin L. (1964). The *Economic Theory of "Managerial" Capitalism*. Macmillan: 1st edition, London.

Moschieri, Caterina and Campa, Jose Manuel (2009). The European M&A Industry: A Market in the Process of Construction. *Academy of Management Perspectives*, vol. 23:4.

Myers, Hayley (2004). Trends in the Food Retail Sector across Europe. *European Retail Digest*, vol. 0:41.

Myers, Stewart C. and Majluf, Nicholal S. (1984). Corporate Financing and Investment Decisions when Firms have Information that Investors do not have. *Journal of Financial Economics*, vol. 13:2.

Palepu, Krishna G. (1986). Predicting Takeover Targets – A Methodological and Empirical Analysis. *Journal of Accounting and Economics*, vol. 8:1.

Parvinen, Petri and Tikkanen, Henrikki (2007). Incentive Asymmetries in the Mergers and Acquisitions Process. *Journal of Management Studies*, vol. 44:5.

Pioch, Elke, Gerard, Ulrike, Fernie, John and Arnold, Stephen J. (2009). Consumer acceptance and market success: Wal-Mart in the UK and Germany. *International Journal of Retail and Distribution Management*, vol. 37:3.

Powell, Ronan G. (1997). Modeling Takeover Likelihood. *Journal of Business Finance and Accounting*, vol. 24:7-8.

Powell, Ronan G. (2001). Takeover Prediction and Portfolio Performance: A Note. *Journal of Business Finance and Accounting*, vol. 28:7-8.

Powell, Ronan G. (2004). Takeover Prediction Models and Portfolio Strategies: A Multinomial Approach. *Multinational Finance Journal*, vol. 8:1-2.

Ramanathan, Ramu (2002). *Introductory Econometrics with Applications*. Harcourt College Publishers: 5th edition, Fort Worth.

Ryan, Bob, Scapens, Robert W. and Theobald, Michael (2002). *Research Method & Methodology in Finance & Accounting*. Thomson Learning: 2nd edition, London.

Sorensen, Donald E. (2000). Characteristics of Merging Firms. *Journal of Economics and Business*, vol. 52:5.

Stevens, Donald L. (1973). Financial Characteristics of Merged Firms: A Multivariate Analysis. *The Journal of Financial and Quantitative Analysis*, vol. 8:2.

Thomas, Jonathan (2002). The Giants' Appetite for Small Fry. *Food Engineering and Ingredients*, vol: 27:4.

UK Dairy Giants round up the Little Guys (1998). Dairy Industries International, vol. 63:3.

Wijnands, Jo H.M., Bremmers, Harry, van der Meulen, Bernd M.J. and Poppe, Krijn J. (2008). An Economic and Legal Assessment of the EU Food Industry's Competitiveness. *Agribusiness*, vol. 24:4.

Wyman, Vic (2002). Icelanders land Greek Cypriot Family Firm. *Food Manufacture*, vol. 77:1.

Zenger, Kenneth (2006). Global Economies of Scale or Regional Customization in the European Union Food Industry. *Journal of Food Products Marketing*, vol. 12:1.

7.2 Electronic Sources

Confederation of the Food and Drink Industries of the EU (CIAA) – Data and Trends of the European Food and Drink Industry, 2010-04-13 [Online].
Available from:
http://www.ciaa.be/documents/brochures/ciaa-data%20trend-updated.pdf
[Accessed 2010-04-15]

EUROPA (The Official Website of the European Union) – Summaries of EU legislations:

Cross-Border Mergers of Limited Liability Companies, 2006-02-07 [Online].
Available from:
http://europa.eu/legislation_summaries/internal_market/businesses/company_law/l26041_en.htm
[Accessed 2010-05-05]

European Commission – Enterprise and Industry: Food Industry, 2009-12-12 [Online].
Available from:
http://ec.europa.eu/enterprise/sectors/food/eu-market/index_en.htm
[Accessed 2010-04-12]

European Commission – Statistics in Focus: The Food Industry in Europe, 2004-10-14 [Online].
Available from:
http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-NP-04-039/EN/KS-NP-04-039-EN.PDF
[Accessed 2010-04-15]

Food Navigator – European Food Industry: the Facts and Figures, 2005-04-15 [Online].
Available from:
http://www.foodnavigator.com/Financial-Industry/European-food-industry-the-facts-and-figures
[Accessed 2010-04-12]

Sveriges Riksbank – Interest & Exchange Rates: Cross Rates, 2005-05-04 [Online].
Available from:
http://www.riksbank.com/templates/stat.aspx?id=17214
[Accessed 2010-05-17]

7.3 Databases

Datastream distributed by Thomson Reuters Financial.
Available at Lunds University (LINC).

Elin@Lund distributed by Lund University Libraries [Online].
Available from:
http://elin.lub.lu.se/elin?lang=se

Reuters 3000Xtra distributed by Thomson Reuters Financial.
Available at Lund University (LINC).

Social Science Research Network (SSRN) – Tomorrow's Research Today distributed by Social Science Electronic Publishing [Online].
Available from:
http://www.ssrn.com

Social Sciences Citation Index (SSCI) – Web of Science distributed by Thomson Reuters [Online].
Available from:
www.isiknowledge.com