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Reduction of the Information Asymmetry in Mergers & Acquisitions Through the Means of Payment

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Abstract: When considering mergers & acquisitions (M&A) it is obvious that each participant has different motives and expectations. It is also noted that the participants never have enough information, since it is preferable not to put their own private information openly. For this reason, the information asymmetry occurs. When considering the M&A transactions it is determined that payment instruments may also influence the information asymmetry. The goal of this scientific paper is to compare theoretically and empirically the effectiveness of the means of payment and to identify the best financial instrument to reduce the information asymmetry. After analysing the results of the empirical researches, thorough specific criteria research, the most efficient method of payment regarding the information asymmetry by the M&As is selected. In order to conduct the best results a literature review of the most important articles and empirical researches is made, using the key words of the paper.

Keywords: mergers & acquisitions, information asymmetry, earn outs, cash and stock deal, ex ante and ex post information asymmetry.

1. Introduction

The term Mergers & Acquisitions (M&As) represents transactions that are associated with the purchase or sale of a business. A distinction is made between mergers, investments and collaborations. Due to the fact that the M&A activities are a complicated agreement, in which various parties act in their own interests, the role of information asymmetry must not be underestimated. Because of the unequal distribution of information there are conflicts of interest arising, which can even lead to break down of the transaction. In the literature, this problem is often explained with the help of the principal-agent model.

Furthermore, the terms ex ante and ex post information asymmetry have to be differentiated. The ex ante problem arises before the conclusion of the contract and suggests a conflict of interest between buyers and sellers. The ex post information asymmetry refers to the post-contractual phase and represents the conflicts of interest between managers and owners.

This scientific paper deals intensively with the question of whether there is a dependency between the information asymmetry and the payment structures of the M & A transaction. In the article by Hansen (1987), the theory is presented that the higher the information asymmetry in an M & A transaction, the more prone the sub-company shares to be used as a payment instrument. This would on the one hand reduce the risk, but on the other hand, this would send according to Myers & Majluf (1984) a negative Signal to the shareholders, which may lead to a price reduction of the stocks. An important point in these considerations is the so-called earn-outs, which are used to make payments at the M & A transactions. According to the latest empirical researches the risk can be reduced by this payment instrument even more effectively than by using shares. The goal of this scientific paper is to compare theoretically and empirically the effectiveness of the means of payment and to identify the best financial instrument to reduce the information asymmetry. After analysing the results of the empirical researches the most efficient method of payment regarding the information asymmetry by the M&A transactions is selected.

The different payment instruments may have a significant impact on the M&A activities. This scientific paper focuses on the impact of the means of payment on the information asymmetry in business cooperations. A distinction is made between cash deal, stock deal and earn-outs. Since every kind include various advantages and disadvantages, these payment mechanisms are presented separately and placed in the context of information asymmetry. Moreover, in this scientific paper, different examples to illustrate these theoretical approaches are given. It is assumed that after the completion of the M&A transactions, a new company is founded. In order to investigate the exact relationship between the payment instruments and the information disadvantages, in the last chapter various researches that empirically consider this context are described.

The literature review made in this scientific paper is based on certain criteria. If the scientific articles consider the different payment instrument under the assumption that they can reduce the risk in an M&A transaction, than this article is considered as relevant for the scientific article. Furthermore, various empirical studies are examined, in order to select the best payment method. In the part related to the previous empiric findings articles, which consider directly the influence of the financial instrument on the information asymmetry, are included.

The first part of the scientific paper defines the main terms of the scientific paper. At first the term M&A transaction is defined and the different kinds of M&As are also explained. Secondly, the information asymmetry in the M&A transaction is defined. This chapter also introduces the ex ante and the ex post information asymmetry. At last but not at least, the different payment methods are represented: cash and stock deal, earn-outs. The second part of this paper compares the results of different empirical analysis related to the different payment structures. In this way the best payment method is selected.

