

7th edition • Southern Africa – West Africa – East Africa

Africa: A closer look at value

Valuation methodology survey 2014/15





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Valuation methodology survey 2014/15



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Section 1: Foreword





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PwC Corporate Finance is pleased to present the seventh edition of the biennial *Valuation Methodology Survey*. For the first time, in the previous edition of the survey, we included a perspective from our colleagues in East and West Africa. In this edition, we broadened the reach of the survey to include Francophone Africa and the survey now represents a wider view across the African continent.

Since our previous survey, interest in Africa as an investment destination has continued to grow, with the continent often viewed as an investment market with the potential for significant growth and superior returns. In the current year, we wanted to test our respondents' experiences around their activities in Africa and as a result included questions sampling:

- The level of investor activity in Africa outside respondents' home markets;
- The countries within Africa that attracted the most investor interest;
- The industries targeted as investor interest in Africa matures;
- How respondents deal with issues around country risk in Africa; and
- The challenges associated with negotiating value in Africa.



“ *The focus in Africa is now on finding the right partnership or local participation model... 100% ownership with remote management is no longer seen as a viable option.* ”

Simon Venables

PwC Deals Leader, sub-Saharan Africa

The lack of market data, valuation inputs and research normally required to perform investment evaluation and analysis remains one of the key challenges to doing business in Africa. As a result the survey continues to focus on the technical valuation questions and data that will provide investors with a starting point for investment analysis in African markets.

Areas covered include:

- The most frequently used valuation methodologies;
- The calculation of cost of capital;
- Preferred market multiples; and
- Discounts and premiums.

We trust that you will find these insights both informative and thought provoking. The sections on East and West Africa have improved in the current survey in terms of both the number of respondents and depth of questions and should provide a better view of these regional markets.

This survey represents the views of 77 financial analysts and corporate financiers – 35 in Southern Africa, 19 in East Africa and 23 in West Africa. We would like to thank all respondents for their valued contribution and the time and effort taken to participate in the survey. Thank you also to the teams in Nairobi, Lagos, Accra, Johannesburg, Abidjan, Paris, Cape Town and Ebène that assisted with the compilation of the survey.

We trust that the survey will continue to be of benefit to readers and contribute to the development of valuation practice in the wider African market. We look forward to feedback from our respondents and readers to be incorporated in the 2016/17 edition of the survey.

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31 January 2015

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PwC's African footprint





Wherever you do business in Africa, we're there for you.

We know that value goes beyond a single engagement or a single result. Value is defined by a relationship – one that is born of an intelligent, engaged, collaborative process. With our African network, our people and experience, we're ready to help you realise that value wherever you do business.

With more than 400 partners and over 9 000 staff in 34 countries, PwC is the largest provider of professional services in Africa. This means that we're able to provide our clients with seamless and consistent service, wherever they do business on the continent. Our in-depth knowledge and understanding of African operating environments enables us to offer tailored tax, assurance and advisory solutions for every business challenge.

Section 2

Investor interest in Africa: Challenges and opportunities





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Introduction

In response to the increased investor interest in Africa since the 2008 global financial crisis, our 2012 survey explored our respondents' perceptions of investment in Africa and the difficulties in doing valuations on the continent.

Over the past two years, investor interest in Africa has gained momentum. A flood of publications has appeared exploring the macro-economic drivers behind Africa's growth, the attractiveness of various countries, Africa's increased prosperity and the ease of doing business on the continent. Most global advisory firms have opened Africa desks in their key markets to assist their clients in Africa.



“ Investment into Africa happens for different reasons depending on the investor groups. Aside from large infrastructural and natural resources investments, consumer product companies have a strong eye on the continent.... Geopolitical unrest in parts of the world and also political instability in some of the emerging countries will make investors more cautious and this may counter the unrivalled promise of growth. Investors will weigh this into their valuations. ”

Cornelis Smaal

Global Head of Corporate Finance, PwC

In this survey, we wanted to test dealmakers' perspectives on investment in Africa and not further explore the well-documented story of Africa's rising. Our focus was on testing the development of investor interest in Africa by benchmarking respondents' views in the 2012 survey to the current edition. For example, we surveyed:

- General deals activity in African markets;
- The number of deals respondents have worked on outside their home markets;
- The countries that attracted the most investor interest;
- The industries that are attracting the most investor interest in Africa;
- The reasons for increased investor interest in Africa;
- The purpose of valuations in African markets; and
- The challenges faced in performing valuations in African markets.

In this section, we provide feedback on these topics from survey respondents across the continent. The statistics discussed in this section therefore represents a consolidated picture of East Africa, West Africa (including Francophone Africa) and Southern Africa.

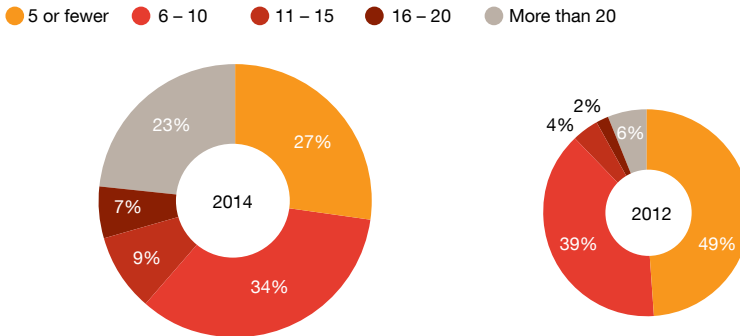
Deal activity in Africa

General level of deal activity in Africa

Q: In how many deals on the African continent were you and/or your team involved over the past 24 months?

- 5 or fewer than 5
- 6 – 10
- 11 – 15
- 16 – 20
- More than 20

Figure 2.1 Opportunities explored on the African continent over the past 24 months



The results clearly indicate an increase in activity across Africa. In 2012, around 12% of respondents had considered more than 10 transactions. This number increased to 39% in 2014 and may also be a result of the general improvement in deal activity post the 2008 recession. The next question supports this statement as deal activity appears to be driven by activity in home markets.

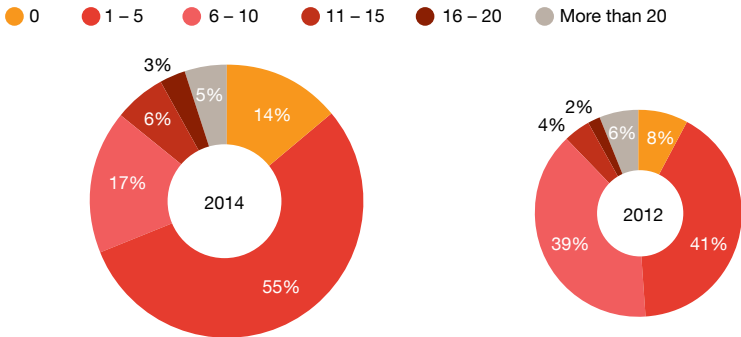
The increase in deal activity in Africa from 2012 to 2014 is most pronounced in the Southern African market.

General level of deal activity in Africa

Q: During the past 12 months, how many valuation-related opportunities did you/your team investigate in African markets, outside your home country?

- None
- 1 – 5
- 6 – 10
- 11 – 15
- 16 – 20
- More than 20

Figure 2.2 Valuation-related opportunities investigated in African markets outside home country





“ In the UK, we have seen a significant upsurge in interest in sub-Saharan Africa. The phrase ‘Africa rising’ is heard frequently and there are many events around London about investing in the continent. However, at this stage I sense that many investors are still standing on the sidelines uncertain about the risks and potential rewards. ”

Paul Cleal

Africa Business Group Leader, PwC UK

Increased deal activity in advisers’ home markets may highlight the need for local knowledge in assessing African opportunities.

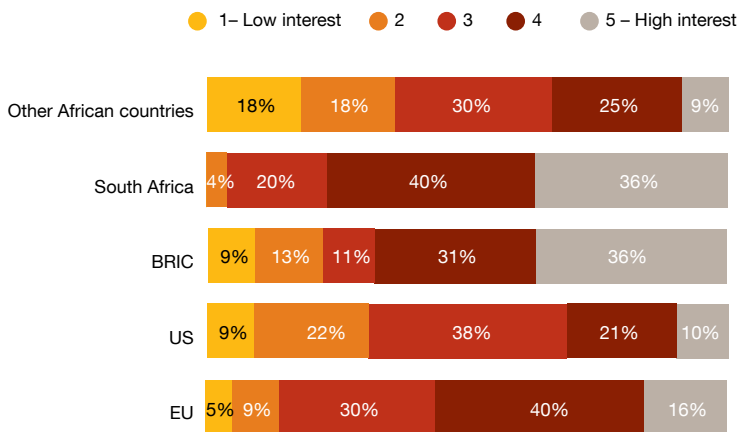
Origin of potential investors in Africa

In our next question, we tested respondents' views on the main sources of investor interest in African markets.

Q: *Based on your experience, rate the level of investor interest in Africa from each of the following destinations.*

- *EU*
- *US*
- *Brazil, Russia, India and China (BRIC)*
- *South Africa*
- *Other African countries*

Figure 2.3 Level of investor interest in Africa



The responses to this question confirm a high level of interest in transactions on the continent from all regions included in our question. South Africa, the EU and the BRIC countries recorded the highest score for investor interest in African markets. The US and remainder of the African continent recorded the lowest score, but still indicated a significant level of interest in investment in the continent.



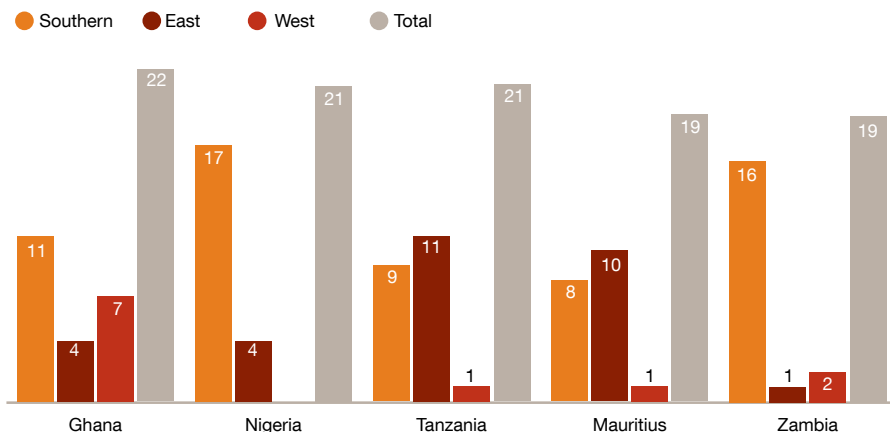
Results show a high level of investor interest in African markets from investors from all regions.

Countries of choice for potential investors

In order to test which African countries attracted the most investor interest, we asked respondents which countries they had worked in over the last two years. In analysing responses, we excluded each respondent's home market from the results for that region. For example, for South African respondents we excluded South Africa from their responses and looked at the next top five markets in which they had worked.

Q: Please indicate all of the countries in Africa in which you/your team have performed valuation work during the last 24 months.

Figure 2.4 Top five countries in which work was done in the last 24 months



Ghana, Nigeria, Tanzania, Mauritius and Zambia were the top five countries in which the most respondents had done work over the past 24 months. It should be noted that the level of activity in the top 15 countries identified by respondents was very similar, as shown in the table that follows.



“ In addition to the traditional investment destinations, namely countries with huge natural resources or significant infrastructure projects (such as the DRC, Angola or Algeria), there is an increasing interest in geographies that can offer a significant market for industrial products, consumer goods and services. Considering the current weakness in regional integration, investors target countries with significant domestic markets such as Nigeria, South Africa, Ghana, Kenya or Algeria. Destinations providing political stability and sound financial organisation such as Morocco or Côte d'Ivoire are also favoured. ”

Philippe Couderc

Transactions Partner – Coordination, PwC Maghreb & Francophone Africa

Countries of choice for potential investors

Top 15 non-home countries in which work was done in the last 24 months

Country	Number of respondents
Ghana	22
Nigeria	21
Tanzania	21
Mauritius	19
Zambia	19
Mozambique	18
Botswana	16
Kenya	16
Zimbabwe	16
Uganda	15
Namibia	14
Côte d'Ivoire	13
Rwanda	11
South Africa	11
Democratic Republic of Congo	9



“ Different regions offer different dynamics. The East African region is very much seen as an advanced market in terms of institutional frameworks, but also dominated by a Kenya-centric hub approach. In the longer term, upcoming markets such as Ethiopia will become the new favourites and the investment flows between the Middle East and East Africa will continue to be a major driver. ”

Tibor Almassy

Deals Leader, PwC Africa East Markets

Respondents reported a high level of activity in most major markets across East Africa, West Africa and Southern Africa.

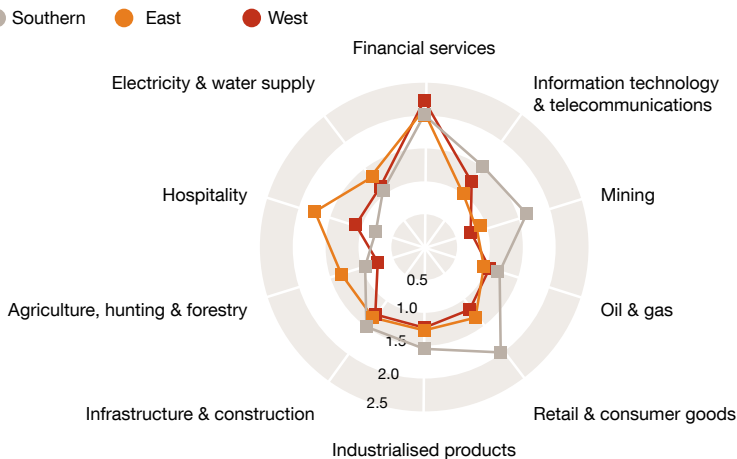
As a next step, we wanted to determine the most popular target industries in Africa.

Industries of choice for investors in Africa

Q: Please indicate the industries in which the African target companies you have valued generally operate.

- Financial services
- Information technology and telecommunications
- Mining
- Oil & gas
- Retail & consumer goods
- Industrialised products
- Infrastructure and construction
- Agriculture, hunting and forestry
- Hospitality
- Electricity and water supply

Figure 2.5 Industries in which target companies generally operate





“Clients are looking for longer-term potential growth and areas where they can get a step ahead of the competition. That’s why the idea of investing in Africa attracts them. Whereas in the past Africa’s story from a business perspective was largely about natural resources, the opportunities driven by an emerging middle class are much wider.”

Paul Cleal

Africa Business Group Leader, PwC UK

As expected, the level of activity by industry differs between regions, but in our latest survey, we noted a wider spread of target industries. This may be an indication of the increase in investor interest as the profile of investors has also widened.

The financial services sector remains a key focus area for all markets and produced the top score in all regions. Traditional regional strengths in various industries were also highlighted in the responses with mining in Southern Africa, hospitality in East Africa and retail and consumer goods in West Africa recording the second highest scores.

The healthcare sector, which was not included in our original industry list, was highlighted as a target industry by respondents in the East African and Southern African regions.

Reasons for increased investor interest in Africa



“ Most African countries have GDP growth rates western countries can only dream of. That, coupled with a large population base and a growing middle class, means Africa cannot be ignored. This is supported by the fact that historically, investors in Africa came to extract and export. We are now seeing more companies (both local and foreign) moving into manufacturing and value-add services to create products for domestic consumption. Africans are big spenders. The success of pan-African telcos, cement companies and banks clearly shows Africa is a market, an underserved market with high demands. We expect this to continue. Investors are just beginning to scratch the surface. This means superior returns for now. ”

Farouk Gumel

Advisory Leader, PwC Africa West Markets

The reasons for investor interest in Africa have been well researched and documented, but we wanted to test respondents' perceptions of the drivers of that interest, so included the question that follows.

Q: Please indicate how much you agree with each of the following as possible reasons for this increased interest on a scale from 1 to 5 where 5 is 'I strongly agree' and 1 is 'I strongly disagree'.

- African companies have greater growth expectations
- Financial reporting standards have improved
- For African companies, the return expectation relative to risk has improved in recent years (lower investment risk due to reforms in political and economic systems)
- Investors are feeling the need to diversify away from low-return markets
- The quality of economic data and company information have improved, facilitating potential transactions

Figure 2.6 Reasons for increased investor interest in African companies

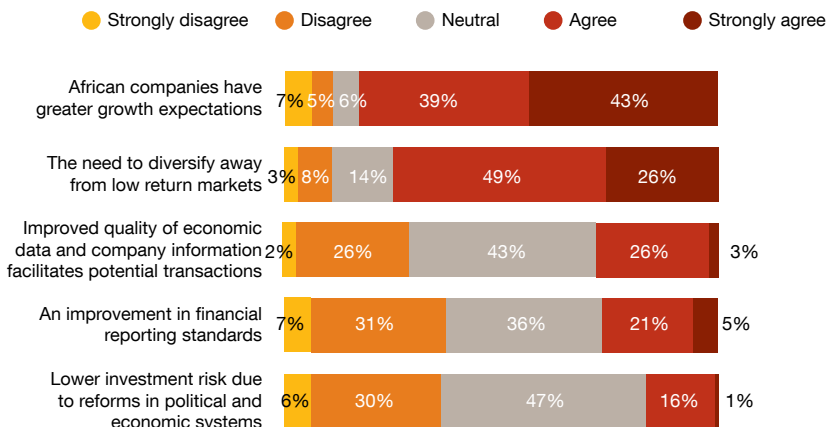


Figure 2.6 highlights the fact that there is a strong perception in the market that companies in Africa have greater growth expectations than those in other markets. Most respondents (82%) agree or strongly agree that growth is the primary driver of investor interest in African markets. In addition, there is a strong drive to diversify away from low-return markets, with 75% of respondents agreeing or strongly agreeing with this statement.

On a secondary level, the improved risk profile of African markets, better quality information and improved financial reporting standards were not considered to be significant drivers of investor interest in African markets.



The importance of growth as the primary driver of investor interest in Africa is more pronounced now than in our previous survey.

Valuations in Africa

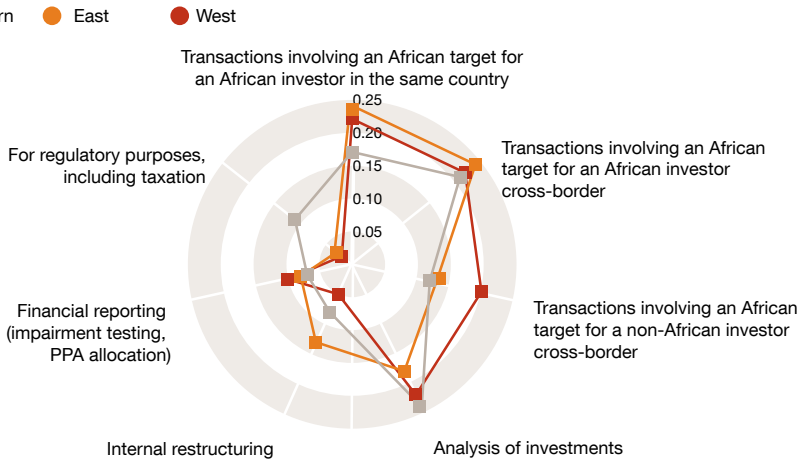


Performing valuations in developing economies presents different challenges to performing them in those that are developed. In our survey, we asked specific questions about performing valuations in Africa, such as what the general purpose of valuations is and how respondents manage the difficulties of doing valuations in Africa.

Q: Which of the following best describe the contexts of valuations performed by you and/or your team in Africa, over the last 24 months?

- Transactions related – involving an African target for an African investor in the same country
- Transactions related – involving an African target for an African investor cross-border
- Transactions related – involving an African target for a non-African investor (cross-border transaction)
- Analysis of investments
- Internal restructuring
- Financial reporting (impairment testing, PPA allocation)
- For regulatory purposes, including taxation

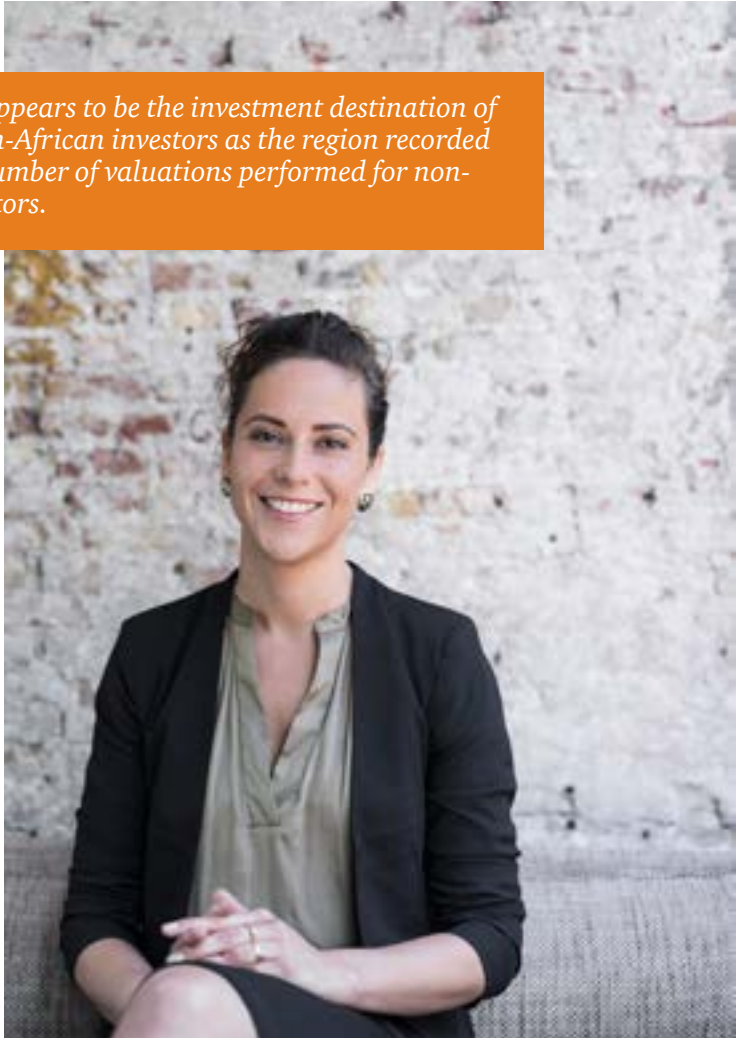
Figure 2.7 Purpose of valuations





The results indicate that the majority of valuations are still performed for the analysis of potential investments. In terms of valuations performed for transaction purposes, we noted a more even distribution of valuations performed for investors from respondents' home countries, other African markets and non-African investors. This may be a result of the increased investor interest.

West Africa appears to be the investment destination of choice for non-African investors as the region recorded the highest number of valuations performed for non-African investors.



Difficulties in performing valuations in Africa

Emerging markets all have their own unique valuation challenges. Large gaps in buyer and seller expectations and worse than expected performance are some of the issues that potential investors face in emerging markets.



“ Many discussions raised in sell-side advisory focus on the potential growth as opposed to historical earnings. This, combined with the availability of few comparable companies, transactions of similar nature and limited market/financial information imply both buyers and sellers are often considering what potential future benefit they are prepared to pay for or forego when contemplating transactions. ”

Simon Venables

PwC Deals Leader, sub-Saharan Africa

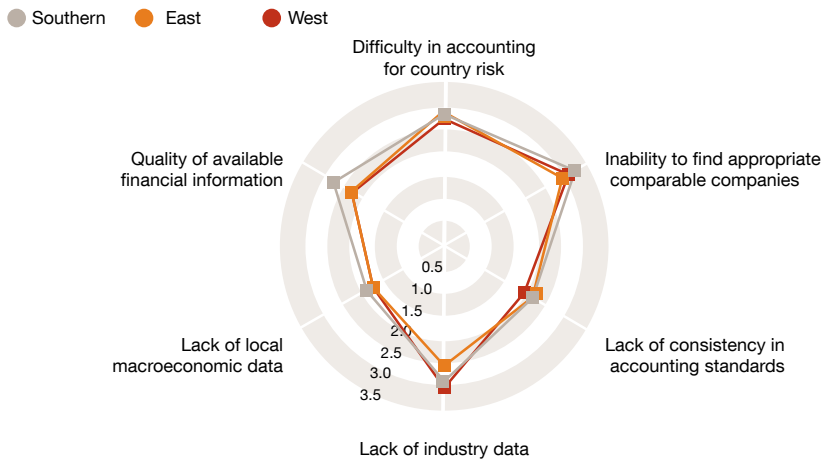
The root causes of valuation issues in emerging markets resulting in these problems may include:

- Uncertainty about future growth, market demand, distribution channels to be used and future actions of competitors. This could be compounded by a lack of research data on potential markets, especially at an industry level;
- Few comparable listed companies that can form a base for valuation analysis and limited liquidity and breadth in local stock markets; and
- Increased investor interest in emerging markets, resulting in significant competition for assets in these markets and consequent increases in pricing with sellers that have several alternatives available to them.

Q: When performing valuations in Africa, how much do you agree with the following as being challenges you encounter?

- *Difficulty in accounting for country risk*
- *Inability to find appropriate comparable companies*
- *Lack of consistency in accounting standards*
- *Lack of industry data*
- *Lack of macroeconomic data*
- *Quality of available financial information*

Figure 2.8 Common challenges to performing valuations



Respondents highlighted that the lack of data, both about comparable companies that could provide valuation benchmarks in a valuation analysis, as well as industry data (for example about market demand, the competitive environment and growth expectations) that could support cash flow forecasts, as the main difficulties in doing valuations in emerging markets.

Lack of market information

As mentioned, the main challenges regarding emerging market valuations concern the lack of industry data and the inability to find comparable companies. This is as a result of a lack of active markets, which generally has one of two causes:

- The general illiquidity of secondary markets in some emerging economies; or
- A limitation in the breadth of active secondary markets in emerging economies.

In some emerging markets, active secondary markets and exchanges are not present or those that are present are so limited that the valuer is unable to gain much use from them.

In addition, in some emerging economies active markets are present, but the breadth of the markets is limited. As a result, the valuer may not be able to find suitable comparable companies to use in his or her analysis.



“The organised formal sector is very young. The deal space is still finding its feet in most cases. This creates a very wide expectation gap between buyers and sellers when it comes to growth projections. Buyers always take a less aggressive stance to growth projections when compared to sellers. Sellers, who in most cases are entrepreneurs, are more bullish.

In many transactions, the lack of historical precedents also makes it difficult to agree a starting point. In most cases there is no right or wrong answer. The market is fast paced, making change a constant. We believe as the market matures with more comparables/historical precedents, more deals will close.”

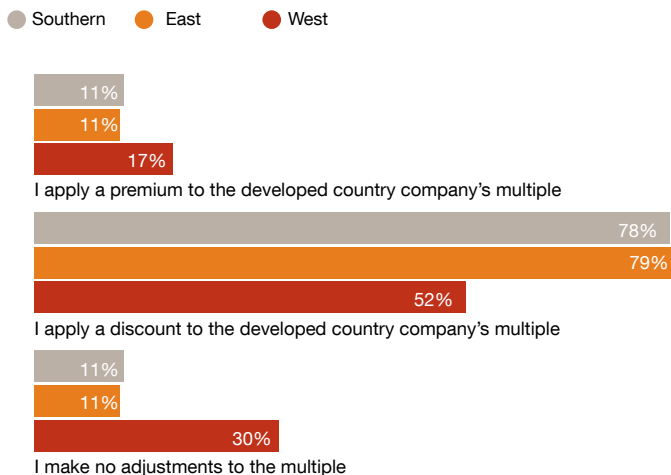
Farouk Gumel

Advisory Leader, PwC Africa West Markets

Q: When valuing a business in Africa and selecting comparable companies that operate in developed markets, what adjustments, if any, do you typically make to the developed country company's multiple?

- I make no adjustments to the multiple
- I apply a discount to the developed country company's multiple
- I apply a premium to the developed country company's multiple

Figure 2.9 Adjustments made when selecting comparable companies that operate in developed markets



When there are not sufficient comparable companies in the same industry and country, most respondents would still maintain a market approach, but would expand their sample to include other countries and/or other industries. When expanding into other countries, further subjectivity is added to the valuation as country risk adjustments are often required for valuations, using multiples derived from, for example, developed markets abroad.

Further details about adjustments made to comparable companies' observed multiples are included in the detailed technical sections for each of the regions in Sections 3, 4 and 5 of this publication.

