

# Unsystematic Risk In South African Privately-Owned Company Valuations

Henro Erasmus, North-West University, South Africa  
Surika van Rooyen, North-West University, South Africa  
Merwe Oberholzer, North-West University, South Africa

## ABSTRACT

*The purpose of the study is to determine whether advisory firms valuing privately-owned companies in South Africa take unsystematic risk into account and, if they do, how objectively it is done. A literature search was reviewed and used as a foundation in a questionnaire to gather information from the big four audit, advisory and taxation firms (PricewaterhouseCoopers, KPMG, Deloitte & Touch and Ernst & Young). The study found that unsystematic risk is incorporated into privately-owned company valuations, but that the whole subject of valuations, especially privately-owned company valuations, does not entail entire objectivity. The study further concluded that it is possible to use unsystematic risk as a device to bring the final results of a valuation in line with the clients' objective. Further research should be done by extending the population to include medium- and large advisory firms and comparing the approaches used by each group.*

**Keywords:** South African Privately-Owned Company Valuations; Systematic Risk; Unsystematic Risk

## INTRODUCTION

This paper is a qualitative and quantitative investigation into how the big four audit, taxation and advisory firms treat unsystematic risk (company-specific risk) in the valuation of privately-owned companies in South Africa. The interest in this topic is that most companies will have to be valued at some stage for one reason or another. For example, valuations are required for taxation purposes, estate purposes, divorce settlements and mergers and acquisitions (Gabehart & Brinkley, 2002). The relevance of valuations is further emphasized by the King Code of Governance for South Africa 2009 (King III), which indicates that the board of a company should ensure fair consideration when the company is subject to a merger, sale, workout, amalgamation or business rescue (King, 2009). Measuring risk is a complicated task (Lin *et al.*, 2010); therefore, Maurer (2008) suggests that new conceptual and methodological approaches should be used to better understand risk. Furthermore, business valuations are in general a perplexed procedure, since it is a matter of balancing the risk return issue. Watkins (2009) noted that valuations of public companies are nothing short of being complicated with numerous subjective variables. Nevertheless, valuing listed companies is relatively easier than valuing privately-owned companies, as traditional valuation approaches do not provide much guidance for valuing the latter (Pereiro, 2001). Since it is reported that the vast majority of businesses in the world are privately owned (Anderson, 2009), and the same trend is followed in South Africa, with the overwhelming majority of active companies being owned privately (CIPRO, 2010), the importance of this topic is that it will shed light on valuation practices relating to privately-owned companies.

The valuation process is a subjective one, requiring several adjustments and assumptions. A large number of variables are present in most valuations (Nilsson *et al.*, 2001), including both financial aspects and non-financial concerns (Astrachan & Jaskiewicz, 2008). In this regard Al-Hares *et al.* (2011) concluded that except for earnings, book value and dividends, the so-called 'other information' is also an important factor in determining the market value of a firm. Mard (2010) illustrated the subjectivity of business valuations in a case where two experts each performed a valuation (both using the income approach) on the same company and arrived at very different values. The valuation of privately-owned companies is even more difficult and subjective with more variables and

uncertainties that make it so much more complicated if compared to a public company valuation (Koeplin *et al.*, 2000). As noted by Martins (2011), the practical application of performing privately-owned company valuations is fraught with difficulties. When privately-owned companies are valued, specific difficulties arise with the use of the three broad categories of valuations, namely the market approach, the asset-based approach and the income approach (Park & Lee, 2003; Helewitz, 2002). It is also well accepted that privately-owned companies' value should be adjusted for lack of marketability. However, assigning this value of discount is a difficult matter (Block, 2007). A controlling interest also influences the value of the business, since it has more power to affect changes in the business (Petersen *et al.*, 2006). With all these arguments in mind, the research question is whether advisory firms valuing privately-owned companies in South Africa take unsystematic risk into account and, if they do, how it is done.

To provide further substance to the research question, the first problem is that the existing literature simply does not provide enough knowledge and insight into the market value of privately-owned companies (Anderson, 2009). Secondly, South Africa is an emerging market, therefore it is also important to notice that valuations in these markets present very different risks than those a developed markets, which implies that valuation models in developed countries should be adjusted when they are applied in developing countries (Miriti, 2004). Thirdly, as South African valuation practitioners are not compelled to follow specific international or local valuation standards, uncertainty regarding this matter increases. Research related to this study is PricewaterhouseCoopers (PwC) (2008 and 2010), who performed a survey under 25 and 27, respectively, financial analysts / corporate financiers in South Africa and found that the valuation approaches most frequently used in South Africa are the income approach, followed by the market approach and then the asset approach. Nel (2009) investigated which shareholders' equity valuation models are advocated by South African academia, and how their preferences are aligned with those of investment practitioners.