2. Merger & Acquisitions

The scientific literature differentiates between three forms of M&As. They are divided into mergers, takeover and collaborations. Since there are different possibilities to perform a M&A transaction, for each major type two subtypes are associated (Kaup, 2008, p22-23). The merger is a fusion of two companies(Piehler, 2007, p.16). A distinction is made between the two other types of mergers: undertaking and re-establishment (Mußhoff, 2008, p.14; Kaup, 2008 p.22). The former mentioned term refers a merger, in which one of the two partners must abandon its legal existence, since all assets are transferred to a joint account. Unlike the undertaking by the re-establishment a completely new company is established. Both parties are obliged to abandon their legal personality and to transfer all assets to the new corporation (Mußhoff, 2008 p.14; Kaup, 2008 p.22).

The scientific literature defines different definitions of a takeover (Mußhoff, 2008, p.14; Roediger, 2010, p.13;; Piehler, 2007, p.16). Often the terms participation, associations and acquisitions are used as synonyms for a takeover. Basically, in contrast to a merger, by a takeover transaction, the sold assets are acquired completely by the buying company (Kaup, 2008 p.22). Here a distinction between the acquisition of shares of a company (share deal) and the purchase of assets (asset deal) is made. If an acquisition is carried out without the consent of the manager, this can be defined as a "hostile takeover" (Piehler, 2007 p.16).

The cooperation between enterprises is an alternative of the M & A transactions in the broader sense (Wirtz, 2003, p.13-15). Basically this term refers to two or more independent partners who support each other in carrying out specific tasks and cooperate with each other when they do business. They can be categorized into two groups: operational cooperation (cartels, trade associations, interest groups) and strategic partnerships (alliances and joint venture). The alliances and joint venture are of great relevance in explaining the concept of M&A. In a joint venture, a new company is founded and merged by the cooperating parties. The partners are not obliged to abandon their previously existing business operations (Wirtz, 2003 S.13-15). Strategic alliances are initiated by legally independent companies. They pursue the objective to unite their individual strengths in individual business(Strasser, 2000, p.67).

An important point when considering M&A activities are the actors involved in the transactions. A distinction between the two trading parties has to be made: the buyer and seller. Since the transaction is associated to a complicated contract drafting and negotiation process, the participation of Inter-intermediaries and managers is needed (Piehler, 2007 p.6). These are, for example, banks, accountants, lawyers, tax advisers and business consultants. They deal basically with the external assistance in such a transaction. The company's consultants (eg KPMG, Ernst & Young, Boston Consulting Group and McKinsey) are able to do multiple tasks at the mergers and acquisition transactions such as the development of corporate strategies, preparation of due diligence and negotiation support (Piehler, 2007 p.9; Jansen, 2008, p.56). Lawyers and tax advisors take part in the legal and tax support.

In most cases, a separation of ownership and right of disposal is to be observed. It can be concluded that managers and owners do not pursue the same objectives in a M&A transaction. It is also noted that conflicts of interest between buyers and sellers are possible because of the asymmetric information.

3. Information Asymmetry in Mergers & Acquisitions

In the following chapter, the information asymmetry is presented in terms of M&A transactions. It is also distinguished between ex ante and ex post asymmetric information.

In the M&A transactions there is no complete information is, which is made available. It is alleged that the seller knows the value of his business better. If this problem is derived using the principal-agent model, in this case, the seller is the agent and the buyer is the principal (Lukas & Heimann, 2010). Since there are a lot of difficulties in evaluating the enterprise's value, there is always the risk of an overpayment. Information asymmetries can also trigger conflicts of interest between shareholders and managers. Here the uninformed party is again referred to as the principal (shareholders) and the other party as the agent (managers) (Kaup, 2008, p. 30). The manager may want to act in its own interest and thus he can cause losses for the shareholders. Given the two cases it is differed between ex ante and ex post information asymmetry.

The figure below illustrates the problem of information over time. There are two contract phases: pre-contractual information and post-contractual information problems. In addition to this there are two information problems in each phase (adverse selection and moral hazard). These terms are explained in detail later in the chapter.