Section 3:

Southern Africa



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Valuation approaches

There are a number of methodologies used to value businesses. We have previously found that the approaches most commonly used in Southern Africa are:

- **The income approach (discounted cash flow approach)**
This approach determines the market value of the ordinary shares of a company based on the value of the cash flows that the company can be expected to generate in the future. This includes traditional discounted cash flow techniques and also real option valuations, which use option pricing models to measure the value of assets that share option characteristics.
- **The market approach (market multiple approach)**
This gauges the market value of the ordinary shares of a company based on a comparison of the company to comparable publicly traded companies and transactions in its industry, as well as to prior transactions in the ordinary shares of the company using an appropriate valuation multiple.
- **The net assets approach**
This evaluates the market value of the ordinary shares of a company by adjusting the asset and liability balances on the company's balance sheet to its market value equivalents. The approach is based on the summation of the individual piecemeal market values of the underlying assets less the market value of the liabilities.

The aim of this section is to highlight the most popular valuation approaches being used in business enterprise valuations in Southern Africa. We were particularly interested in determining whether any changes have taken place in the choice of approaches followed by market participants since our previous survey in 2012.

Q: Which of the following valuation approach do you *prefer* to value a going concern?

- *Income approach (discounted cash flow)*
- *Market approach (e.g. price/earnings ratio)*
- *Net asset approach*

The primary valuation approaches remain the income approach (discounted cash flow) and market approach (based on market multiples). The general indication from respondents is that the income approach remains the primary valuation methodology, used by 69% of respondents, while the market approach also remains an important methodology, with 29% of the respondents using it as their preferred approach.

In the South African market, where there are relatively few listed companies that can be used as a reliable source for market multiples, it is perhaps not surprising that the income approach continues to remain the most favoured methodology.

We also asked respondents whether they apply a secondary methodology. Of those respondents who use the income approach as the primary methodology, 96% confirmed using the market approach as the secondary method of choice.

Of the responses confirming the market approach as the primary methodology for valuing going concerns, 80% confirmed using the income approach as the secondary method of choice.

Industry-specific multiples, such as value measured relative to assets under management, adjusted present value techniques and production-related metrics were also offered as alternatives to the standard income and market approaches used as examples in the survey.

While the income approach remains the most popular approach, valuation practitioners seldom use only one approach to valuing businesses.

Income approach

Cost of capital

From a company's perspective, the weighted average cost of capital (WACC) represents the economic return (or yield) that an investor would have to give up by investing in the subject investment instead of all available alternative investments that are comparable in terms of risk and other investment characteristics.¹

WACC formula

The general formula for calculating the WACC (assuming only debt and equity capital) is:

$$\text{WACC} = k_d \times (d\%) + k_e \times (e\%)$$

where:

WACC = Weighted average rate of return on invested capital

k_d = After-tax rate of return on debt capital

$d\%$ = Debt capital as a percentage of the sum of the debt and ordinary equity capital (total invested capital)

k_e = Rate of return on ordinary equity capital

$e\%$ = Ordinary equity capital as a percentage of the total invested capital

There are three related steps involved in developing the WACC:

- Estimating the opportunity cost of equity financing;
- Estimating the opportunity cost of non-equity financing; and
- Developing market value weights for the capital structure.

¹ Pratt, S and Niculita, A. *Valuing a Business*. McGraw-Hill, 2008.

Cost of equity

Estimating the cost of equity is the most subjective and difficult measure to quantify in the WACC formula, which is why we have dedicated a substantial part of this survey to this issue.

There are two broad approaches to estimating the cost of equity:

- **Deductive models**
Deductive models rely on market data to determine an imputed cost of equity.
- **Risk-return models**
The capital asset pricing model (CAPM) is probably the most widely used of the risk-return models.

CAPM formula

$$E(Re) = R_f + \beta \times E(R_p)$$

where:

$E(Re)$ = Expected rate of return on equity capital

R_f = Risk-free rate of return

β = Beta or systematic risk

$E(R_p)$ = Expected market risk premium: expected return for a broad portfolio of shares less the risk-free rate of return

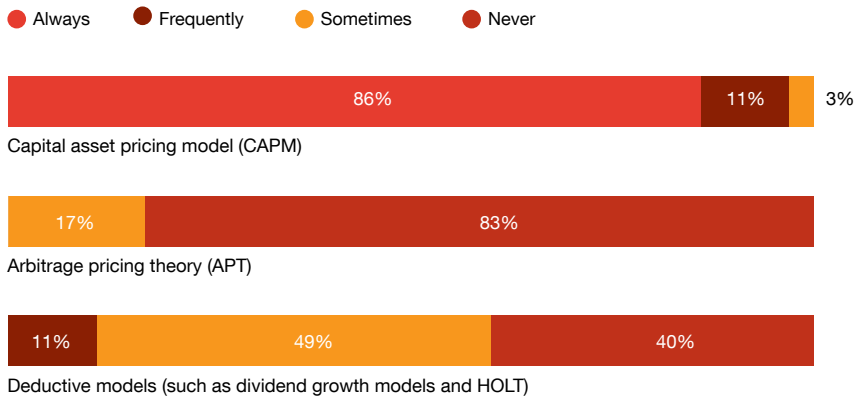
While the CAPM is popular, it is not perfect. A key criticism raised against the CAPM is its inability to account for several equity returns, such as the small firm effect (whereby smaller companies exhibit higher returns) and the value effect (whereby companies with low ratios of book-to-market value have higher expected returns). One response to this empirical questioning is to move away from the traditional CAPM's linear, stationary, and single-factor features.

Given the competing views between deductive models and risk-return models, we included a question in our survey to determine what methodologies are being used by market practitioners.

Q: In calculating an appropriate rate of return to apply to the future cash flows, which of the following methods are being used?

- Arbitrage pricing theory (APT)
- Capital asset pricing model (CAPM)
- Deductive models (such as dividend growth models and HOLT)

Figure 3.1 Methods used to calculate the rate of return for future cash flows



Survey responses relating to the assumptions made in the application of the CAPM are included in the section that follows.

The 2014/15 survey once again confirms both the CAPM as the primary methodology, with all respondents stating that they always, frequently or sometimes use it, as well as the preference for risk-return models over deductive models.

Risk-free rate

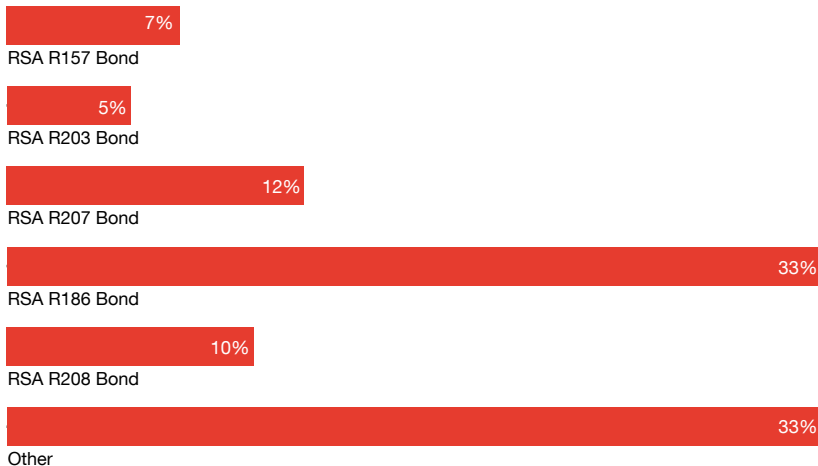
Ordinarily, valuation practitioners estimate the cost of equity by assessing its component parts using the CAPM.

In South Africa, various government bonds are available as a proxy for the risk-free rate and we asked respondents to indicate their choice of proxy.

Q: When performing valuations in South Africa, how often are the following used as a benchmark for the risk-free rate?

- R201 Bond (maturity date: 21/12/2014)
- R157 Bond (maturity date: 15/09/2015)
- R203 Bond (maturity date: 15/09/2017)
- R204 Bond (maturity date: 21/12/2018)
- R207 Bond (maturity date: 15/01/2020)
- R208 Bond (maturity date: 31/03/2021)
- R186 Bond (maturity date: 11/12/2026)
- R213 Bond (maturity date: 28/02/2031)
- R209 Bond (maturity date: 31/03/2036)
- R214 Bond (maturity date: 28/02/2041)

Figure 3.2 Benchmarks used for the risk-free rate



Interestingly, the R186 has increased significantly in popularity, with 33% of the respondents using the R186 as their benchmark rate. However, while the use of the R186 has increased relative to other government bonds, the 'other' category has also increased significantly. Most respondents in the 'other' category use 10-year bond yields derived from the yield curve, indicating a move away from a specific government bond to the use of a yield curve.



While the R186 is the preferred government bond, our findings show an increased preference for a 10-year bond yield derived from a yield curve.

Beta

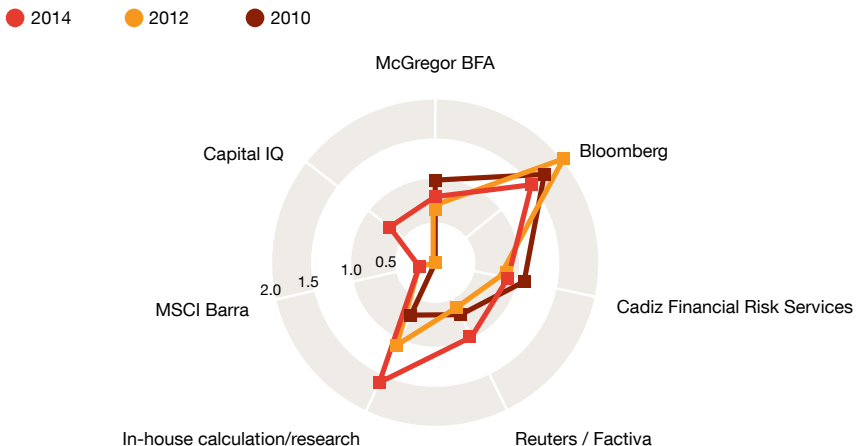
Beta typically measures the sensitivity of a share price to fluctuations in the market as a whole. It is calculated by regressing individual share returns against the returns of the market index.

Analysts often do not use raw data (e.g. share prices and share returns) to estimate beta based on their programmed regression algorithms, but rather subscribe to information systems and databases as sources for betas. We asked respondents to indicate which service providers they use most often.

Q: When performing valuations in Africa, how often do you make use of the following service providers as a source of information for beta calculations?

- *Bloomberg*
- *Cadiz Financial Risk Services*
- *In-house calculation/research*
- *McGregor BFA*
- *MSCI Barra*
- *Reuters*
- *Capital IQ*

Figure 3.3 Service providers used to source betas



Bloomberg continues to be a popular source for beta estimates. Capital IQ was offered as an option in this year's survey, and came out as being another popular source for beta estimates, closely tracking McGregor and Cadiz. The move towards in-house beta calculations observed in the last survey was also confirmed.

Another key issue relating to the beta calculation is the choice of market index. In practice, there is no index that accurately measures the total return of the market portfolio. We asked respondents which index they use as a market proxy.

Q: When performing valuations in the South African market, how often would you consider each of the following to be an appropriate market index to use as a market proxy for a beta calculation?

- *ALSI*
- *FINDI*
- *MSCI World*

Figure 3.4 Market proxies used for beta calculations in the South African market



The most popular index remains the ALSI, with most respondents using the ALSI either frequently or always.

Equity market risk premium

The market risk premium is the single most debated input in a cost of capital calculation. The three broad approaches to estimating a market risk premium include the historic equity bond spread, the survey approach and an implied forward approach.

Historical

The historical approach is the most widely used approach to estimating equity risk premiums. It is based on the assumption that in a well-functioning market, arbitrage will ensure that required and achieved returns should be equivalent.

The actual returns earned on stocks over a long time are estimated and compared to the actual returns earned on a default-free (usually government) security. The difference, on an annual basis, between the two returns is calculated and represents the historical risk premium.

There are several issues related to the use of this approach in estimating risk premiums. The suitability of the approach depends on whether investor expectations are influenced by the historical performance of the market and whether market conditions and expectations change over time. In some markets the availability of data may be limited or unreliable. This is an issue particularly for emerging markets.

Survey approach

The survey methodology is based on the opinions of market participants. There are several issues with this approach. As with most forecasts, survey risk premiums are responsive to recent stock price movements. It is therefore possible that survey premiums will be a reflection of the recent past rather than a good forecast of the future. Survey results may also be influenced by the subjective manner in which questions regarding market risk premiums are posed to respondents.

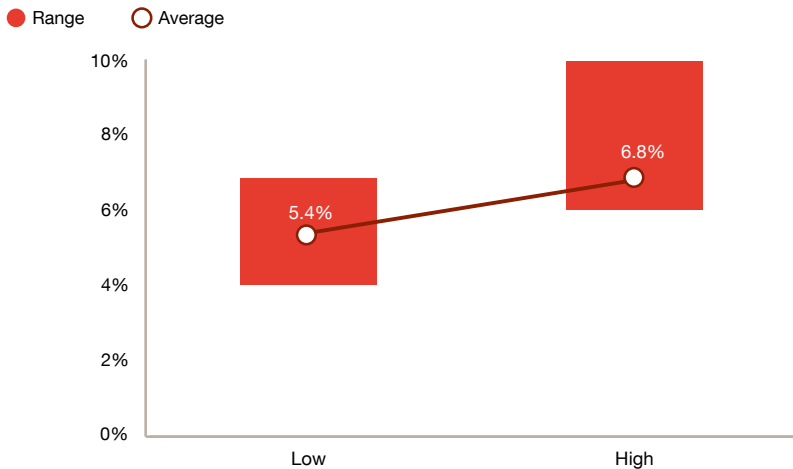
Forward-looking estimate

A forward-looking estimate of the premium is estimated using either current equity prices or risk premiums in non-equity markets. The discounted cash flow approach uses pricing of assets to infer required return or uses actual or potential dividends on an index to calculate required return. This approach will not generate a correct estimate if companies do not pay out what they can afford to in dividends or if earnings are expected to grow at extraordinary rates in the short term.

We asked respondents what range of market risk premiums they typically apply.

Q: Please specify the range of equity market risk premiums applied when you use the CAPM? Please ignore discounts (e.g. marketability discounts), premiums (e.g. control premiums) and the size premiums for small companies, which will be addressed later in the survey.

Figure 3.5 Range of equity market risk premiums used in the CAPM



Southern Africa

Average market risk premium

	Low	High
2014	5.4%	6.8%
2012	4.7%	6.6%

Second and third quartiles

	Low	High
2014 2nd quartile	5.5%	6.5%
2014 3rd quartile	5.5%	7.0%

The market risk premium ranges from 4% to 10% with the average used in South Africa ranging between 5.4% and 6.8%. Interestingly, the range of market risk premiums has narrowed in our latest survey.

Small stock premiums

In computing an equity risk premium to apply to all investments in the capital asset pricing model (CAPM), we are assuming that betas carry the weight of measuring the risk in individual firms or assets, with riskier investments having higher betas than safer investments. A number of studies, such as the data contained in the annual *Duff & Phelps Valuation Handbook*, have shown that investments in small companies may experience higher returns than those predicted by the standard CAPM approach.

In theory, the CAPM would suggest a higher required return for small companies through a higher beta for such companies. The higher betas for small companies can be caused by higher operational and financial leverage, limited access to funding and other factors making them more vulnerable to general market fluctuations.

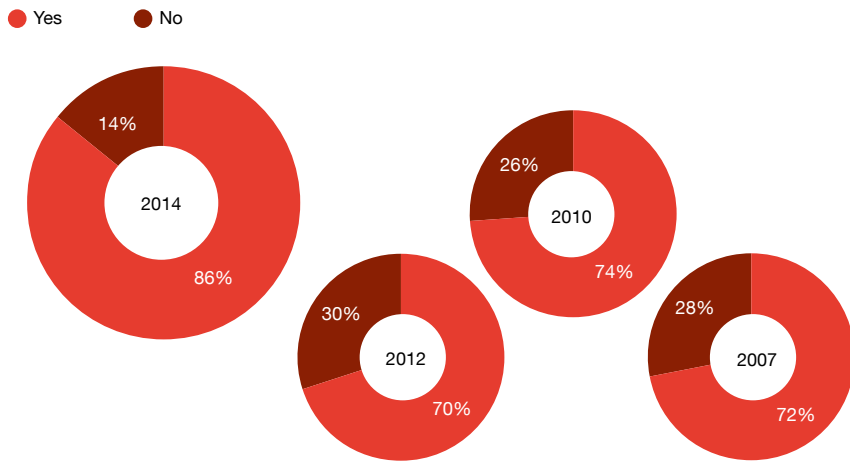
However, the higher betas do not seem to fully explain the higher returns historically achieved by smaller companies. Some have interpreted this as an indication that there are other risks associated with small companies that the CAPM does not address. To adjust for this finding, many practitioners add an additional premium to the cost of equity of companies with smaller market capitalisation.

With various studies both supporting and refuting the notion of the small capitalisation premium, we asked respondents whether they apply a small stock premium (SSP) in the course of their valuation analysis.

Q: Do you adjust the CAPM rate of return by a premium that reflects the extra risk of an investment in a small company?

- Yes
- No

Figure 3.6 Use of small stock premiums



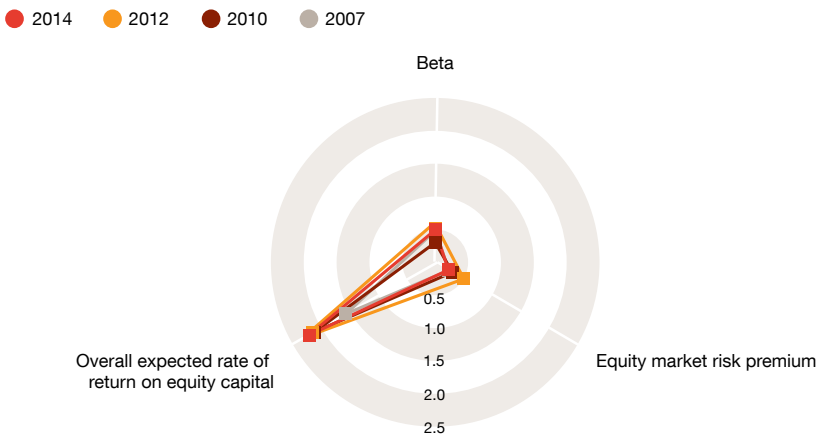
The number of respondents considering a small stock premium has remained relatively stable over the years, with the majority favouring the application of a small stock premium.

Small stock premiums

Q: When adjusting for small stock premiums, how often do you adjust each of the following factors?

- Beta
- Equity market risk premium
- Overall expected rate of return on equity capital

Figure 3.7 Adjustments made for company size



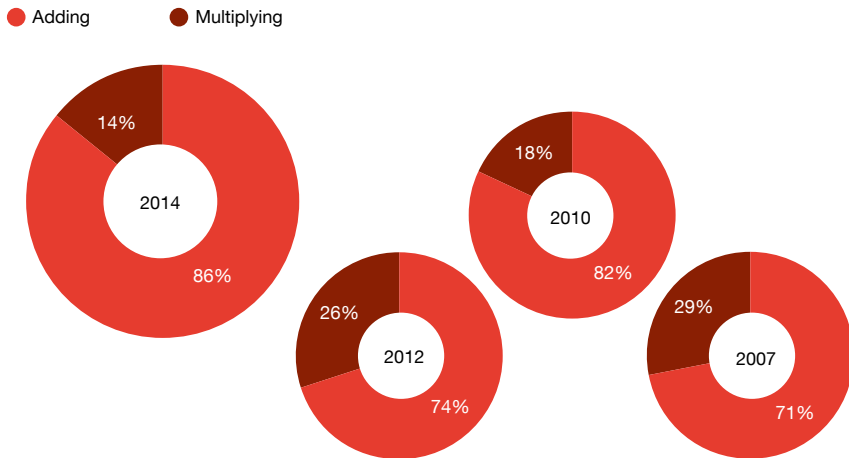
When applying an adjustment for company size, most respondents make an adjustment to the overall cost of equity.

As the next step in the survey, we wanted to determine the methodology used to effect the adjustment for company size.

Q: Do you adjust by multiplying a factor (i.e. $CAPM\ ke \times \{1 + SSP\}$) or adding a factor (i.e. $CAPM\ ke + SSP$)?

- *Multiplying*
- *Adding*

Figure 3.8 Small stock premium inclusion methods

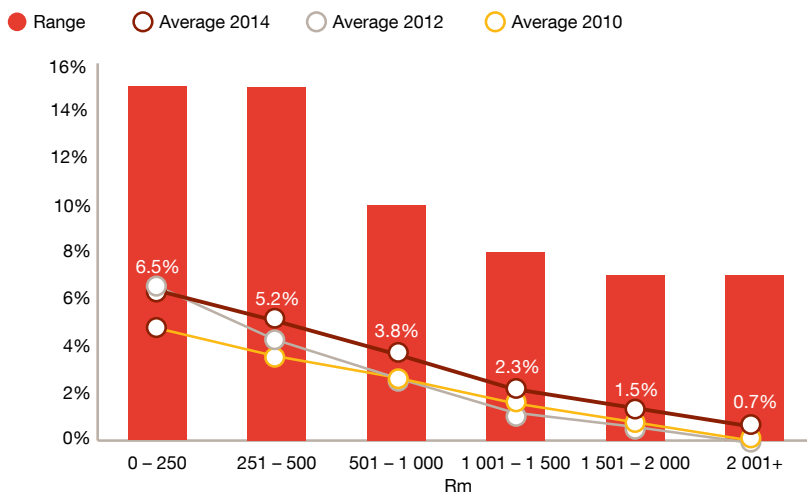


Of the respondents that make size adjustments, most respondents add a small stock premium to the cost of equity.

Small stock premiums

Q: What is the benchmark small stock premium applied, given the expected size of the company or entity?

Figure 3.9 Small stock premiums applied additively



Average stock premium: Adding²

Rm	0 – 250	251 – 500	501 – 1 000	1 001 – 1 500	1 501 – 2 000	2 001+
2014	6.5%	5.2%	3.8%	2.3%	1.5%	0.7%
2012	6.7%	4.4%	2.8%	1.7%	0.9%	0.1%
2010	4.9%	3.7%	2.8%	1.3%	0.7%	0.1%
2007	5.2%	4.0%	2.7%	1.7%	1.3%	0.4%

² In this year's survey, the clear majority of respondents indicated they apply an additive premium, with very few applying a multiplication approach. Given the small sample size, data relating to the multiplication approach has therefore not been included.



Specific risk premiums

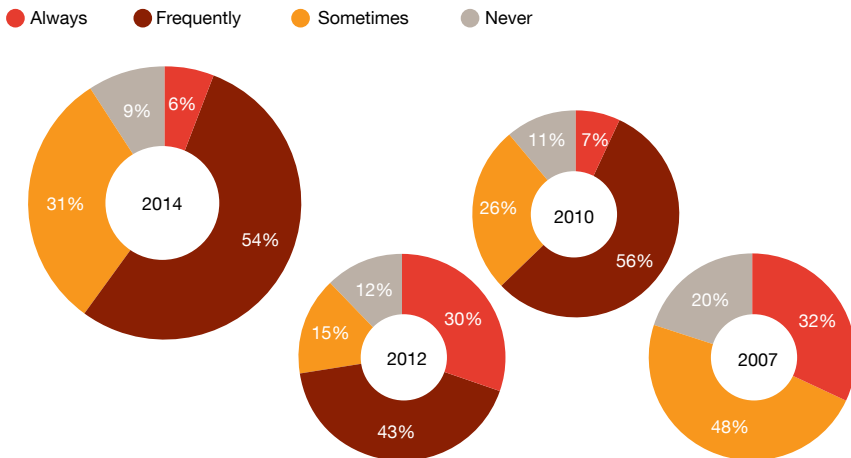
A key attribute of the CAPM is that investors are rewarded only for systematic risk. Specific risks that are theoretically diversifiable are not included in the CAPM. Standard finance theory states that investors should be compensated only for non-diversifiable risks.

Given that the application of a specific risk premium (SRP) is not consistent with the CAPM, we surveyed market practitioners about whether they apply specific risk premiums, and if so, in what instances. We also asked respondents what premiums are considered for projects at various stages of development.

Q: How often do you adjust the CAPM rate of return by a premium that reflects unique risks to the extent that such risks could not be modelled in the forecast cash flows?

- Always
- Frequently
- Sometimes
- Never

Figure 3.10 Use of a specific risk premium



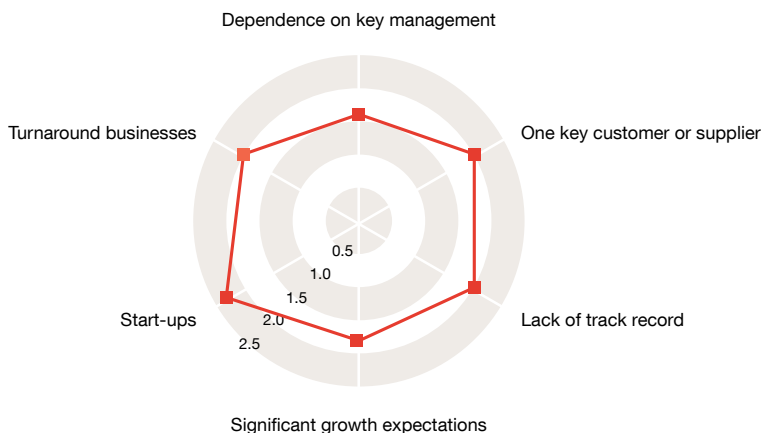
A marked difference since the last survey is the decrease in the percentage of respondents who always adjust the CAPM by applying a specific risk premium, which has declined from 30% to only 6%. However, the majority of respondents frequently apply specific risk premiums.

No less than 85% of respondents regularly or occasionally consider an adjustment to the CAPM, which demonstrates that although the use of a specific risk premium is not supported by the CAPM and financial theory, specific risk premiums are widely used in practice.

Q: How often would each of the following conditions require you to apply a specific risk premium, also referred to as alpha?

- Dependence on key management
- One key customer or supplier
- Lack of track record
- Significant growth expectations
- Start-ups
- Turnaround businesses

Figure 3.11 Specific risk factors



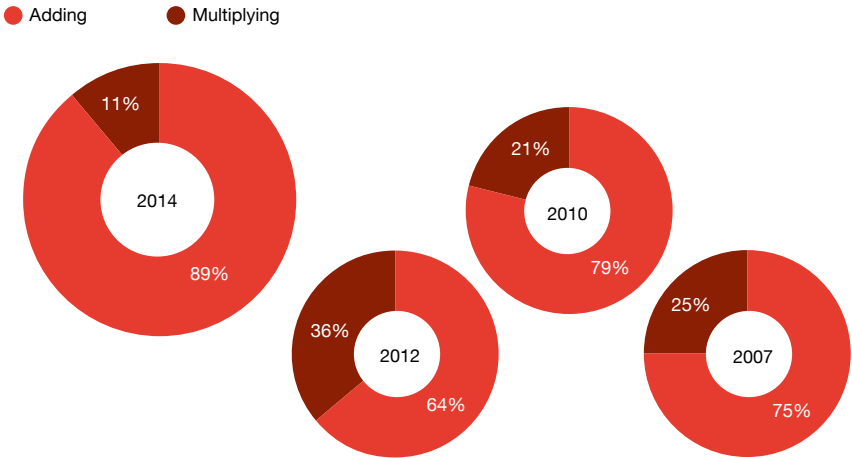
Specific risk premiums

Respondents indicated that most of the factors listed would at some time be considered as motivation for the inclusion of a specific risk premium.

Q: Do you adjust by multiplying a factor (i.e. $CAPM\ ke \times \{1 + SRP\}$) or adding a factor (i.e. $CAPM\ ke + SRP$)?

- Multiplying
- Adding

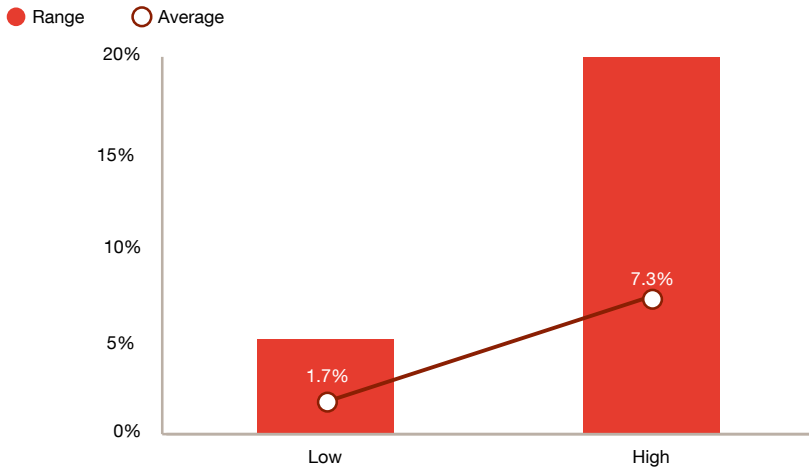
Figure 3.12 Specific risk premium inclusion methods



Most respondents adjust the overall expected return on equity capital by adding a premium. This is consistent with the results of previous surveys.

