Earnouts and asymmetric information

A study of M&A transactions of privately held Swedish SME's

Seminar paper: Master's degree
Industrial and Financial Management

School of Business, Economics and Law,
University of Gothenburg
Autumn 2010

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Abstract

The Swedish business climate is up for a big change. During the coming years many of the 40-chord entrepreneurs will sell off their family businesses creating a huge need for allocating potential buyers. Conversely, due to the asymmetric information issues surrounding privately held companies, the sellers and buyers might not be able to reach an agreement. In order to cope with these issues, financial intermediaries and M&A specialists have started using earnout agreements, and thus, removing some of the risk from the buyer towards the seller. Our research aims to find out if the usage of earnouts represents the risk-level of the transaction or if it is a standardized tool used by M&A specialists. By analyzing 25 M&A transactions of Swedish SME's we were able to see that earnouts are not standardized instruments as they do differ between targets firms. Moreover we have found evidence that some uncertainty factors, such as distance between the seller and buyer, have significant effect on the usage of earnouts. Interestingly however, is that the proportion of earnouts does not increase as uncertainty increases. Instead, our study shows that the usage of earnouts is non-linear, meaning that the earnout is more flexibly used and more custom made in transactions with high uncertainty.

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1. Introduction

In this section an introduction and background to this thesis are presented. Further we present our pre-study which has been a source of inspiration as well as the starting point of our research. Subsequently we continue with a problem discussion leading us to our main problem formulation. In the final part of the chapter we present our purpose and the disposition of our thesis.

1.1 Background

The business climate in Sweden is changing. Today, sixty percent of all privately held companies in Sweden are in need to change ownership in the coming years as the 40-chord generation is now facing retirement (Hellerstedt, 2009). The fact that six out of ten entrepreneurs will soon hand over ownership of their enterprises is of great importance – 200 000 people are today employed in firms where the entrepreneur is more than 60 years (Boman, 2009). In turn, the transfers of ownership are a prerequisite and necessity for the dynamic and competitiveness of a Swedish enterprise. Unfortunately, a substantial reason for this stagnant rate of generational change and the transform of ownership has to do with buyers and sellers unrealistic expectations about the price of the company. A price difference which is said to be derived from the differences in perceived risk, and uncertainty about the future potential associated with the selling firm (Boman, 2009).

The selling decision of a private firm is generally established when the managing owner of a private business decides to slow down or retire and there is no inheritor interested in, or capable of, running the business. In addition, since the owner often find it too risky and too stressful to remain as the owner, a retirement usually results in a sale. Furthermore, once the decision about selling the company is set, a business owner has according to Salomon (2008), one basic *concern* when selling his legacy; to maximize the valuation and thus, the price of the firm. One way to maximize the apprehended value of the company and increase the likelihood of a completed transaction is by using a financial intermediary such as an investment bank. These intermediaries often have the experience and expertise in managing a competitive selling process (Salomon, 2008).

The essential precondition for a successful M&A (merger and acquisition) is rather straightforward; the notion that a buyer and seller agree on a price that reflects the perceived value of the company at sale. The valuation phenomenon itself is however difficult and complex. There are many variables to consider and every company is unique. This is especially the case when it comes to the valuation of private companies as the asymmetric information increases. The higher risk taking are then being reflected in a lower purchasing price, or a discount, more specifically known as the private business discount (Koeplin et al., 2000).

When acquirers experience high uncertainty they will inevitably face higher transaction costs and higher possibilities of valuation errors. Therefore buyers tend to use a more cautious strategy when valuing a private firm relative to a public one (Capron & Chen, 2007). Subsequently, the bidders caution in the evaluation of the target firm might lead to undervaluation due to fear of overvaluing the target firm (Bruton et al., 2009). Further, the uncertainty can be explained as a product of asymmetric information between the buyer and the seller, or more specifically, issues of adverse selection and moral hazard (Amit and Villalonga, 2006).

1.2. Pre-study

The magnitude of ownership transition and selling of private companies is both an important and a necessary element in the modern economy. However, according to theory (Amit & Villaonga, 2006; Shen & Reuer, 2005), small and private businesses have frequently been neglected in M&A studies, and thus, have not been given enough attention on how they differ from public targets. One explanation to this is the difficulty of gathering trustworthy information from a private firm (Amit & Villalonga, 2006). However this does not mean that private firms should be excluded, rather they should be put in the spotlight. In order for us to dig deeper into the complex world of transfers of ownership in private firms, we conducted interviews with corporate representatives from four Swedish M&A intermediaries; Engnér from Censor (2010-09-30), Creutz representing Svensk Företagsförmedling (2010-10-02), Siewertz from Handelsbanken (2010-10-05) and Ingemarson representing PwC (2010-11-22). The focus for these interviews was to discuss valuation issues in private SME's (small- and medium-sized enterprises) in Sweden from their point of view.

Generally, the representatives claim that the main reason for why a public company sells at a higher price is the existence of a secondary market. The lack of a secondary market for private firms is according to Creutz, incorporated in a higher discount rate, thus a lower valuation. Further, Engnér claims that it is impossible to bridge the entire information gap in a private firm, which results in a more skeptical valuation. According to Creutz, the value of a private firm is created by the buyer and therefore, there is no general truth about how to calculate the price for a private target. In addition he says that one can be very surprised how the valuation changes depending on who is the buyer. And consequently, the highest price is often paid by a buyer in the same industry. Engnér explains this by the fact that when the seller and buyer share the same set of value the price will also be higher.

According to Engnér, the acquirer's motive is generally not to purchase a shell company but rather the employees within the company; as they are the ones that sit on all the knowledge, the networks and the customer contacts they also create the value which the acquirer is paying for. Subsequently, the effect of losing a key person might result in the loss of many customers, which will distress the turnover and finally depress the value of the business. As a result of this we

encountered an extremely important phenomenon in the process of the transaction of ownership in a private firm; the use of contractual earnouts.

All representatives agree that in order to limit the buyer's risk there is a need to build in mechanisms into the contract. For instance, Siewertz mentions that a settlement where the previous owner must remain within the company during a transition period is frequently used. In this way the new owner can secure the existing contracts and relations, both internal and external. Creutz means that since the price paid is partially based on future earnings the buyer would want the old owner to deliver these results. Engnér agrees when saying that the price is all about expectations, expectations which are based on the owner's subjective view.

The most common use of earnouts is that in addition to the initial down payment, an agreement where a fraction of the transaction price is based on the future performance of the target company. In this way, the agreement could be described as a method to overcome the buyer's struggle in determining the present value of future growth of the target company. According to Ingemarson, the seller of a company usually attains 70-80 percent of the total purchase price as a down payment. The remaining percent are subsequently pegged to an earnout agreement of approximately 2-3 years.

Engnér and Siewertz both state that they cannot remember one single case where a performance based transaction model has not been used, and that it has become a standard procedure in the selling of private SME's. Creutz argue that we have to be aware of the fact that an earnout agreement is not ideal for the seller; he wants the entire payment immediately. But, since basically no buyer would agree on such a payment, the seller has to agree to stay in the company in order to get the compensation that he desires. However, Ingemarson states that usually the previous owner wants to remain in the company in order to control the performance-based compensation derived from the earnout.

According to Creutz the structure and magnitude of an earnout agreement has mostly to do with the importance and sensitivity of certain key persons within the business. However, Ingemarson continuously argue that the future projections are what finally determine the construction of the earnout agreement. An aggressive and highly uncertain forecast of future performance equals a substantial earnout proportion of the total purchase price. For example, if a company has been in a steep upward curve at the time of sale the buyer will generally seek to secure the deal with an additional earnout proportion. In contrast, a potential buyer of stable company that has delivered rather constant results for a long time will not be in the corresponding a need of an earnout due to the limited uncertainty.

Nevertheless, one point our informants all agree upon is that the earnout agreement is an effective instrument of preempting the uncertainty caused by the asymmetric information in a private firm.

1.3. Problem discussion

Apparently there are many factors that differs a private firm from a public. The most obvious is linked to the difference in risk, or what researchers label as a difference in asymmetric information. Asymmetric information should not be equal between all private firms as it is dependent on several, both internal and external factors. This difference in uncertainty would supposedly create valuation differences, or different discount levels, between firms with various levels of asymmetric information. As our pre-study shows, earnouts are used to limit the perceived uncertainty to make the asymmetric information more controllable. Since uncertainty in private firms is ever attending, the use of earnouts in SME acquisitions is almost praxis when transaction contracts are written. As it may seem obvious that earnouts are related to asymmetric information there are no quantitative studies made which confirms that this is the case. Do factors which affect asymmetric information affect the earnout? Or more specifically; is it possible to draw a parallel between the two, saying that the higher asymmetric information the higher earnout.

These statements raise doubts on however earnouts really works as a tool to reduce asymmetric information, or if it is just a clause in a contract which the parties take for granted. This inevitably leads us to our research problem formulation which this thesis aims to answer; *how does the use of earnouts change as asymmetric information increases?*

1.4 Purpose

Our purpose is to understand and characterize earnouts in transactions of Swedish private and owner-managed SME's to create a basic perception of how, or to what extent, they are used to limit uncertainty.

Within the scope of our purpose we wish to inspire future academics and researchers to further elaborate and analyze this interesting, yet often forgotten, topic. But also, this approach hopefully improves the seller's knowledge about which factors buyers recognize as risk-associated, and thus, being able to eliminate or partially reduce these. Further we want to make M&A intermediaries more armored in their consultancy to prepare SME's which are up for sale. Enabling them to better inform their clients about the use and effects of earnouts, but more importantly, to make the screening of potential buyers more effective.

1.5. Disposition

As we now know the background to the problem we will continue our research by looking at how the existing theories deal with the complexity of the problem. This will both help us to find sufficient reasons to formulate our research hypotheses but it will also give the reader a deeper insight in our subject. Once the hypotheses have been identified we will declare the strategy used to answer the problem formulation and highlight the key factors for measuring the problem and testing the hypotheses. Our final two chapters deal with a comprehensive analysis of our findings and in addition some concluding remarks.