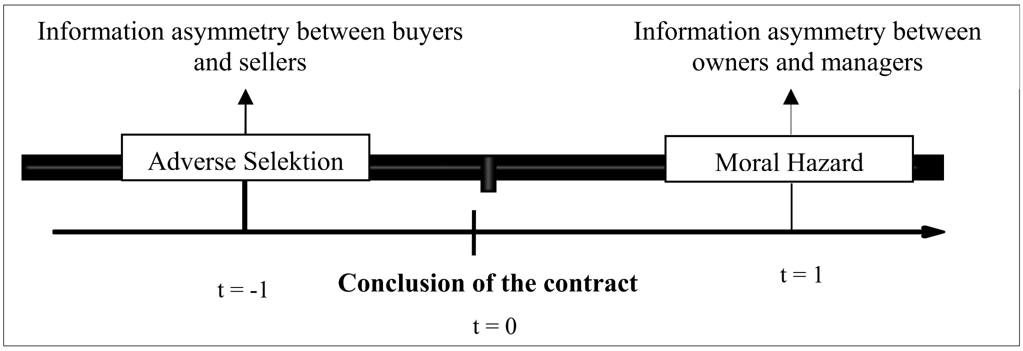

Fig. 1. Information asymmetries over the time, Prepared by Lukas et al. (2012)

Information asymmetries between buyers and sellers exist before the conclusion of the contract, after the conclusion between the owners and managers. This is also illustrated in the figure 1. (Piehler, 2007 p.13). In the following section the terms of Adverse Selection and Moral Hazard will be explained.

Ex ante information asymmetries arise prior to the conclusion of the contract. The basic idea is that the agent (the seller) wants to withhold important information ("Hidden information"), in order to get a higher profit with the sell of the company(Lietke, 2009, p.57). These are properties of the sales object, which may adversely affect the price of the seller's perspective. In the scientific literature, the term "Hidden Characteristics" is often used. Due to the fact that the agent tends to opportunistic behavior, it is claimed that he hides his intentions ("Hidden Intentions") (Lietke, 2009, p.57; Piehler, 2007, p.13). Because the principal does not know the true value of the target company on the basis of the "Hidden Characteristics", he cannot distinguish between good and bad contract conditions. This can usually lead to a selection problem, which is summarized in the scientific discourse as the term "adverse selection" (Weese, 2007, p.53; Piehler, 2007 p.13).

The ex post information asymmetry arises after the conclusion of the contract (See Figure 1.) (Wirtz, 2003 p.33; Piehler, 2007 p.13). This problem with respect of the M&As refers to a conflict of interest between managers and owners (Weese, 2007 p.57). Because the agent (manager) has more information, he can use this to hide it from the principal (Hidden Information) and use it in his own interest. Furthermore, the principal cannot observe all actions of the Agent (Hidden Action), since often the environmental changes can have an impact on the final results (Wirtz, 2003 p.33). In these two cases, the managers tend to maximize their own benefits although this may adversely affect the benefits of ownership: [...] the agency conflict between the owner-manager and outside shareholders as deriving from the manager's tendency to appropriate perquisites out of the firm's resources for his own consumption [...] (Jensen & Meckling, 1976, p. 313).

This problem is in the literature known as moral hazard, when considering M&As it refers to a conflict of interest between managers and owners (Weese, 2007 p.58). The company's management gives great importance to the power structure. Therefore the distribution of free cash to help enhance shareholder value does not correspond to their preferences. Furthermore, the problem could also have impact on the payment methods in the M&As (Weese, 2007 p.58).

4. Cash- und Stock- Deals

In a cash payment the object of purchase is acquired by means of a fixed deposit, which is independent of the future development of the company (Piehler, 2007 p.29). This payment can be financed through equity, debt or issue of treasury shares. In most cases the debt financing is preferred, because the companies usually do not have sufficient liquidity resources (Weese, 2007 p.52). In a cash deal, the shareholders of the buyer company carry all the risk, which for example may be caused by the overvaluation of the target company(Rappaport & Sirower, 1999; Weese, 2007 p.55). If the company, which was bought, do not realize the expected synergies, this will cause losses to the purchaser. Furthermore, it is claimed that a cash payment method is used only for acquisitions that are sure in the success of the transaction (Rappaport & Sirower, 1999). In an overvaluation of the acquiring company on the part of the target company there is no risk, as in cash deal a fixed deposit is made. This indicates that by the use of cash as a payment instrument, an information asymmetry only on the side of the purchaser arises. In this case he takes the whole risk (Weese, 2007 p.55).