Q: What is the benchmark small stock premium applied, given the expected size of the company or entity?

Figure 3.13 Specific risk premiums applied additively



Southern Africa

Average specific risk premium: Adding³

	Low	High
2014	1.7%	7.3%
2012	2.7%	7.7%
2010	2.0%	7.0%
2007	2.0%	6.0%

The results indicate that valuation practitioners consider a very wide range of specific risk premiums, which range on average between 2% and 7% when applied additively.

³ In this year's survey, the clear majority of respondents indicated they apply an additive premium, with very few applying a multiplication approach. Given the small sample size, data relating to the multiplication approach has therefore not been included.

Specific risk premiums

In order to eliminate any outliers in the first and fourth quartiles, the second and third quartiles have been calculated and are shown below. As can be seen, we considered the average range falling between the second and third quartiles. The lower end of the specific risk premium falls between 1% and 3%, and the upper end between 7% and 10%.

Second and third quartiles: Adding

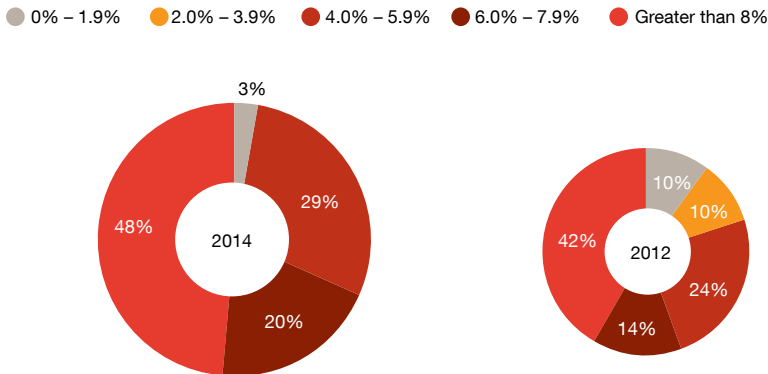
	Low	High
2014 2nd quartile	1.0%	7.0%
2014 3rd quartile	3.0%	10.0%

Specific risk premiums are used for a wide variety of reasons, with the upper end of the range likely to be dominated by hurdle rates used to appraise very high-risk projects. The wide range of specific risk premiums added to the CAPM is therefore likely to be a result of the variety of risks that specific risk premiums aim to address.

Q: One instance where specific risk premiums are sometimes applied is where the company is considered to be a start-up. If you apply a specific risk premium for start-up companies, what percentage would you normally apply, assuming you are adding the premium to the cost of equity?

- 0 – 1.9%
- 2.0 – 3.9%
- 4.0 – 5.9%
- 6.0 – 7.9%
- 8.0 – 10.0%

Figure 3.14 Specific risk premiums for start-up companies



More than half of respondents apply a premium of greater than 6%. However, there is still a wide range of premiums applied, suggesting that specific risk premiums are highly asset specific.

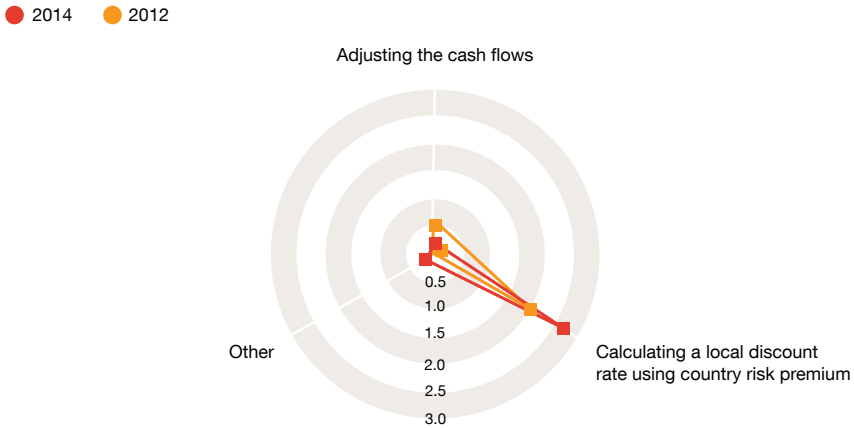
Country risk premiums

When valuing businesses in emerging markets, it is critical that a prospective investor assesses and quantifies the risks inherent in investing in different sovereign territories. We asked respondents how they account for country risk in their valuations.

Q: How do you generally adjust for country risk when valuing an asset in a country where no reliable long-bond yield (i.e. risk-free rate) can be observed?

- *Adjusting the cash flows*
- *Calculating a local discount rate using a US-dollar or euro-based risk-free rate and adding a premium for local country risk and inflation*
- *Other*

Figure 3.15 Country risk premium inclusion method



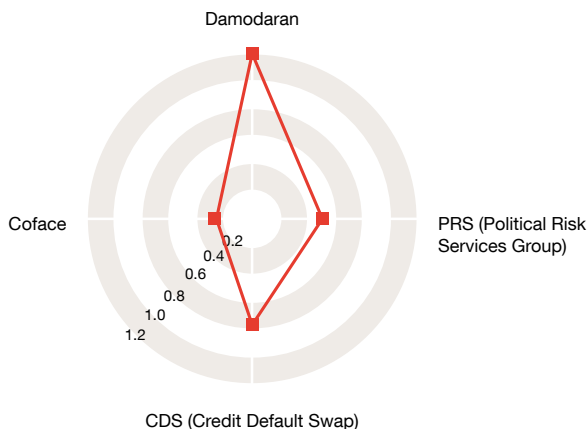
The survey results indicate that country risk differentials are recognised mainly through adjusting local discount rates with a country risk premium. This is consistent with the results in previous surveys.

Given the level of activity in countries with limited capital market data, we asked our respondents some additional questions regarding how they determine their country risk adjustments.

Q: How often are each of the following service providers used as a source of information for country risk premium?

- *Damodaran*
- *PRS (Political Risk Services Group)*
- *CDS (Credit Default Swap)*
- *Coface*

Figure 3.16 Country risk premium data sources



Damodaran is a popular source of country risk premium for respondents. In-house proprietary models and calculations were also highlighted as a source for country risk premiums.

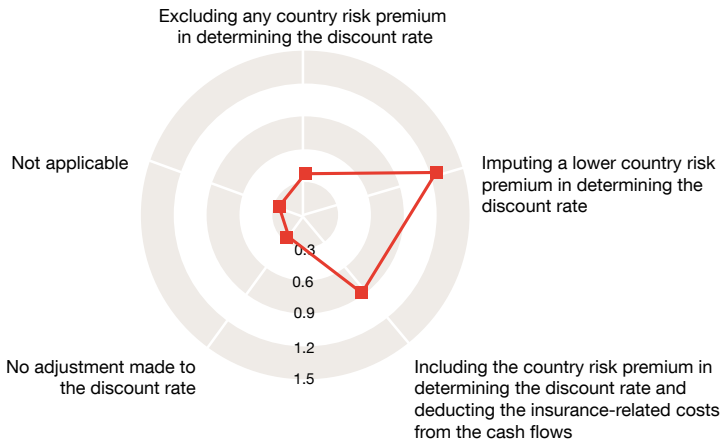
Country risk premiums

The majority of respondents are familiar with the concept of international insurance against country risk. We asked respondents how they factor in international insurance against country risk when calculating the discount rate.

Q *If international insurance is factored in, how do you adjust the discount rate?*

- *Excluding any country risk premium in determining the discount rate*
- *Imputing a lower country risk premium in determining the discount rate*
- *Including the country risk premium in determining the discount rate and deducting the insurance-related costs from the cash flows*
- *No adjustment made to the discount rate*
- *Not applicable*

Figure 3.17 Discount rate adjustment method when factoring in international insurance



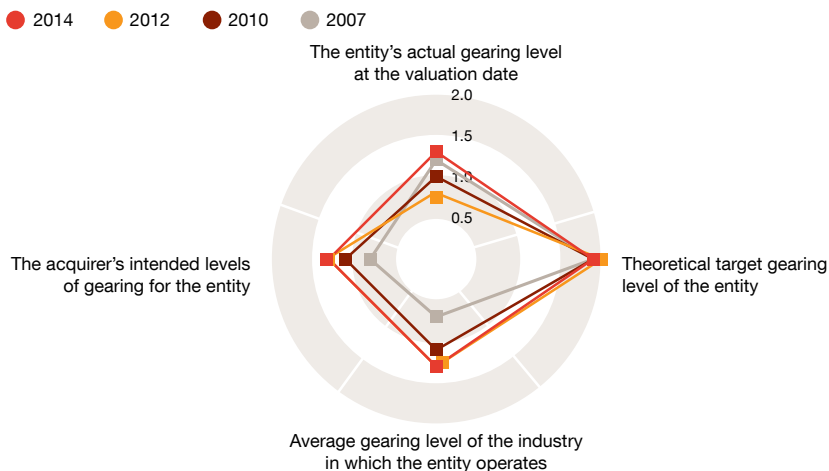
Most respondents impute a lower country risk premium where international insurance is used to mitigate country risk.

Gearing

Q: Which of the following approaches are used in determining an appropriate level of debt and equity in the cost of capital calculation?

- Average gearing level of the industry in which the entity operates
- Theoretical target gearing level of the entity
- The acquirer's intended levels of gearing for the entity
- The entity's actual gearing level at the valuation date

Figure 3.18 Approaches used in determining the appropriate level of debt and equity



As was the case in previous surveys, the theoretical target gearing of the entity being valued was the approach adopted most frequently.

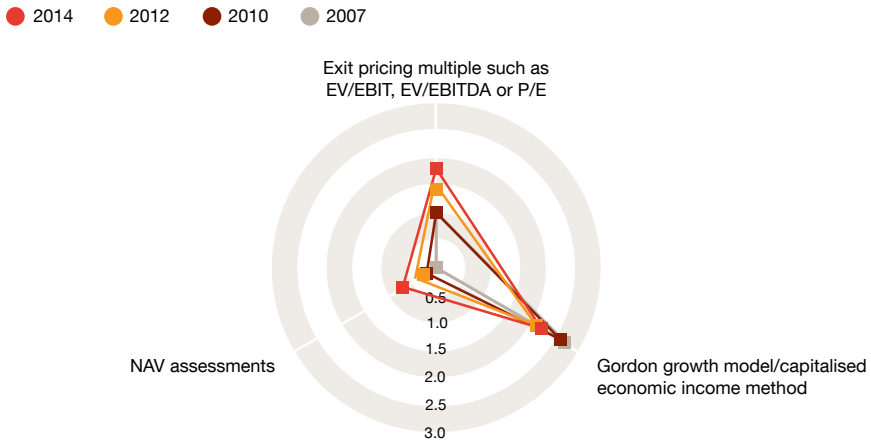
Terminal value

Another technical issue that frequently arises in the income approach is the question of terminal values. Terminal values often contribute more than 50% of the discounted cash flow value. As a result, the terminal value calculation is an area that needs to be considered in detail.

Q: How often are each of the following approaches used in calculating the terminal value in a business valuation?

- Exit pricing multiple such as EV/EBIT, EV/EBITDA or P/E
- Gordon growth model/capitalised economic income method
- Net asset value (NAV) assessments

Figure 3.19 Approaches used in calculating terminal values

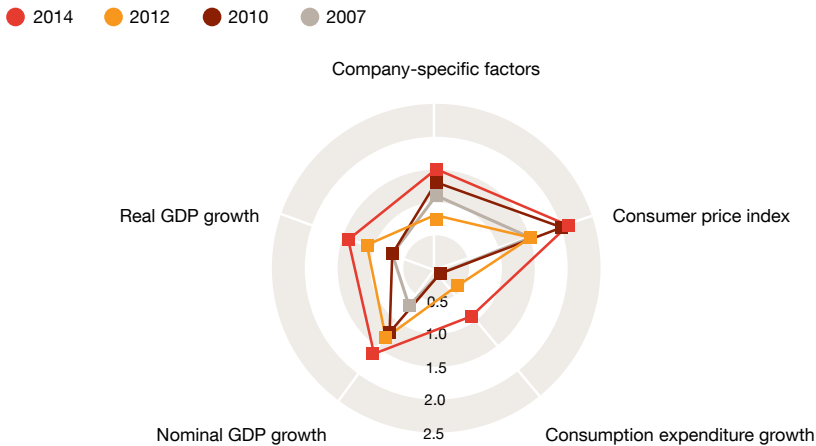


The Gordon growth model remains the most popular methodology, with most respondents using this approach either always or frequently. It is notable that exit multiples have continued to gain in popularity.

Q: In applying the Gordon growth model/capitalised economic income method, how often do you base your long-term growth assumption on each of the following?

- *Company-specific factors*
- *Consumer price index (CPI)*
- *Consumption expenditure growth*
- *Nominal gross domestic product (GDP) growth*
- *Real GDP growth*

Figure 3.20 Basis used for estimating long-term growth rates



The latest survey results indicate a strong preference for macroeconomic factors including CPI and GDP growth, but company-specific factors are also considered by the majority of valuation practitioners, and have continued to gain in popularity.

Market approach

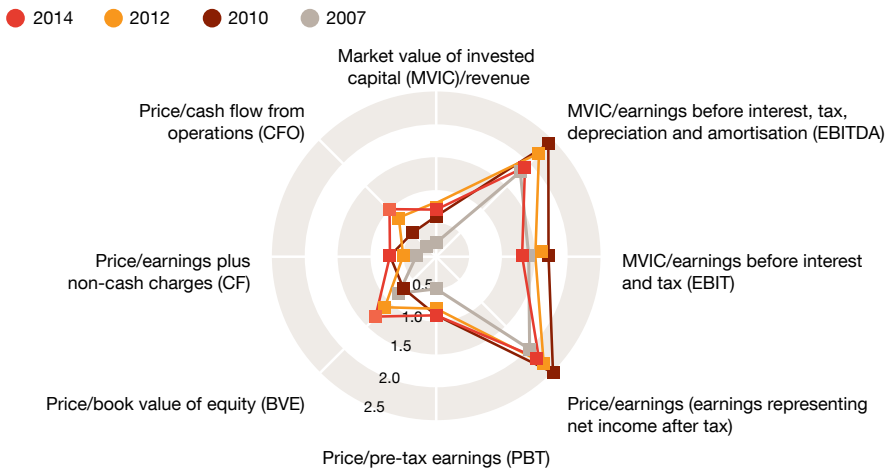
Choice of multiples

A number of valuation multiples or valuation benchmarks can be used in the application of the market approach. This section of the survey tested the frequency of use of a range of common market multiples.

Q: When using the market approach, how often do you use each of the following valuation multiples?

- Market value of invested capital (MVIC)/revenue
- MVIC/earnings before interest, tax, depreciation and amortisation (EBITDA)
- MVIC/earnings before interest and tax (EBIT)
- Price/earnings (earnings representing net income after tax)
- Price/pre-tax earnings (PBT)
- Price/book value of equity (BVE)
- Price/earnings plus non-cash charges (CF)
- Price/cash flow from operations (CFO)

Figure 3.21 Valuation multiples used



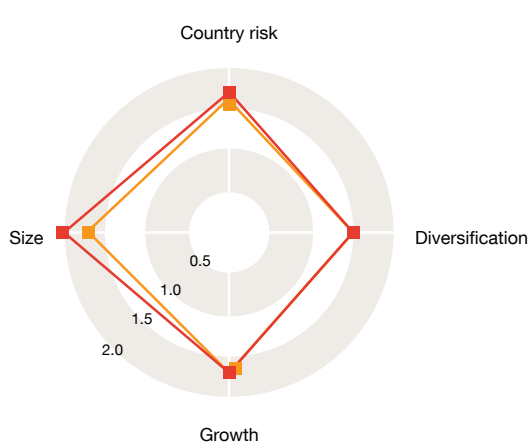
The price/earnings and EV (enterprise value)/EBITDA multiples are the most used valuation multiples, according to the respondents.

Adjustments to multiples

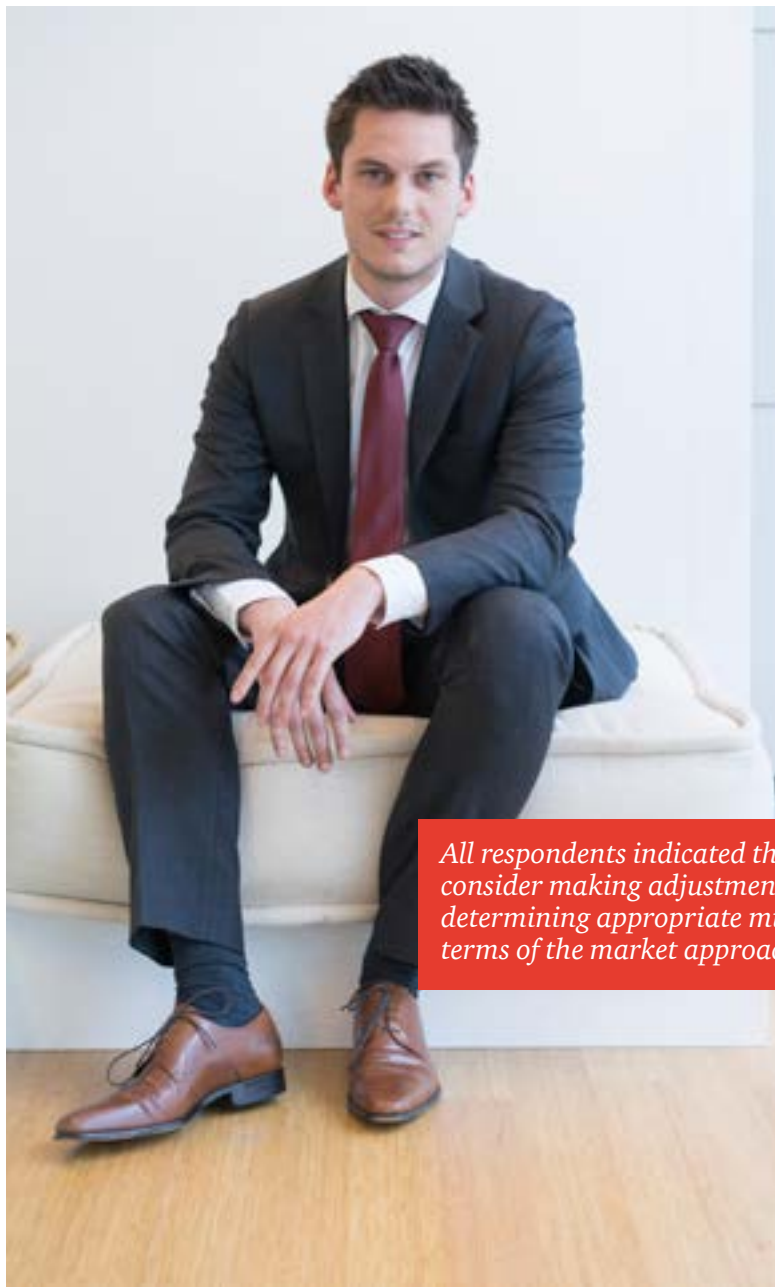
Q: If applicable, which of the following adjustments to observed comparable company multiples would you consider in applying the market multiple approach?

- *Country risk*
- *Diversification*
- *Growth*
- *Size*

Figure 3.22 Adjustments to valuation multiples



In this year's survey, we asked some additional questions to gauge the quantum of the discounts being applied.

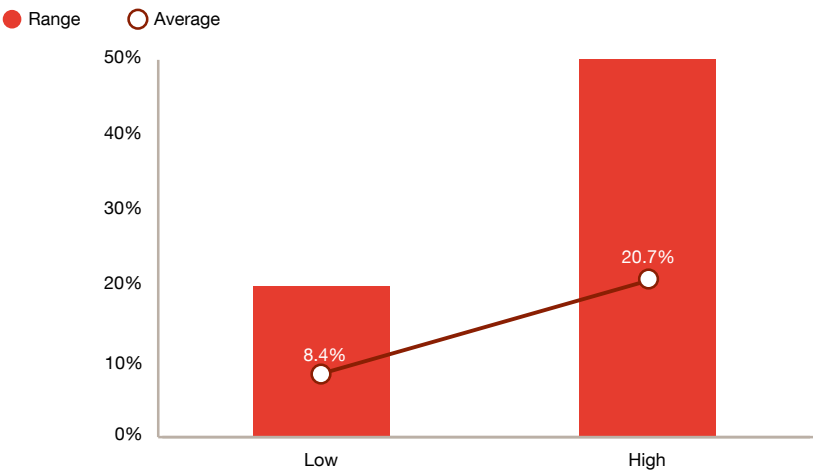


All respondents indicated that they consider making adjustments in determining appropriate multiples in terms of the market approach.

Country risk adjustments

Q. Assuming you are valuing a business that operates in an emerging market, but you are using developed market comparable companies to derive an earnings multiple, what is the range of discounts you would apply to developed market comparable company multiples to reflect differences in country risk?

Figure 3.23 Range of discounts applied to developed market comparable multiples to reflect differences in country risk

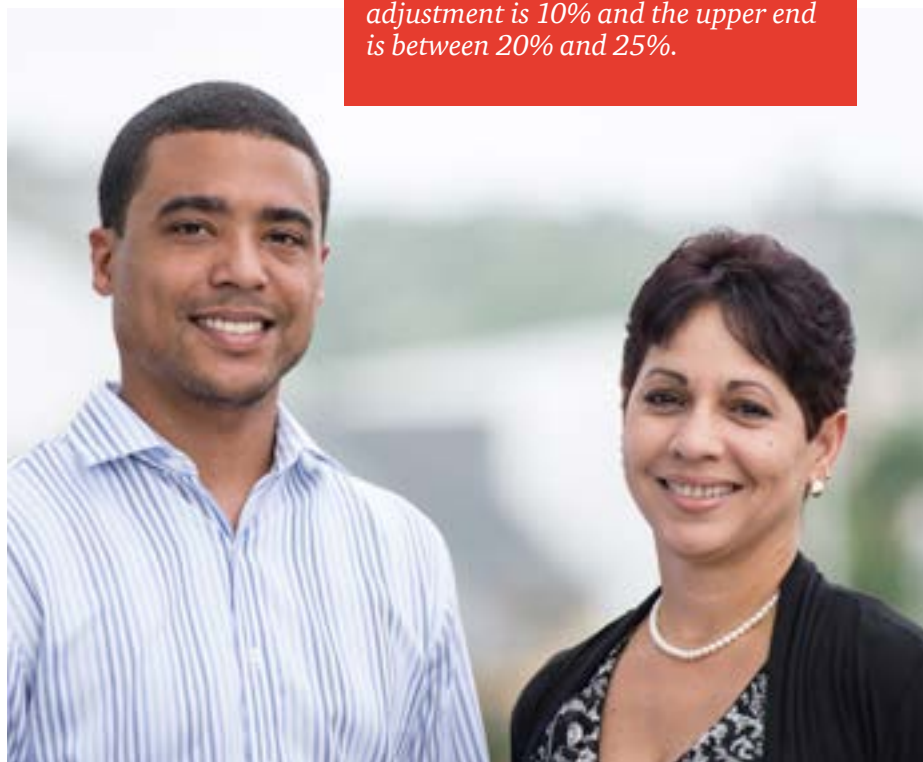


In order to eliminate any outliers in the first and fourth quartiles, the second and third quartiles have been calculated on the next page. As can be seen, we considered the average range falling between the second and third quartiles. The lower end of the country risk adjustment is 10%, and the upper end falls between 20% and 25%. The relatively low average results from a large number of respondents not applying country risk premiums in certain instances.

Country risk adjustments – discounts applied

	Low	High
2014 average	8.4%	20.7%
2014 2nd quartile	10.0%	20.0%
2014 3rd quartile	10.0%	25.0%

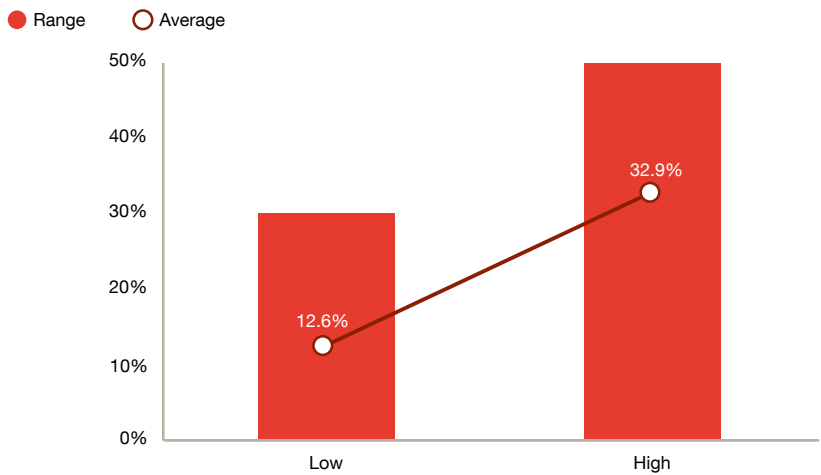
The lower end of the country risk adjustment is 10% and the upper end is between 20% and 25%.



Size adjustments

Q. Assuming you are valuing a business that is significantly smaller than the listed comparable companies you used to derive an earnings multiple, what is the range of discounts you would apply to comparable company multiples to reflect differences in size?

Figure 3.24 Range of discounts applied to developed market comparable multiples to reflect differences in size



In order to eliminate any outliers in the first and fourth quartiles, the second and third quartiles have been calculated below. As can be seen, we considered the average range falling between the second and third quartiles. The lower end of the country risk adjustment falls between 10% and 20%, and the upper end between 30% and 40%.

Size adjustments – discounts applied

	Low	High
2014 average	12.6%	32.9%
2014 2nd quartile	10.0%	30.0%
2014 3rd quartile	20.0%	40.0%

The lower end of the size adjustment falls between 10% and 20%, and the upper end between 30% and 40%.

Discounts and premiums

Minority discounts

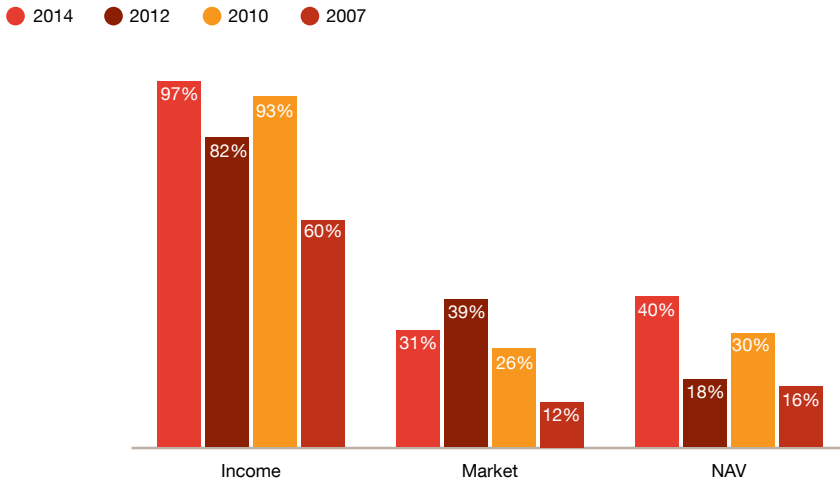
The minority discount relates to the lack of control over the operation and corporate policy for a given investment by its minority shareholders. The minority shareholders can generally not direct the size or timing of dividends or control the selection of management.

A minority shareholder can also not veto the acquisition, sale or liquidation of assets. Minority discounts are therefore usually applied when valuing a non-controlling stake to discount the value for lack of control.

Q: Do you generally apply a minority discount when using any of the following approaches?

- *Income approach*
- *Market multiple approach*
- *Net asset value*

Figure 3.25 Approaches in which minority discounts are applied



The majority of respondents will consider a minority discount in the income approach.

Q: Where do you apply the minority discounts?