As a result of the research question, the purpose of the study is, from a South African perspective, firstly to determine whether advisory firms do take unsystematic risk into account when valuations on privately-owned companies are performed; and secondly, if they do, how unsystematic risk is incorporated into different valuation approaches. To fulfill the purpose, the big four audit, advisory and taxation firms are selected as research subjects. They are, in no particular order: PwC; KPMG; Deloitte & Touch; and Ernst & Young. Against the backdrop that a valuation is not a fact, but an estimate that is based on assumptions and can be seen as a form of art (or an inexact science) rather than a science (Grossfeld, 2004), and the fact that South African valuation practitioners are not compelled to follow specific international or local valuation standards, our argument that unsystematic risk cannot be incorporated entirely objectively by valuation practitioners into a privately-owned company valuation in South Africa might be justified.

The contribution of this study is that it extends the existing literature by indicating trends of valuation practices relating to privately-owned companies by the big four firms. The practical implication of this study is that if the recommendations in this study were to be executed, it should lead to best practice guidelines for valuations so that uncertainties relating to unsystematic risk incorporation are eliminated as far as possible. The value of this study is that it challenges the fact that very little literature and research exist that concentrate on the valuation of privately-owned companies. No South African research was encountered that focuses on the incorporation of unsystematic risk into privately-owned company valuations.

The organization of the paper is as follows: The next section provides some background information regarding the topic, followed by sections that explain the theory and the design/method of the study. A further section exhibits the empirical results, followed by a discussion thereof and the study is concluded in the final section.

## **BACKGROUND**

The conceptual scope of this study is that privately-owned companies are, however, not able to diversify their portfolio adequately to ensure that unsystematic risk is eradicated. This risk should therefore be incorporated into a valuation of a privately-owned company, as it has had a large impact on the value of real shares (Pereiro, 2001). For each privately-owned company valuation, the first unsystematic risk hurdle to overcome is to identify the

relevant risks and then to measure these risks. This is no trivial task, as unsystematic risk is difficult to identify, difficult to measure and difficult to correlate with an appropriate incremental rate of return (Reilly, 2007). Most texts do, however, not prescribe specifically how risks affecting the company to be valued should be quantified to be incorporated into the valuation thereof (Pereiro, 2001).

In the business world, the words risk and return are frequently used in the same sentence (Reilly, 2007). Investors are generally adverse to risk, which implies that the expected return should be high enough to compensate the investor for the perceived risk of the investment (James-Earles & Duet, 2002). Risk is divided into two categories: Systematic risk and unsystematic risk. Systematic risk affects many different securities at the same time. Most shares are affected in the economy by this risk (Firer *et al.*, 2008). Examples of such events include changes in the market condition as a whole (recession or expansion of the macro-economy), interest rates, exchange rates, wars or inflation. Unsystematic risk affects at most a small number of shares and is a function of characteristics of the individual company, the industry and the type of investment interest. Examples of company-specific characteristics could include relations between labor and management, the success or failure of a particular program, management's ability to weather economic conditions, lawsuits, the possibility of strikes, or any other factor specific to the company (Pratt & Niculita, 2008). As reported by Bello (2005), a significant linear relation exists between unsystematic risk and average returns. Systematic risk cannot be eliminated through diversification, because all shares will be affected by this risk to some degree. Unsystematic risk in the case of listed companies can, on the other hand, be eradicated by a portfolio that is diversified (Miriti, 2004). Companies can control their exposure to unsystematic risk through selecting certain securities in certain industries (Bennett & Sias, 2006).

## **THEORY**

### **Introduction**

To summarize, the central argument of the paper is that unsystematic risk cannot be incorporated entirely objectively by valuation practitioners into a privately-owned company valuation in South Africa. This implies that the methods utilized to identify unsystematic risk factors are not entirely objective and the measuring/quantification of unsystematic risk is not entirely objective. Therefore, the theory to be discussed consists of three parts, namely the three broad categories of valuation, factors indicating the existence of unsystematic risk and procedures to measure unsystematic risk.

### **Valuation methods**

#### *Market value approach*

As indicated by PwC (2010), the market approach values a privately-owned company by comparing the business to an identified comparable public company in the same industry. Multiples like the price/earnings (P/E) ratio, price/book value ratio, price cash flow ratio are frequently used to determine the market value of a company (Dunis & Reilly, 2004). It is practice that multiples of comparable or guideline companies are adjusted to match those of the specific company (Anderson, 2009). The advantage of the market approach is that many appraisers consider this information from the stock market to be objective, while others feel that the disadvantage is that there is a lack of comparability between listed companies and privately-owned companies (Helewitz, 2002). When unsystematic risk is accounted for with privately-owned company valuations, the multiple used to value the business will have to be adjusted using knowledge obtained from exposure to the company and its industry, as well as professional judgment (Koeplin *et al.*, 2000).