In the Stock Deal the M&A transaction is paid in shares. The focus in the consideration of this payment instrument is on the fact that the value of shares depend on the value of the target company (Piehler, 2007 p.29). Furthermore it is applicable that the value of the company to be acquired may also have an impact on the share value of the volume of new-founded company. This implies that if the value of the two companies after the transaction sink, the price of the shares will also drop. These price fluctuations pose a risk for all shareholders (Piehler, 2007 p.29).

If the buyer is in possession of undervalued shares, the Stock Deal is not a sensible decision. If the shares are overvalued, the purchaser is liable to use shares as payment, because it is beneficial for him (Rappaport & Sirower, 1999). From this it can be conclude that an opportunistic behaviour on the part of the buyer due to information advantages is possible (Weese, 2007 p.55). This leads to the hypothesis that in the stock deal a second problem of adverse selection may occur. On the one hand, the seller can never be sure whether the shares of the buyer company are overvalued. Basically, there is also in the evaluation of the target company an overestimate danger that may pose a significant risk for the prospective buyer

(Weese, 2007 p.55). On the other hand, both parties will participate in the profit or loss of the transaction, as both sides possess shares of the company. It follows the conclusion that both sides share the risk.

When considering the stock and cash deal it can be summarized that the managers who have an optimistic attitude for the future success of the transaction, tend to use cash as a payment instrument (Weese, 2007 p.55). Those who are more uncertain and pessimistic about the transaction, use equities, because in this case the risk is not so great. Since a stock deal is often interpreted as a signal for the overvaluation of shares, this causes an information problem.

5. Earn-outs

The so-called earn-outs are used in the practice, in order to avoid the post contractual risks. This payment instrument helps in removing the information uncertainty and ex post moral hazard problem. If the company's success is highly dependent on the subject-specific human capital, this can be called a risky transaction, since the workers may leave any time the company (Caselli et al., 2006). To prevent this appropriate incentives are used. This problem can be solved by using of earn-outs as a payment method. When using this payment mechanism, the payment will be divided into two parts: a fixed payment and an additional supplementary payment (Caselli et al, 2006; Cain et al., 2011). The former is set in the closing phase and is always constant. The latter is a payment which is carried out in the future if certain conditions are met. This means that this extra payment is based on the performance of the newly bought company. Therefore, it is claimed that the target companies tend to adopt an earn-out agreement only if they are convinced that they can fulfil the agreed conditions. The companies, whose potential for success is not very high, will not accept an earn-out deal, since they are not likely to get that performance-based supplementary payment. It can be concluded that the earn-outs serve as a self-selection tool (Caselli et al, 2006;. Luke & Heimann, 2010). Therefore, this method of payment is to assist in the elimination of information asymmetry with respect to the potential success of a company. Since the performance-based supplementary payment represents an incentive for the managers, in this way they have a greater motivation to actively participate in the management. The result is that the earn-outs can effectively eliminate the moral hazard problem (Lukas et al., 2012).

By companies whose success depends on the intangible assets and therefore the potential for synergies is difficult to predict, buyers usually prefer earn-outs as a payment instrument (Caselli et al., 2006). When using this payment method, small innovative companies that do not have sufficient track record to demonstrate the correct value of the company can make a bigger profit, when selling the company. Furthermore earn-outs are suitable for companies whose success depends heavily on the executives. This agreement is an incentive for managers to stay longer in the company (Caselli et al., 2006).