- Market value of equity
- Enterprise value
- Discount rate

Figure 3.26 Application of minority discounts



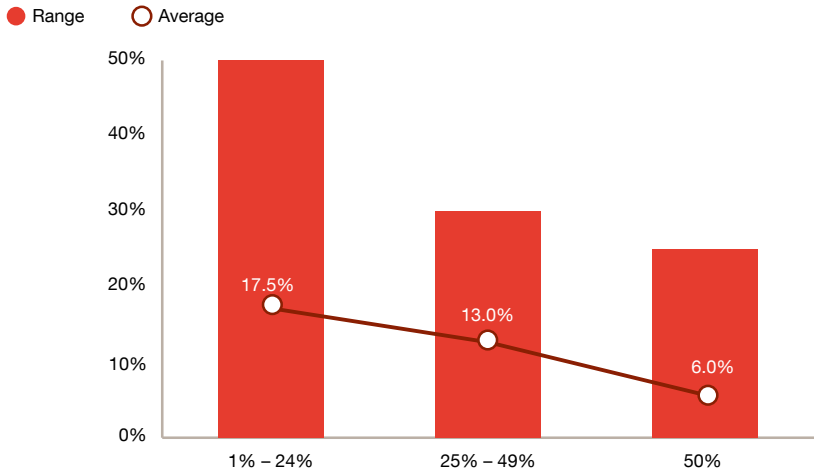
When asked where the minority discounts are applied, the majority of respondents indicated that they prefer to apply the minority discount to the market value of equity.

Given that most respondents acknowledge the appropriateness of the minority discount, we asked them for an indication of the range of minority discounts normally applied in their valuation analysis.

Minority discounts

Q: Please indicate the benchmark minority discount normally applied given the size of the interest being valued.

Figure 3.27 Average minority discount: Equity value



Average size of discount applied⁴

Size of interest	1 – 24%	25 – 49%
2014	17.5%	13.0%
2012	17.8%	14.4%
2010	22.0%	15.0%
2007	20.0%	16.0%

Second and third quartiles

Size of interest	1 – 24%	25 – 49%	50%
2014 2nd quartile	18.0%	14.5%	5.0%
2014 3rd quartile	20.0%	15.3%	10.0%

⁴ In this year’s survey, the clear majority of respondents indicated they apply an adjustment to equity, with very few applying an enterprise value adjustment. Given the small sample size, data relating to adjustments to enterprise value has therefore not been included.

The average minority discount applied to the market value of equity for a interest in the range 1% – 24% is 18% and 13% in the range 25% – 49%. This year we also asked respondents for their view on what minority discount is appropriate where joint control exists. On average, the respondents indicated a minority discount of 6%.



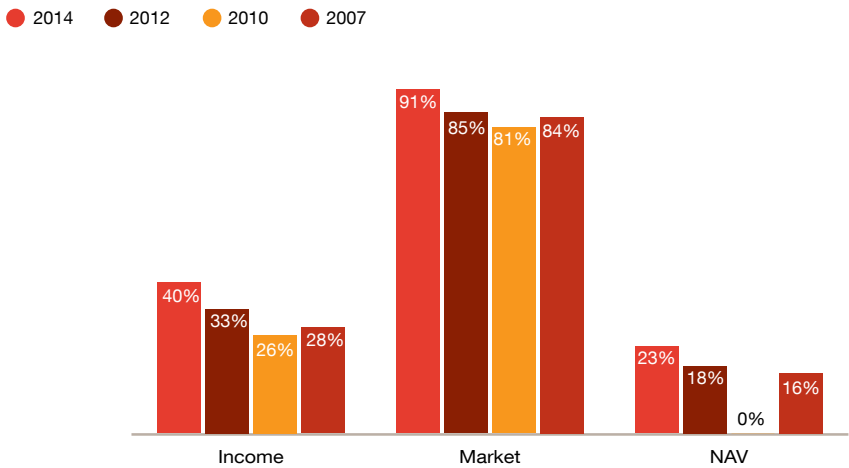
Control premiums

The control premium is the inverse of the minority discount and similar issues have to be considered in calculating a control premium. To summarise, a control premium relates to the additional value associated with the ability to control the distribution of cash generated by the company, which includes the ability to influence the timing and size of the dividend distribution.

Q: Where do you apply the control premiums?

- Income approach
- Market multiple approach
- Net asset value

Figure 3.28 Approaches in which control premiums are applied



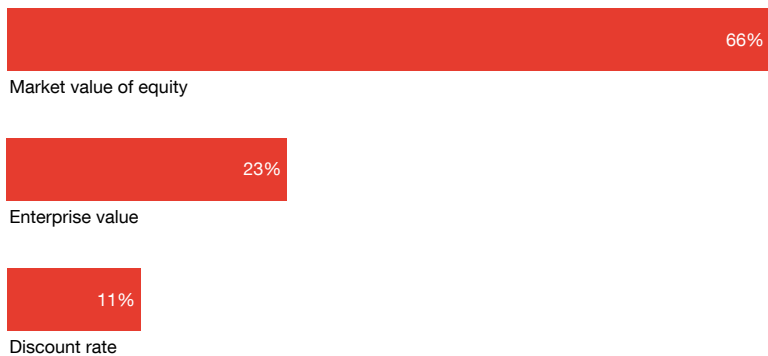
Most respondents consider the control premium to be already implicitly included in the income approach and will only apply the control premium in a market approach. However, if the control premium relates to synergies not built into the cash flows, a control premium may in some cases be applied to the income approach.

Given that most respondents acknowledge the appropriateness of the control premium, we asked them to indicate how they go about applying control premiums in their valuation analysis.

Q: Where do you apply the control premiums?

- Market value of equity
- Enterprise value
- Discount rate

Figure 3.29 Application of control premiums



Southern Africa

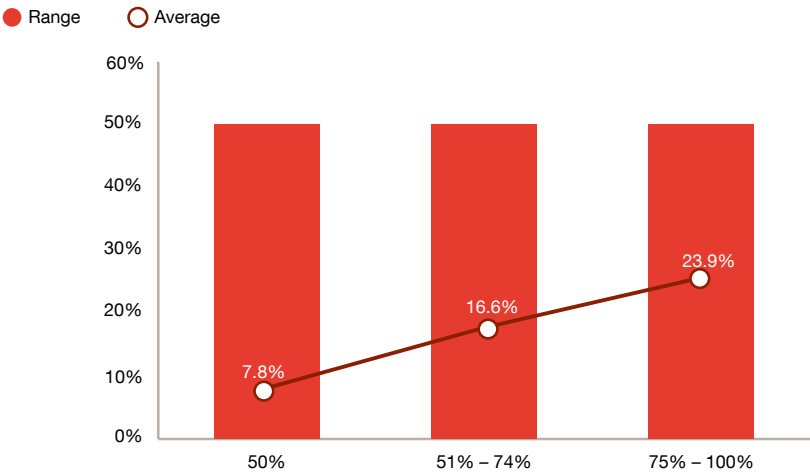
While some respondents apply adjustments to the discount rate or enterprise value, the majority of respondents apply control premiums to the market value of equity.

We then sought to quantify the benchmark control premiums that are typically applied.

Control premiums

Q: Please indicate the benchmark control premium normally applied given the size of the interest being valued.

Figure 3.30 Average control premium: Equity value



Average size of premium applied⁵

Size of interest	50%	51 – 74%	75 – 100%
2014	7.8%	16.6%	23.9%
2012		18.8%	22.4%
2010		18.0%	22.0%
2007		18.0%	23.0%

Second and third quartiles

Size of interest	50%	51 – 74%	75 – 100%
2014 2nd quartile	5.0%	15.0%	23.0%
2014 3rd quartile	10.0%	20.0%	28.8%

⁵ In this year’s survey, the clear majority of respondents indicated they apply an adjustment to equity, with very few applying an enterprise value adjustment. Given the small sample size, data relating to the adjustments to enterprise value has therefore not been included.

The average control premium applied to the market value of equity for a stake in the range of 51% - 74% is 17% and 24% in the range 75% – 100%. This year we also asked our respondents for their view on what control premium is appropriate where joint control exists. On average, the respondents indicated a control premium of 8%.



Marketability discounts

Marketability can be defined as “the ability to convert the business ownership interest (at whatever ownership level) to cash quickly, with minimum transaction and administrative costs in so doing and with a high degree of certainty of realising the expected amount of net proceeds”.⁶

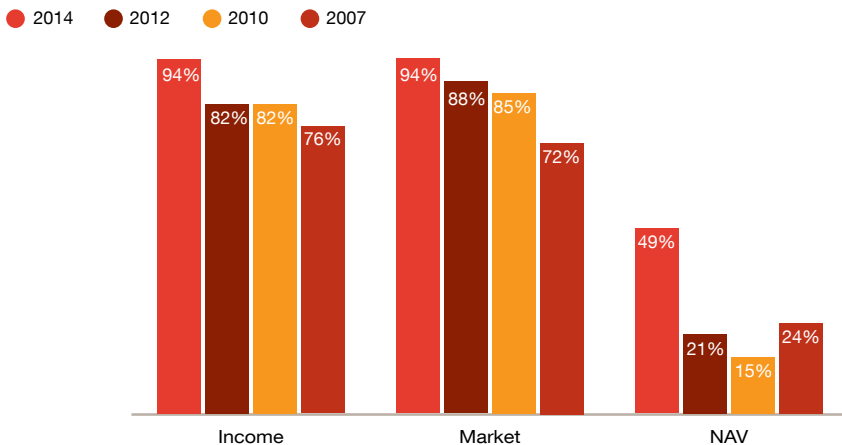
It is important to distinguish the marketability discount from the minority discount. The lack of ownership control captured by the minority discount addresses the limited ownership and lack of operational control, whereas the marketability discount deals with how quickly and certainly the ownership share can be converted to cash.

There is, however, an expected relationship between the marketability and the ownership share. Even after we discount a minority interest for a lack of control, it is usually harder to sell a non-controlling interest than a controlling ownership interest. The marketability discount is therefore expected to decrease with the size of the ownership share.

Q: If the entity is not listed, do you apply a marketability discount to any of the following approaches?

- *Income approach*
- *Market multiple approach*
- *Net asset value*

Figure 3.31 Approaches in which marketability discounts are applied



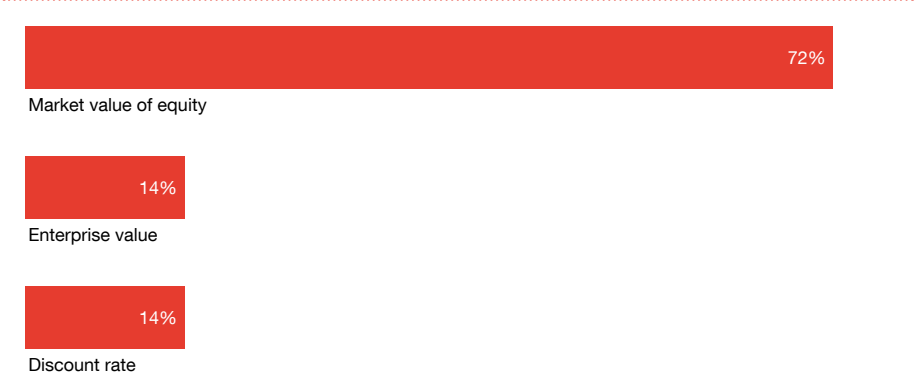
6 Pratt, S, Reilly, R and Schweighs, R. *Valuing a Business*. McGraw-Hill, 2000.

Respondents recognise the need to adjust for marketability in all valuation approaches. The remainder of this section therefore deals with how respondents apply marketability discounts in their valuation analysis.

Q: *Where do you apply the marketability discounts?*

- *Market value of equity*
- *Enterprise value*
- *Discount rate*

Figure 3.32 Application of marketability discounts

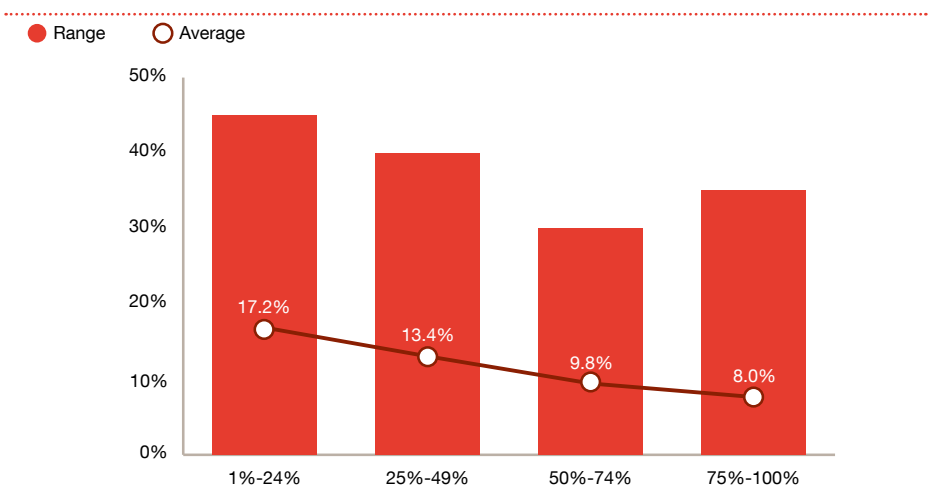


The majority of respondents apply marketability discounts to the market value of equity. We subsequently asked them to quantify the benchmark discounts that are typically applied.

Marketability discounts

Q: Please indicate the benchmark marketability discount normally applied given the size of the interest being valued.

Figure 3.33 Average marketability discount applied: Equity value



Average size of discount applied ⁷

Size of interest	1 – 24%	25 – 49%	50 – 74%	75 – 100%
2014	17.2%	13.4%	9.8%	8.0%
2012	15.3%	13.3%	10.1%	8.1%

Second and third quartiles

Size of interest	1 – 24%	25 – 49%	50 – 74%	75 – 100%
2014 2nd quartile	15.0%	13.5%	10.0%	5.0%
2014 3rd quartile	20.0%	15.0%	11.5%	10.0%

The ranges provide an indication of the size of the marketability discounts that are applied by respondents. As shown in the tables above, we considered the ranges falling between the second and third quartiles.

⁷ In this year’s survey, the clear majority of respondents indicated they apply an adjustment to equity, with very few applying an enterprise value adjustment. Given the small sample size, data relating to adjustments to enterprise value has therefore not been included.

Some respondents have pointed out that it is also important to consider the connection between minority and marketability discounts as well as any specific facts and circumstances relating to the individual company or industry, as described earlier in this section.



BEE considerations

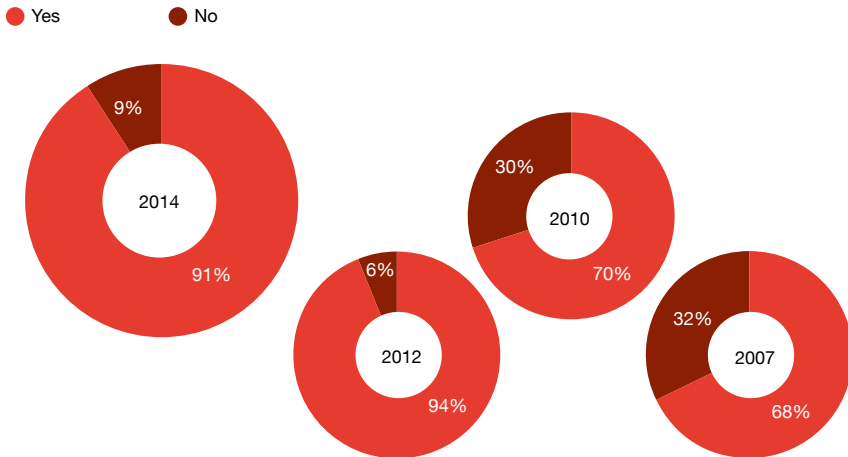
Black economic empowerment (BEE) remains an integral part of South Africa's transformation process. A particularly contentious issue in valuing BEE investments is the issue of lock-in discounts, so our questions were focused on obtaining the market's view on whether these discounts are appropriate, and if so, what the quantum of these lock-in discounts is that the market is applying.

Q: A hypothetical BEE transaction has been structured to include the following lock-in periods for the empowerment parties: three years, five years and ten years.

The BEE interest is held in a listed company. Would you apply a discount to the observed share price for the lock-in agreed between the parties?

- Yes
- No

Figure 3.34 Application of BEE discounts



Most respondents consider a discount to the observed market price to be necessary. These results are broadly consistent with the results of our previous surveys.

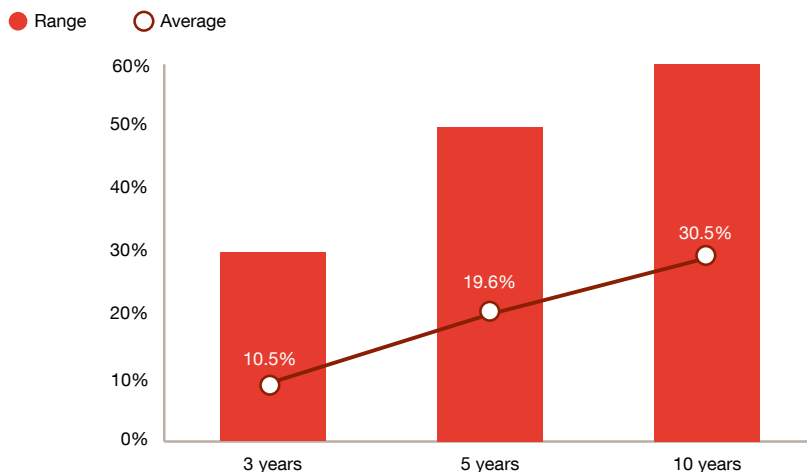
Typical BEE structures include lock-in periods whereby BEE entities are required to remain invested in the structure for a number of years, or where other restrictions are placed on the transferability of the shares held by the BEE entity. The discount applied in the market is likely to be correlated with the length of lock-in periods being considered by market practitioners.

Consequently, we attempted to gauge the impact of varying lock-in periods by asking respondents how they consider lock-ins of varying lengths from a valuation perspective.

Q: What is the average discount you would apply for the respective lock-in periods?

- Three years
- Five years
- Ten years

Figure 3.35 Average lock-in discount applied



BEE considerations

Average lock-in discount

	3 years	5 years	10 years
2014	10.5%	19.6%	30.5%
2012	13.4%	24.5%	35.8%
2010	9.3%	19.8%	32.8%
2007	8.0%	16.0%	29.0%

The discount level increases significantly as the lock-in period increases. The average discount relating to a 10-year lock-in was 30% in the latest survey. In comparison, discounts of 11% and 20% were applied for three- and five-year lock-ins, respectively.

Second and third quartiles

	3 years	5 years	10 years
2014 2nd quartile	10.5%	20.5%	31.0%
2014 3rd quartile	20.0%	30.0%	41.0%

The average range falls within the second and third quartiles as shown above, eliminating any statistical outliers within the first and fourth quartiles.



Section 4: West Africa

West Africa

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Valuation approaches

There are a number of methodologies used to value businesses. We have previously found that the approaches most commonly used in West Africa are:

- **The income approach (discounted cash flow approach)**
This approach determines the market value of the ordinary shares of a company based on the value of the cash flows that the company can be expected to generate in the future. This includes traditional discounted cash flow techniques and also real option valuations, which use option pricing models to measure the value of assets that share option characteristics.
- **The market approach (market multiple approach)**
This gauges the market value of the ordinary shares of a company based on a comparison of the company to comparable publicly traded companies and transactions in its industry, as well as to prior transactions in the ordinary shares of the company using an appropriate valuation multiple.
- **The net assets approach**
This evaluates the market value of the ordinary shares of a company by adjusting the asset and liability balances on the company's balance sheet to its market value equivalents. The approach is based on the summation of the individual piecemeal market values of the underlying assets less the market value of the liabilities.

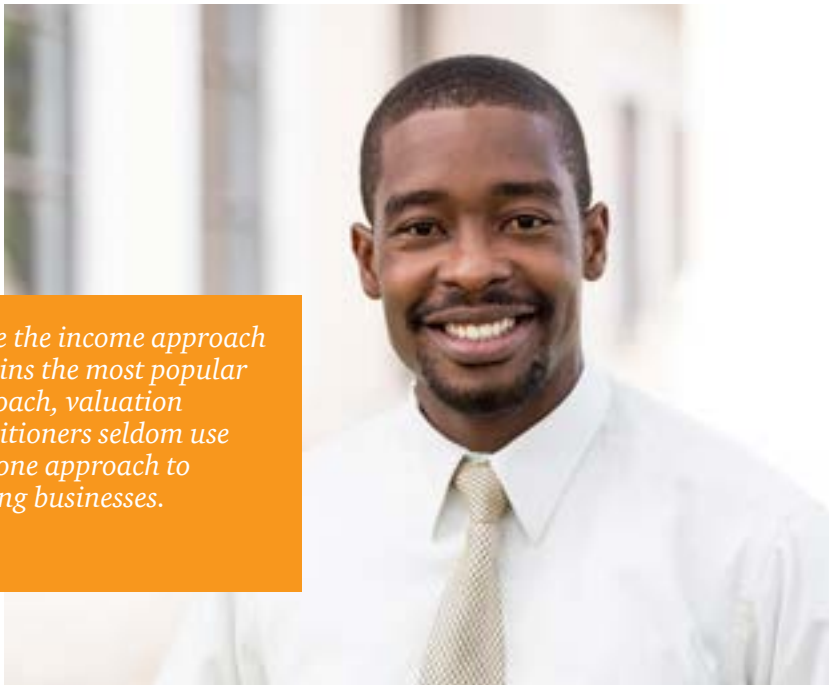
The aim of this section is to highlight the most popular valuation approaches being used in business enterprise valuations in West Africa. We were particularly interested in determining whether any changes have taken place in the choice of approaches followed by market participants since our previous survey in 2012.

Q: Which of the following valuation approach do you *prefer* to value a going concern?

- *Economic value added (EVA)*
- *Income approach (discounted cash flow)*
- *Market approach (e.g. price/earnings ratio)*
- *Net asset approach*

The primary valuation approaches remain the income approach (discounted cash flow) and market approach (based on market multiples). The general indication from respondents is that the income approach remains the primary valuation methodology, used by 61% of respondents, while the market approach also remains an important methodology, with 35% of the respondents using it as their preferred approach.

We also asked our respondents whether they apply a secondary methodology. Of those respondents who use the income approach as the primary methodology, 71% confirmed using the market approach as the secondary method of choice.



While the income approach remains the most popular approach, valuation practitioners seldom use only one approach to valuing businesses.

Income approach

Cost of capital

From a company's perspective, the weighted average cost of capital (WACC) represents the economic return (or yield) that an investor would have to give up by investing in the subject investment instead of all available alternative investments that are comparable in terms of risk and other investment characteristics.¹

WACC formula

The general formula for calculating the WACC (assuming only debt and equity capital) is:

$$\text{WACC} = k_d \times (d\%) + k_e \times (e\%)$$

where:

WACC = Weighted average rate of return on invested capital

k_d = After-tax rate of return on debt capital

$d\%$ = Debt capital as a percentage of the sum of the debt and ordinary equity capital (total invested capital)

k_e = Rate of return on ordinary equity capital

$e\%$ = Ordinary equity capital as a percentage of the total invested capital

There are three related steps involved in developing the WACC:

- Estimating the opportunity cost of equity financing;
- Estimating the opportunity cost of non-equity financing; and
- Developing market value weights for the capital structure.

¹ Pratt, S and Niculita, A. *Valuing a Business*. McGraw-Hill, 2008.

Cost of equity

Estimating the cost of equity is the most subjective and difficult measure to quantify in the WACC formula, which is why we have dedicated a substantial part of this survey to this issue.

There are two broad approaches to estimating the cost of equity:

- **Deductive models**
Deductive models rely on market data to determine an imputed cost of equity.
- **Risk-return models**
The capital asset pricing model (CAPM) is probably the most widely used of the risk-return models.

CAPM formula

$$E(R_e) = R_f + \beta \times E(R_p)$$

where:

$E(R_e)$ = Expected rate of return on equity capital

R_f = Risk-free rate of return

β = Beta or systematic risk

$E(R_p)$ = Expected market risk premium: expected return for a broad portfolio of shares less the risk-free rate of return

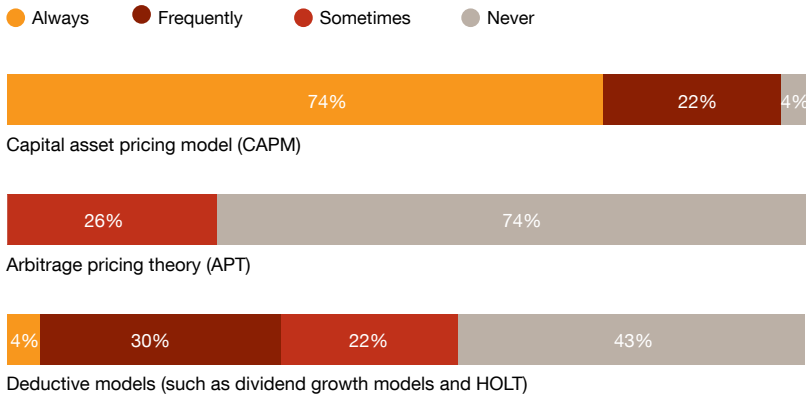
While the CAPM is popular, it is not perfect. A key criticism raised against the CAPM is its inability to account for several equity returns, such as the small firm effect (whereby smaller companies exhibit higher returns) and the value effect (whereby companies with low ratios of book-to-market value have higher expected returns). One response to this empirical questioning is to move away from the traditional CAPM's linear, stationary, and single-factor features.

Given the competing views between deductive models and risk-return models, we included a question in our survey to determine what methodologies are being used by market practitioners.

Q: In calculating an appropriate rate of return to apply to the future cash flows, which of the following methods are being used?

- *Arbitrage pricing theory (APT)*
- *Capital asset pricing model (CAPM)*
- *Deductive models (such as dividend growth models and HOLT)*

Figure 4.1 Methods used to calculate the rate of return for future cash flows



The 2014/15 survey once again confirms both the CAPM as the primary methodology, with most respondents stating that they always or frequently use it, as well as the preference for risk-return models over deductive models.

Survey responses relating to the assumptions made in the application of the CAPM are included in the section that follows.

Risk-free rate

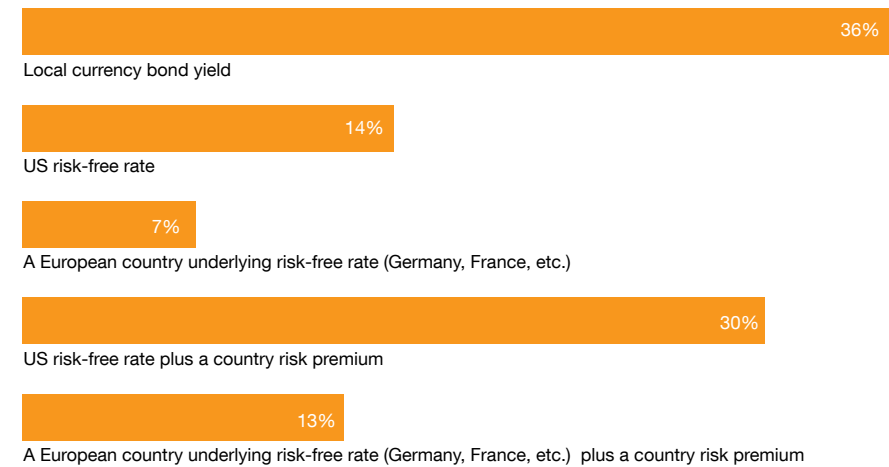
Ordinarily, valuation practitioners estimate the cost of equity by assessing its component parts using the CAPM.

In Nigeria and other West African countries, various government bonds are available as a proxy for the risk-free rate. We thus asked respondents to indicate their choice of proxy.

Q: When performing valuations in Africa, how often are the following used as a benchmark for the risk-free rate?

- Local currency bond yield
- US risk-free rate
- A European country underlying risk-free rate (Germany, France, etc.)
- US risk-free rate plus a country risk premium
- A European country underlying risk-free rate (Germany, France, etc.) plus a country risk premium

Figure 4.2 Benchmarks used for the risk-free rate



The local currency bond yields are widely used in West Africa. However, as not all West African countries have government bonds that are traded on an exchange, a large number of respondents also consider alternative approaches whereby a risk-free rate can be determined using a US or European risk-free rate, plus a premium for country risk.



A wide range of approaches is used in West African markets. This is likely to be driven by variations in the availability of suitable government bond data across the various West African countries in which the survey respondents are based.