2. Theoretical framework

In this chapter we will present the theoretical framework of our thesis. We will present existing theories and results from past research related to our subject. The chapter consists of three inter-related parts in order to help the reader get a clear view of our research problem. First we will look at specific features in private firms which results in a discount on their value. Second we will explain the existence of asymmetric information and the effect it has on private firm valuation. Third, and finally, we will focus on earnouts and how they are applicable to reduce asymmetric information.

2.1. Discounts on private companies

There have been several studies throughout the years, which have established evidence of that private firms sell at discount. In a study of both American and international M&A transactions between 1984 and 1998, Koeplin et al. (2000), found evidence that private firms trade at lower multiples than their public counterparts, both in domestic and cross-border transactions. Furthermore, Shen and Reuer's (2005) study shows evidence that there are higher transaction costs involved with private targets, leading acquirers to be more resilient in paying a high acquisition price.

While there seems to be a variety of issues that can create a discount on the value of a private firms they all share one characteristic. Whether or not the discount is in the shape of illiquidity, distance or assets, they are all based upon uncertainty, and the uncertainty is partly derived from the valuation models being used (Damodaran, 2002). In addition to the valuation problem, to target a potential private firm might turn out to be problematic as they generally are difficult to locate and thus small, in addition private businesses tend to find it more difficult to signal their business prospect to investors. Shen and Reuer (2005) emphasize that these problems are less significant for public firms due to the greater information disclosure and the signals attached from being publicly traded.

2.1.1. Factors affecting the discount

Many claim that the main factor why a private firm often sells at a discount is simply that the investment in a private firm is much more difficult to turn into cash (Damodaran, 2005). There is a study proving that investment bankers, when valuing a private firm in the light of comparable publicly traded firms, generally apply a discount, which reflects the private firm's relative illiquidity (Koeplin et al. 2000).

The illiquidity discount is explained by the following argument. By taking an equity position on the stock market, the investor always has the option to liquidate its position whenever needed. However, in the case of an equity

position in a private firm, the transaction costs from liquidating your investment can be a substantial percentage of the firm value. Therefore, it is reasonable to lower the value of equity in order to consider the illiquidity (Damodaran, 2005). In addition, this might also answer the question why public firms tend to choose private firms in acquisition. Since there is a discount on the price tag, *the imperfect market conditions for these firms increase the chances of abnormal returns on the investment increase* (Capron & Shen, 2007).

Further, the concentration on solely one factor is also one of the major setbacks with the traditional views on private firm discount. Although there is awareness that there are many things that affects the private firm discount, the explanation is narrowed down to just account for the illiquidity discount, this for simplicity reasons. However, Koeplin et al., (2000) states that there are more factors that justify the discount on private firms. Since private firms do not share all the characteristics of a comparable public firm in terms of cash flows, capital structure, risk *and* liquidity, a discount to smooth out these differences is considered as justified. In accordance with Koeplin et al, (2000), Capron and Shen (2007) argue that the discount can be explained partly by liquidity and bargaining power between the seller and buyer, but also by the lack of information on private firms, compared to public ones.

Although the main argument for the discount, historically, has been that the lack of liquidity (Kopelin et al 2000; Fuller et al., 2002; Capron and Shen, 2007) there are no concrete theoretical evidence that confirms this illiquidity effect on the private firm value (Faccio et al., 2006). If we instead take a multifactor approach to the private firm discount we can start by looking into one of the key points, namely the information gap. Capron & Shen (2007) is of the opinion that this difference in the information quality and volume affects the valuation process. Since public firms have less control over the information they want to communicate to investors making them more visible, which results in a lower level of uncertainty concerning their true value. Meanwhile private firms have a lower transparency to the public, and therefore investors face problems when deciding a private firm's value. This insecurity leads to that investors in a private firm have high information search costs and that the seller has high costs of making its firm more visible on the market. These costs may have a depressing impact on the creation of a fair price, which might explain why acquirers often choose public firms when the target firm is operating in unfamiliar industries (Capron & Shen, 2007).

Furthermore, Capron & Shen, (2007) claim that the bargaining power balance between the buyer and the seller is of importance when setting the price on a firm. For instance, a private target firm has generally an inferior bargaining power towards an acquirer. This has to do with the limited amount of available information and will eventually lead to a scenario of few bidders. The negotiating process is also different between private firms, in which they are based on voluntary exchange, whereas in the case of public firms the negotiating process is more like an auction. It is also possible that in a private firm, finding *the right seller* is more important than finding *the right price* (Capron & Shen, 2007). This

can partly be explained by the fact that the ownership structure in a private firm is generally very concentrated with the owner as the major block holder. In a takeover scenario though, he or she will have to accept that the new owner will become the major block holder in the firm (Chang, 1998). Shen and Reuer (2005) broaden this view by adding a factor which can have an impact on the private firm discount, the firm's age. A young private firm lacks legitimacy and reliability, which increases the bidders' transaction costs, resulting in a lower bid price. In addition, the bargaining power of a young private firm is limited, consequently it faces a poor positions when to convince a potential acquirer of its' true value.

Furthermore, Capron and Shen's (2007) argue that during M&A's, acquirers' tend to prefer private firms when expanding in close-to-headquarters, familiar industries, and prefer public firms when expanding into new markets and product areas. By expanding in core-related industries the acquirer lowers its adverse selection and therefore it is more likely that the buyer and seller will agree on a price (Shen & Reuer, 2005). This can be traced to the fact that private investors usually find itself in an *active-owner position* where they monitor the firm and provide valuable knowledge (Capron & Shen 2007). Finally, the level of intangible assets also play a part as firms generally do not turn to private firms when scanning for investments in an industry with a lot of intangible assets because of difficulties estimating the value of these assets (Shen & Reuer, 2005).

All in all, the level of asymmetric information that an acquirer perceives will be distinctive with different types of target firms. A firm which acquires within its own industry will not only have sufficient knowledge about the target, but also about the targets assets, management, resources, customers and suppliers (Ragozzino, 2004). Simply put, a firm which is operating in a similar environment as the target firm is able to make more accurate valuation of firm-specific assets (Poulsen & Stegemoller, 2008).

2.1.2. The key persons effect on the private discount

As mentioned, research shows that private firms sell at discount (Koeplin et al. 2000; Pratt, 2009; Spremann & Gantenbein, 2009; Bruton et al., 2009). There are believes, although not statistically proved, that a part of the discount might be explained by the managers receiving a share of the difference between the bid and the ask price (Koeplin et al., 2000). More likely however is that the private discount reflects the uncertainty in buying a private company. Further, according to scientific articles (Pratt, 2009; Spremann & Gantenbein, 2009; Bruton et al., 2009) a portion of the private company discount might have some connections with the key person in a private firm. The key person discount could be explained as the reduction in value of a private company derived from the actual or potential loss of a key person by deducting an amount or percentage from the value of the target company. In most private firms, the owner holds on to the superior knowledge and information. Subsequently, this puts him in a decisive role for the valuation procedure, as he may be unwilling to share all the relevant information to the buyer, which creates additional costs through adverse selection.

Furthermore, the private owner might engage in actions to increase his personal gains by disclosing biased information, which in turn creates extra costs for the buyer in terms of moral hazard (Bruton et al., 2009). Additionally, Wasserman (2003) claims that there are clear differences between the role of the founder-CEO and the role of other CEO's, differences which need to be acknowledgeable. The level of managing-power has impacts on the risk associated with the decision-making. In the case where the CEO makes the most, or all decisions, there is high volatility of the outcome of each decision. This means, the more control, the higher volatility in the performance of the firm (Adams et al., 2005). Further, Adams et al. (2005) present evidence that firms with high concentration of CEO-power has, historically, both the lowest and highest performance record.

According to Pratt (2009) the loss of a key person entails a risk because of the subsequent variation in the firm's performance due to relationship with suppliers, customers and employees. And as a result, the key person dependency affects the valuation in the private company in a depressing way as the firms is being viewed as a more risky business. There is today little doubt that the key persons affect the value of the company. However, the difficulty lies in how to quantify they key person's impact on the company, which is something that obviously lies in the potential buyer's interest before the intended acquisition. If the target firm is undoubtedly dependent on its present management, there are strong reasons to consider this actuality when valuing the target firm (Pratt, 2009). The management should hence be credited a fraction of the potential value of the firm. The problem lies in that the traditional valuation methods do not encounter this problem adequately (Spremann & Gantenbein, 2009). In order to apply a key person discount and to estimate a realistic future cash flow, certain factors must be considered according to Pratt (2009). Who in agreement with Spremann & Gantenbein (2009) argue that there is no such set percentage or model available in order to reflect a key person discount, as each circumstance and conditions are unique.

Nevertheless, in order to make a relatively accurate assessment on the key persons' affect on the targets' value, certain conditions ought to be considered before looking at the more concrete factors that might affect the future earnings (Pratt, 2009). *The first* condition is whether or not the claimed individual (the key person) actually is responsible for the company's profit level. Just because an individual may be the founder and controlling officer of a corporation does not necessarily mean that he or she is a key person. For example the firms' earnings might be derived from intangible assets, such as patent or long-term contracts. When quantifying the key person discount, the size of the company, in terms of number of employees is also very important. The bigger the company, the harder it becomes to actually confirm one key person responsibility of the firms historical performance (Pratt, 2009).

Secondly, if there is a key person within the target firm, the question is whether the individual can be sufficiently replaced or not as there might be possibilities that other personnel, especially long term employees, could replace the management position. In addition, according to Pratt (2009) a company might

own key person life insurance which might enable the company to survive a period of decreased earnings when searching for competent replacement. The next step after reviewing these conditions is to try to uncover the crucial factors when analyzing and computing the key person discount, which often turns out to be very problematic. The main factors to look at when computing the key person discount are; i) services caused by the key person and the degree of dependence on that very person ii) the likelihood loosing the key person iii) the depth and quality of the overall management within the company (Pratt, 2009).