In order to understand better the earn-out a formula to calculate the synergy effects that lead to an increase in the income surplus, is presented (Lukas et al., 2012).

$$\Theta(I_C) = \theta_1 + (1 + I_C)^{\theta_2} \,, \qquad (1)$$

Θ (Θ> 1) refers to the coefficient, which leads to an increase in the cash flows of the target company. Since the transaction costs $(I_c \in \mathbb{R}^+)$ occur, the Θ-coefficient depends on these costs. $\theta_1$stands for the constant synergies that do not arise as a result of the cooperation (Lukas et al., 2012). It is essential that $\theta_1 \in \mathbb{R}^+$ and $0 \le \theta_2 < 1$. Furthermore, the term $(1 + I_c)^{\theta_2}$ stands for the synergies that are dependent on the transaction success. Since these post contractual synergies are not directly observable, it is possible that the moral hazard problem occurs. This is represented by the $\theta_2 = 0$ coefficient. This suggests that if $\theta_2 = 0$, no moral hazard exists (Lukas et al., 2012). The result is that in this case, the amount in the brackets would be equal to 1. Furthermore, it is claimed that an earn-out agreement, which can reduce the moral hazard problem. This will lead accordingly to a reduction of the coefficient θ_2. This process is explained with the help of figure 2 (Lukas et al., 2012).

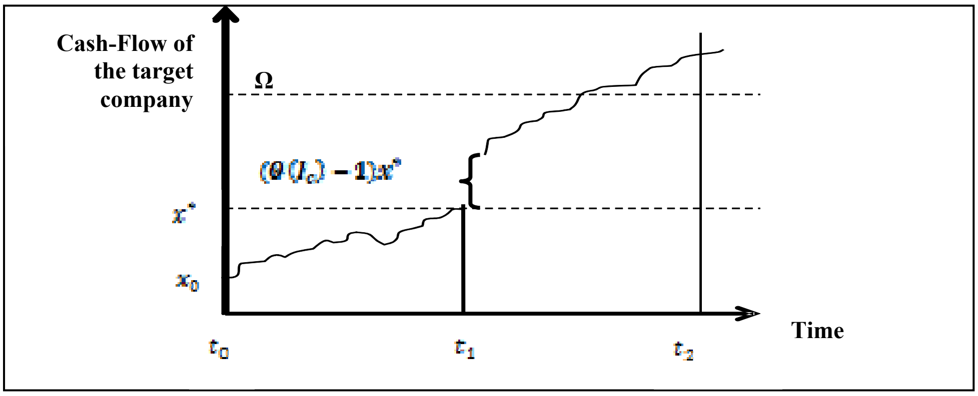

Fig. 2. Earn-out payment. Prepared by Lukas et al. (2012, S.258).

It is believed that in t_0 negotiations are carried out and in $t_1$the two companies join forces (Lukas et al., 2012). At the time t_1 a deposit due to the purchase of the target company is carried out. Because at the time there is no moral hazard problem, the following growth of the cash flows of the target company is measured by the following formula:

$$(\Theta(I_C)-1)\cdot x^*, \tag{2}$$

Furthermore, a second payment is settled. You will then be paid out if the target company reaches a certain benchmark. This is indicated in the graph by $\Omega \in \mathbb{R}^+$ the additional payment takes the following form:

$$Q\aleph(\Theta(I_C)x(t_2)-\Omega), \tag{3}$$

Here, $\aleph$ is the Heaviside function which value is either 0 or. 1 This indicates that if the benchmark is above the cash flows in t_2, Q will have a value of 0. This means that no second payment will be made (Lukas et al., 2012).

The earn-out agreements impute a payment instrument that successfully serves the reduction of information asymmetry and reduce the risk in a M&A transaction in this way.

6. Methodology and Previous Empirical Findings

The following chapter represents the different payment methods in the M&A transactions. What is more, as already mentioned in the previous chapter every payment structure can reduce the information asymmetry in the M&A transaction. The goal of this chapter is to compare different empirical studies, which present results related to the reduction of information asymmetry. After comparing every empirical research the most effective method will be chosen.

The literature review made in the previous chapters include scientific papers directly related to the topics mergers & acquisitions and information asymmetry. They were found thanks to a detailed online research in different databases such as Springer, Science Direct etc. Furthermore, the researches related to the various payment methods by the M&As were also considered. In these sections only articles related to the payments methods and their influence on the information asymmetry were used. The articles included in this scientific paper meet certain criteria. The focus is on articles which relate the financial instruments to the information asymmetry and the risks related to it. All other papers connected only to the different financial methods are excluded from this work. Some of the main researcher in this area are for example: Caselli, Lukas, Reuer & Welling, Weese, Cain, M.D., Denis, D.J. & Denis, D.K.