Beta

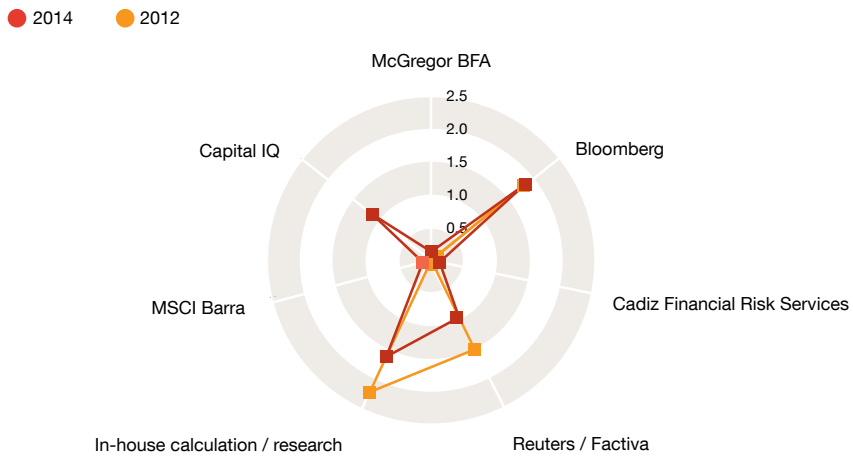
Beta typically measures the sensitivity of a share price to fluctuations in the market as a whole. It is calculated by regressing individual share returns against the returns of the market index.

Analysts often do not use raw data (e.g. share prices and share returns) to estimate beta based on their programmed regression algorithms, but rather subscribe to information systems and databases as sources for betas. We asked respondents to indicate which service providers they use most often.

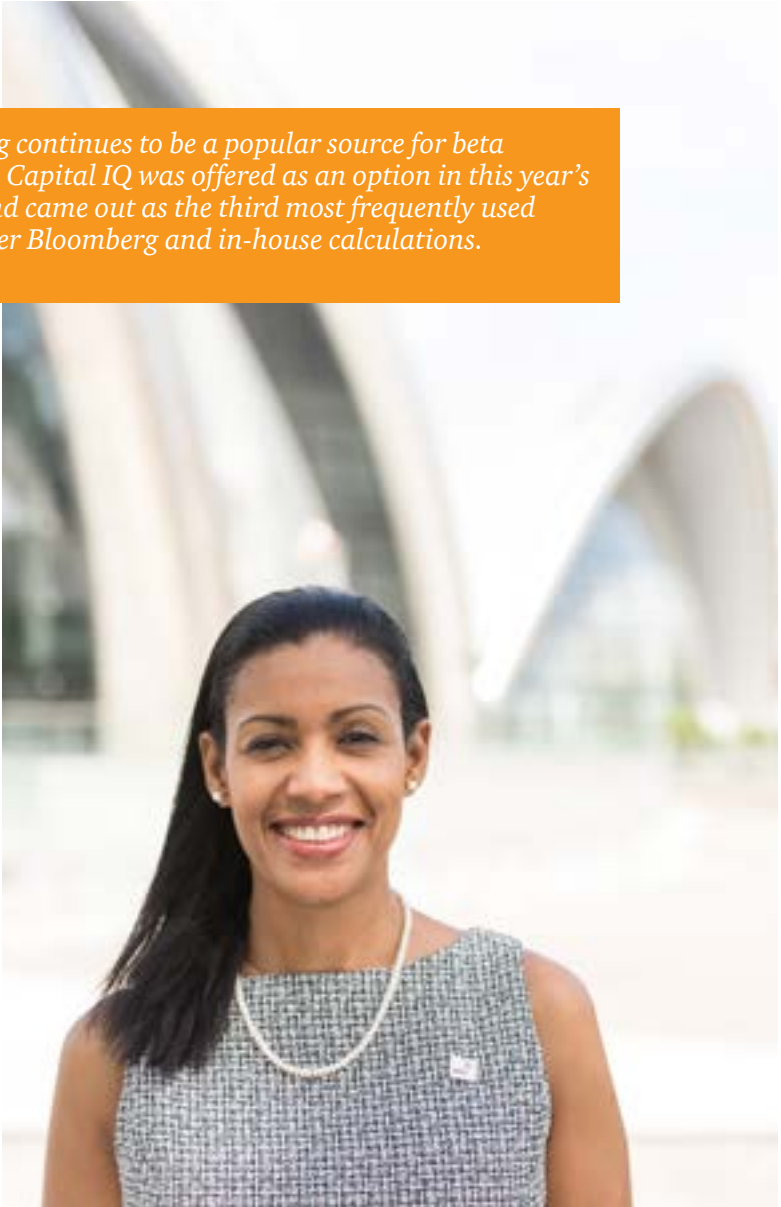
Q: When performing valuations in Africa, how often do you make use of the following service providers as a source of information for beta calculations?

- *Bloomberg*
- *Cadiz Financial Risk Services*
- *In-house calculation/research*
- *McGregor BFA*
- *MSCI Barra*
- *Reuters*
- *Capital IQ*

Figure 4.3 Service providers used to source betas



Bloomberg continues to be a popular source for beta estimates. Capital IQ was offered as an option in this year's survey, and came out as the third most frequently used source after Bloomberg and in-house calculations.



Equity market risk premium

The market risk premium is the single most debated input in a cost of capital calculation. The three broad approaches to estimating a market risk premium include the historic equity bond spread, the survey approach and an implied forward approach.

Historical

The historical approach is the most widely used approach to estimating equity risk premiums. It is based on the assumption that in a well-functioning market, arbitrage will ensure that required and achieved returns should be equivalent.

The actual returns earned on stocks over a long time are estimated and compared to the actual returns earned on a default-free (usually government) security. The difference, on an annual basis, between the two returns is calculated and represents the historical risk premium.

There are several issues related to the use of this approach in estimating risk premiums. The suitability of the approach depends on whether investor expectations are influenced by the historical performance of the market and whether market conditions and expectations change over time. In some markets the availability of data may be limited or unreliable. This is an issue particularly for emerging markets.

Survey approach

The survey methodology is based on the opinions of market participants. There are several issues with this approach. As with most forecasts, survey risk premiums are responsive to recent stock price movements. It is therefore possible that survey premiums will be a reflection of the recent past rather than a good forecast of the future. Survey results may also be influenced by the subjective manner in which questions regarding market risk premiums are posed to respondents.

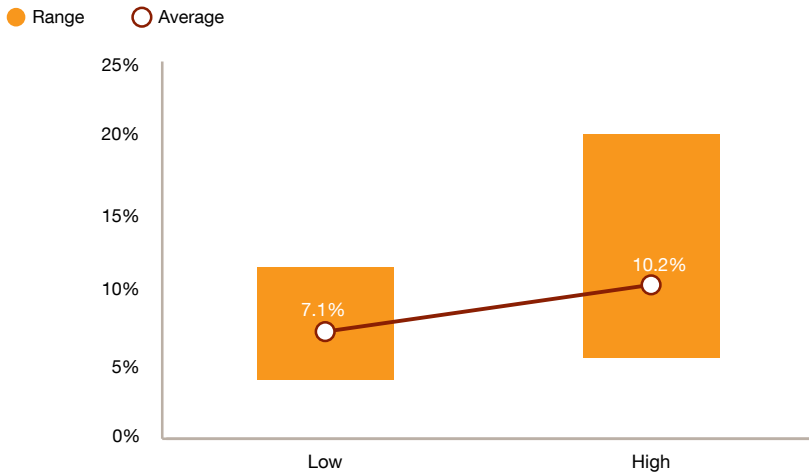
Forward-looking estimate

A forward-looking estimate of the premium is estimated using either current equity prices or risk premiums in non-equity markets. The discounted cash flow approach uses pricing of assets to infer required return or uses actual or potential dividends on an index to calculate required return. This approach will not generate a correct estimate if companies do not pay out what they can afford to in dividends or if earnings are expected to grow at extraordinary rates in the short term.

We asked respondents what range of market risk premiums they typically apply.

Q: Please specify the range of equity market risk premiums applied when you use the CAPM? Please ignore discounts (e.g. marketability discounts), premiums (e.g. control premiums) and the size premiums for small companies, which will be addressed later in the survey.

Figure 4.4 Range of equity market risk premiums used in the CAPM



Average market risk premium

	Low	High
2014	7.1%	10.2%
2012	5.0%	10.0%

Second and third quartiles

	Low	High
2014 2nd quartile	6.0%	10.0%
2014 3rd quartile	7.8%	13.0%

The market risk premium ranges from 4% to 20% with the average used in West Africa ranging between 7% and 10%.

Small stock premiums

In computing an equity risk premium to apply to all investments in the capital asset pricing model (CAPM), we are assuming that betas carry the weight of measuring the risk in individual firms or assets, with riskier investments having higher betas than safer investments. A number of studies, such as the data contained in the annual *Duff & Phelps Valuation Handbook*, have shown that investments in small companies may experience higher returns than those predicted by the standard CAPM approach.

In theory, the CAPM would suggest a higher required return for small companies through a higher beta for such companies. The higher betas for small companies can be caused by higher operational and financial leverage, limited access to funding and other factors making them more vulnerable to general market fluctuations.

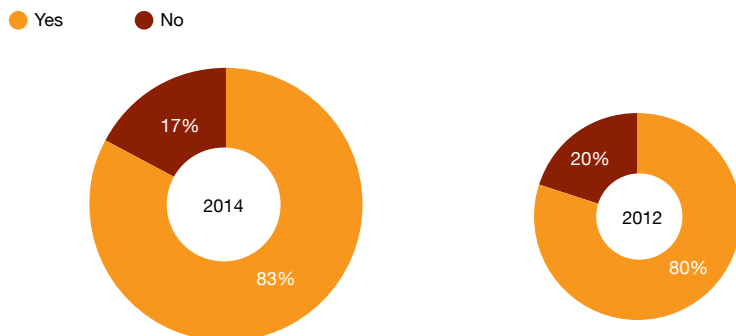
However, the higher betas do not seem to fully explain the higher returns historically achieved by smaller companies. Some have interpreted this as an indication that there are other risks associated with small companies that the CAPM does not address. To adjust for this finding, many practitioners add an additional premium to the cost of equity of companies with smaller market capitalisation.

With various studies both supporting and refuting the notion of the small capitalisation premium, we asked respondents whether they apply a small stock premium (SSP) in the course of their valuation analysis.

Q: Do you adjust the CAPM rate of return by a premium that reflects the extra risk of an investment in a small company?

- Yes
- No

Figure 4.5 Use of small stock premiums

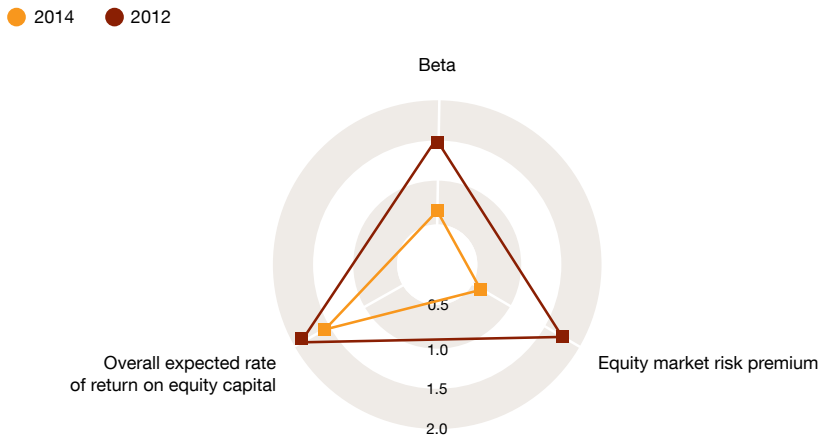


The number of respondents considering a small stock premium has remained relatively stable over the years, with most favouring its application.

Q: *When adjusting for small stock premiums, how often do you adjust each of the following factors?*

- *Beta*
- *Equity market risk premium*
- *Overall expected rate of return on equity capital*

Figure 4.6 Adjustments made for company size



When applying an adjustment for company size, most respondents make an adjustment to the overall cost of equity.

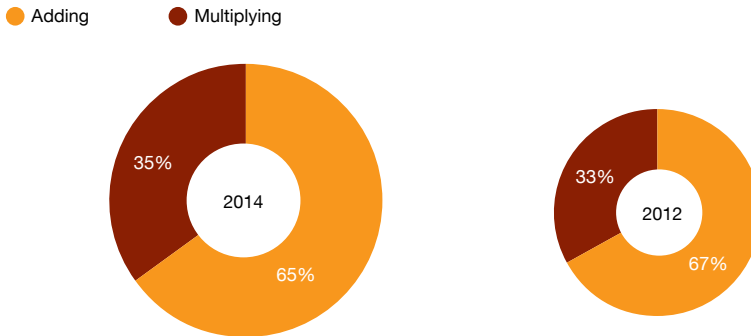
Small stock premiums

As the next step in the survey, we wanted to determine the methodology used to effect the adjustment for company size.

Q: Do you adjust by multiplying a factor (i.e. $CAPM\ ke \times \{1 + SSP\}$) or adding a factor (i.e. $CAPM\ ke + SSP$)?

- *Multiplying*
- *Adding*

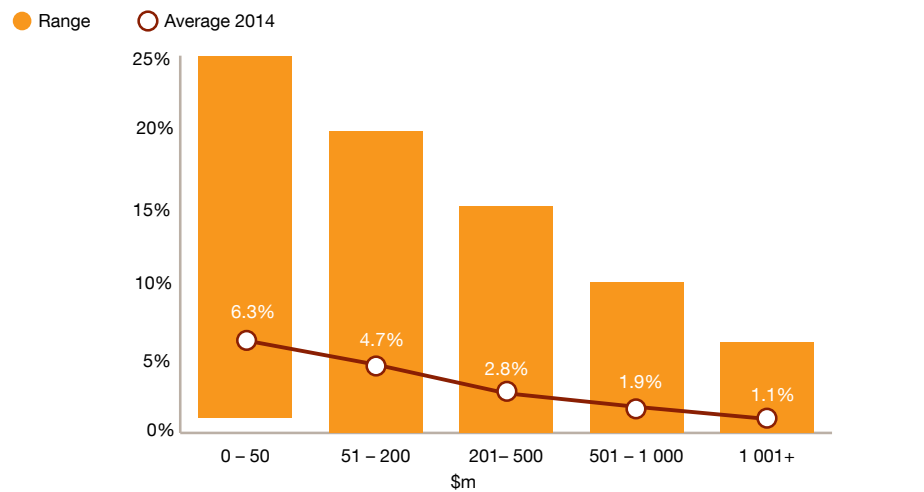
Figure 4.7 Small stock premium inclusion methods



Of the respondents that make size adjustments, most add a small stock premium to the cost of equity.

Q: What is the benchmark small stock premium applied, given the expected size of the company or entity?

Figure 4.8 Small stock premiums applied additively



Average stock premium: Adding²

\$m	0 – 50	51 – 200	201 – 500	501 – 1 000	1 001+
2014	6.3%	4.7%	2.8%	1.9%	1.1%

² In this year’s survey, the clear majority of respondents indicated they apply an additive premium, with very few applying a multiplication approach. Given the small sample size, data relating to the multiplication approach has therefore not been included.

Specific risk premiums

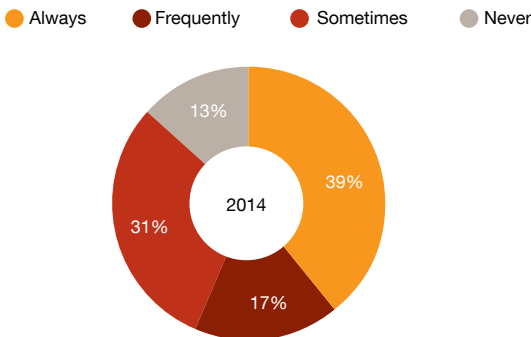
A key attribute of the CAPM is that investors are rewarded only for systematic risk. Specific risks that are theoretically diversifiable are not included in the CAPM. Standard finance theory states that investors should be compensated only for non-diversifiable risks.

Given that the application of a specific risk premium (SRP) is not consistent with the CAPM, we surveyed market practitioners about whether they apply specific risk premiums, and if so, in what instances. We also asked respondents what premiums are considered for projects at various stages of development.

Q: How often do you adjust the CAPM rate of return by a premium that reflects unique risks to the extent that such risks could not be modelled in the forecast cash flows?

- Always
- Frequently
- Sometimes
- Never

Figure 4.9 Use of a specific risk premium



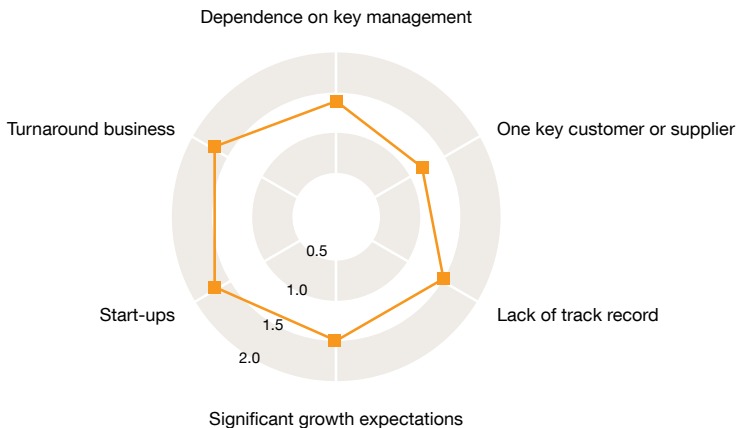
A marked difference since the last survey is the increase in the percentage of respondents who always adjust the CAPM by applying a specific risk premium, which has increased from 20% to 39%.

No less than 87% of respondents regularly or occasionally consider an adjustment to the CAPM, which demonstrates that although the use of a specific risk premium is not supported by the CAPM and financial theory, specific risk premiums are widely used in practice.

Q: How often would each of the following conditions require you to apply a specific risk premium, also referred to as alpha?

- Dependence on key management
- One key customer or supplier
- Lack of track record
- Significant growth expectations
- Start-ups
- Turnaround businesses

Figure 4.10 Specific risk factors



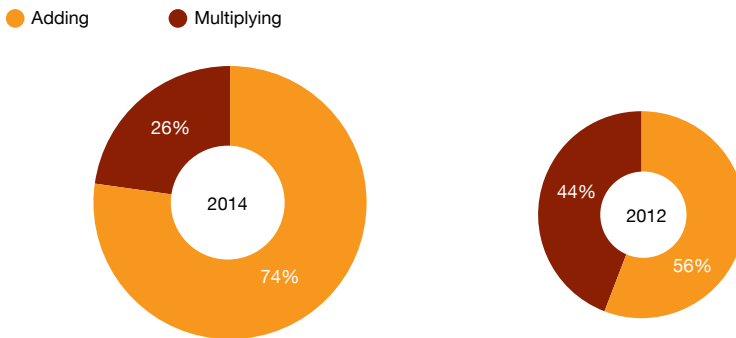
Respondents indicated that most of the factors listed would at some time be considered as motivation for the inclusion of a specific risk premium.

Specific risk premiums

Q: Do you adjust by multiplying a factor (i.e. $CAPM\ ke \times \{1 + SRP\}$) or adding a factor (i.e. $CAPM\ ke + SRP$)?

- *Multiplying*
- *Adding*

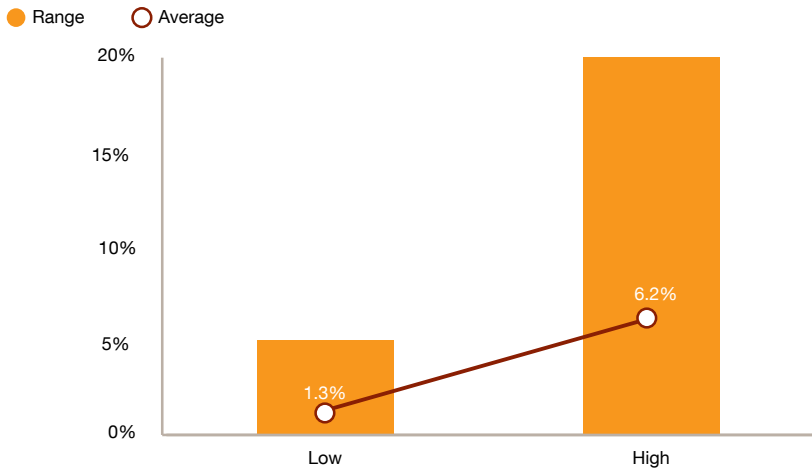
Figure 4.11 Specific risk premium inclusion methods



Most respondents adjust the overall expected return on equity capital by adding a premium. This is consistent with the results of previous surveys.

Q: What is the benchmark small stock premium applied, given the expected size of the company or entity?

Figure 4.12 Specific risk premiums applied additively



Average specific risk premium: Adding³

	Low	High
2014	1.3%	6.2%
2012	3.0%	8.0%

In order to eliminate any outliers in the first and fourth quartiles, the second and third quartiles have been calculated and are shown below. As can be seen, we considered the average range falling between the second and third quartiles. The lower end of the specific risk premium falls between 1% and 1.5%, and the upper end between 6% and 10%.

Second and third quartiles: Adding

	Low	High
2014 2nd quartile	1.0%	6.0%
2014 3rd quartile	1.5%	10.0%

³ In this year's survey, the clear majority of respondents indicated they apply an additive premium, with very few applying a multiplication approach. Given the small sample size, data relating to the multiplication approach has therefore not been included.

Specific risk premiums

Specific risk premiums are used for a wide variety of reasons, with the upper end of the range likely to be dominated by hurdle rates used to appraise very high-risk projects. The wide range of specific risk premiums added to the CAPM is therefore likely to be a result of the variety of risks that specific risk premiums aim to address.

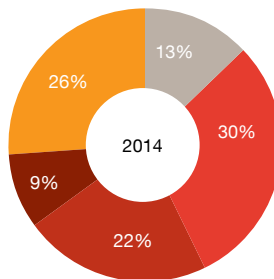
The results indicate that valuation practitioners consider a very wide range of specific risk premiums, which range on average between 1% and 6% when applied additively.

Q: *One instance where specific risk premiums are sometimes applied is where the company is considered to be a start-up. If you apply a specific risk premium for start-up companies, what percentage would you normally apply, assuming you are adding the premium to the cost of equity?*

- 0 – 1.9%
- 2.0 – 3.9%
- 4.0 – 5.9%
- 6.0 – 7.9%
- 8.0 – 10.0%

Figure 4.13 Specific risk premiums for start-up companies

● 0% – 1.9% ● 2.0% – 3.9% ● 4.0% – 5.9% ● 6.0% – 7.9% ● Greater than 8%



More than half of respondents apply a premium of lower than 6%. However, there is still a wide range of premiums applied, suggesting that specific risk premiums are highly asset specific.



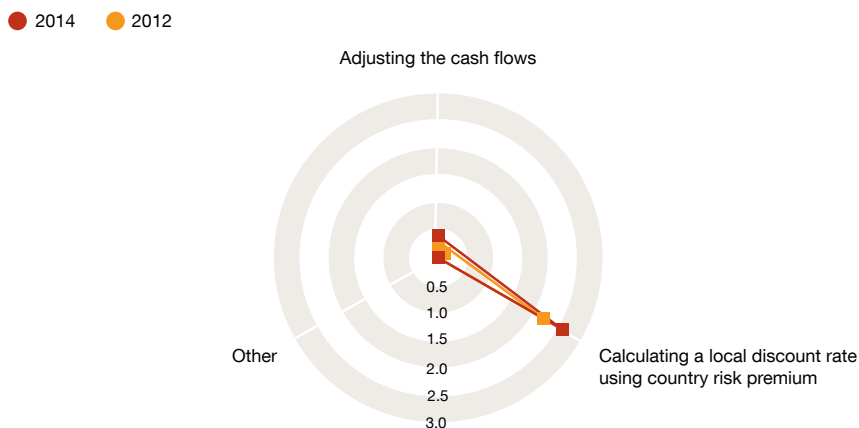
Country risk premiums

When valuing businesses in emerging markets, it is critical that a prospective investor assesses and quantifies the risks inherent in investing in different sovereign territories. We asked respondents how they account for country risk in their valuations.

Q: How do you generally adjust for country risk when valuing an asset in a country where no reliable long-bond yield (i.e. risk-free rate) can be observed?

- *Adjusting the cash flows*
- *Calculating a local discount rate using a US-dollar or euro-based risk-free rate and adding a premium for local country risk and inflation*
- *Other*

Figure 4.14 Country risk premium inclusion method



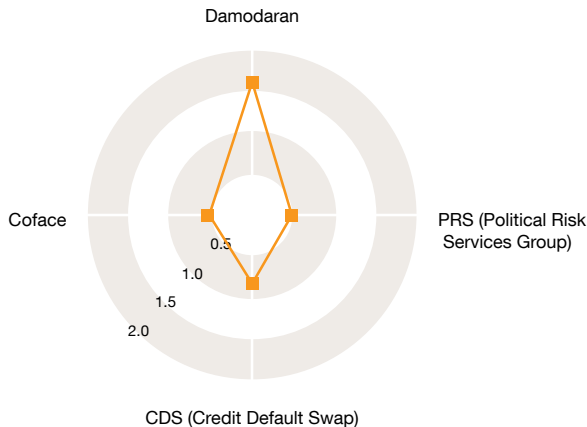
The results indicate that country risk differentials are recognised mainly through adjusting local discount rates with a country risk premium.

Given the level of activity in countries with limited capital market data, we asked respondents some additional questions regarding how they determine their country risk adjustments.

Q: How often are each of the following service providers used as a source of information for country risk premium?

- *Damodaran*
- *PRS (Political Risk Services Group)*
- *CDS (Credit Default Swap)*
- *Coface*

Figure 4.15 Country risk premium data sources



A number of publicly available data sources are used, with Damodaran being a popular source of information.

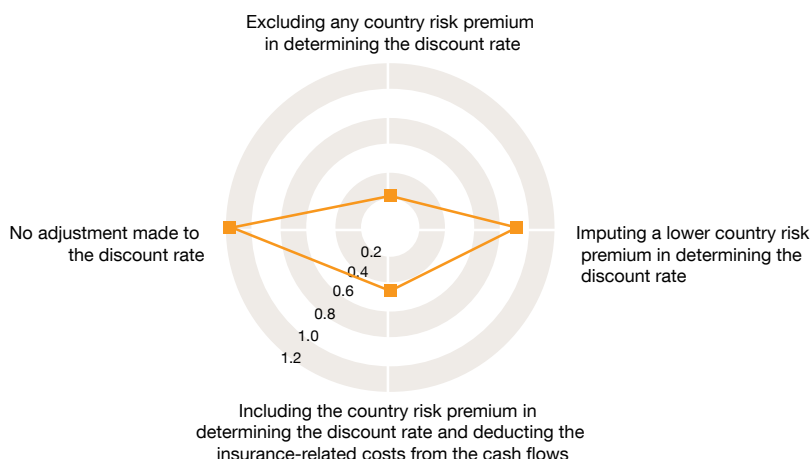
The majority of respondents are familiar with the concept of international insurance against country risk. We asked respondents how they factor in international insurance against country risk when calculating the discount rate.

Country risk premiums

Q *If international insurance is factored in, how do you adjust the discount rate?*

- *Excluding any country risk premium in determining the discount rate*
- *Imputing a lower country risk premium in determining the discount rate*
- *Including the country risk premium in determining the discount rate and deducting the insurance-related costs from the cash flows*
- *No adjustment made to the discount rate*

Figure 4.16 Discount rate adjustment method when factoring in international insurance



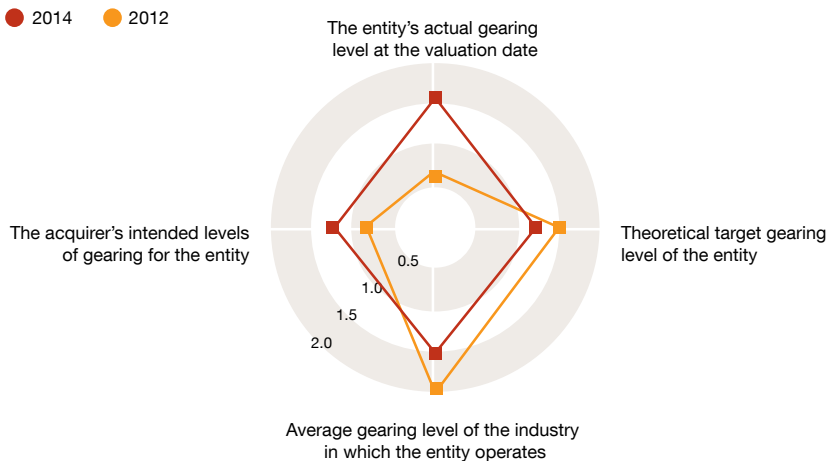
Many respondents impute a lower country risk premium where international insurance is used to mitigate country risk, although a large number of respondents make no adjustment to the discount rate. This suggests that a number of respondents may consider international insurance to not fully address the issue of country risk from a valuation perspective.