#### *Asset approach*

The asset approach revalues the statement of financial position to the market value, adding the piecemeal values of the underlying assets and subtracting the market values of the liabilities (Helewitz, 2002; PwC, 2010). The net effect is essentially the liquidation value of the company (Dellinger, 2010). The asset approach is theoretically weak, as the historic asset prices cannot predict the future earning power of a business (Anderson, 2009) and the adjustments of assets to their market values might be at risk as these adjustments lend themselves to manipulation

(Dellinger, 2010). Modica (2006) also noted that companies are generally worth much more than the sum value of their net assets. The strengths of this approach are that the valuations are promptly available and a minimum value of the entity is provided. Weaknesses are, among others, that future profitability expectations are ignored and the value of intangible assets is difficult to allow for (Ogilvie, 2009).

### *Income approach*

As a valuation is forward looking, the income approach focuses on the future cash flows expected, discounted to a present value using an appropriate discount rate to take the time value of money into account (Helewitz, 2002). An appropriate discount rate is determined by considering the expected risk of the prospective income stream. This approach is at times the only one to be used to value intangible assets (Trugman, 2002; Helewitz, 2002). Although the income approach is most often used in South Africa (PwC, 2010), a range of additional issues arise when the income approach is used to value a privately-owned company. Firstly, the lack of information from these companies may be problematic when the cash flows are estimated (Petersen *et al.*, 2006; French & Gabrielli, 2005). Petersen *et al.* (2006) also found that although both internal and external information is regarded as important, emphasis is especially put on internal information. The quality of internal information varies with the period of forecasts being short and the quality of the forecasts being poor. The second issue relates to the decision of the discount rate. The discount rate is the cost of capital and consists of the cost of debt and the cost of equity. The cost of debt is relatively easier to calculate than the cost of equity (Sim & Wilhelm, 2010; Borgman & Strong, 2006).

The Capital Asset Pricing Model (CAPM), as a measure of cost of equity, is suitable for public listed companies where market data is continuously available, since systematic risk is incorporated by using beta in the formula (Megginson *et al.*, 2008) and unsystematic risk is eliminated by diversification (Ogilvie, 2009). To determine the beta for a privately-owned company, a beta for the industry will be estimated and adjusted for the purposes of a privately-owned company (Feldman, 2005; St-Pierre & Bahri, 2006). Therefore, unsystematic risk remains a matter for the judgment of the analyst involved, without the commonly accepted empirical support evidence. Arbitrage pricing theory (APT), in contrast to CAPM, recognizes a variety of risk factors. APT is a multivariate of the CAPM, where CAPM only recognizes systematic risk (Pratt & Niculita, 2008), this model is a regression analysis-based procedure and based on empirical data sources (Reilly, 2007) that allows for multiple factors to influence returns and is an extension of the single-factor CAPM (Sun & Zhang, 2001; Galagedera, 2007). The dividend yield model assumes that the market price of a share correlates with the future dividend income from that share (Ogilvie, 2009:156). That implies that analysts tend to use past data to estimate future risk and return, but when the dividend yield is utilized, estimated future data is used to determine the cost of equity (Borgman & Strong, 2006). In the build-up method, Modica (2006) explains that the risk-free rate is included as this would be the minimum return an investor would accept if no risk existed. The equity risk premium is added to compensate the investor for the risk taken by investing in market shares. The size premium is included to reward the investor for investing in a smaller company as more risk is associated with smaller companies in comparison to publicly-traded companies. The unsystematic risk premium is added to provide for specific risks attached to the company under discussion (Reilly, 2007). Finally, the Fama-French Three-Factor Model includes a stock's CAPM, measuring systematic risk, and two additional factors, measuring unsystematic risk, namely the size of the firm in terms of market value of equity and the book-to-market ratio, (Gharghori *et al.*, 2009).

### **Factors indicating the existence of unsystematic risk**

Over time, analysts have identified company-specific (unsystematic) risk premium (CSRPs) factors to consider. This study focuses on the factors suggested by Reilly (2007), i.e. the Black/Green-, Warren Miller-, and Gary Tugman factors, as well as the factors identified by the PwC Corporate Finance's valuation methodology survey (PwC, 2010).