The following literature review includes papers, which examined the success of the M&A transactions after using a certain payment structure. This success is empirically tested by measuring the abnormal returns after the transaction. The literature review in this scientific paper includes papers, which managed to measure the effectiveness and efficiency of the following payment structures: cash vs. share payment and earn-outs. Due to the fact that companies usually trade with shares or cash there are much more scientific papers related to these payment instruments.

These are regarded as the basic payment structures and that is why some of the scientific researches are older. But still their results are relevant and are also included in the following literature review. The earn-out payment is a relative new form of payment. That is why the researches connected to this payment are newer, but unfortunately less that the empirical studies related to the cash and share payment. The oldest research related to the earn-outs dates back to the year 2000.

In order to make an evaluation of all the results presented in the literature, the most representative empirical results were chosen. This means that only articles, which included a big number of transactions in their research, were considered. In this way the results are much more accurate than in the case when researchers use a small number of transactions.

Another point related to the literature review is the way the articles were sorted and found. In order to find the right scientific article, the key words represented at the beginning of this scientific article, were used in search engines, like for example: Googleschoolar, ScienceDirect, Springer etc.. It is also important to search for articles, which include a representative empirical research. That is why the word empiric was also regarded as a key word.

7. Cash and Share Payment

This section describes the effect of equity and cash payment on the returns by the M&A transactions. This is done with the aid of numerous empirical researches. At the end the results are summarized and thus one of the two payment mechanisms is preferred.

First, the research by Houston & Ryngaert (1997) is considered. They investigate the change of the abnormal return of transactions, which were carried out with equity payments and cash. This research regards only bank mergers from 1985 to 1992. In the final sample 209 transactions are considered, 26 of which were carried out with cash and 94 were carried out with shares. The authors relate their findings to the elasticity of the supply. A share agreement has an elasticity of 1 and any payments made via cash, has an elasticity of 0. The authors found out that transactions, which were paid with cash and cash equivalents, had less negative abnormal returns than the transactions paid with shares. Furthermore, it was proven that the acquirer, whose offers required less risk, in other words you pay with cash, obtained 3% higher yield as buyers who paid with shares. The result is justified by the fact that a cash deposit guarantees a high level of protection for the sellers. However, different results are delivered by the researches that specifically focus on the reduction of information asymmetry by the M&As.

The next research to be represented is written by Wübben (2007 S.219-220). Here M&A transaction from the year 1990 until the year of 2004 were considered. Wübben has found that with minor exceptions, the transactions carried out by means of a share payment are more successful than those that were paid with cash and cash equivalents. Although, some results are not statistically significant, it is claimed that the cash deals are more complex and difficult to control than the stock deals. The research also shows that about one-third of the transactions, which were paid with shares were successful. In comparison, the success rate is the cash deal is at a lower level.

The research by Moeller et al. (2007) conducted similar results. The authors examine the changes in the abnormal returns in private and public companies. First, the hypothesis of Myers & Majluf (1984) is presented. It claims that when a transaction is carried out with cash, this is a good sign. It is expected in this case a positive abnormal return. In contrast to this theory, in the research of Moeller et al. was found out that private companies that have been acquired with shares, had better outcomes than private companies that have been purchased with cash payment . The authors explain these results with the resulting synergies that arise in the stock deal. This thesis assumes however that the positive results can be justified rather by reducing the information asymmetry in share payments. Furthermore, the authors come to the conclusion that no significant differences between equity and cash payment at public companies exist. In this work, this is justified by the fact that in public companies there is less information asymmetry than in private enterprises (Lukas & Heimann, 2010).