2.2. Asymmetric Information

In Akerlof's famous article (1970) the author claims that buyers initially cannot distinguish a superior product from an inferior. This creates an advantageous situation for the seller due to asymmetric information, meaning that the seller obtains more information about the underlying product than the buyer does. In this situation, a dishonest seller has the opportunity to deceive the market by selling inferior products at the price of superior products. This may result in a significant problem for the buyer; namely to identify *the actual quality of the product*. Furthermore, since the risk in this case is the buyer's, the demand for guarantees arises. With guarantees the buyer is ensured a certain level of quality. This limits the buyer's uncertainty and lowers the perceived risk of the transaction. These guarantees are often a prerequisite for the buyer to reach an agreement with the seller (Akerlof, 1970). In this kind of market, where the seller has private information on which the buyer is uninformed, the gains from trade cannot be fully realized (Levin, 2001).

This theory is also applicable on the relation between investors and investees since there are market imperfections which limit the information available for investors. This information asymmetry ultimately results in the imbalance between companies up for sale and potential investors (Hassan & Leece, 2007). Although mainly instructive and under specific circumstances, Akerlof's study works as a basis of understanding adverse selection due to asymmetric information also in M&A's (Shen & Reuer, 2005). Ragozzino (2004) presents agency and bargaining problems which arises with asymmetric information. The agency theory states that managers act to look after their own interests. These costs are related to the availability of information and this asymmetric information between insiders and outsiders will lead to higher agency costs for the buyer. The other problem under asymmetric information is the bargaining power between seller and buyer. In theory, high asymmetric information leads to problems for buyers to separate between low- and high-value investments. Hence, buyers turn down good investments in order to avoid overpaying. This misinterpretation creates difficulties for buyers to screen possible targets efficiently. However, this problem is also affecting the seller. If the seller is not able to transfer sufficient information to possible acquirers, it will result in more cautiousness from the buyer when the valuating target firms. Hence, the seller will not be able to get fully compensated from the sale. Furthermore, increased information about the target firm makes the buyers forecasts more accurate and more trustworthy (Ragozzino, 2004).

2.2.1. Valuation issues due to asymmetric information

When valuing any type of firm there is a key question which has to be considered before starting the valuation process; what is the motive behind the valuation? For example, there are differences if a bank values a firm as a basis for a credit grant than if a firm is planning to merge with or acquire another firm. If the main focus is finding a correct asking price it is of importance to know that the economic value, that is the perceived utility value, might vary depending on the buyer. However, in order for the seller and buyer to agree on a price the economic value perceived by the buyer must generally exceed the seller's economic value (PricewaterhouseCoopers, 2007).

Researches in the past have made conclusions that were supposed to be true for both public and private firms, but, in reality there are substantial differences between the two (Shen & Reuer, 2005). Some obvious characteristics of a private unlisted firm create severe valuation problems (Hassan & Leece, 2007). First of all, there are no objective measures of value in terms of the price of a publicly traded stock. In addition, it is not possible to measure the market value by comparing a private firm with other private firms with corresponding size and/or in the same industry, as they also lack publicly recognizable values (Koeplin et al., 2000).

Second, the available information on private firms tends to be much more limited than for public firms resulting in the latter having a higher reliability (Pratt, 2009). This limitation is partly due to the lack of strict accounting rules for disclosure of information in private firms (Hassan & Leece, 2007). This leads to asymmetric information problems for investors in terms of find sufficient information from the financial statement of a private firm (Damodaran, 2002). Amit and Villalonga (2006) claim that even though private firms have a huge impact on the world economy they are given little attention compared to public firms. This can, according to the authors, to some extent be explained by the difficulty to gather trustworthy information from private firms.

This information gap is a serious issue when trying to value a firm because it makes it far more difficult to predict accurate future cash flows (Koeplin et al., 2000) and the likelihood of mistakes therefore increases dramatically (Spremann & Gantenbein, 2009). The considerable problems in forecasting future cash flows (Hassan & Leece, 2007) can jeopardize the trustworthiness of the valuation process. In fact, in the simplest manner the value is a function of cash flows. Thus, to value a firm is nothing else than the valuing *all future cash flows* to the firm at the present value (Mendenhall & Stahl, 2005). These estimation problems in combination with the difficulty of gathering correct and sufficient information (Damodaran, 2002; Datar et al 2001; Hassan & Leece, 2007; Koeplin et al., 2000; Pratt, 2009) is a form of information asymmetry. The information asymmetry leads to a scenario where there is a high risk for the buyer to overvalue the firm leading to a bad investment. The buyer cannot trust the seller since he may only disclose information which *he finds necessary* for the valuation (Hassan & Leece, 2007). This might subsequently lead to an overestimation of the expected value of the firm (Bruton et al., 2009).

In accordance, when bidders experience high uncertainty they will inevitably face higher transaction costs and a higher possibility of valuation errors. Therefore, buyers tend to use a more cautious strategy to evaluate a private firm (Capron & Chen, 2007). This basically means either being skeptical in the calculations of future cash flows or using a higher discount rate to play safe. Further, due to information asymmetry, the buyer face difficulties seeing the true value of the combined benefits for the firms, the synergies, as well as the true value of the target firm's assets (Shen & Reuer, 2005). The bidders caution in the evaluation of the target firm might hence lead to undervaluation due to fear of overvaluing the target firm. One example is presented by Bruton et al. (2009). Their study shows that in the initial public offering of a private firm the markets closing price on the first trading day exceeds the price that the entrepreneur obtains, meaning that the *seller gets paid less* than the final price set by the market. Officer et al. (2006) provide evidence that also the type of payment may affect the final price. If the acquirer, in a case of asymmetric information, pays in cash he bears all the risk of overvaluing the firm. However, if the payment is with stocks he will share the risk with the acquired firms' shareholders. The authors suggest that stock should always be the term of payment when acquiring a private target.

Flanagan and O'Shaughnessy's research (2003) further states that the final price of an M&A depends, to some extent, on the core-relatedness between the seller and buyer. By being a core related business, the risk of overpaying reduces as the acquirer becomes more informed and can more easily assess the true value of the target company (Flanagan & O'Shaughnessy, 2003). In order to be considered a core-related business, the acquiring firm and the target firm must meet one of the following three criteria; i) the acquirer primarily sell the same product as the target firm, ii) the products, even if different, have similar selling and production technologies or iii) the firms' product is an input for the target firms product or vice versa.

2.3. Earnouts

M&A transactions provide a natural setting in which we can investigate the effects of agency costs, asymmetric information, adverse selection and moral hazards. According to Datar et al (2001) both acquirers and target firms take on actions to mitigate these problems and *an earnout arrangement* is one of these actions. An earnout could basically be presented as a method to overcome the buyer's struggle in determining the present value of future growth of the target company. Instead of an immediate payment the acquirer could attach a fraction of the transaction price on the current managers' or owners' and their future performance. In an earnout the target firm's performance is generally based on the future earnings of the acquired firm in the following one to five years after the acquisition. (Datar et al 2001). The exact time to remain in the business depends heavily on who the acquirer turns out to be, but also his motives: a strategic buyer with a larger operating business will be more flexible, and thus, the previous owner's retention within the business will become shorter.

Since a firm's value might be affected by future contribution from existing managers the problem of adverse selection usually arises in the presence of the transaction of ownership. It is therefore common practice to retain these managers post acquisition by adjusting the form of payment and hence overcome this moral hazard. The buyer's knowledge of the potential risk and uncertainty is derived from the due diligence process, which is praxis where the buyer makes a thorough analysis of the firm to investigate the effects of agency costs, asymmetric information, adverse selection and moral hazards (Hassan & Leece, 2007; PricewaterhouseCoopers, 2007). In a due diligence process the buyer generally hires professionals to review the state of the target firm, in example the uncertainty and dependency of various factors such as the business plan, reputation to customers, ties with suppliers are all being reviewed, but not at least the manager's role and personal attributes (Hassan & Leece, 2007).

2.3.1. Pros and cons associated with earnouts

The earnout structure provides the seller an interest in the future profitability of the target, without explicitly require the seller to maintain an ownership interest in the target company. By using earnouts Ragozzino and Reuer (2009) state that it can implicitly reduce the buyer's risk of overpaying while still retaining full ownership of the target's recourses. In addition, to overcome private information Holmström, (1979) argue that the earnout provisions might not only be a mean to overcome asymmetric information as the compensation is based on future performance, but also, the earnout will induce the party to stay and managing the selling firms assets after the acquisition. Hence, the earnout can be useful for retaining and motivating the owner or manager of the target firm. Also, bidders might have the option of only partial ownership of the target, which can further reduce overpayment risk (Ragozzino & Reuer, 2009).

There are however large costs for the buyer associated with the use of earnouts; namely the potential expenses due to a transfer of risk and potential agency problems. As earlier mentioned, the general motives for selling has to do with the target companies owners no longer wishes to bear the business risk. According to Datar el al. (2001), the most important cost associated with an earnouts has to do with the transfer of risk. An earnout results in that the target owners bear some of the risk associated with the deal – the risk of the future business condition but also the uncertainty related with the competence of the acquiring company. The other cost associated with earnouts has to do with the occurrence of an agency dilemma as the target owners now must monitor the acquiring firm's influence in the computation of earnout performance measures.

Furthermore, with an earnout the target owner's compensation is, to some extent, in the hands of the future performance of the firm which is measured by the new owner. This might lead to disputes regarding the measurement techniques. In the case when the target company is being bought and later integrated with the acquiring firms operation, this cost might be substantial and noisy (Datar el al, 2001). Finally, the earnout agreement might also reward short term thinking as the seller might take on actions that inflate the result in the near future when the purchasing price is based on the near time performance. A

result from this could be that managers depress the long term value creation of the company by for example reducing the R&D and accounting deferrals (Damodaran, 2005). As for the case with partial ownership this might, in addition to limited discretion over the target firm's recourses, introduce additional exposures to various types of opportunistic behavior (Ragozzino and Reuer 2009).