**Table 1: Factors indicating the existence of unsystematic risk**

<b>Black/ Green</b>	<b>Warren Miller</b>	<b>Gary Trugman</b>	<b>PwC</b>
<ul style="list-style-type: none"> <li>• Competition</li> <li>• Financial strength</li> <li>• Management ability and depth</li> <li>• Profitability and stability of earnings</li> <li>• National economic effects</li> <li>• Local economic effects</li> </ul>	<p><b>Macro-environment</b></p> <ul style="list-style-type: none"> <li>• Economic</li> <li>• Political</li> <li>• International</li> <li>• Demographic</li> <li>• Technological socio-cultural</li> </ul> <p><b>Industry &amp; company</b></p> <ul style="list-style-type: none"> <li>• Defining the industry</li> <li>• Determining market structure</li> <li>• Estimating relative market shares</li> <li>• Applying Michael Porter’s five forces (Threat of new entrants; Bargaining power of suppliers; Bargaining powers of customers; Rivalry; and Threat of subs; titution)</li> </ul>	<p><b>Risk factors</b></p> <ul style="list-style-type: none"> <li>• Economic risk</li> <li>• Operating risk</li> <li>• Asset risk</li> <li>• Market risk</li> <li>• Regulatory risk</li> <li>• Business risk</li> <li>• Financial risk</li> <li>• Product risk</li> <li>• Technological risk</li> <li>• Legal risk</li> </ul> <p><b>Non-financial risks</b></p> <ul style="list-style-type: none"> <li>• Economic conditions</li> <li>• Location of business</li> <li>• Depth of management</li> <li>• Barriers to entry into market</li> <li>• Industry conditions</li> <li>• Competition</li> <li>• Quality of management</li> </ul> <p><b>Company-specific risks</b></p> <ul style="list-style-type: none"> <li>• Economic conditions</li> <li>• Location of business</li> <li>• Depth of management</li> <li>• Barriers to entry into market</li> <li>• Industry conditions;</li> <li>• Competition</li> <li>• Quality of management;</li> <li>and</li> <li>• The bottom line</li> </ul>	<ul style="list-style-type: none"> <li>• Dependence on key management and</li> <li>• One key customer or supplier</li> <li>• Lack of track record</li> <li>• Significant growth expectations</li> </ul>

Source: Reilly, 2007; PwC, 2011; Trugman, 2002

Parnell Black and Robert Green studied unsystematic risk factors and came up with certain categories (Table 1). It is suggested that individual quantitative and qualitative assessments are made for the first four categories. A points system could be used where a point value is assigned to each individual assessment (ranging from one point for low risk and ten for high risk). The point assigned is determined by the valuation practitioner’s opinion of the risk factor in the specific situation. The last two categories are taken into account by assigning a minus one for a strong economy, plus one for a weak economy and zero for a neutral economy. The point assigned is again the valuation practitioner’s opinion. The total sum of the points provides an indication of the estimated suitable CSRP (Reilly, 2007).

Warren Miller has suggested using a competitive advantage/strategic analysis structure to determine the most suitable CSRP. Miller groups CSRP factors into the following categories: Macro-environmental; Industry; and Company (Table 1). These factors should then be considered in the strengths, weaknesses, opportunities and threats (SWOT) analysis (Reilly, 2007).

Gary Trugman did not come up with these factors, but merely listed the factors various analysts suggested (Table 1). Trugman presents these factors in the following three categories that need to be quantitatively and qualitatively considered (Trugman, 2002), namely risk factors, non-financial risks and company-specific risks.

The PwC valuation methodology survey asked the participants under which conditions they would consider applying an unsystematic risk premium. The results in Table 1 are listed in sequence of importance (PwC, 2010).

## Procedures to measure unsystematic risk

To measure risk, valuation practitioners usually identify a risk-free base and then add a certain percentage for certain levels of risk (Mard, 2010). Reilly (2007) describes three common procedures used in practice, namely the plus/minus-, the numeric-, and the listing procedure.

With the plus/minus procedure, a '+' notation is used to indicate that the factor increases the CSRP, while the '-' notation decreases the CSRP. A blank notation indicates a neutral effect. Double notations such as '+ +' or '- -' indicate a strong impact. The '+' notation does not signal the adding of one percentage point and the '- -' notation does also not indicate the subtracting of two percentage points. It is therefore not a mathematical exercise of adding all the '+' and '-' notations. The valuation practitioner still uses his/her judgment in deciding on the CSRP. When the numeric procedure is used, each factor causes a specific percentage number that should be added to the CSRP. 1 indicates that one percentage should be added, while -1 means that one percentage should be subtracted. 0 indicates a neutral effect. In this procedure, the CSRP is the actual numeric sum of the individual assigned values for each selected factor. The listing procedure lists all the negative company-specific risk factors and all the positive company-specific risk factors. No numeric value is assigned to the factors and the importance is also not indicated. Again, the valuation practitioner uses his professional judgment to decide on the CSRP.

In all of the approaches above, the valuation practitioner should be able to describe, explain and defend the specific factors. The valuation practitioner should also avoid the double-counting of factors as they may already have been included in other sections of the valuation.

## DESIGN AND METHOD

The frame (world) in which the study is performed is the world of science and scientific research. An aspect (unsystematic risk) is taken from the world of business (business valuations of privately-owned companies) and searched to find truthful knowledge thereon (is unsystematic risk objectively incorporated into privately-owned company valuations?). The study is classified as empirical, collecting primary numeric and textual data (a combination thereof), with a low level of control (Mouton, 2011). A mixed method approach was utilized in this study, more specifically, the explanatory design. A mixed method approach is built on both qualitative and quantitative methods (Maree, 2010). The purpose of the explanatory mixed method design used in this study was to use the qualitative findings to help clarify the quantitative results.

The research included a survey questionnaire completed (middle of 2011) by senior managers or directors in the business valuation departments to determine which risks firms perceive to have an impact on business valuations of privately-owned companies, how these risks are identified and how the risks are taken into account in the valuations. The questionnaires were followed up by interviews with the participants to ensure the information communicated via the questionnaires is correctly interpreted by obtaining elaboration from participants where needed (Maree, 2010).