Gearing

Q: Which of the following approaches are used in determining an appropriate level of debt and equity in the cost of capital calculation?

- Average gearing level of the industry in which the entity operates
- Theoretical target gearing level of the entity
- The acquirer's intended levels of gearing for the entity
- The entity's actual gearing level at the valuation date

Figure 4.17 Approaches used in determining the appropriate level of debt and equity



A wide variety of indicators are considered as part of the respondents' gearing assumption. These include actual industry and target gearing levels.

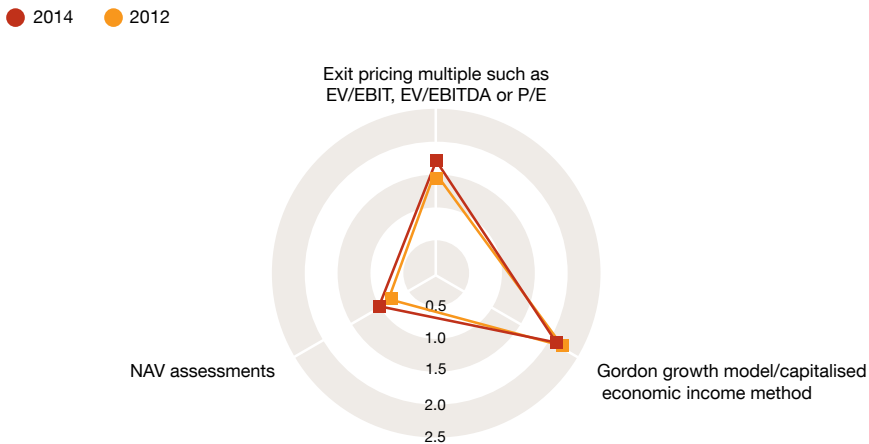
Terminal value

Another technical issue that frequently arises in the income approach is the question of terminal values. Terminal values often contribute more than 50% of the discounted cash flow value. As a result, the terminal value calculation is an area that needs to be considered in detail.

Q: How often are each of the following approaches used in calculating the terminal value in a business valuation?

- Exit pricing multiple such as EV/EBIT, EV/EBITDA or P/E
- Gordon growth model/capitalised economic income method
- Net asset value (NAV) assessments

Figure 4.18 Approaches used in calculating terminal values



The Gordon growth model remains the most popular methodology, with most respondents using this approach either always or frequently. It is notable that exit multiples have continued to gain in popularity.

Q: In applying the Gordon growth model/capitalised economic income method, how often do you base your long-term growth assumption on each of the following?

- Company-specific factors
- Consumer price index (CPI)
- Consumption expenditure growth
- Nominal gross domestic product (GDP) growth
- Real GDP growth

Figure 4.19 Basis used for estimating long-term growth rates



The latest results indicate a strong preference for macroeconomic factors including CPI and GDP growth, but company-specific factors are also considered by the majority of valuation practitioners, and have continued to gain in popularity.

Market approach

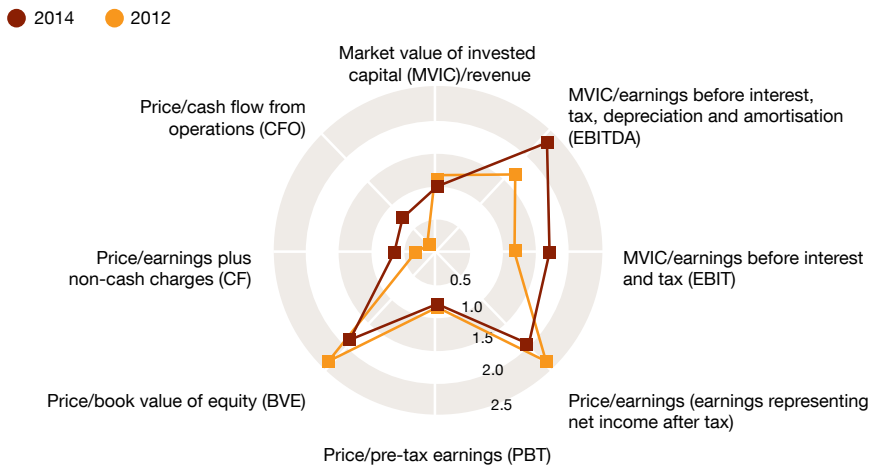
Choice of multiples

A number of valuation multiples or valuation benchmarks can be used in the application of the market approach. This section of the survey tested the frequency of use of a range of common market multiples.

Q: When using the market approach, how often do you use each of the following valuation multiples?

- Market value of invested capital (MVIC)/revenue
- MVIC/earnings before interest, tax, depreciation and amortisation (EBITDA)
- MVIC/earnings before interest and tax (EBIT)
- Price/earnings (earnings representing net income after tax)
- Price/pre-tax earnings (PBT)
- Price/book value of equity (BVE)
- Price/earnings plus non-cash charges (CF)
- Price/cash flow from operations (CFO)

Figure 4.20 Valuation multiples used



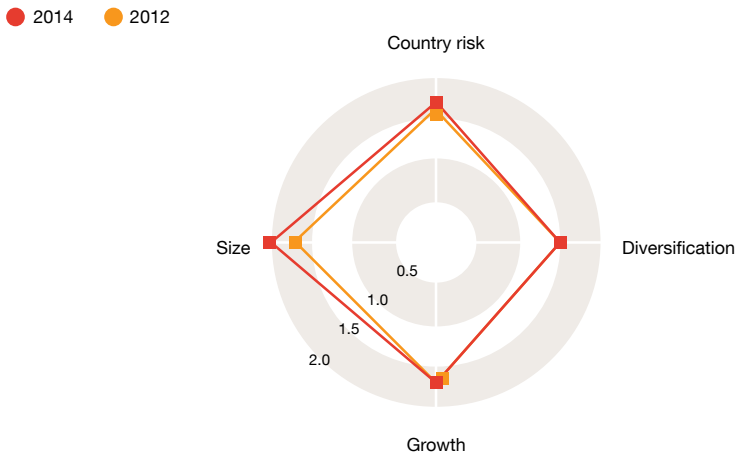
The price/earnings, price/book and EV (enterprise value)/EBITDA multiples are the most widely used valuation multiples used by the respondents.

Adjustments to multiples

Q: If applicable, which of the following adjustments to observed comparable company multiples would you consider in applying the market multiple approach?

- Country risk
- Diversification
- Growth
- Size

Figure 4.21 Adjustments to valuation multiples



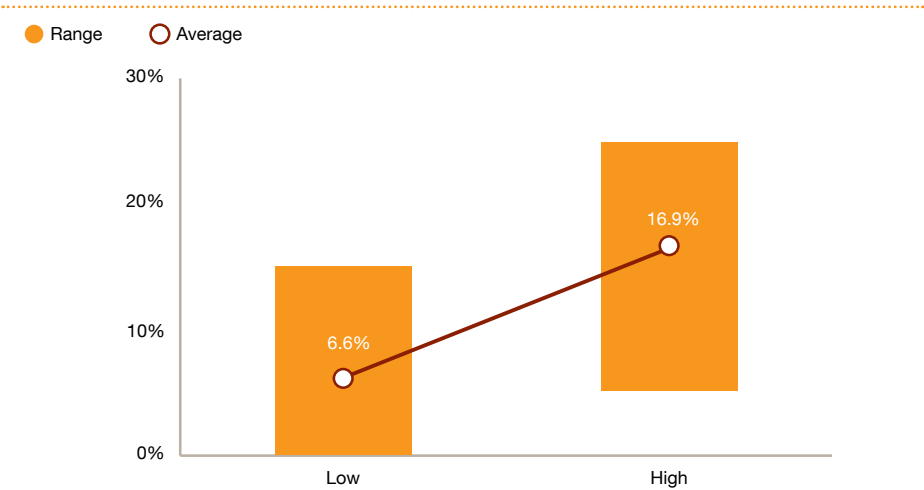
All respondents indicated that they consider making adjustments in determining appropriate multiples in terms of the market approach.

In this year's survey, we asked some additional questions to gauge the quantum of the discounts being applied.

Country risk adjustments

Q. Assuming you are valuing a business that operates in an emerging market, but you are using developed market comparable companies to derive an earnings multiple, what is the range of discounts you would apply to developed market comparable company multiples to reflect differences in country risk?

Figure 4.22 Range of discounts applied to developed market comparable multiples to reflect differences in country risk



In order to eliminate any outliers in the first and fourth quartiles, the second and third quartiles have been calculated below. As can be seen, we considered the average range falling between the second and third quartiles.

Country risk adjustments – discounts applied

	Low	High
2014 average	6.6%	16.9%
2014 2nd quartile	6.0%	20.0%
2014 3rd quartile	10.0%	20.0%

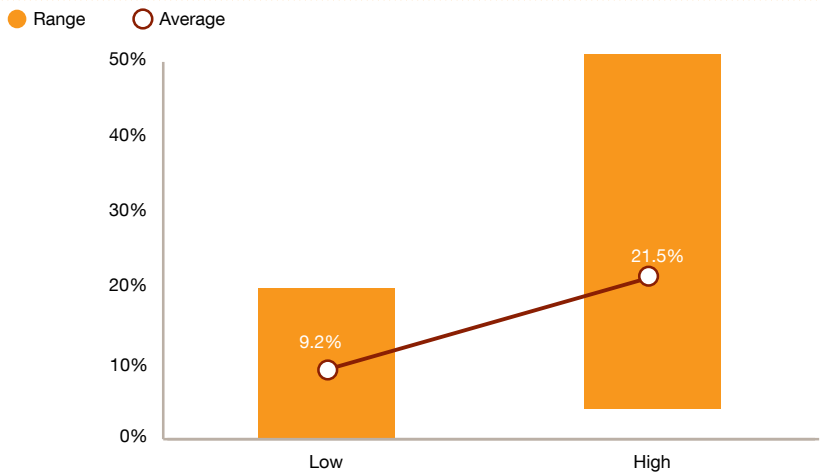
The lower end of the country risk adjustment falls between 6% and 10%, and the upper end between 17% and 20%.

West Africa

Size adjustments

Q. Assuming you are valuing a business that is significantly smaller than the listed comparable companies you used to derive an earnings multiple, what is the range of discounts you would apply to comparable company multiples to reflect differences in size?

Figure 4.23 Range of discounts applied to developed market comparable multiples to reflect differences in size



In order to eliminate any outliers in the first and fourth quartiles, the second and third quartiles have been calculated below. As can be seen, we considered the average range falling between the second and third quartiles.

Size adjustments – discounts applied

	Low	High
2014 average	9.2%	21.5%
2014 2nd quartile	10.0%	20.0%
2014 3rd quartile	10.0%	30.0%

The lower end of the size adjustment stands at 10%, and the upper end is between 20% and 30%. The relatively low average results from a number of respondents not applying discounts in certain instances.

Discounts and premiums

Minority discounts

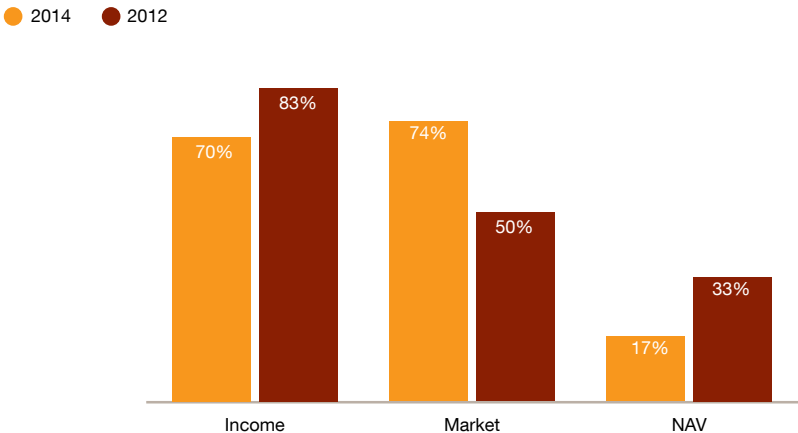
The minority discount relates to the lack of control over the operation and corporate policy for a given investment by its minority shareholders. The minority shareholders can generally not direct the size or timing of dividends or control the selection of management.

A minority shareholder can also not veto the acquisition, sale or liquidation of assets. Minority discounts are therefore usually applied when valuing a non-controlling stake to discount the value for lack of control.

Q: Do you generally apply a minority discount when using any of the following approaches?

- Income approach
- Market multiple approach
- Net asset value

Figure 4.24 Approaches in which minority discounts are applied



The majority of respondents will consider a minority discount in the income and market approaches.

Q: Where do you apply the minority discounts?

- Market value of equity
- Enterprise value
- Discount rate

Figure 4.25 Application of minority discounts



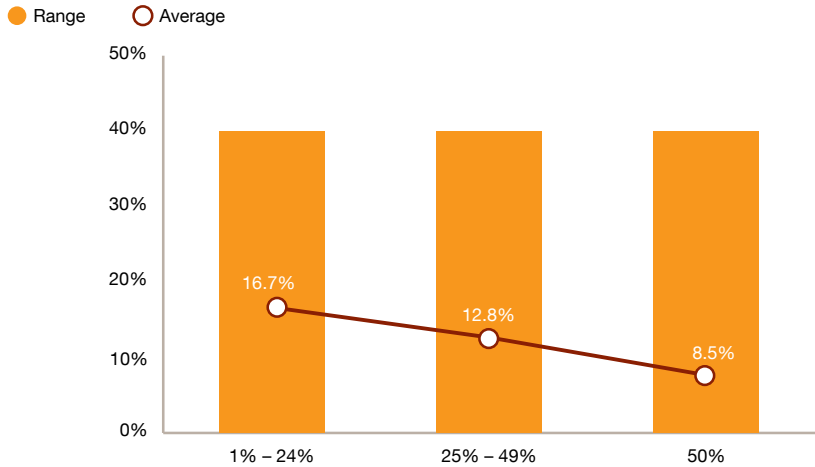
When asked where the minority discounts are applied, most respondents indicated that they prefer to apply the minority discount to the market value of equity.

Given that most respondents acknowledge the appropriateness of the minority discount, we asked them for an indication of the range of minority discounts normally applied in their valuation analysis.

Minority discounts

Q: Please indicate the benchmark minority discount normally applied given the size of the interest being valued.

Figure 4.26 Average minority discount: Equity value



Average size of discount applied⁴

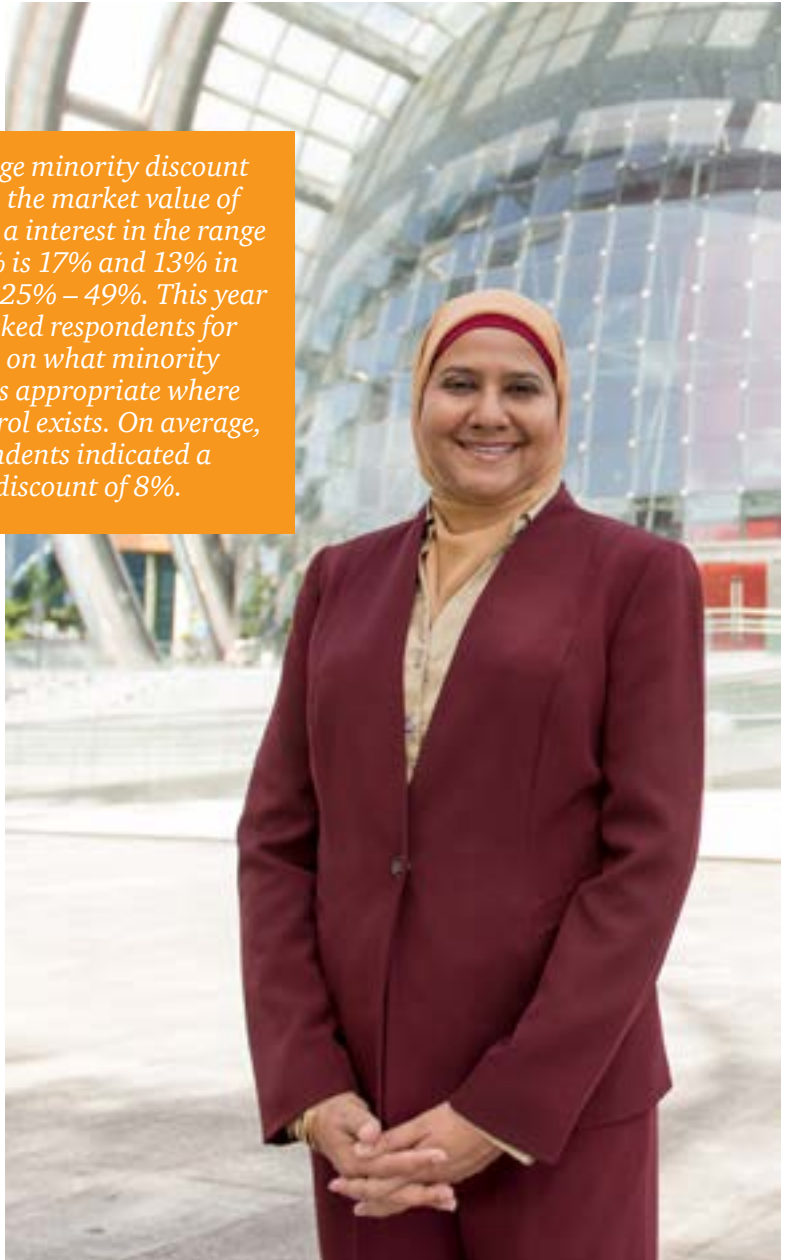
Size of interest	1 – 24%	25 – 49%	50%
2014 average	16.7%	12.8%	8.5%

Second and third quartiles

Size of interest	1 – 24%	25 – 49%	50%
2014 2nd quartile	15.0%	10.0%	5.0%
2014 3rd quartile	20.0%	15.0%	10.0%

⁴ In this year’s survey, the clear majority of respondents indicated they apply an adjustment to equity, with very few applying an enterprise value adjustment. Given the small sample size, data relating to adjustments to enterprise value has therefore not been included.

The average minority discount applied to the market value of equity for a interest in the range 1% – 24% is 17% and 13% in the range 25% – 49%. This year we also asked respondents for their view on what minority discount is appropriate where joint control exists. On average, the respondents indicated a minority discount of 8%.



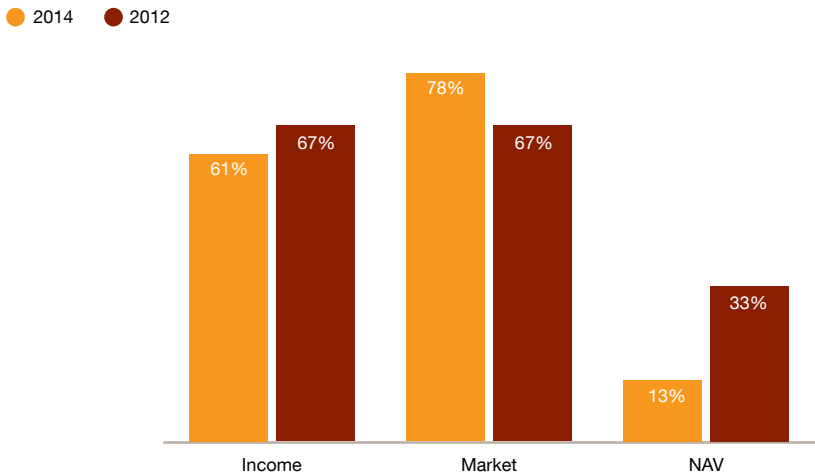
Control premiums

The control premium is the inverse of the minority discount and similar issues have to be considered in calculating a control premium. To summarise, a control premium relates to the additional value associated with the ability to control the distribution of cash generated by the company, which includes the ability to influence the timing and size of the dividend distribution.

Q: Where do you apply the control premiums?

- Income approach
- Market multiple approach
- Net asset value

Figure 4.27 Approaches in which control premiums are applied



The control premium may already be implicitly included in the income approach and as a result the control premium should normally be considered in a market approach valuation. However, if the control premium relates to synergies not built into the cash flows, a control premium may in some cases be applied to the income approach.

Given that most respondents acknowledge the appropriateness of the control premium, we asked them to indicate how they go about applying control premiums in their valuation analysis.

Q: *Where do you apply the control premiums?*

- *Market value of equity*
- *Enterprise value*
- *Discount rate*

Figure 4.28 Application of control premiums



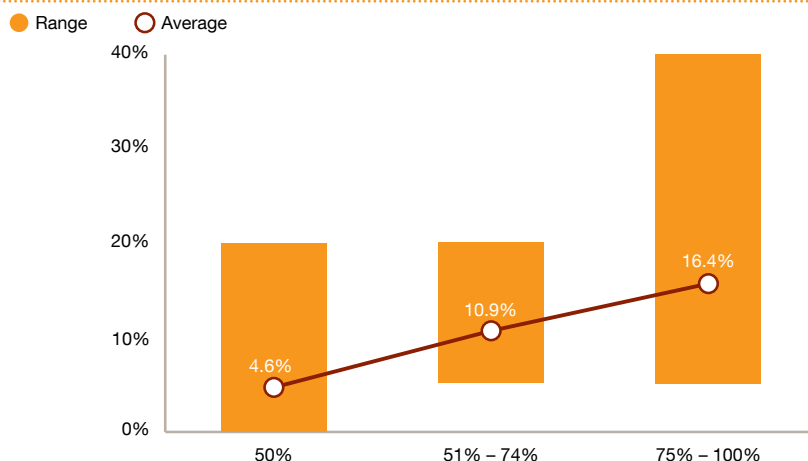
While some respondents apply adjustments to the discount rate or enterprise value, most apply control premiums to the market value of equity.

We then sought to quantify the benchmark control premiums that are typically applied.

Control premiums

Q: Please indicate the benchmark control premium normally applied given the size of the interest being valued.

Figure 4.29 Average control premium: Equity value



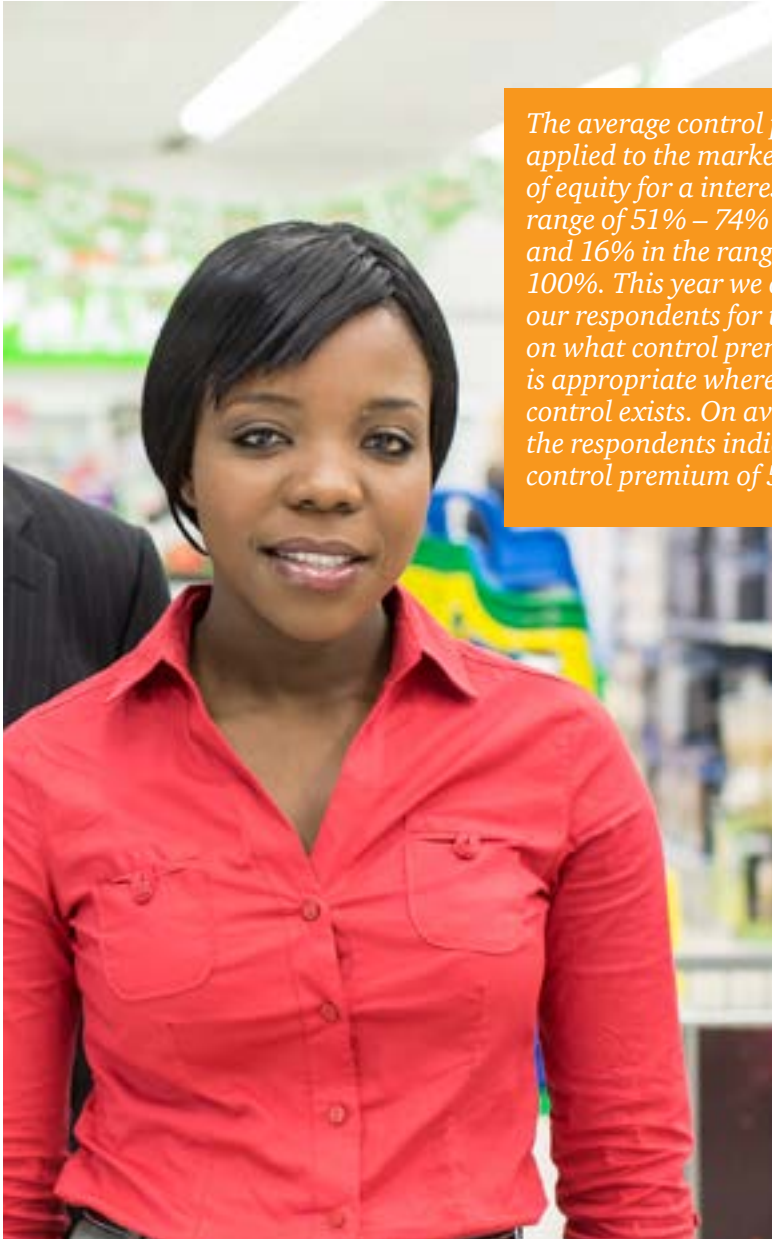
Average size of premium applied⁵

Size of interest	50%	51 – 74%	75 – 100%
2014 average	4.6%	10.9%	16.4%

Second and third quartiles

Size of interest	50%	51 – 74%	75 – 100%
2014 2nd quartile	5.0%	10.0%	15.0%
2014 3rd quartile	10.0%	15.0%	20.0%

⁵ In this year's survey, the clear majority of respondents indicated they apply an adjustment to equity, with very few applying an enterprise value adjustment. Given the small sample size, data relating to the adjustments to enterprise value has therefore not been included.



The average control premium applied to the market value of equity for a interest in the range of 51% – 74% is 11% and 16% in the range 75% – 100%. This year we also asked our respondents for their view on what control premium is appropriate where joint control exists. On average, the respondents indicated a control premium of 5%.

Marketability discounts

Marketability can be defined as “the ability to convert the business ownership interest (at whatever ownership level) to cash quickly, with minimum transaction and administrative costs in so doing and with a high degree of certainty of realising the expected amount of net proceeds”.⁶

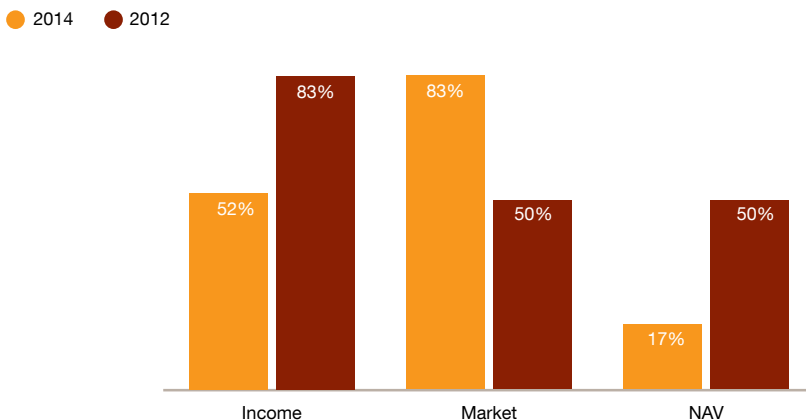
It is important to distinguish the marketability discount from the minority discount. The lack of ownership control captured by the minority discount addresses the limited ownership and lack of operational control, whereas the marketability discount deals with how quickly and certainly the ownership share can be converted to cash.

There is, however, an expected relationship between the marketability and the ownership share. Even after we discount a minority interest for a lack of control, it is usually harder to sell a non-controlling interest than a controlling ownership interest. The marketability discount is therefore expected to decrease with the size of the ownership share.

Q: If the entity is not listed, do you apply a marketability discount to any of the following approaches?

- *Income approach*
- *Market multiple approach*
- *Net asset value*

Figure 4.30 Approaches in which marketability discounts are applied



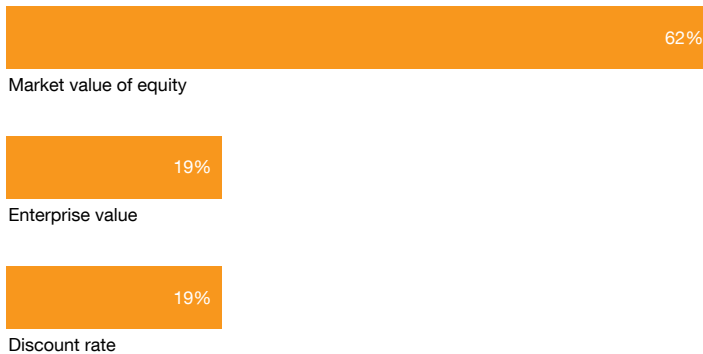
6 Pratt, S, Reilly, R and Schweighs, R. *Valuing a Business*. McGraw-Hill, 2000.