Consequently, as theory clearly states, in some situations the long-term value is successfully created by an earnouts' ability to overcome agency problems and private information. However, sporadically these positive returns will not be sufficient enough to compensate the target owners for continuously bearing the business and fusion risk. In this case the costs involved with earnouts overcome the long-term benefits.

2.3.1. The application of earnouts

The foundation of using earnouts is significant as private information occurs resulting in difficulties when estimating future performance. Datar et al. (2001) states that earnout's are more likely to be used in situations where adverse selection and incentive problems are more frequent. This implies that the use of an earnout payment might be beneficial for targets which are small, privately owned or are operating within another industry. In addition, the use of earnouts might be beneficial in the presence of sizeable distance between the seller and buyer. Earnouts is also frequently used when it comes to companies with a large proportion of intangible assets such as technological companies and subsidiary targets, which has to do with incentive or signaling benefits received from an earnout (Ragozzino and Reuer, 2009).

Datar et al. (2001) generally concludes that the use of earnout is motivated by agency and adverse selection concerns, as opposed to tax and financial reporting concerns which other studies has focused on. The probability of a successful use of an earnout seems also to be related to the occurrence of benchmarking. More precise, the successes of earnouts are more likely in firms where similar firms have been sold using the strategy.

From a more seller oriented view Ragozzino and Reuer (2009) claims that contingent earnout instead of a lumpy sum payment method are a way for the entrepreneurial firms to signal their value to a prospective acquirer, by ensuring that the value of the company endure even post the acquisition. Activities such as undergoing an initial public offering, engaging in alliances or joint ventures are all means which a target firms can signal their value to potential investors, preempting the adverse selection and hence facilitate deals. Subsequently they enable long term value creation. However, Ragozzino and Reuer (2009) also urge target firms, in addition to all the other signaling methods mentioned, to engage themselves in the use of earnout as a more frequent mean of signaling and to reduce the asymmetric information and the associated costs.

2.4. The formulation of research hypotheses

To reduce the problems related to asymmetric information in general and adverse selection in particular, earnouts has become widely used among acquirers of private firms. Furthermore, as existing theory states, asymmetric information is dependent on many different factors and that these factors are likely to differ from firm to firm. Since there are differences in asymmetric information across firms (Akerlof, 1970; Hassan & Leece, 2007; Levin, 2001; Ragozzino, 2004; Shen & Reuer, 2005) the buyer's perceived risk should therefore be different depending on the riskiness of the target firm's industry. As a result, we state our first hypothesis;

Hypothesis 1: the earnout's proportion of the total transaction increases as industry risk increases.

In general, asymmetric information is higher in private firms than in public firms. A private firm has less demand on information disclosure and is less known to the general public, consequently a larger information gap between the selling party and the buying party arises (Hassan & Leece, 2007; Shen & Reuer, 2005). To cope with the perceived information asymmetry an earnout can be applied (Datar et al., 2001). Thus, we can formulate our second hypothesis;

Hypothesis 2: as uncertainty with the target firm increases the earnout's proportion of the total transaction price increases.

It is important to understand what is meant by information asymmetry. In this thesis asymmetric information is divided into four major components. First of all, as stated above the asymmetric information is greater with private targets than with public. However, firms which are operating in the same industry or operating on the same market may have the ability to reduce the information gap (Flanagan & O'Shaughnessy, 2003). Consequently we can derive two closely related risk components; distance and industry difference. According to these theories we should be able to observe that;

Hypothesis 2.1: as distance between seller and buyer increases, the earnout's proportion of the total transaction increases.

and;

Hypothesis 2.2: as industry difference between seller and buyer increases, the earnout's proportion of the total transaction increases.

Furthermore, in a transaction where the acquirer perceives adverse selection much of this information asymmetry is related to the targets dependence on the old CEO, his contacts and the knowledge he obtains (Pratt, 2009; Spremann & Gantenbein, 2009; Bruton et al., 2009). To reduce the uncertainty with the seller's human capital, and retain the old management after the purchase, an earnout can be applied. Thus, our third risk component is the dependence on the old management and consequently;

Hypothesis 2.3: as uncertainty about the value of human assets increases the earnout's proportion of the total transaction increases.

Finally, uncertainty with the value of the target firm can be translated into the difficulties a buyer face with evaluating future revenues due to asymmetric information (Koeplin et al., 2000). A firm with a history of stable cash flows, nor public or private, is easier to price than a firm with volatile cash flows. Hence, it is more defendable to pay a high initial price for a firm with a high turnover and a stable cost structure. Therefore our last information asymmetry component is the size of the target firm, and;

Hypothesis 2.4: as size decreases the earnout's proportion of the total transaction should increase.

3. Methodology

In this chapter we specify what methodological choices we made to enable us to answer our problem formulation. First we discuss the quantitative approach and why it is suitable for our research study. Then we provide information on how we collected the data necessary for our thesis, what sample we have used and which variables we used in order to measure risk or more specifically asymmetric information. In the last section of this chapter we present the analysis models used to test our hypothesis and the correlation between our variables and earnouts.

3.1. Study Approach

In our study we use a deductive approach where we started by examining theories and then test these theories in practice (Bryman & Bell, 2007). However, in order to discover an interesting topic and present a problem formulation we performed a pre-study where we conducted open interviews with representatives from four financial intermediaries. Once the problem formulation was phrased we carried out a comprehensive literature study which was followed by a formulation of the research hypotheses in our research. Our final step was to collect information on each hypothesis, and their underlying variables, to conduct a statistical analysis and interpret the findings.

To be able to answer our research problem formulation and test our hypotheses we carried out a quantitative research approach (Bryman & Bell, 2007). Our aim is to measure the concepts of asymmetric information and the corresponding application of earnouts, specifically in the sale of a Swedish private SME's. In order to measure our concepts we have identified variables upon which these are dependent on. By finding a way to measure the concepts we are able to identify fine differences between transactions and hence get a clearer distinction of the concepts. Furthermore, the measurement also provides information on each variable's relationship with the concepts (Bryman & Bell, 2007). In this way we hope to extend the understanding of earnouts and its possible use to limit asymmetric information.

The focus in our thesis is to collect and compare data from a range of similar cases to see if there are any trends in the relationship between our research variables. To enable this we us a cross-sectional research design (Bryman & Bell, 2007) where we look at the variation of multiple cases from a quantitative sample to examine how the variables relate to each other. Concerning the replicability of our study, which concerns the ease of replicating our work (Bryman & Bell, 2007), it is in attendance. We are presenting how we gathered the information and which measures we have used as well as why they are used. Furthermore, we explain how our analysis is made practically. In this way we eliminate the uncertainty of our study and we make it possible for other researcher to generate similar studies.

The reliability and validity of a qualitative study in general and our cross-sectional study in particular lies within the quality in the measures used. The reliability of a research is mainly on how consistent the measure of a concept is. We can divide reliability into three factors; stability, internal reliability and inter-observer reliability (Bryman & Bell, 2007). Our measure is rather stable over time since asymmetric information is not very volatile and factors such as distance and industry differences will always play a role for the perceived uncertainty. However, since uncertainty is closely linked with information the results might change if there is a change in accounting standards for private firms; higher disclosure will result in lower asymmetric information. Furthermore, the Internet can be a source which lowers asymmetric information, and thus we would perhaps find different results if we use samples before the use of Internet became widespread. Overall we believe that our study is stable over time and that one should find rather similar results if the study is made on transactions in the near past or near future.

Regarding the internal reliability there is no problem in our research. Since the sample is composed with actual transactions there is no risk that the score on one variable may be influenced by the score on another variable. Furthermore, we did not ask the financial intermediaries to rank any variables and therefore we can assure that the data from the transactions are not biased. Finally, there is complete internal reliability in our study because, as previously mentioned, there is no subjectivity or categorization dilemmas involved in our sample. Our spreadsheet has been created in a straightforward manner where no variable can be misunderstood.

In addition the internal validity, or the certainty of the causality in the research, is one of the principal occupations of the quantitative approach (Bryman & Bell, 2007). The nature of our research question, *to decide if earnouts are correlated with asymmetric information,* leaves limited reason to question the causality. As asymmetric information increases, earnouts should increase as well. And, as the variables in our research increases, the asymmetric information should increase. The final concern when performing a qualitative study is if the results can be generalized beyond the context of the research (Bryman & Bell, 2007). Our study is limited to transactions where the seller is a privately owned Swedish SME, with this in mind there are a few problems regarding generalizing our results. To be able draw the same conclusions in other countries we need to know if they have the same rules about disclosure in private firms but also if earnouts is as widely used as in Sweden. Further, we cannot draw any conclusions on public targets since they generally have much lower problems with asymmetric information and earnouts is therefore not a frequently used method of payment.

3.2. Data collecting

We use several sources of information in our research. The introduction is based on both primary sources from a pre-study as well as on secondary sources mainly from research articles. In our pre-study we have carried out open unstructured interviews (Bryman & Bell, 2007) with financial intermediaries.

This allowed us to discuss a number of related topics. Our purpose with these interviews was to get a basic understanding of our topic in order to select a subject which is interesting both to us as well as to financial intermediaries.

The theoretical framework consists of secondary sources from research articles published on various databases. To understand the components and character of our topic we have performed a systematic review (Bryman & Bell, 2007) of existing research articles. Our aim was to look back at specific research articles which covered our research area. Since our research question is defined by variables we can see how changes in these variables correspond to existing theories. In this way we might be able to add new views to the research topic.

Once the research question and the underlying variables where identified we could start with the main data collection of our study; information from M&A transactions of private Swedish SME's. As a basis we used a spreadsheet (Exhibit 1) with the most interesting variables which were identified in the literature study. Then we transmitted the spreadsheet to our collaborated financial intermediaries which in turn filled in data from cases which they have been handling.