The big four audit, advisory and taxation firms were selected as research subjects for this research project, viz. PwC, KPMG, Ernst & Young and Deloitte & Touch. These four firms are the largest audit, advisory and taxation firms in the world. The advisory departments of each provide business valuation services to many clients. These firms were selected to determine how the leading firms, which are driven by the Chartered Accountancy profession, incorporate unsystematic risk into the valuations of privately-owned companies. The scope does exist for future studies to expand this study to medium- and small-sized firms. The methods of the three groups (the big four firms, the medium-sized firms and the small-sized firms) used to incorporate unsystematic risk into privately-owned company valuations can be compared as well as the outcomes of the methods used. To ensure anonymity, the four firms will be referred to, in no specific order, as Firms Q, R, S and T.

There are different ways to ensure reliability, namely the test-retest method and the split-half/equivalent method (Adams *et al.*, 2009). A tailored version of the test-retest reliability method was used in this study. Reliability was ensured by following up the questionnaire with an interview. This was done to ascertain that information reflected in the questionnaire corresponded with information from the interview. The face validity was

ensured by consulting the literature review (thus experts on the subject and other researchers) when the questionnaire was developed. To ensure clarity of the questions, the questionnaire was presented as a pilot to two experts in the field, one in practice and one in academia (Blumberg *et al.*, 2008).

## EMPIRICAL RESULTS

### Scale statements

Table 2 shows the summary of the responses of the participants on the questionnaire. To ensure that participants express their opinion, the Likert scale was tailored into a six-category scale, where one on the scale means a strong disagreement with the statement made (or question asked), and six means a strong agreement. An even number of categories was used to force the participants to decide whether they lean more towards the “agree” or “disagree” end of the scale for each question (Trochim & Donnelly, 2007). For analyzing purposes, the scale was divided into two sections, viz. Section A (options 1 to 3) and Section B (options 4 to 6). Table 2 supplies the question number, the number of firms choosing which option, as well as the responses expressed as a percentage (the distribution) in Sections A and B. The following scale questions/statements were posed to the participants:

1. The market approach (using information of a comparable listed company, e.g. Price-earnings ratio) is frequently applied to determine the value of going concern privately-owned companies.
2. The asset approach is frequently applied to determine the value of going concern privately-owned companies.
3. The income approach (e.g. discounted cash flows) is frequently applied to determine the value of going concern privately-owned companies.
4. An approach other than the market-, asset- or income approach is frequently applied to determine the value of going concern privately-owned companies.
5. Systematic risk is always taken into account with the valuation of going concern privately-owned companies.
6. Unsystematic risk is always taken into account with the valuation of going concern privately-owned companies.
7. The identification of unsystematic risk factors is entirely objective.
8. The quantification of unsystematic risk is entirely objective.
9. An objective method is utilized to bring unsystematic risk into account when the market approach is used to value a going concern privately-owned company.
10. An objective method is utilized to bring unsystematic risk into account when the asset approach is used to value a going concern privately-owned company.
11. An objective method is utilized to bring unsystematic risk into account when the income approach is used to value a going concern privately-owned company.
- 12.1 When calculating an appropriate cost of equity for cost of capital to apply to future cash flows in the income approach, the capital asset pricing model (CAPM) is mostly used.
- 12.2 When calculating an appropriate cost of equity for cost of capital to apply to future cash flows in the income approach, the arbitrage pricing theory (APT) is mostly used.
- 12.3 When calculating an appropriate cost of equity for cost of capital to apply to future cash flows in the income approach, the dividend growth model is mostly used.
- 12.4 When calculating an appropriate cost of equity for cost of capital to apply to future cash flows in the income approach, the build-up model is mostly used.
- 12.5 When calculating an appropriate cost of equity for cost of capital to apply to future cash flows in the income approach, the Fama-French Three-Factor model is mostly used.
- 12.6 When calculating an appropriate cost of equity for cost of capital to apply to future cash flows in the income approach, a model other than the above models is mostly used.
- 13.1 When the income approach is utilized to value a privately-owned company, unsystematic risk is taken into account by adjusting the cost of equity.
- 13.2 When the income approach is utilized to value a privately-owned company, unsystematic risk is taken into account by adjusting the forecast cash flows.

- 13.3 When the income approach is utilized to value a privately-owned company, unsystematic risk is taken into account by another means than adjusting the cost of equity or the forecast cash flows.
14. It is possible to use unsystematic risk as a device to bring the final results of a business valuation of a privately-owned company in line with the client's objectives, because of the subjectivity of unsystematic risk.