Respondents recognise the need to adjust for marketability in all valuation approaches. The remainder of this section therefore deals with how respondents apply marketability discounts in their valuation analysis.

Q: *Where do you apply the marketability discounts?*

- *Market value of equity*
- *Enterprise value*
- *Discount rate*

Figure 4.31 Application of marketability discounts

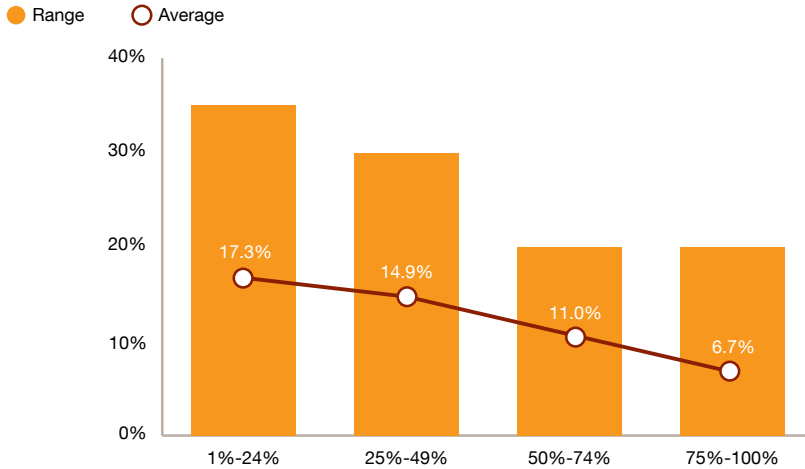


The majority of respondents apply marketability discounts to the market value of equity. We subsequently asked them to quantify the benchmark discounts that are typically applied.

Marketability discounts

Q: Please indicate the benchmark marketability discount normally applied given the size of the interest being valued.

Figure 4.32 Average marketability discount applied: Equity value



Average size of discount applied⁷

Size of interest	1 – 24%	25 – 49%	50 – 74%	75 – 100%
2014 average	17.3%	14.9%	11.0%	6.7%

Second and third quartiles

Size of interest	1 – 24%	25 – 49%	50 – 74%	75 – 100%
2014 2nd quartile	20.0%	15.0%	10.0%	5.0%
2014 3rd quartile	25.0%	20.0%	15.0%	10.0%

The ranges provide an indication of the size of the marketability discounts that are applied by respondents. As shown in the tables above, we considered the ranges falling between the second and third quartiles.

⁷ In this year's survey, the clear majority of respondents indicated they apply an adjustment to equity, with very few applying an enterprise value adjustment. Given the small sample size, data relating to adjustments to enterprise value has therefore not been included.



Section 5: **East Africa**



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Valuation approaches

There are a number of methodologies used to value businesses. We have previously found that the approaches most commonly used in East Africa are:

- **The income approach (discounted cash flow approach)**
This approach determines the market value of the ordinary shares of a company based on the value of the cash flows that the company can be expected to generate in the future. This includes traditional discounted cash flow techniques and also real option valuations, which use option pricing models to measure the value of assets that share option characteristics.
- **The market approach (market multiple approach)**
This gauges the market value of the ordinary shares of a company based on a comparison of the company to comparable publicly traded companies and transactions in its industry, as well as to prior transactions in the ordinary shares of the company using an appropriate valuation multiple.
- **The net assets approach**
This evaluates the market value of the ordinary shares of a company by adjusting the asset and liability balances on the company's balance sheet to its market value equivalents. The approach is based on the summation of the individual piecemeal market values of the underlying assets less the market value of the liabilities.

The aim of this section is to highlight the most popular valuation approaches being used in business enterprise valuations in East Africa. We were particularly interested in determining whether any changes have taken place in the choice of approaches followed by market participants since our previous survey in 2012.

Q: Which of the following valuation approach do you *prefer* to value a going concern?

- *Economic value added (EVA)*
- *Income approach (discounted cash flow)*
- *Market approach (e.g. price/earnings ratio)*
- *Net asset approach*

The primary valuation approaches remain the income approach (discounted cash flow) and market approach (based on market multiples). The general indication from respondents is that the income approach remains the primary valuation methodology, used by 84% of respondents. Other respondents indicated that they have no specific primary methodology, but select and combine the approaches based on the nature of the company being valued.

We also asked our respondents whether they apply a secondary methodology. Of those respondents who use the income approach as the primary methodology, 75% confirmed using the market approach as the secondary method of choice.



While the income approach remains the most popular approach, valuation practitioners seldom use only one approach to valuing businesses.

Income approach

Cost of capital

From a company's perspective, the weighted average cost of capital (WACC) represents the economic return (or yield) that an investor would have to give up by investing in the subject investment instead of all available alternative investments that are comparable in terms of risk and other investment characteristics.¹

WACC formula

The general formula for calculating the WACC (assuming only debt and equity capital) is:

$$\text{WACC} = k_d \times (d\%) + k_e \times (e\%)$$

where:

WACC = Weighted average rate of return on invested capital

k_d = After-tax rate of return on debt capital

$d\%$ = Debt capital as a percentage of the sum of the debt and ordinary equity capital (total invested capital)

k_e = Rate of return on ordinary equity capital

$e\%$ = Ordinary equity capital as a percentage of the total invested capital

There are three related steps involved in developing the WACC:

- Estimating the opportunity cost of equity financing;
- Estimating the opportunity cost of non-equity financing; and
- Developing market value weights for the capital structure.

¹ Pratt, S and Niculita, A. *Valuing a Business*. McGraw-Hill, 2008.

Cost of equity

Estimating the cost of equity is the most subjective and difficult measure to quantify in the WACC formula, which is why we have dedicated a substantial part of this survey to this issue.

There are two broad approaches to estimating the cost of equity:

- **Deductive models**
Deductive models rely on market data to determine an imputed cost of equity.
- **Risk-return models**
The capital asset pricing model (CAPM) is probably the most widely used of the risk-return models.

CAPM formula

$$E(R_e) = R_f + \beta \times E(R_p)$$

where:

$E(R_e)$ = Expected rate of return on equity capital

R_f = Risk-free rate of return

β = Beta or systematic risk

$E(R_p)$ = Expected market risk premium: expected return for a broad portfolio of shares less the risk-free rate of return

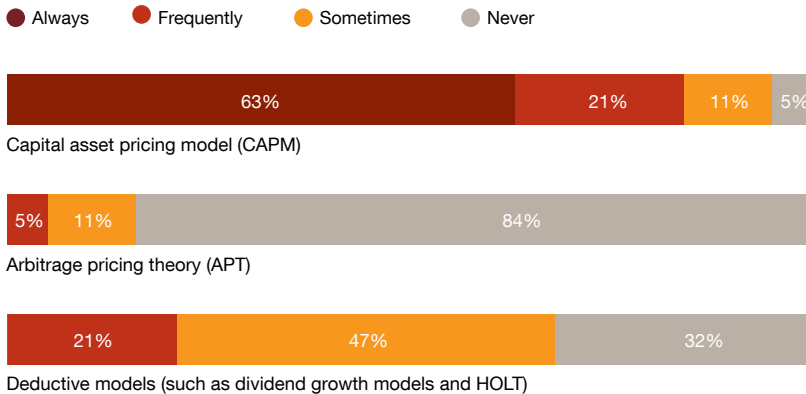
While the CAPM is popular, it is not perfect. A key criticism raised against the CAPM is its inability to account for several equity returns, such as the small firm effect (whereby smaller companies exhibit higher returns) and the value effect (whereby companies with low ratios of book-to-market value have higher expected returns). One response to this empirical questioning is to move away from the traditional CAPM's linear, stationary, and single-factor features.

Given the competing views between deductive models and risk-return models, we included a question in our survey to determine what methodologies are being used by market practitioners.

Q: In calculating an appropriate rate of return to apply to the future cash flows, which of the following methods are being used?

- Arbitrage pricing theory (APT)
- Capital asset pricing model (CAPM)
- Deductive models (such as dividend growth models and HOLT)

Figure 5.1 Methods used to calculate the rate of return for future cash flows



The 2014/15 survey once again confirms both the CAPM as the primary methodology, with most respondents stating that they always, frequently or sometimes use it, as well as the preference for risk-return models over deductive models.

Survey responses relating to the assumptions made in the application of the CAPM are included in the section that follows.

Risk-free rate

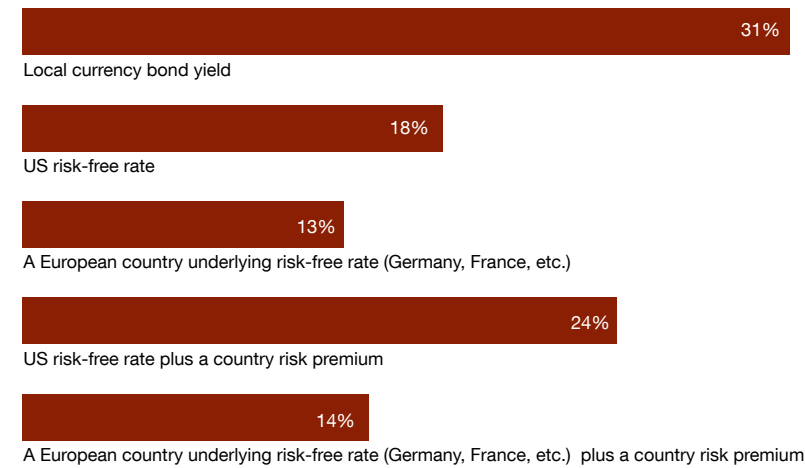
Ordinarily, valuation practitioners estimate the cost of equity by assessing its component parts using the CAPM.

In many of the East African countries, various government bonds are available as a proxy for the risk-free rate. We thus asked respondents to indicate their choice of proxy.

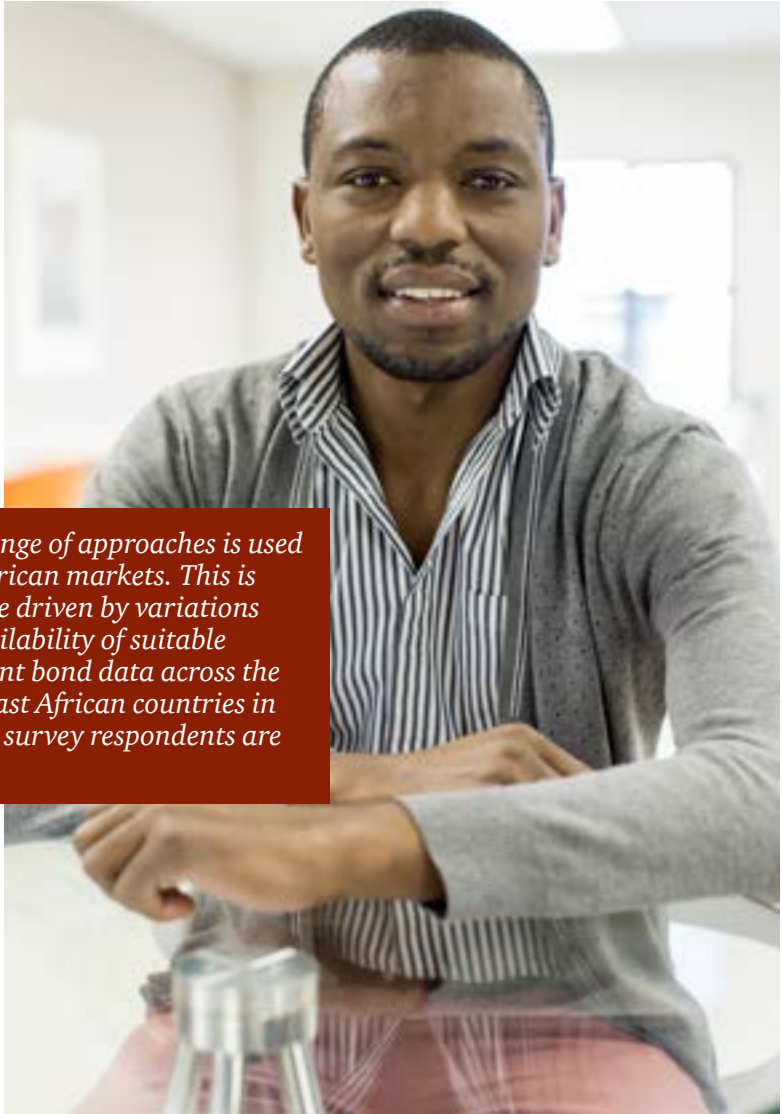
Q: When performing valuations in Africa, how often are the following used as a benchmark for the risk-free rate?

- Local currency bond yield
- US risk-free rate
- A European country underlying risk-free rate (Germany, France, etc.)
- US risk-free rate plus a country risk premium
- A European country underlying risk-free rate (Germany, France, etc.) plus a country risk premium

Figure 5.2 Benchmarks used for the risk-free rate



Respondents indicated that various risk-free rate benchmarks are used in East Africa. The most widely used approach is a local currency bond yield. However, as not all of the available government bonds are actively traded on an exchange, a large number of respondents also consider alternative approaches, including adding a country risk premium to a recognised risk-free rate, for example, the US/EU risk-free rate.



A wide range of approaches is used in East African markets. This is likely to be driven by variations in the availability of suitable government bond data across the various East African countries in which the survey respondents are based.

Beta

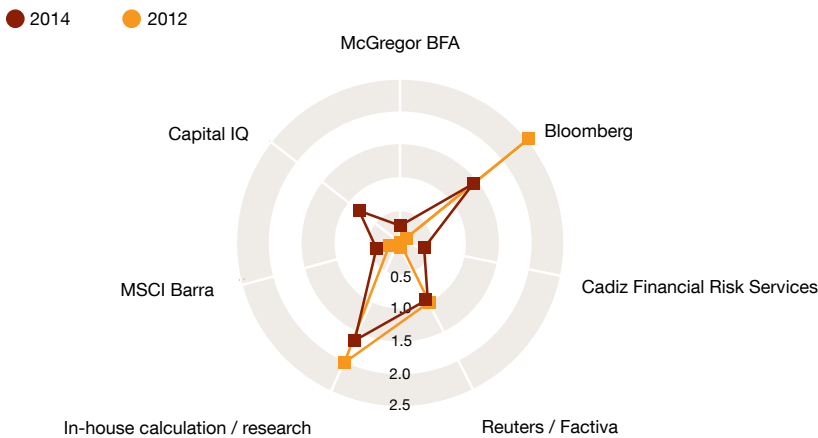
Beta typically measures the sensitivity of a share price to fluctuations in the market as a whole. It is calculated by regressing individual share returns against the returns of the market index.

Analysts often do not use raw data (e.g. share prices and share returns) to estimate beta based on their programmed regression algorithms, but rather subscribe to information systems and databases as sources for betas. We asked respondents to indicate which service providers they use most often.

Q: When performing valuations, how often do you make use of the following service providers as a source of information for beta calculations?

- *Bloomberg*
- *Cadiz Financial Risk Services*
- *In-house calculation/research*
- *McGregor BFA*
- *MSCI Barra*
- *Reuters*
- *Capital IQ*

Figure 5.3 Service providers used to source betas





Bloomberg continues to be a popular source for beta estimates. Capital IQ was offered as an option in this year's survey, and came out as one of the other popular sources. The move towards in-house beta calculations observed in the last survey was also confirmed.

Equity market risk premium

The market risk premium is the single most debated input in a cost of capital calculation. The three broad approaches to estimating a market risk premium include the historic equity bond spread, the survey approach and an implied forward approach.

Historical

The historical approach is the most widely used approach to estimating equity risk premiums. It is based on the assumption that in a well-functioning market, arbitrage will ensure that required and achieved returns should be equivalent.

The actual returns earned on stocks over a long time are estimated and compared to the actual returns earned on a default-free (usually government) security. The difference, on an annual basis, between the two returns is calculated and represents the historical risk premium.

There are several issues related to the use of this approach in estimating risk premiums. The suitability of the approach depends on whether investor expectations are influenced by the historical performance of the market and whether market conditions and expectations change over time. In some markets the availability of data may be limited or unreliable. This is an issue particularly for emerging markets.

Survey approach

The survey methodology is based on the opinions of market participants. There are several issues with this approach. As with most forecasts, survey risk premiums are responsive to recent stock price movements. It is therefore possible that survey premiums will be a reflection of the recent past rather than a good forecast of the future. Survey results may also be influenced by the subjective manner in which questions regarding market risk premiums are posed to respondents.

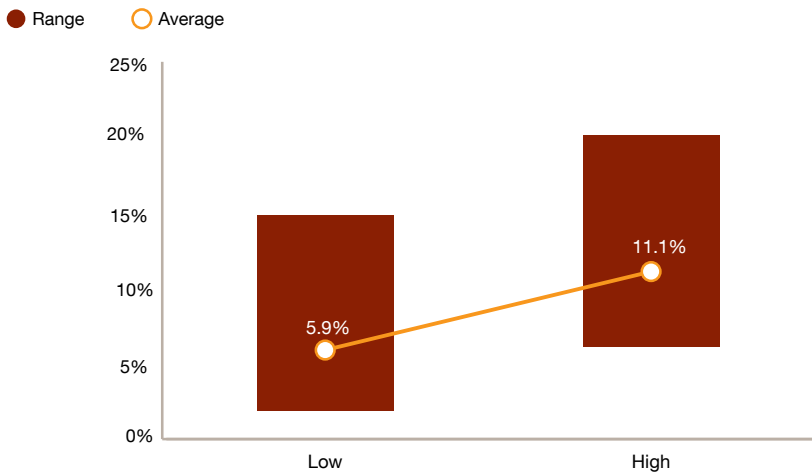
Forward-looking estimate

A forward-looking estimate of the premium is estimated using either current equity prices or risk premiums in non-equity markets. The discounted cash flow approach uses pricing of assets to infer required return or uses actual or potential dividends on an index to calculate required return. This approach will not generate a correct estimate if companies do not pay out what they can afford to in dividends or if earnings are expected to grow at extraordinary rates in the short term.

We asked respondents what range of market risk premiums they typically apply.

Q: Please specify the range of equity market risk premiums applied when you use the CAPM? Please ignore discounts (e.g. marketability discounts), premiums (e.g. control premiums) and the size premiums for small companies, which will be addressed later in the survey.

Figure 5.4 Range of equity market risk premiums used in the CAPM



Average market risk premium

	Low	High
2014	5.9%	11.1%
2012	5.2%	8.2%

Second and third quartiles

	Low	High
2014 2nd quartile	5.0%	9.0%
2014 3rd quartile	6.0%	15.0%

A wide range of market risk premiums was observed. The average market risk premium used in East Africa ranges between 6% and 11%.

Small stock premiums

In computing an equity risk premium to apply to all investments in the capital asset pricing model (CAPM), we are assuming that betas carry the weight of measuring the risk in individual firms or assets, with riskier investments having higher betas than safer investments. A number of studies, such as the data contained in the annual *Duff & Phelps Valuation Handbook*, have shown that investments in small companies may experience higher returns than those predicted by the standard CAPM approach.

In theory, the CAPM would suggest a higher required return for small companies through a higher beta for such companies. The higher betas for small companies can be caused by higher operational and financial leverage, limited access to funding and other factors making them more vulnerable to general market fluctuations.

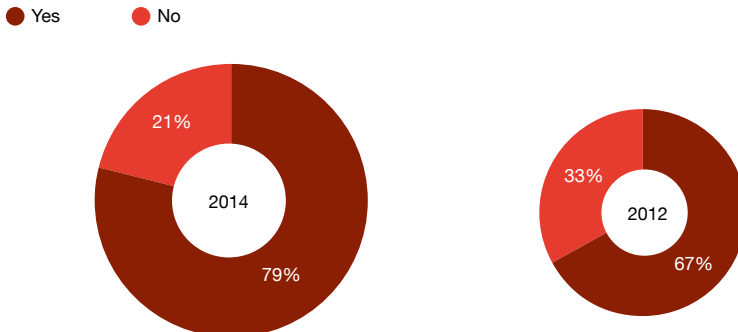
However, the higher betas do not seem to fully explain the higher returns historically achieved by smaller companies. Some have interpreted this as an indication that there are other risks associated with small companies that the CAPM does not address. To adjust for this finding, many practitioners add an additional premium to the cost of equity of companies with smaller market capitalisation.

With various studies both supporting and refuting the notion of the small capitalisation premium, we asked respondents whether they apply a small stock premium (SSP) in the course of their valuation analysis.

Q: Do you adjust the CAPM rate of return by a premium that reflects the extra risk of an investment in a small company?

- Yes
- No

Figure 5.5 Use of small stock premiums

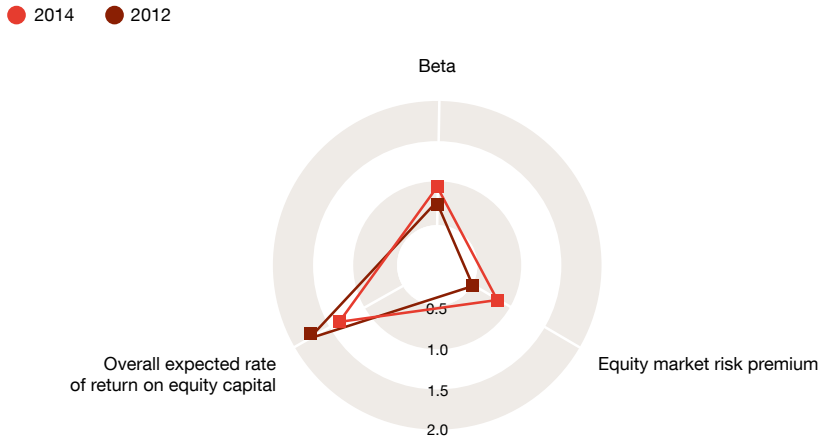


The percentage of respondents considering a small stock premium has increased, with the majority favouring the application of a small stock premium.

Q: When adjusting for small stock premiums, how often do you adjust each of the following factors?

- Beta
- Equity market risk premium
- Overall expected rate of return on equity capital

Figure 5.6 Adjustments made for company size



When applying an adjustment for company size, most respondents make an adjustment to the overall cost of equity.

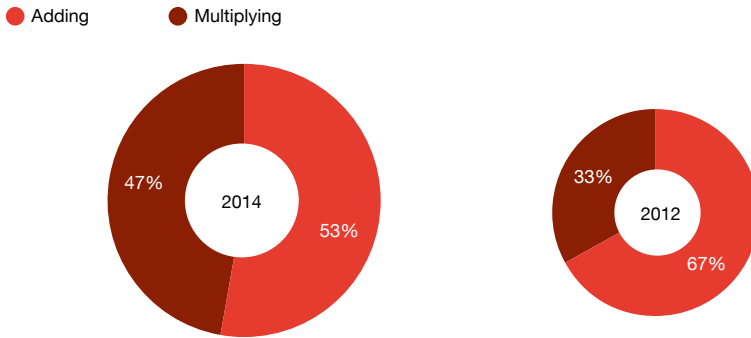
Small stock premiums

As the next step in the survey, we wanted to determine the methodology used to effect the adjustment for company size.

Q: Do you adjust by multiplying a factor (i.e. $CAPM\ ke \times \{1 + SSP\}$) or adding a factor (i.e. $CAPM\ ke + SSP$)?

- *Multiplying*
- *Adding*

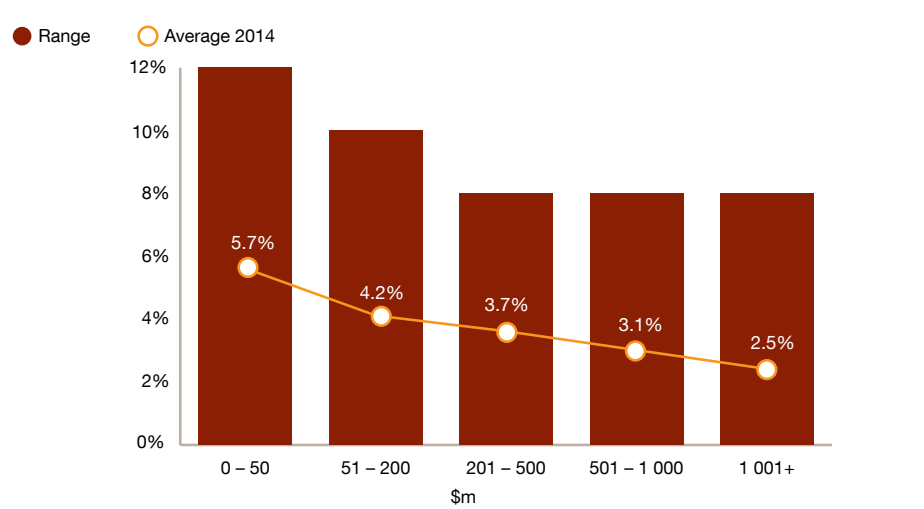
Figure 5.7 Small stock premium inclusion methods



Of the respondents that make size adjustments, most respondents add a small stock premium to the cost of equity.

Q: What is the benchmark small stock premium applied, given the expected size of the company or entity?

Figure 5.8 Small stock premiums applied additively



Average stock premium: Adding²

\$m	0 – 50	51 – 200	201 – 500	501 – 1 000	1 001+
2014	5.7%	4.2%	3.7%	3.1%	2.5%

2 In this year’s survey, the clear majority of respondents indicated they apply an additive premium, with very few applying a multiplication approach. Given the small sample size, data relating to the multiplication approach has therefore not been included.

Specific risk premiums

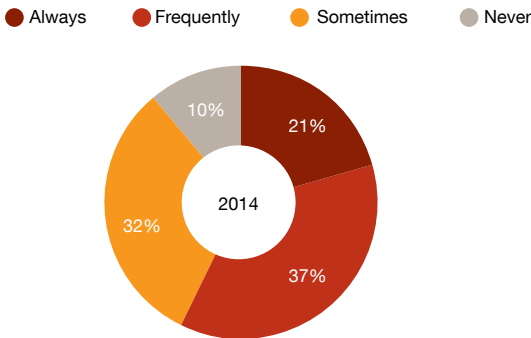
A key attribute of the CAPM is that investors are rewarded only for systematic risk. Specific risks that are theoretically diversifiable are not included in the CAPM. Standard finance theory states that investors should be compensated only for non-diversifiable risks.

Given that the application of a specific risk premium (SRP) is not consistent with the CAPM, we asked market practitioners about whether they apply specific risk premiums, and if so, in what instances. We also asked respondents what premiums are considered for projects at various stages of development.

Q: How often do you adjust the CAPM rate of return by a premium that reflects unique risks to the extent that such risks could not be modelled in the forecast cash flows?

- Always
- Frequently
- Sometimes
- Never

Figure 5.9 Use of a specific risk premium



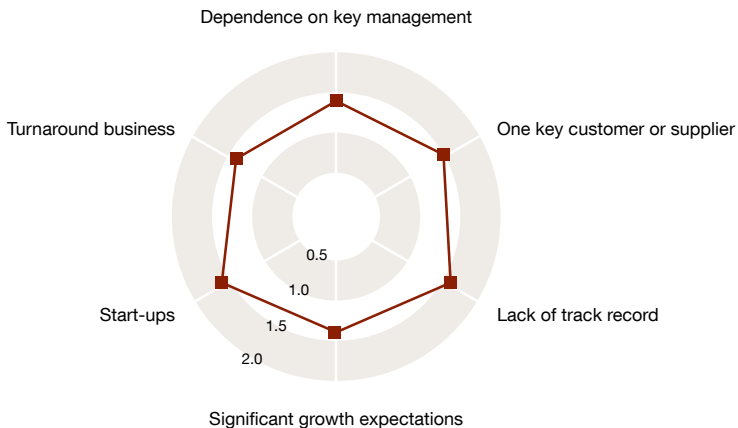
In general, most respondents apply specific risk premiums. In addition, those who apply specific risk premiums are applying them more frequently. Another marked difference since the last survey is the increase in the percentage of respondents who always adjust the CAPM by applying a specific risk premium, which has increased from 0% to 21%.

No less than 90% of respondents regularly or occasionally consider an adjustment to the CAPM, which demonstrates that although the use of a specific risk premium is not supported by the CAPM and financial theory, specific risk premiums are widely used in practice.

Q: How often would each of the following conditions require you to apply a specific risk premium, also referred to as alpha?