3.2.1. The sample

Finding the right sample and collecting correct data from that sample is a prerequisite for a quantitative study (Bryman& Bell, 2007). We are using a random sample that our cooperating financial intermediaries collect from their databases. By doing this, rather than separately asking each acquirer or acquired firm, we ensure that the data is 100 per cent correct and not biased – the data is transferred from the actual written contract of the transaction. However, we are unaware of the total amount of transactions made and the fraction of our sample. To be straightforward, our sample is the sample which after a lot of time and effort was available to us. Still, the general belief is that earnouts are used in nearly all transactions of private SME's in Sweden. Therefore we strongly believe that our sample, although with some sampling error, is a fairly representative measure of all private SME transactions. We also want to point out that we have not found any earlier studies dealing with this issue. This means that our study can be seen as the benchmark for more extensive studies in the future.

More specifically, as our sample we have used information from *25* M&A transactions where the target firm has been a Swedish privately owned SME. The information has been gathered from four financial intermediaries who provide advisory services for firms up for sale. These intermediaries are Censor, Svensk Företagsförmedling, Skarpa and PwC. Censor is a provider of advisory and project management services in M&A's of SME's, especially owner-CEO managed firms (censor.se, 09-11-2010). Svensk Företagsförmedling is one of the leading M&A actors in the Nordic region with 24 branches in Sweden (sffab.se, 09-11-2010). Skarpa is a specialist in ownership transfers with transaction prices between 15 and 200MSEK (skarpa.se, 05-12-2010). Pwc is a world leading auditing and advisory firm with 150 corporate finance advisors in Sweden (pwc.com/sve, 09-11-2010).

As previously mentioned, each of the cooperating intermediaries has provided data from their own records of sale transactions of SME's. In exhibit 1 we present which variables we have collected from each transaction. The sample includes many different types of transactions; transactions within the same industry, cross-industry transactions, transactions within Sweden and cross-border transaction. The only demand for a transaction to be included in the sample is that the target firm is a private Swedish SME and that the case was closed within the last two years. One question that still can be raised is that we are using a fairly small sample. Given the information from our interviews we believe that the sample, although small, is a good approximation of the distribution in a larger sample.

3.2.2. The variables

Our research question states that it should be possible to understand the buyers perceived level of asymmetric information in a target firm by looking at the earnouts proportion of the initial payment. If this holds, the variables which explain asymmetric information should also explain *earnouts, which is our dependent variable*. By analyzing existing theories we have identified explanatory variables which should affect the asymmetric information, thus the earnout, at the point of sale of a private SME. Due to limited access to sufficient data we have been forced to use proxy variables in order to measure these explanatory variables. Therefore, we are aware that there could be other variables which will explain the relationship more accurately.

To be able to answer our first hypothesis, and analyze if earnouts increase with industry risk, we need we will use *industry unlevered beta* as our proxy variable in the analysis. The industry unlevered beta is a measure of industry risk and thus we can argue that if earnouts differ from targets it should have a relationship with industry risks – an industry with high risk should not be treated in the same manner as an industry with low risk. The reason for choosing unlevered beta is because the potential buyer, in accordance with the MM theorem (Modigliani & Miller, 1958), can decide the financial structure of the target firm. The betas have been gathered from Stern University, New York (pages.stern.nyu.edu, 2010-11-20).

Regarding the second hypothesis, and its four related sub-hypotheses, which deals with asymmetric information and earnouts we will use several variables to measure their relationship. First of all, asymmetric information is created through an unequal share of information between two parties. The differences in information are greater if one party is a privately held company because of the restricted disclosure demands on the latter (Hassan & Leece, 2007; Shen & Reuer, 2005). However, the information gap can be smaller if the buyer in this case is operating on the same market or in the same industry (Flanagan & O'Shaughnessy, 2003). Thus, our first two variables are *distance and industry differences* as they can be regarded as a proxy of the information gap between the seller and buyer.

Moreover, much of the value of a firm lies within its human assets. And since this asset is not found on the balance sheet they are difficult to estimate and thus will increase the asymmetric information. Unfortunately much of the value in a private firm can be attached to the founder or the CEO (Pratt, 2009; Spremann & Gantenbein, 2009; Bruton et al., 2009). Since there are difficulties to gather information of the managers' value we will use the owner retention stated in the transaction contract as a proxy. This is explained by the fact that when a buyer faces great uncertainty about the value of the sellers human capital he should be more eager to keep the existing management for a longer transitional period. Our third variable is therefore *owner retention*.

As stated in the hypotheses discussion, our final sub-hypothesis component is connected to the stability and *size* of the target since it simplifies forecasting future cash flows. To measure this component we will use *turnover* as a proxy. Although not a perfect proxy variable we believe that it gives a hint of how the buyer *may* perceive the stability in future revenues. The rationale behind this is that with high turnover we can assume that the business is rather big and mature and, thus, it should have less volatile earnings.

The validity of the variables is a key issue in a quantitative research. Simply put, validity in the variables refers to if the variables actually measure what they aim to measure (Bryman & Bell, 2007). Our variables have been accepted by all our cooperating intermediaries meaning that they have approved that our variables can be a measure of asymmetric information, hence earnouts. Furthermore, our research variables are derived from theories of asymmetric information. All of our variables are frequently used in articles and we can therefore beyond reasonable doubt ensure that they measure what we intend to measure.

However, there is a problem with our variables that need attention; the difficulty to turn them into figures. The first step in handling the data collected is to understand the classification of each variable so that we can rank each variable properly (Bryman & Bell, 2007). Concerning earnouts, we will treat the data as a percentage of the earnout's proportion of the total payment. Regarding our explanatory variables we will transform them into ordinal variables, which make them easy to rank and measure. The *distance* variable we divide into two categories where a *value of 0* represents a buyer and seller operating on the same geographical area and a *value of 1* represents that the buyer and seller operate on different locations. Concerning industry differences it is a bit more complicated to rank, since we cannot tell if the difference between a retailer and a manufacturer is greater than the difference between a service firm and a wholesaler. To simplify we have transformed the variable it into a dichotomous variable (Bryman & Bell, 2007); when the buyer and seller is in the same industry they receive the *value of 0* and when they are in different industries they receive the *value of 1*.

Furthermore, owner retention is rather straightforward to rank. We will rank a transaction where no retention was used as *0,* a retention of up to two years as *1,* and a retention period of over two years as *2.* Our last variable, *turnover*, is also

fairly straightforward. As all companies in our sample varies in turnover between 0-200 MSEK, we chose to give firms with a turnover of less than 100 MSEK the *value of 0* and firms with a turnover of 100 MSEK or more will be addressed the *value of 1.*

We are aware of the possibility that other variables discussed in the theoretical framework such as age and type of assets may have an impact on the earnout's proportion as well. However, due to time and recourse restraints there was no possibility to include all variables in our study. By this reason we have focused on the variables which according to our pre-study have the greatest impact on the information asymmetry, and thus, the most relevant to include in our study.

3.3. Analysis models

In order to test our hypotheses, and see if there is causality between one or more variables and the proportion of earnouts used in the transaction, we will use different types of quantitative analysis methods. And more specifically, since our objective is to isolate the effect each variable has on the earnout we will run a bivariate analysis. Thus, we are able to concentrate our analysis to a specific variable and its relatedness with our dependent variable (Bryman & Bell, 2007). The reason for this type of analysis is that we wish to find evidence that if one of our variables varies then consequently the proportion of the earnout should vary. If not, there is no evidence that the examined variable has a relationship with the earnout's proportion.

3.3.1. Statistical significance

One major setback with a quantitative study in general and the sample procedure itself is the worry that the results may not be generalized (Bryman & Bell, 2007). Although we are confident that our sample is representative, there are some tests which can degree *how confident we can be*. The first test of statistical significance is the establishment of *null* hypotheses (Bryman& Bell, 2007). This enables drawing conclusions that an explanatory variable is not related to the dependent variable. While we have not explicitly spelled out this zero hypothesis in words they are still very present and simply the reverse of the presented hypotheses. Furthermore our hypotheses are of a character that there is no risk of misinterpreting them, and hence, no risk of misinterpreting what the null hypotheses imply. Therefore we are very confident that we are able to have integrity in our conclusions and draw correct interpretations about when a null hypothesis should be rejected.

The second test is to set up an acceptable level of statistical significance (Bryman & Bell, 2007). The statistical significance is the risk level taken in concluding that there is a relationship between two variables when in fact there is not. We are using the business research convention of a maximum statistical significance level of 5 per cent, or in other words, a 95 per cent confidence interval. This means that if we conclude that there is a significant relationship there is a 5 per cent risk that this is false. Consequently, a conclusion to reject a hypothesis is with 95 per cent confidence correct. Thus, with this level of significance we can be relatively sure that our results have not occurred by pure coincidence.

In order to test the significance level we will use Spearman's Rho which, according to Hinton et al. (2004), is the proper method of measuring correlation between two variables when the data measured cannot be said to be normally distributed. In our sample of 25 M&A transactions, it is too small to make any conclusions regarding its normal distribution. Hence, the Spearman's Rho is the proper correlation method to use. Furthermore, even though we are using the categorical ranks of earnouts instead of the actual sum, the Spearman correlation can still be used. This is because Spearman's Rho does not demand a linear relationship between the dependent variable and the explanatory variables (Hinton et al., 2004). One final consideration is that since we are expecting a positive correlation between earnout and the explanatory variables our confidence interval is one-tailed. Nevertheless, we are aware of the possibility of a negative correlation, which the one-tailed alternate confidence interval implicitly tests.