**Table 2: Participant responses on scale statements**

Statement	(Disagree)		Options				(Agree)		Summary	
	1	2	3	4	5	6	Section A 1-3 (%)	Section B 4-6 (%)		
1	0	0	1	1	1	1	25%	75%		
2	2	2	0	0	0	0	100%	0%		
3	0	0	0	0	0	4	0%	100%		
4	2	2	0	0	0	0	100%	0%		
5	0	0	0	0	0	4	0%	100%		
6	0	0	0	0	0	4	0%	100%		
7	0	2	1	1	0	0	75%	25%		
8	0	2	2	0	0	0	100%	0%		
9	0	2	2	0	0	0	100%	0%		
10	1	2	1	0	0	0	100%	0%		
11	0	2	2	0	0	0	100%	0%		
12.1	0	0	0	0	0	4	0%	100%		
12.2	4	0	0	0	0	0	100%	0%		
12.3	4	0	0	0	0	0	100%	0%		
12.4	4	0	0	0	0	0	100%	0%		
12.5	4	0	0	0	0	0	100%	0%		
12.6	4	0	0	0	0	0	100%	0%		
13.1	0	0	0	1	0	3	0%	100%		
13.2	0	1	0	1	1	1	25%	75%		
13.3	4	0	0	0	0	0	100%	0%		
14	0	0	0	2	1	1	0%	100%		

Source: Own research

### Descriptive questions

The descriptive questions section consists of open questions. The decision was made to include such questions as many answers to these might be possible. Care was, however, taken to ensure that questions are not asked in a way that will force participants into a specific direction and therefore to particular answers (Tan, 2008). Space was provided after each question where participants could comment on and/or answer the question (Maree, 2010). The questions were constructed in such a way that participants could describe and elaborate if needed.

**Question 1:** List the factors most commonly affecting the value of privately-owned companies.

Participants listed various factors as those most commonly affecting privately-owned company values. Firms did indicate that their lists are not exhaustive. This is acceptable as only the most common factors were requested. In many cases, the same factors were listed by different firms. The following matrix (Table 3) presents a summary of the responses. The factors were ranked based on which were listed the most to which were listed the least:

**Table 3: Factors most commonly affecting the value of privately-owned companies**

Factors listed by firms	Firms				Ranked
	Q	R	S	T	
Reliance on key management	x	x	x	x	1
Reliance on key customer/supplier	x		x	x	2
Over optimistic forecasts/growth prospects	x	x	x		2
Lack of marketability		x		x	3
The size of the interest being valued		x	x		3
Lack of product diversity	x		x		3
Lack of geographic diversity	x	x			3
Historic volatile results	x		x		3
Lack of track record	x				4
Lack of access to capital markets		x			4
Market share			x		4
Competitive landscape			x		4
Labor relations			x		4
Regulations and changes therein			x		4
Possible non-market-related or personal expenses in business				x	4
Quality of management		x			4

Source: Own research

**Question 2:** How are unsystematic risk factors to be considered, identified?

The following matrix presents a summary of the responses. The identification methods were ranked based on which were listed the most to which were listed the least (Table 4).

**Table 4: Identification methods of unsystematic risks**

Identification methods	Firm				Ranked
	Q	R	S	T	
Discussions with management	x	x	x		1
Scrutinizing documents	x	x	x		1
Industry research		x	x		2
Analyzing forecasts		x	x		2
Sensitivity analysis to determine level of impact				x	3

Source: Own research

**Question 3:** Describe how unsystematic risk is quantified and taken into account when the market approach is used to value privately-owned companies.

Firm Q: The multiple used to value the business (e.g. P/E ratio) is adjusted by this firm to account for unsystematic risk factors. A corroborative discounted cash flow approach is also prepared. An adjustment to the multiple is benchmarked against a change in the cost of equity to gauge the relative impact of an xx% change in the multiple to an yy% change to the cost of equity. This is done to get a feel for the impact of the type of adjustment that is made.

Firm R: Adjustments are made to peer company multiples by this firm. The firm did indicate that no objective basis exists for making adjustments to multiples for unsystematic risk.

Firm S: This firm indicated that unsystematic risk is taken into account by means of a discount or premium to comparable listed company multiples. It was emphasized by this firm that the size of the discount or premium to comparable listed company multiples is determined based on the valuation practitioner's professional judgment and experience in valuing other privately-owned companies. Firm S furthermore explained that the valuation practitioner is not only comparing the riskiness of the subject company to its own peers, but also to all previous companies that have been valued by the firm and the discounts or premiums applied to the multiples for those companies.

Firm T: An adjustment is made to the earnings or multiple. Firm T emphasized that care must be taken not to duplicate the accounting of unsystematic risk in the valuation.

**Question 4:** Describe how unsystematic risk is quantified and taken into account when the asset approach is used to value privately-owned companies.

Firm Q: This firm indicated that this is not applicable. It is their opinion that the value of the underlying assets should be considered. The asset approach would normally only be used by Firm Q to value property or investment holding companies, and the underlying asset valuations would be amended to account for any unsystematic risk factors.

Firm R: Firm R indicated that this is not applicable as they do not use the asset approach to value going concern businesses.