In this context the research of Chang (1998) is represented. The author examines the average abnormal return changes in private and public companies, depending on the acquisition currency. In the final sample 536 US M&A transactions were examined in the period from 1981 to the year 1992nd. It is noted that the private companies that have been acquired with shares, are significantly more successful than those that have been purchased with cash payment. The acquired companies with shares obtained in the case 2.64% average abnormal returns at a significance level of 1%. This is significantly more than in the private companies that have been purchased with the aid of cash. This looks different in the public companies. When comparing the results of public companies it is determined that the cash deals are more successful than the stock deals. It is alleged that there is a positive correlation between the presence of the shareholders of the target company in the new business and the returns achieved.

The research by Fuller et al. (2001) also examined these events. The authors examined 3.135 M&A transactions in the period from 1990 up to the year 2000. Firstly, private target companies were considered. It was noted that transactions, in which shares were used as a payment method were more successful than the transactions, in which cash was used. Furthermore, the effect of the size of the target company is examined for the transaction success. It is important to emphasize here the transactions which were carried out with equity payments, are much more successful than these in which cash was used. For public companies, it should be considered exactly the reverse. The authors of the research stated that due to the large uncertainty in the private companies and by the acquisition of large target companies, share payments are preferred to cash payments. In these cases, the share payment mitigates the risk. With the purchase of private companies there is uncertainty caused by the asymmetry of information. In accordance with the theory of Hansen (1987), these transactions are carried out by means of share payments, as this is more profitable for the company. It is also noted that if the target company and the acquiring parties are not located in the same industrial sector, the uncertainty is greater. Accordingly, here is the share payment recommended.

With consideration to the presented research results, it can be concluded that transactions that are associated with a high risk, are more successful in the use of shares as payment. The model of Myers & Majluf (1984) refers to the share payment as a "bad" signal and the cash as a "good" signal. This is demonstrated in numerous studies, such as, for example, in Houston & Ryngaert (1997). However, the information asymmetry in M &As must also be taken into consideration. A transaction under the influence of information asymmetry can be referred to as a high-risk transaction. As is clear from the research of Wübben (2007), Moeller et al (2007), Chang (1998), Fuller (2001) can be seen, this is the case with private target companies for acquisitions of large "targets" and in cases where the seller and the buyers are not in the same industry. In such situations share payments are recommended, as they can reduce the risk.

8. Earn-out payment

The following chapter examines the effect of the earn-out agreements on the M&A transactions. This payment instrument has numerous advantages. The earn-outs can significantly reduce the ex ante and ex post information asymmetry, because they serve as a self-selection mechanism. Ex post they lead to strong commitment of the management to the newly established companies. Given these conclusions, a positive abnormal return is expected to be seen in the transactions with earn-out payment.

In the research of Kohers & Ang (2000) the influence of the earn-out on the information asymmetry in M&A transactions is examined. In the final sample 938 Earn-out agreements in the period from 1984 to 1996 are explored. The authors say that in the companies that are located in the high-tech industry, a lot of information asymmetry occurs in the takeovers. These companies have great growth potential, but little tangible assets. In the article it is proved that in these cases, earn-outs are preferable to cash payment, because they can reduce the asymmetric information. Furthermore, the authors find that the acquisitions of private enterprises are associated with high information asymmetry, because in these cases little or no information about the company is published. This hypothesis is consistent with the conclusions of the last subchapter. Even among companies in the services sector, similar events are considered, as they have low-value assets. For both of these issues it is demonstrated that an earn-out agreement is preferable. Unanimously with the conclusions from the previous subchapter, is also noted here that the larger the target company is relatively to the buyer company, the greater the information asymmetry in the acquisition process. Accordingly, here, the empirical results indicate that in this case the companies tend to use earn-out agreements. Next, the earn-outs are compared with the share and cash payment at the private enterprise. On the day of the announcement of a positive average abnormal return of 1.348% for the earn-out payment, 0.867% for the share of payment and for the cash 0.868% is determined. The results are significant at the .01 level. The abnormal return for the whole 31-day event window of the earn-out amounts to 5.39%, significantly more than by the share payment (1.13%) and cash deals (1.45%). Furthermore, the results in this research determine that at the acquisitions with high information asymmetry, the M&A transactions are much more successful, because the abnormal return measured is much higher.