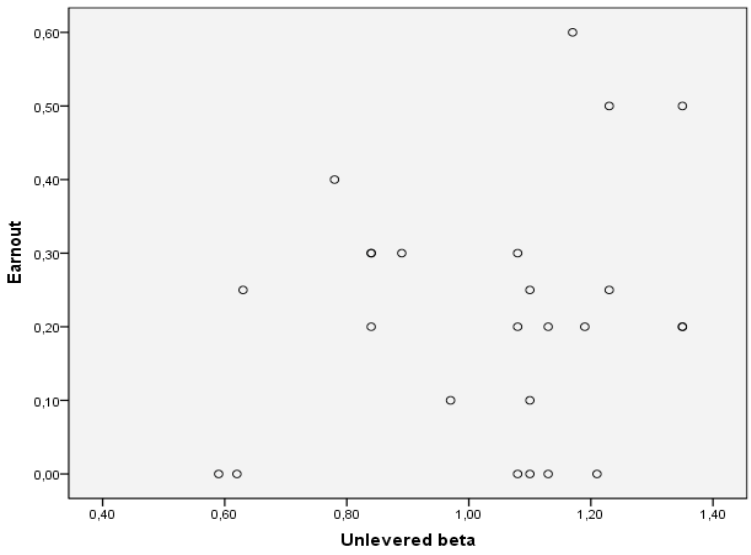
4. Results and analysis

In this chapter we will present the results derived from the collected data of 25 Swedish M&A transactions. With the hypotheses and the theoretical framework as a benchmark we will look at each specific variable and its relationship with the propotion of earnouts. Once a relationship has been found we will test how strong the relationship actually is by looking at the statistical significance level – which in turn will give us the authority to either reject or confirm the null hypotheses.

4.1. Hypothesis 1 – Do earnouts increase with industry risk?

Theory suggests that earnouts are used in M&A transactions to reduce uncertainty (Datar et al., 2001) and accordingly the use of earnouts should vary depending on the characteristics of both the seller and buyer. To be able to test if this assumption holds we have chosen to analyze the relationship between the unlevered betas of the sellers' industries and the proportion of earnouts in the transaction contracts. Although we could have chosen a wide variety of proxy variables to test this we do believe that the unlevered industry beta gives a good approximation of general differences between targets. In figure 1 we present the results from our sample of 25 Swedish M&A transactions. In the scatter plot we can clearly overview the distribution in our sample; with the earnout's proportion on the Y-axis and the unlevered industry beta on the X-axis. As we can see there is a random distribution of the transactions. Since there are differences in asymmetric information across firms (Akerlof, 1970; Hassan & Leece, 2007; Levin, 2001; Ragozzino, 2004; Shen & Reuer, 2005) the buyer's perceived risk should therefore be different depending on the riskiness of the target firm's industry.

Figure 1: Earnouts and Industry unlevered beta



First of all, Damodaran (2002) claims that some characteristics within a private firm, such as illiquidity, distance and inter-relatedness (Flanagan & O'Shaughnessy, 2003), give rise to a degree of risk, which is directly connected to the valuation of the firm. Because our figure only focuses on the unlevered beta as a risk factor it cannot give a complete understanding of how earnouts differs from targets but it definitely tells us that different industry beta seems to result in a different earnout strategy.

But as previously mentioned as well as according to Koeplin et al. (2000) and Capron and Shen (2007) there are several factors which may affect the uncertainty in putting a value on a privately owned SME. One of the most apparent sources of uncertainty in a private firm is the information gap towards outsiders (Akerlof, 1970; Capron & Shen, 2007). In our figure we cannot detect a positive relationship (Exhibit 2), between unlevered beta and earnouts which may suggest that the earnout does not increase as industry risk increases. This finding is not in line with our belief about how the earnout will respond to risk-factors. The risk, according to theory, is mostly attached to the difficulty to estimate future cash flows in a firm operating in a risky, hence high unlevered beta, environment (Koeplin et al., 2000; Spremann & Gantenbein, 2009). And thus, the earnout proportion should be positively correlated with the risk.

Because of the dignity of Hypothesis 1, and that it is dependent on more than one factor, makes it difficult to reject our null hypothesis. However, by just looking at the distribution in the figure we cannot find sufficient evidence to reject the null hypothesis. On the other hand we can a different result appearing; we believe that there is evidence that earnouts are not a standardized instrument but rather custom made as risk increases. This is in line with Datar et al. (2001) who states that earnouts are actions which an acquirer and a seller take to mitigate problems with asymmetric information. Further they claim that the frequency of earnouts increases as the problems becomes more severe. This is not shown in our study as earnouts do not increase with the industry unlevered beta.

On the whole, do earnouts actually change as the target's industry risk changes? According to our pre-set level of significance (Exhibit 2), and the charachtersitics of figure 1, the answer is clearly no. And as a consequence we cannot reject out null hypothesis. But this rather unexpected result gives rise to a possible implication of the use of earnouts. By looking at figure one and the scattered results we can assume that the use of earnouts are not a standardized instrument used by M&A specialists. In fact, the figure implies that earnouts are non-standarsized and hence tailor-made for the specific transaction.

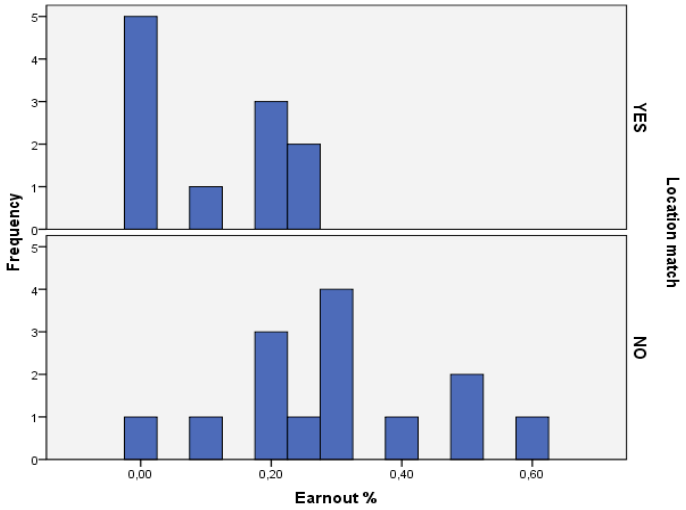
4.2. Hypothesis 2 – Does uncertainty affect earnouts?

4.2.1. Distance and earnouts

As stated in our theoretical framework and method, distance is a proxy variable for the information gap. This is resulting in uncertainty the buyer faces in predicting the outcome from a potential acquisition of a privately owned

company (Flanagan & O'Shaughnessy, 2003). Consequently, substantial distance between a seller and buyer should result in an increase of the earnout's proportion of the total transaction price. By analyzing the data obtained from the various transactions focusing on the relationship between earnouts and distance, defined as location match in our study, we end up with the results presented in figure 2.

Figure 2: Earnouts and location match



From the Spearman correlation (Exhibit 2) we can conclude that there is a positive statistically significant relationship between distance and the earnout proportion (the correlation coefficient, r_s=0,642 and the probability, p<0,05). As the information gap becomes larger, the use of earnouts consequently inflates. Therefore we can reject the corresponding null hypothesis 2.1 and conclude that as industry differences increase the proportion of earnouts increases.

Also, the data shows that the eanout's proportion of the down payment is more of a rule of the thumb when modest distance between seller and buyer occurs. Generally the transactions in this category have no earnout or an earnout of approximately 20 per cent of the total purchase price. In addition, by analyzing figure 2 we conclude that when large distance occurs between the seller and the buyer it seems like the structure of the transaction agreements are more individually tailor-made, explaining the scattered distribution.

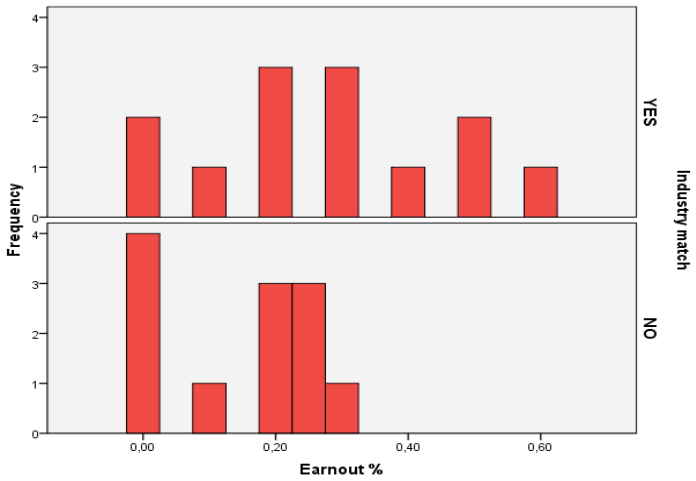
In addition to the various costs associated with the asymmetric information that emerges from distance between buyer and seller, namely adverse selection and agency costs (Akerlof, 1970; Flanagan & O'Shaughnessy, 2003; Ragozzino, 2004), it is our belief that our findings of positive correlation between distance and eanouts could partially be explained by the importance of individual key persons and their retention period. When substantial distance occurs, resulting in asymmetric information (Flanagan & O'Shaughnessy, 2003), the new acquirer of the company might be highly dependent on the existing key person owner and other key staff in the initial phase of the acquisition. Therefore, we have conducted a complementary analysis of the correlation between manager retention and distance (Exhibit 2). This shows, with little surprise, that there is a

positive yet not statistically significant correlation between the two – as distance increases it puts more pressure on existing management to retain within the firm for a transition period after the transaction.

4.2.2. Industry differences and earnouts

As existing theory shows (Flanagan & O'Shaughnessy, 2003), industry differences between seller and buyer should result in the increase of the earnout's proportion in relation to the down payment as the acquirer is subject to adverse selection due to asymmetric information. Thus, firms operating in the same industry or operating on the same market should have the advantageous ability of reducing the information gap and thus the risk (Flanagan & O'Shaughnessy, 2003).

Figure 3: Earnouts and Industry match



However, from the data we obtained, and presents in figure 3, a rather unexpected result appeared – *a negative and statistical significant relation between earnout and industry relation* (r_s=-0,435; p<0,05). Thus, industry difference between two firms results in a decrease in the usage of earnout in relation to the initial down payment. With this result we cannot reject the null hypothesis 2.2 since the relationship is the opposite of the expected correlation.