Firm S: Firm S indicated that the asset approach is rarely applied to value a privately-owned company that is a going concern. It was also noted by this firm that as most of the factors noted in the first statement/question above do not affect the fair value of a company's assets or liabilities, no adjustment is necessary for these risks. If a discount is applied to the asset approach, it is likely to be limited to a discount for lack of liquidity or marketability as the subject company is privately owned. It was emphasized that the above comments are not relevant for valuations where a price-to-book ratio or adjustment to embedded value is applied as a valuation methodology (e.g. banking, insurance, property portfolios).

Firm T: It was signaled that the price-to-asset multiple would normally be adjusted for risks.

**Question 5:** Describe how unsystematic risk is quantified and taken into account when the income approach is used to value a privately-owned company.

Firm Q: An unsystematic risk premium would typically be added to the cost of equity, most often a figure in the range of 0 to 10% depending on the specific circumstances. Exceptional cases could potentially warrant a greater adjustment. Consideration is given to all positive and negative unsystematic factors affecting the prospects of the company, and using their knowledge and professional judgment, the firm will then make what they consider to be an appropriate adjustment.

Firm R: Unsystematic risks are addressed in the cash flows as far as possible. Uncertainties relating to unsystematic risks are modeled as scenarios and their impact on value is understood. The example was given that if an unsystematic risk is the potential loss of a key customer, the impact of a loss of this key customer will be modeled to assess the impact on the value of the business. Such scenarios may be considered in the final assessment of the likely value range for the business. The firm did suggest that other risks are less easy to model as scenarios; for example, there is a great deal of research supporting the notion that smaller companies are riskier than larger ones. The size premium is not, however, captured in CAPM and therefore is a risk that appears to be rewarded by the market, but which is not captured in the return predicted by the CAPM. A size premium also represents unsystematic risk, which is often considered in discounted cash flow analyses. Other risk premiums may be applied to the cost of equity for other factors that cannot be modeled in the cash flows (such as regulatory uncertainty or dependence on a key customer). The reason is that there is either a positive cash flow, or no cash flow. The firm furthermore emphasized that their approach is to avoid making subjective adjustments to the cost of equity as far as possible.

Firm S: This firm takes unsystematic risk into account by means of an adjustment to the cost of equity. The size of the adjustment is determined as described in the answer to statement/question 3 above.

Firm T: The discount rate used in the cash flow analysis is adjusted through sensitivity analyses.

## **DISCUSSION**

The first four scale statements were included only for completeness and not specifically to reach the purpose of the study. Nevertheless, the results of this study, focusing only on the valuation of privately-owned companies, correspond to the findings (see Introduction) of PwC (2008; 2010), focusing on valuation generally, that valuation approaches most frequently used in South Africa are the income approach, followed by the market approach, then, to a very limited extent, the asset approach and/or other approaches.

The first purpose of the study is to determine whether advisory firms do take unsystematic risk into account. As risk consists of both systematic and unsystematic risk, two questions were put to participants to determine whether risk is incorporated into valuations. Statement 5 dealt with systematic risk and Statement 6 with unsystematic risk. All participants chose option 6 on the six-option Likert scale in both cases, indicating a strong agreement with the statements made, i.e. these risks are always taken into account. Our argument was that if unsystematic risk is taken into account, it cannot be incorporated entirely objectively by valuation practitioners into a privately-owned company valuation in South Africa. Statements 7 to 11 support this argument, since three participants indicated in Statement 7 that they disagree (Section A) that the identification of unsystematic risk is entirely objective, where one agrees little with this statement. From the remaining four statements (8, 9, 10 and 11), it is clear that all the participants are convinced that unsystematic risk is not treated objectively, since all the answers are grouped in Section A. Furthermore, according to the results of Statement 14, participants do agree that it is possible to use unsystematic risk as a device to bring the final results of a valuation of a privately-owned company in line with the client's objectives, because of the subjectivity of unsystematic risk.

The second purpose of the study is to determine how unsystematic risk is incorporated into different valuation techniques. To reach this purpose, it is firstly necessary to determine the factors most commonly affecting the value of a privately-owned company. By considering all the factors indicated by the participants in Descriptive Question 1, it is clear that they meet the requirements of the six Black/Green categories (competition, financial strength, management ability and depth, profitability and stability of earnings, national economic effects and local economic effects), the three main Warren Miller categories (macro-environmental, industry and company) and the three main Gary Trugman categories (risk, non-financial risk and company-specific risk). The four factors ranked by PwC are in the same order as the results of this study. Nevertheless, the findings of this study provide more substance regarding other factors as well as the importance of those factors. The results of Descriptive Question 2 indicated that discussions with management and scrutinizing documents are mostly used to identify unsystematic risk.

The results of Descriptive Question 3, when the market approach is used, indicate that the valuation of privately-owned companies is done according to the theory, namely the multiple used to value (e.g. P/E ratio) the business should be adjusted. This is also the case with regard to the results of Descriptive Question 4, when the asset approach is used, that practice is in line with the theory. The theory indicated that the valuation of assets to the market value by design amends for unsystematic risk. Participants indicated that this approach is not applicable as the value of underlying assets is considered.