The research by Lukas & Heimann (2010) also deals with the influence of earn-outs on the information asymmetry in M&A transactions. This article reports that the German capital market responded positively to the earn-out agreements. A significant positive cumulative average abnormal return with a value of 1.817% on the day of the announcement was measured. In this research it is found that in non-listed companies there is less information available. For this reason, such transactions are riskier. The empirical findings confirm the theory that earn-outs have a positive impact in these cases. Furthermore, the influence of the earn-out is being explored with companies from the high-tech industry. Unlike the study of Kohers & Ang (2000) here no positive impact is detected. The results concerning the target companies from the services industry are also not in line with the latest research presented.

Two other studies support the theory that the earn-outs can reduce the information asymmetry. In the article by Datar et al. (2001) comes to the conclusion that companies from the high-tech industry, from the service industry, and those that are non-listed company are connected with high information asymmetry. This scientific article also demonstrated by empirical research that the earn-out agreements positively influence such transactions. Beard (2004) also notes that in such transactions earn-outs as an instrument to reduce the information asymmetry tend to used by the acquiring company.

From all research results relating to the earn-outs can be concluded unequivocally that this payment mechanism is an effective mean to eliminate the information asymmetry in M & As. Most studies that have been presented here agree that the information asymmetry in non-listed companies and in such located in the high-tech industry or in the service industry is most likely. Lukas & Heimann agree with this theory. However, showing their research that the companies have made the service and high-tech industry dubious results regarding the success of the establishment of earn-outs. This is justified with the unclear diversification among companies about the importance of their human capital. In the latter rapid technological change is mentioned as a possible cause.

Therefore it can be concluded that: Earn-outs allow the successful reduction of the information asymmetry in M&A transactions. The use of earn-outs as a payment instrument is recommended, particularly for those companies that are unlisted, whose success depends on subject-specific human capital, and in the cases when the target compared to the buyers is relatively large.

9. Conclusion

In this scientific article the information asymmetry in the M&A transactions was considered under the assumption that this information problem can be solved by using proper means of payment. The information asymmetry can exacerbate the conflicts of interest and have a negative effect on the transaction success, because these transactions can be much riskier. In the case of M&As it is differed between ex ante and ex post information asymmetry. As already explained in the previous chapter, the ex ante uncertainties occur in the pre-contractual stage of the transaction. This is based on the lack of information in the negotiations on the behalf of the buyers. The takeover candidate can never be sure whether the value of the target company is evaluated properly because the seller has an incentive to a higher selling price. In the ex post problem the conflict between owners and management that may arise after the conclusion of the contract is considered. This is also called a moral hazard problem. Due to the leadership position, the manager receives more information than the owners. Accordingly, they then have no incentive to disclose this. Instead, it is preferable that they are pursuing their own goals, although this may have negative consequences for the owner.

When considering the M&A transactions it is determined that the payment instruments can have an impact on the information asymmetry. In this scientific article the following payment instruments and their impact on the information asymmetry were presented: earn-outs, equity and cash payment. It was noted that shares can reduce information asymmetries in the M&As better than cash because they reduce the risk in the transaction. But a stock deal caused other information problems. With a share payment the buyers are interested to pay for the transaction with overvalued stocks, although this is very unprofitable for the seller. Therefore, the shareholder can never be sure whether a stock offering may not result in losses. The problem is also known as double adverse selection. Next, the earn-out agreements were presented. With this payment method payment is made regardless of the success of the target company and agreed on a further additional payment. The second payment will only be carried out if certain criteria are met in this case. Thus, the earn-outs constitute a payment method which simultaneously serves as a self-selection-tool and can ex post reduce the moral hazard problem clearly.

After a detailed review of all the hypotheses the empirical research results were presented. Hence it comes to the following conclusion: though equity payment may reduce the risk of overpayment and, accordingly, the ex ante asymmetric information, they often cause negative reaction in the capital market. This is justified by the double adverse-selection problem. The earn-outs are the optimal choice, in the M&A transactions under the influence of information asymmetries. This is supported by empirical results.

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