Nevertheless, we believe that this rather intuitively unexpected increase of earnout with industry match might be explained in a fairly reasonable way. First of all, it is important to emphasize who the acquirer of a private company is and what motive is behind the takeover. By buying companies outside the sector that the acquirer is operating within diversification can be achieved. This is generally the case when the acquirer is an investment company with the motive to diversify their current portfolio consisting out of different types of businesses. Subsequently, in accordance with the diversification motive reduced risk is obtained as a result (Salomon, 2008), hence, less need for extensive use of earnout agreements. Furthermore, according to Capron and Shen (2007), acquirers tend to favor public targets rather than private when expanding outside its own industry. Thus, when an acquirer purchases a private target in an unrelated industry there must be some underlying factor behind the decision which limits the uncertainty, and, making the earnout more standardized. This

explanation of portfolio diversification suggests that the results from the analysis is expected and thus we can argue that the proportion of earnouts seem to increase as rik, in this case un-diversification, increases.

In addition to the former explanation there might also be the case that a potential acquirer is operating in the same industry as the target, and as a result is more familiar with the industry and the individual target firm's overall risk. Consequently, these buyers limit the firm specific risk, or the information gap (Pratt, 2009), and hence the perceived information asymmetry. This argument should result in a higher and a more accurate valuation. And therefore this will also result in an increased use of earnouts.

Besides this discovery we observed an additional tendency. When industry difference occur a more concentrated earnout in proportion to down payment is applicable. These two major findings must be interpreted as somewhat contradictory in light of past observations and theory (Flanagan & O'Shaughnessy, 2003). Generally, higher industry difference equals higher uncertainty in form of the exposure of asymmetric information. And normally this should yield an amplified use of earnout and thus a more individually settled earnout agreement.

4.2.3. Human assets and earnouts

Business researchers (Koeplin et al., 2000; Pratt, 2009; Spremann & Gantenbein, 2009; Bruton et al., 2009) claim that a substantial part of an acquirer's uncertainty regarding the target firms' performance is highly related to the dependency on the old CEO and his contacts and industry knowledge. Hence, the key person discount is explained as the reduction in the value of a private company from the actual or potential loss of a key person. As theory states (Pratt, 2009), if the target firm is undoubtedly dependent on its present management there are strong reasons to consider that actuality when valuing the target. Adams et al., (2005) further claim that if the firm is highly dependent on one person the future outcome, in form of future profits, becomes more volatile. Consequently uncertainty increases with key person dependence.

In this very research we have been trying to measure this statement by analyzing the correlation between the earnout percentage and the length of the manager retention. Moreover, much of the value of a firm lies within its human assets. And since this asset is not found on the balance sheet they are difficult to estimate and thus will increase the asymmetric information (Shen & Reuer, 2005). Unfortunately much of the value in a private firm can be attached to the founder or the CEO (Pratt, 2009; Spremann & Gantenbein, 2009; Bruton et al., 2009) and since there are difficulties to gather information of the managers' value we will use the owner retention stated in the transaction contract as a proxy.

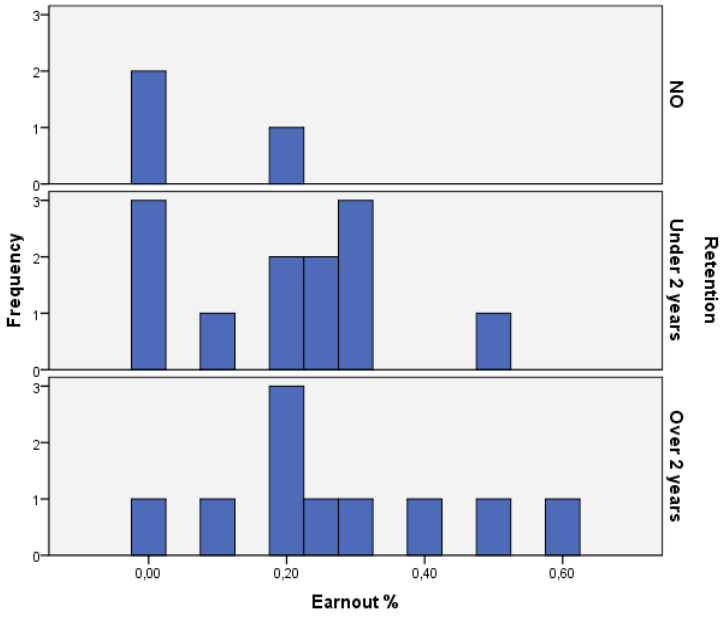
The Spearman analysis (Exhibit 2) does not show a statistically significant relationship between earnout and retention period. The relationship behind hypothesis 2.3 is explained by the fact that when a buyer faces great information

asymmetry and uncertainty about the value of the sellers' human capital he should be more eager to keep the existing management for a longer transitional period. For example the previous management may function as a guarantee of its survival and performance and ultimate profitability. Thus, the earnout's proportion in relation to the upfront payment should increase with the notion of a longer retention period. However since we do not find a statistically significant relationship, and thus cannot reject null hypothesis 2.3., we cannot confirm this theory.

This result is contradictive to recent theories which state that as the key person's actual or potential effect on the valuation of the company in absolute terms increase; which previous studies has emphasized as a very problematic and abstract process to measure (Pratt, 2009; Spremann & Gantenbein, 2009; Bruton et al., 2009). Ultimately, a positive relationship should be regarded as fairly expected, and in addition to this explanation it goes in line with previous studies focusing on asymmetric information in corporate valuation. However, one could also look at the results in a somewhat critical manner. An earnout is intended to reduce uncertainty and the asymmetric information and the same thing could be said about the retention period. Consequently, an increased retention period might arguable result in a less frequent use of earnouts which could to some degree explain our results.

A more interesting phenomenon is the distribution of earnout in relation to the following retention period. As figure 4 shows, the longer retention period the more scattered distribution of earnout proportion and more individually settled earnout agreement.

Figure 4: Earnouts and Retention period



Once again this fact supports our new view on the implication of earnouts. A short retention period indicates low information asymmetry and therefore less need for customization in the earnout. Accordingly, a long retention period indicates great information asymmetry, and thus the need for a substantial

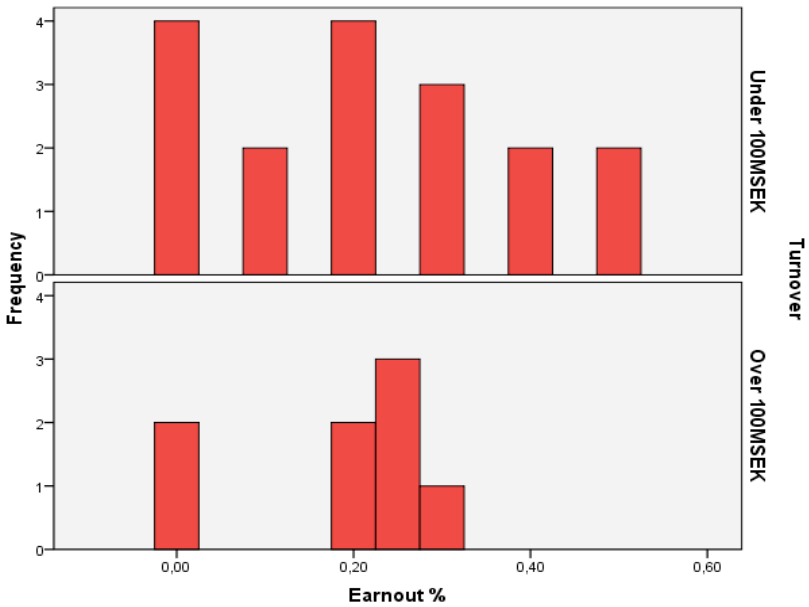
earnout agreement that is individually customized arises – explained by the highly scattered distribution in earnouts in the case where the retention period exceeds two years.

4.2.4. Size and earnouts

From the Spearman analysis we cannot find a significant relationship between size and earnout (Exhibit 2), as turnover being our proxy variable for size. This is a surprising result since theories suggest that a negative correlation illustrates the reality that acquiring a company with substantial and stable earnings generally results in a relatively smaller degree of uncertainty, and hence, these kinds of acquisitions are not as much in need of earnouts. As previously mentioned in theory (Akerlof, 1970; Capron & Shen, 2007; Pratt, 2009), this size effect has to partly to do with both more stringent information requirements, which systematically reduces the prevailing asymmetric information, and the perception that more mature firm has more stable cash flows. In addition, maturity is an important factor in valuation since according to Shen and Reuer (2005), a young firm lacks the legitimacy and reliability in their track record, and thus, making the buyer skeptical in the earnings forecasts.

In addition to information issues, the relatively smaller dependency on internal key personnel, as well as external stakeholders, reflects the stability in sales records and eventually also the profit. Thus, the historical performance is more likely to be delivered also in the future. This reduces the need for the same degree of collateral, which from a buyer's point of view is measured as the earnout percentage of the total purchase price (Adams et al., 2005; Pratt, 2009). However, in our study we do not find evidence that supports the belief that the proportion of earnouts increases as the size of the target decreases. Hence, we cannot reject our null hypothesis 2.4.

Figure 5: Earnouts and turnover



But as seen in all our previous analysis, an alternative view on the use of earnouts appears. By looking at figure 5, we notice that with high turnover you

basically either ignore the earnout clause or use a flat percentage of approximately 25 percent. Consequently they are regarded as more stable than a smaller counterpart. As for companies with low turnover, thus volatile cash flows, we distinguish a highly scattered distribution in the percentage of earnouts and hence a relatively higher degree of individually customized agreement. As a result high uncertainty contributes to greater use of earnouts, which are more customized and aimed to target the specific uncertainty in the unambiguous transaction – a finding which is in line with Datar et al.'s (2001) perception that earnouts are actions to take the edge off asymmetric information.

4.2.5. Does uncertainty actually affects earnouts?

To be honest, there is no easy answer to this question. But starting from a purely statistical approach, the only solid thing is to discard the variables that do not show an adequate level of significance. And subsequently, the only explanatory variable which actually shows a positive significant relationship with the proportion of earnouts, and thus statistically can reject our null hypothesis, is location match. However, discarding the other variables as non-meaningful would in our opinion be regarded as an action which leads to an incorrect assumption since it implies that some of the explanatory variables, or the various measures of uncertainty they entail, has no effect on the use of earnouts whatsoever. This is in contrast to our findings where we notice a highly scattered distribution of earnouts in relation to the high frequency of the explanatory variables. In addition to this, it is also reasonable to consider the fact that the variables may have greater impact when analyzing a larger sample and that there might be other explanatory variables not covered in our study.