Regarding to the income approach, according to the results of Statements 12.1 to 12.6, it is clear that all the participants totally agree that the CAPM method is always used to calculate cost of capital, while the APT, dividend growth model, the build-up model, the Fama-French Three-Factor model or any other model has never been used. From the results of Statements 13.1 to 13.3, it is clear that unsystematic risk is taken into account by using only two methods, i.e. mainly by adjusting the cost of equity, followed by the method by adjusting the forecasted cash flows. The results of Descriptive Question 5 indicate that the practice to incorporate unsystematic risk in privately-owned companies is also in line with the theory, namely that a premium is added to the cost of equity and/or adjustments are made in forecasted cash flows.

## **CONCLUSION**

The purpose was to enquire whether the valuation of privately-owned companies performed by the big four audit firms in South Africa reflects the true risk involved, and, if it is incorporated, how objectively it is done. The study found that valuation approaches most frequently used are the income approach, followed by the market

approach, then, to a very limited extent, the asset approach and/or other approaches; systematic risk and unsystematic risk are always taken into account; if unsystematic risk is taken into account, it cannot be incorporated entirely objectively by valuation practitioners; the asset approach (when it is used), market approach and income approach are applied according to the theory; and, regarding the income approach, the CAPM method is exclusively used to determine the cost of equity.

The study concludes that participants indicated that unsystematic risk is incorporated into privately-owned company valuations, but that the whole subject of valuations, especially privately-owned company valuations, does not entail entire objectivity. It was also found that there is no obvious discrepancy between the theory and practice, but the firms involved have specific preferences regarding valuation approaches and methods within the approaches. What is concerning is that participants tend to agree that the identification and quantification of unsystematic risk are not entirely objective and that it is possible to use unsystematic risk as a device to bring the final results of a valuation in line with the clients' objective. Furthermore, all the participants take unsystematic risk into account by means of an adjustment to cost of equity and/or the adjustment of future cash flows. These adjustments are subjective to a great extent and based on personal judgment. There are no specific guidelines to reduce the subjectivity. Based on this, it is imperative that some best practice guidelines should be introduced in South Africa in order to minimize the subjectivity in this field. It is recognized that the topic of valuation of privately-owned firms will always have an element of subjectivity, but formal guidelines such as valuation standards could eliminate some of the uncertainties and enhance objectivity.

The contribution of this study is that it reveals the current practice by the big four firms, which can be used as starting point by role-players in the valuation sector to open the discussion on this topic formally so that valuation practitioners can engage with one another and work towards workable solutions to improve the confidence investors and other users have in valuations performed. Recommended solutions are, among others, developing valuation standards (such as IFRS for Accounting) and establishing an institute for valuation practitioners (the equivalent of the South African Institute of Chartered Accountants, namely SAICA). Valuation practitioners should be compelled to adhere to these valuation standards and should be members of such an institute. The value of the study is found in the fact that this is the first one performed in South Africa that zoomed into this specific topic. Very little literature and research exist that concentrate on the valuation of privately-owned companies. Further research should be done on medium and small-sized South African advisory firms so that further comparative conclusions can be made.

A limitation of the study is that even though the valuation departments at the firms are not that large (compared to, for example, the audit departments), and the top-level employees that know the ins and outs of the processes were used as representatives of participants, it could have been more advantageous to include junior-level, senior-level as well as top-level employees of each firm in the population. Another limitation is that even though they are the pacesetters, the study chose to only include the large four audit, taxation and advisory firms as the population.

## **AUTHOR INFORMATION**

**Henro Erasmus** is currently senior lecturer at the North-West University (South Africa). He holds the Chartered Accountant (CA (SA)) designation and completed recently a master's degree in financial management (Cum Laude). He has taught in the Chartered Accountancy and Chartered Management Accountancy programs. His current research focuses on business valuation models and equity valuation models. E-mail: Henro.Erasmus@nwu.ac.za. Corresponding author.

**Professor Surika van Rooyen** is currently an associate professor at the North-West University (South Africa). She holds the Chartered Accountant (CA (SA)) designation and a master's degree in financial management (Cum Laude). She has lectured at various levels of complexity and received various outstanding educator awards, including an award for the best lecturer in the Faculty of Economic and Management Sciences. She also received the award as the best master's degree student in the School of Accounting Sciences in 2005. She is also the co-author of various publications in financial management in peer-reviewed journals. E-mail: Surika.Vanrooyen@nwu.ac.za

**Professor Merwe Oberholzer** is currently Professor in the School of Accounting Sciences at the North-West University (South Africa). He has taught extensively in the Chartered Accountancy and Chartered Management Accountancy programs. His academic research outputs include more than 30 peer-reviewed articles and conference presentations. His current research focuses on corporate resilience, social responsibility and DEA modeling. E-mail: Merwe.Oberholzer@nwu.ac.za

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