So does information asymmetry actually affect the use of earnouts? As mentioned earlier but worth emphasizing further, high levels of asymmetric information, explained by the different variables, do generally not contribute to a greater use of earnouts. Hence we cannot reject the null hypothesis 2. However, a more important and interesting contribution from our study is that asymmetric information inflates a customized use of earnouts aimed to target the specified risk. Although the results are contradictive to what we expected our overall believe is that we have found evidence that asymmetric information do affect the use of earnouts. While not in a positive linear manner, asymmetric information creates incentives to specify the characteristics of the earnout and make it a tool for dealing with the uniqueness in a single M&A transaction.

5. Conslusions

In this final chapter we will highlight the most interesting results from the previous analysis and conclude if earnouts are measures of the perceived asymmetric information. We will also discuss what implication our results have for financial intermediaries and their clients. In the last section we will present recommendations for future studies within this specific subject.

An earnouts is a transaction-, or payment-, strategy where the buyer and seller agree the specific terms in each deal. Evidence show, according to our study, that these specific details in the earnout agreement vary depending on the degree of asymmetric information the buyer faces. There are probably several risk factors which this study does not cover, but among the four explanatory variables included we can state that some factors have different impact on the usage of earnouts than others. The distance between seller and buyer is of great importance. It seems that when the buyer and seller are from different geographical areas the earnout is likely to be more tailor-made. Consequently, when asymmetric information exists, the parties try to partially bridge the gap by selecting a suitable transaction model in which an earnout is a common feature. We also see this tendency that when the uncertainty with human assets and uncertainty with the firm's stability increases. Paradoxically, industry similarities have a negative relationship with the earnouts' proportion, which is the complete opposite to the other variables. However, if relating the result to portfolio theory it is actually quite natural since investing in new industries increases diversification and consequently decreases the risk. As a result we can conclude that asymmetric information creates a more flexible use of earnouts.
This, rather surprising result, is not perfectly in line with what earlier theorists who predict a positive linear relationship between asymmetric information and the proportion of earnouts.

We have provided evidence that earnouts are not just a standardized insurance for buyers of a private SME. In fact, although they are often standardized in transactions with low uncertainty, they become more non-standardized as uncertainty increases. Thus, in a transaction with high uncertainty, the proportion of earnout used can be said to partly measure the specific asymmetric information perceived by the specific buyer. However, since the correlation between uncertainty and the earnout is random, and not linear, we are not able to measure exactly how much of the risk that the earnout aims to reduce and how much other mechanisms before, during or after the transaction aim to reduce. This non-linear relationship is somewhat surprising. It would have been realistic to believe that earnouts are not used when buyers face no price uncertainty, but our study shows, that in this case there is a tendency to use either no earnout or a standardized proportion of approximately 20 – 25 per cent. On the other hand, when information asymmetry exists, the earnout's proportion of the total transaction is quite unpredictable – ranging from zero to

60 percent. We believe that this could be explained by the nature of acquiring a private SME; the strategies used in the negotiating process and in the contractual discussion are just means for a seller and a buyer to meet an agreement. Therefore, the earnouts specified in the final contract is very dependent on how the personal chemistry between the parties and how the negotiations proceeds. But, despite the non-linearity we can conclude that earnouts are affected by the perceived asymmetric information.

5.1. Practical implications

Our findings also have some practical implications. First of all, sellers of private businesses need to be aware that when buyers face high information asymmetry the usage of a tailor-made earnout strategy becomes more inevitable. Thus, entrepreneurs need to ask themselves if they are prepared for the time and effort this type of transaction takes. Although earnouts might help to increase the final price by the buyer, it put pressure on the retained manager to reach the performance goals set by the buyer. Consequently, if the entrepreneur would like to leave his company on a short notice he will probably have to find a buyer who perceives low risk with the acquisition. From the M&A intermediaries point of view, they need to better inform their clients about the structure of an earnout strategy and how it is used to sidestep risk barriers. They need to emphasize the non-linearity and flexibility in the use of earnouts when asymmetric information is high, and the opposite standardization of earnouts when uncertainty is low. By discussing these characteristics, and their implications, both sellers and their financial advisors will perform a better screening of potential buyers laying a foundation for a successful transformation of ownership.

5.2. Recommendations for further research

Derived from the interesting question Spremann & Gantenbein, (2009); Pratt, (2009); Bruton et al. (2009) raises when highlighting a key person's depressing effect on a future selling price on a private company, we believe it would be very interesting to empirically measure the theoretical rationale of avoiding the private company discount through the application of an earnout agreement. We are fully aware of the problems this entail as it is very difficult, if not impossible to practically measure. Each company is unique, and we therefore need two transactions with two very accurate valuations for each company, a situation with an earnout agreement and one without. However, we urge the interested and knowledgeable reader to elaborate on this proposal for future studies. In addition, based on our discovery in which we state that information asymmetry affects the use of earnouts from case to case, there is good reason to suspect that there are other uncertainties than those we have measured. We therefore recommend further mapping of other explanatory variables relevant to the use of earnouts.

References

Keywords: Earnouts, Corporate Valuation, Private Businesses, Private Business Discount, Mergers and Acquisitions, Asymmetric information, Adverse Selection, Key person

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Appendix

Exhibit 1: Data table

Down Payment	Earnout proporion	Location match	Industry match	Unlevered beta (ind.)	Manager retention	Turnover
70%	30%	NO	NO	0,84	MAX 2 YEARS	UNDER 100MSEK
75%	25%	YES	NO	1,23	OVER 2 YEARS	OVER 100MSEK
75%	25%	NO	NO	1,10	MAX 2 YEARS	OVER 100MSEK
100%	0%	YES	NO	1,08	MAX 2 YEARS	OVER 100MSEK
100%	0%	YES	NO	1,21	OVER 2 YEARS	UNDER 100MSEK
100%	0%	YES	YES	0,59	MAX 2 YEARS	UNDER 100MSEK
100%	0%	YES	NO	0,62	NO RETENTION	UNDER 100MSEK
100%	0%	YES	YES	1,13	MAX 2 YEARS	OVER 100MSEK
80%	20%	YES	NO	1,35	MAX 2 YEARS	UNDER 100MSEK
70%	30%	NO	YES	1,08	MAX 2 YEARS	UNDER 100MSEK
60%	40%	NO	YES	0,78	OVER 2 YEARS	UNDER 100MSEK
90%	10%	NO	YES	0,97	OVER 2 YEARS	UNDER 100MSEK
70%	30%	NO	YES	0,89	MAX 2 YEARS	UNDER 100MSEK
100%	0%	NO	NO	1,10	NO RETENTION	UNDER 100MSEK
80%	20%	NO	YES	1,13	NO RETENTION	UNDER 100MSEK
80%	20%	YES	YES	1,35	OVER 2 YEARS	UNDER 100MSEK
80%	20%	NO	NO	1,19	OVER 2 YEARS	OVER 100MSEK
75%	25%	YES	NO	0,63	MAX 2 YEARS	OVER 100MSEK
70%	30%	NO	YES	0,84	OVER 2 YEARS	OVER 100MSEK
50%	50%	NO	YES	1,23	MAX 2 YEARS	UNDER 100MSEK
50%	50%	NO	YES	1,35	OVER 2 YEARS	UNDER 100MSEK
90%	10%	YES	NO	1,10	MAX 2 YEARS	UNDER 100MSEK
80%	20%	YES	NO	0,84	MAX 2 YEARS	OVER 100MSEK
80%	20%	NO	YES	1,08	OVER 2 YEARS	UNDER 100MSEK
60%	40%	NO	YES	1,17	OVER 2 YEARS	UNDER 100MSEK

Exhibit 2: Spearman's Rho

Industry unlevered beta vs. Earnouts

Correlations

			Earnout	Unlevered beta
Spearman's rho	Earnout	Correlation Coefficient	1,000	,123
		Sig. (1-tailed)	.	,279
		N	25	25
	Unlevered beta	Correlation Coefficient	,123	1,000
		Sig. (1-tailed)	,279	.
		N	25	25

Location match vs. Earnouts

Correlations

			Earnout	Location match
Spearman's rho	Earnout	Correlation Coefficient	1,000	,585
		Sig. (1-tailed)	.	,001
		N	25	25
	Location match	Correlation Coefficient	,585	1,000
		Sig. (1-tailed)	,001	.
		N	25	25

Manager retention vs. Location match

Correlations				
			Location match	Retention
Spearman's rho	Location match	Correlation Coefficient	1,000	,160
		Sig. (1-tailed)	.	,223
		N	25	25
	Retention	Correlation Coefficient	,160	1,000
		Sig. (1-tailed)	,223	.
		N	25	25

Industry match vs. Earnouts

Correlations				
			Earnout	Industry match
Spearman's rho	Earnout	Correlation Coefficient	1,000	-,367
		Sig. (1-tailed)	.	,036
		N	25	25
	Industry match	Correlation Coefficient	-,367	1,000
		Sig. (1-tailed)	,036	.
		N	25	25

Manager retention vs. Earnouts

Correlations				
			Earnout	Retention
Spearman's rho	Earnout	Correlation Coefficient	1,000	,336
		Sig. (1-tailed)	.	,050
		N	25	25
	Retention	Correlation Coefficient	,336	1,000
		Sig. (1-tailed)	,050	.
		N	25	25

Turnover vs. Earnouts

Correlations				
			Earnout	Turnover
Spearman's rho	Earnout	Correlation Coefficient	1,000	-,079
		Sig. (1-tailed)	.	,354
		N	25	25
	Turnover	Correlation Coefficient	-,079	1,000
		Sig. (1-tailed)	,354	.
		N	25	25