- *Dependence on key management*
- *One key customer or supplier*
- *Lack of track record*
- *Significant growth expectations*
- *Start-ups*
- *Turnaround businesses*

Figure 5.10 Specific risk factors



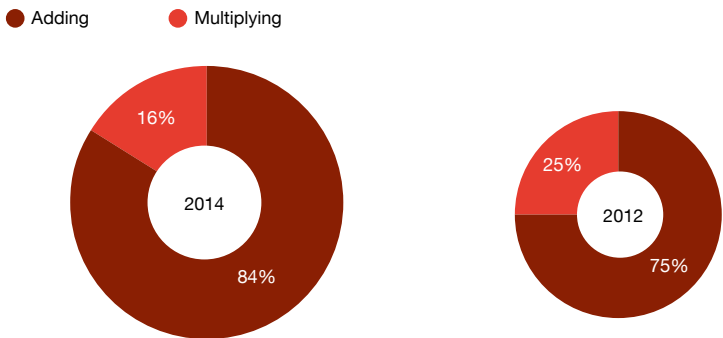
Specific risk premiums

Respondents indicated that most of the factors listed would at some time be considered as motivation for the inclusion of a specific risk premium.

Q: Do you adjust by multiplying a factor (i.e. $CAPM\ ke \times \{1 + SRP\}$) or adding a factor (i.e. $CAPM\ ke + SRP$)?

- *Multiplying*
- *Adding*

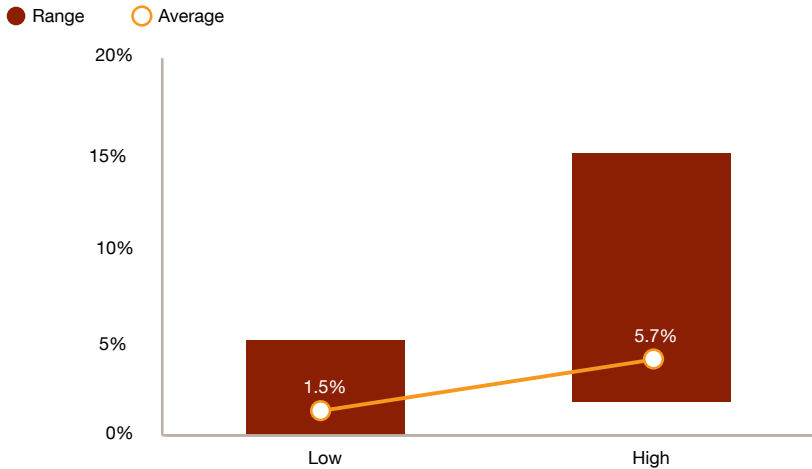
Figure 5.11 Specific risk premium inclusion methods



Most respondents adjust the overall expected return on equity capital by adding a premium. This is consistent with the results of previous surveys.

Q: What is the benchmark small stock premium applied, given the expected size of the company or entity?

Figure 5.12 Specific risk premiums applied additively



Average specific risk premium: Adding³

	Low	High
2014	1.5%	5.7%
2012	1.0%	10.0%

In order to eliminate any outliers in the first and fourth quartiles, the second and third quartiles have been calculated and are shown below. As can be seen, we considered the average range falling between the second and third quartiles. The lower end of the specific risk premium falls between 1% and 2%, and the upper end between 5% and 6%.

Second and third quartiles: Adding

	Low	High
2014 2nd quartile	1.0%	5.0%
2014 3rd quartile	2.0%	5.5%

³ In this year's survey, the clear majority of respondents indicated they apply an additive premium, with very few applying a multiplication approach. Given the small sample size, data relating to the multiplication approach has therefore not been included.

Specific risk premiums

Specific risk premiums are used for a wide variety of reasons, with the upper end of the range likely to be dominated by hurdle rates used to appraise very high-risk projects. The wide range of specific risk premiums added to the CAPM is therefore likely to be a result of the variety of risks that specific risk premiums aim to address.

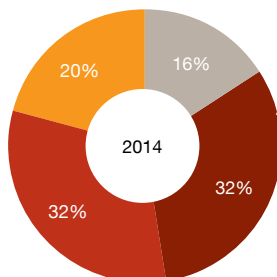
The results indicate that valuation practitioners consider a very wide range of specific risk premiums, which range on average between 2% and 6% when applied additively.

Q: *One instance where specific risk premiums are sometimes applied is where the company is considered to be a start-up. If you apply a specific risk premium for start-up companies, what percentage would you normally apply, assuming you are adding the premium to the cost of equity?*

- 0 – 1.9%
- 2.0 – 3.9%
- 4.0 – 5.9%
- 6.0 – 7.9%
- 8.0 – 10.0%

Figure 5.13 Specific risk premiums for start-up companies

● 0% – 1.9% ● 2.0% – 3.9% ● 4.0% – 5.9% ● 6.0% – 7.9% ● Greater than 8%



A wide range of premiums are applied, suggesting that specific risk premiums are highly asset specific.



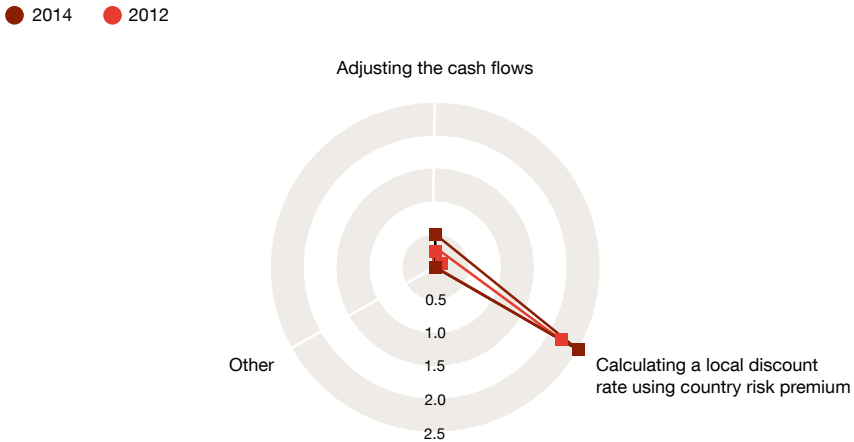
Country risk premiums

When valuing businesses in emerging markets, it is critical that a prospective investor assesses and quantifies the risks inherent in investing in different sovereign territories. We asked respondents how they account for country risk in their valuations.

Q: How do you generally adjust for country risk when valuing an asset in a country where no reliable long-bond yield (i.e. risk-free rate) can be observed?

- *Adjusting the cash flows*
- *Calculating a local discount rate using a US-dollar or euro-based risk-free rate and adding a premium for local country risk and inflation*
- *Other*

Figure 5.14 Country risk premium inclusion method



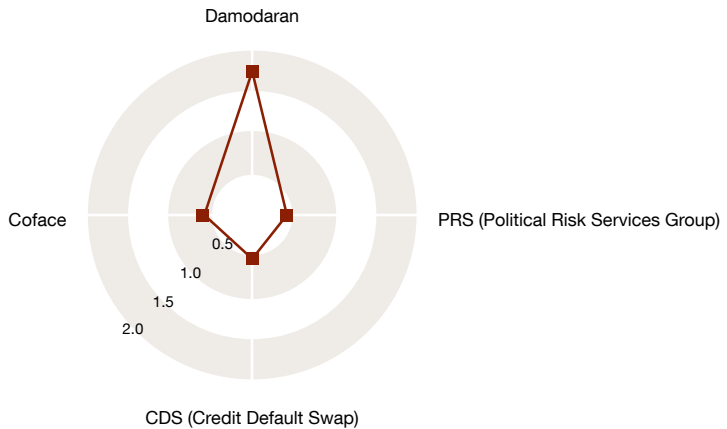
The survey results indicate that country risk differentials are recognised mainly through adjusting local discount rates with a country risk premium.

Given the level of activity in countries with limited capital market data, we asked respondents some additional questions regarding how they determine their country risk adjustments.

Q: How often are each of the following service providers used as a source of information for country risk premium?

- Damodaran
- PRS (Political Risk Services Group)
- CDS (Credit Default Swap)
- Coface

Figure 5.15 Country risk premium data sources



A number of publicly available data sources are used, with Damodaran being a popular source of information.

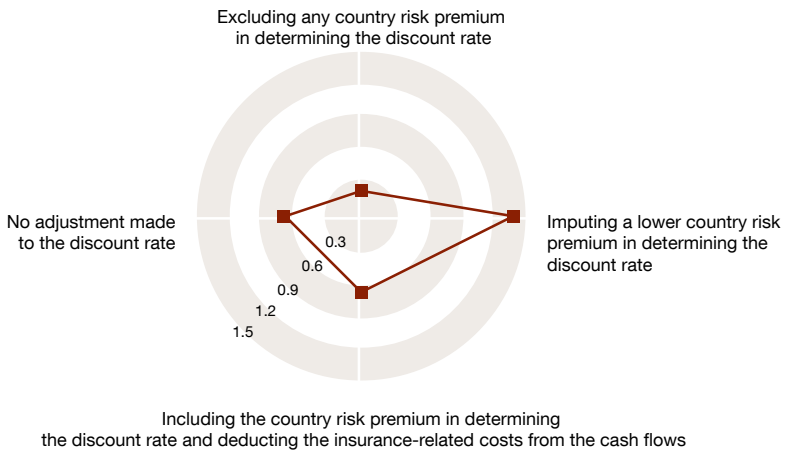
The majority of respondents are familiar with the concept of international insurance against country risk. We asked respondents how they factor in international insurance against country risk when calculating the discount rate.

Country risk premiums

Q *If international insurance is factored in, how do you adjust the discount rate?*

- *Excluding any country risk premium in determining the discount rate*
- *Imputing a lower country risk premium in determining the discount rate*
- *Including the country risk premium in determining the discount rate and deducting the insurance-related costs from the cash flows*
- *No adjustment made to the discount rate*
- *Not applicable*

Figure 5.16 Discount rate adjustment method when factoring in international insurance



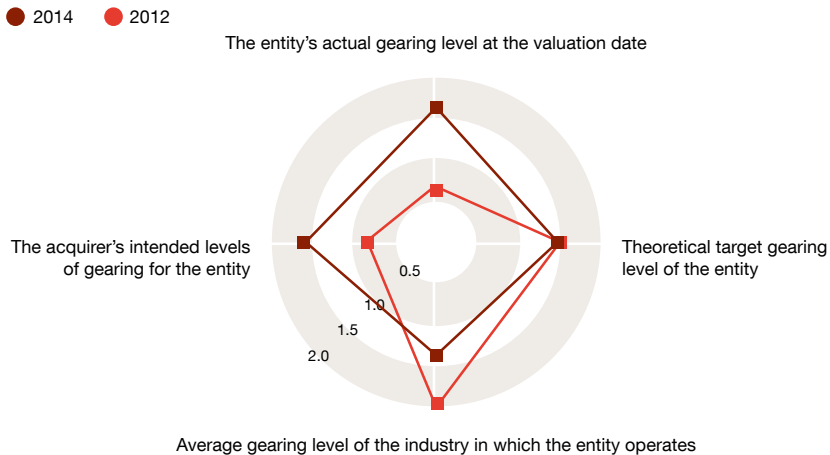
Most respondents impute a lower country risk premium where international insurance is used to mitigate country risk.

Gearing

Q: Which of the following approaches are used in determining an appropriate level of debt and equity in the cost of capital calculation?

- Average gearing level of the industry in which the entity operates
- Theoretical target gearing level of the entity
- The acquirer's intended levels of gearing for the entity
- The entity's actual gearing level at the valuation date

Figure 5.17 Approaches used in determining the appropriate level of debt and equity



A wide variety of indicators are considered as part of the respondents' gearing assumption. These include actual industry and target gearing levels.

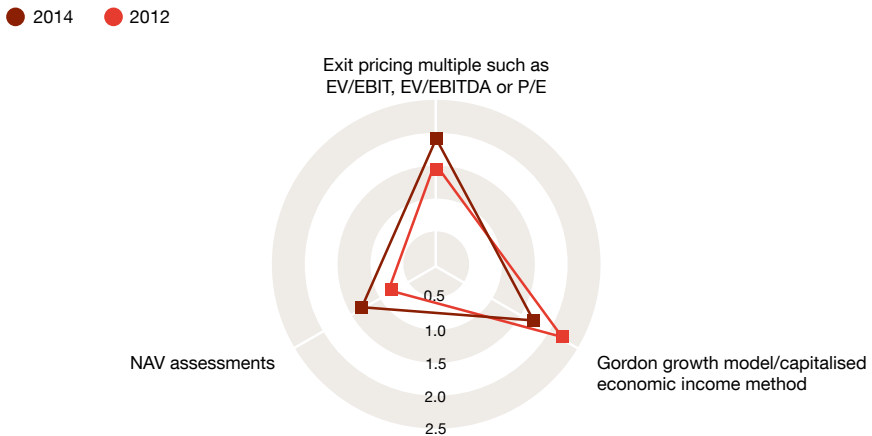
Terminal value

Another technical issue that frequently arises in the income approach is the question of terminal values. Terminal values often contribute more than 50% of the discounted cash flow value. As a result, the terminal value calculation is an area that needs to be considered in detail.

Q: How often are each of the following approaches used in calculating the terminal value in a business valuation?

- Exit pricing multiple such as EV/EBIT, EV/EBITDA or P/E
- Gordon growth model/capitalised economic income method
- Net asset value (NAV) assessments

Figure 5.18 Approaches used in calculating terminal values



The Gordon growth model and exit multiples are the most frequently used approaches to calculate terminal values.

Q: In applying the Gordon growth model/capitalised economic income method, how often do you base your long-term growth assumption on each of the following?

- Company-specific factors
- Consumer price index (CPI)
- Consumption expenditure growth
- Nominal gross domestic product (GDP) growth
- Real GDP growth

Figure 5.19 Basis used for estimating long-term growth rates



The latest survey results indicate a strong preference for macroeconomic factors including CPI and GDP growth, but company-specific factors are also considered by the majority of valuation practitioners.

Market approach

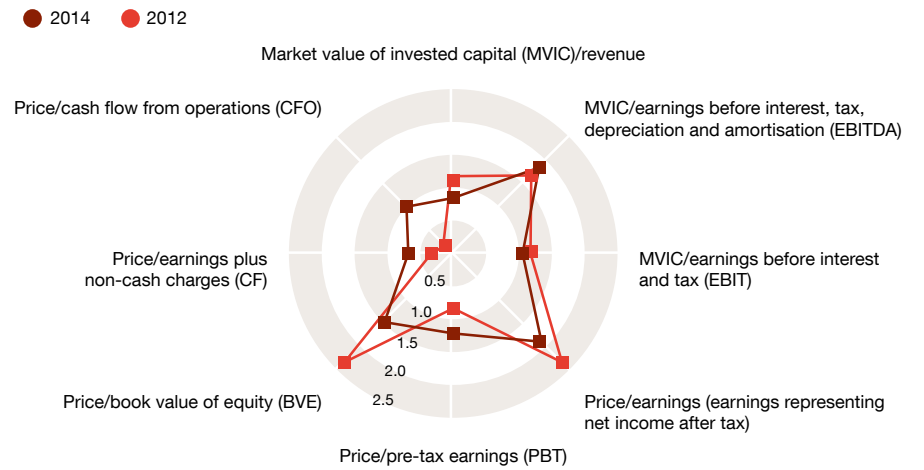
Choice of multiples

A number of valuation multiples or valuation benchmarks can be used in the application of the market approach. This section of the survey tested the frequency of use of a range of common market multiples.

Q: When using the market approach, how often do you use each of the following valuation multiples?

- Market value of invested capital (MVIC)/revenue
- MVIC/earnings before interest, tax, depreciation and amortisation (EBITDA)
- MVIC/earnings before interest and tax (EBIT)
- Price/earnings (earnings representing net income after tax)
- Price/pre-tax earnings (PBT)
- Price/book value of equity (BVE)
- Price/earnings plus non-cash charges (CF)
- Price/cash flow from operations (CFO)

Figure 5.20 Valuation multiples used



The price/earnings, price/book and EV (enterprise value)/EBITDA multiples are the most widely used valuation multiples, according to the respondents.

Adjustment to multiples

Q: If applicable, which of the following adjustments to observed comparable company multiples would you consider in applying the market multiple approach?

- Country risk
- Diversification
- Growth
- Size

Figure 5.21 Adjustments to valuation multiples



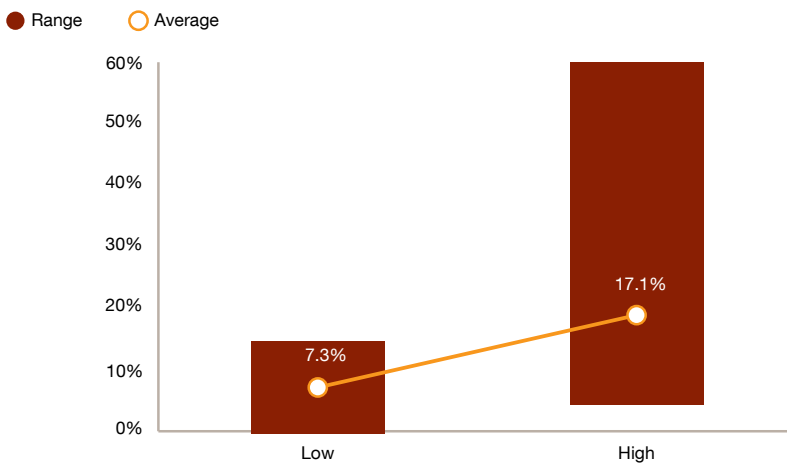
All respondents indicated that they consider making adjustments in determining appropriate multiples in terms of the market approach.

In this year’s survey, we asked some additional questions to gauge the quantum of the discounts being applied.

Country risk adjustments

Q. Assuming you are valuing a business that operates in an emerging market, but you are using developed market comparable companies to derive an earnings multiple, what is the range of discounts you would apply to developed market comparable company multiples to reflect differences in country risk?

Figure 5.22 Range of discounts applied to developed market comparable multiples to reflect differences in country risk



In order to eliminate any outliers in the first and fourth quartiles, the second and third quartiles have been calculated below. As can be seen, we considered the average range falling between the second and third quartiles. The relatively low average results from a large number of respondents not applying country risk premiums in certain instances.

Country risk adjustments – discounts applied

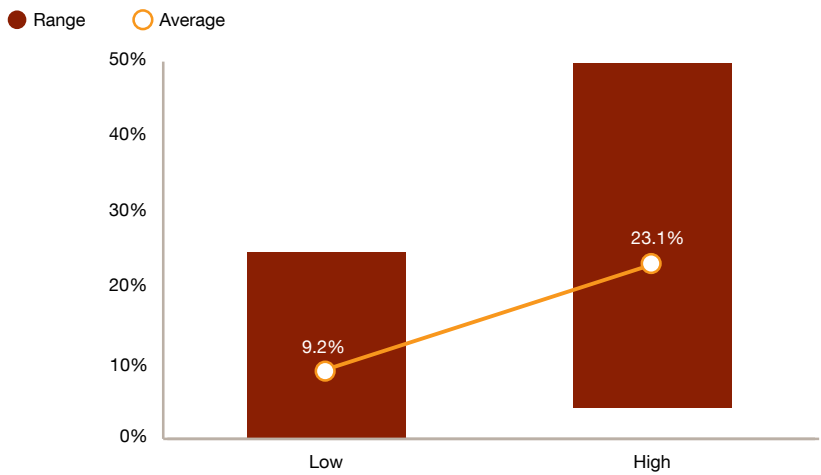
	Low	High
2014 average	7.3%	17.1%
2014 2nd quartile	7.5%	15.0%
2014 3rd quartile	10.0%	20.0%

The lower end of the country risk adjustment falls between 7.5% and 10%, and the upper end is between 15% and 20%.

Size adjustments

Q. Assuming you are valuing a business that is significantly smaller than the listed comparable companies you used to derive an earnings multiple, what is the range of discounts you would apply to comparable company multiples to reflect differences in size?

Figure 5.23 Range of discounts applied to developed market comparable multiples to reflect differences in size



In order to eliminate any outliers in the first and fourth quartiles, the second and third quartiles have been calculated below. As can be seen, we considered the average range falling between the second and third quartiles. The lower end of the country risk adjustment stands at 10%, and the upper end between 20% and 30%.

Size adjustments – discounts applied

	Low	High
2014 average	9.2%	23.1%
2014 2nd quartile	10.0%	20.0%
2014 3rd quartile	10.0%	30.0%

The lower end of the size adjustment applied by respondents is 10%, and the upper end is between 20% and 30%.

Discounts and premiums

Minority discounts

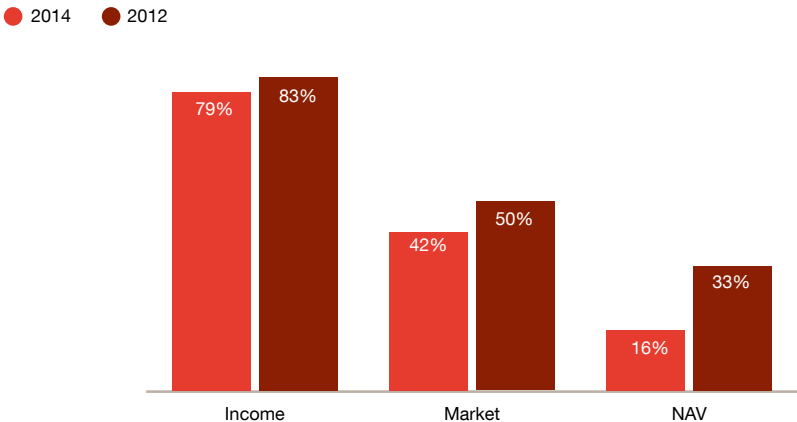
The minority discount relates to the lack of control over the operation and corporate policy for a given investment by its minority shareholders. The minority shareholders can generally not direct the size or timing of dividends or control the selection of management.

A minority shareholder can also not veto the acquisition, sale or liquidation of assets. Minority discounts are therefore usually applied when valuing a non-controlling stake to discount the value for lack of control.

Q: Do you generally apply a minority discount when using any of the following approaches?

- *Income approach*
- *Market multiple approach*
- *Net asset value*

Figure 5.24 Approaches in which minority discounts are applied

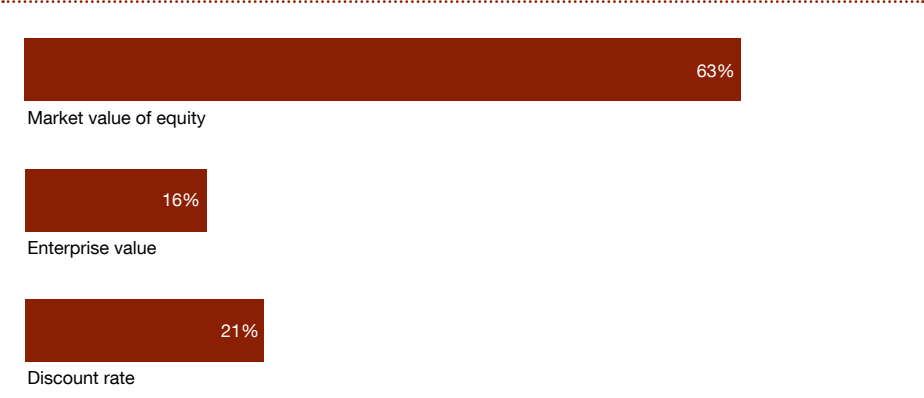


The majority of respondents will consider a minority discount in the income approach.

Q: *Where do you apply the minority discounts?*

- *Market value of equity*
- *Enterprise value*
- *Discount rate*

Figure 5.25 Application of minority discounts



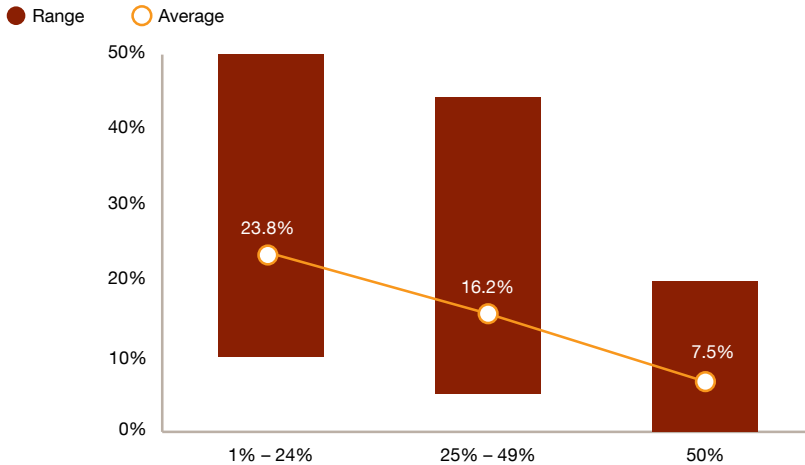
When asked where the minority discounts are applied, most respondents indicated that they prefer to apply the minority discount to the market value of equity.

Given that most respondents acknowledge the appropriateness of the minority discount, we asked them for an indication of the range of minority discounts normally applied in their valuation analysis.

Minority discounts

Q: Please indicate the benchmark minority discount normally applied given the size of the interest being valued.

Figure 5.26 Average minority discount: Equity value



Average size of discount applied⁴

Size of interest	1 – 24%	25 – 49%	50%
2014 average	23.8%	16.2%	7.5%

Second and third quartiles

Size of interest	1 – 24%	25 – 49%	50%
2014 2nd quartile	20.0%	16.0%	5.0%
2014 3rd quartile	26.3%	20.0%	15.0%

⁴ In this year's survey, the clear majority of respondents indicated they apply an adjustment to equity, with very few applying an enterprise value adjustment. Given the small sample size, data relating to adjustments to enterprise value has therefore not been included.



The average minority discount applied to the market value of equity for a interest in the range 1% – 24% is 24% and 16% in the range 25% – 49%. This year we also asked respondents for their view on what minority discount is appropriate where joint control exists. On average, the respondents indicated a minority discount of 7%.

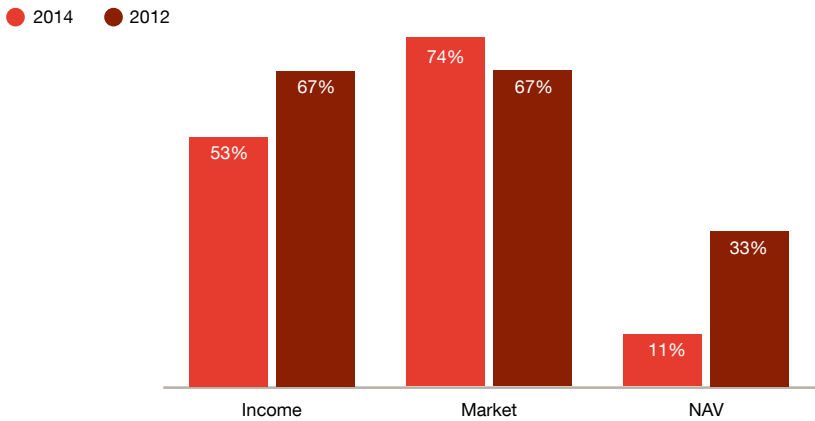
Control premiums

The control premium is the inverse of the minority discount and similar issues have to be considered in calculating a control premium. To summarise, a control premium relates to the additional value associated with the ability to control the distribution of cash generated by the company, which includes the ability to influence the timing and size of the dividend distribution.

Q: Where do you apply the control premiums?

- Income approach
- Market multiple approach
- Net asset value

Figure 5.27 Approaches in which control premiums are applied



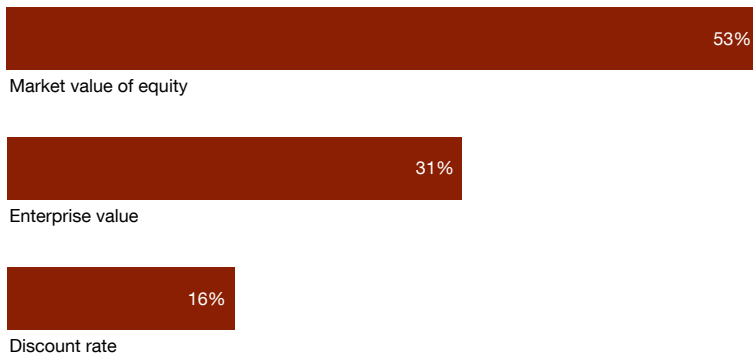
The control premium may already be implicitly included in the income approach and normally the control premium is only applied in a market approach valuation. However, if the control premium relates to synergies not built into the cash flows, a control premium may in some cases be applied to the income approach.

Given that most respondents acknowledge the appropriateness of the control premium, we asked them to indicate how they go about applying control premiums in their valuation analysis.

Q: *Where do you apply the control premiums?*

- *Market value of equity*
- *Enterprise value*
- *Discount rate*

Figure 5.28 Application of control premiums



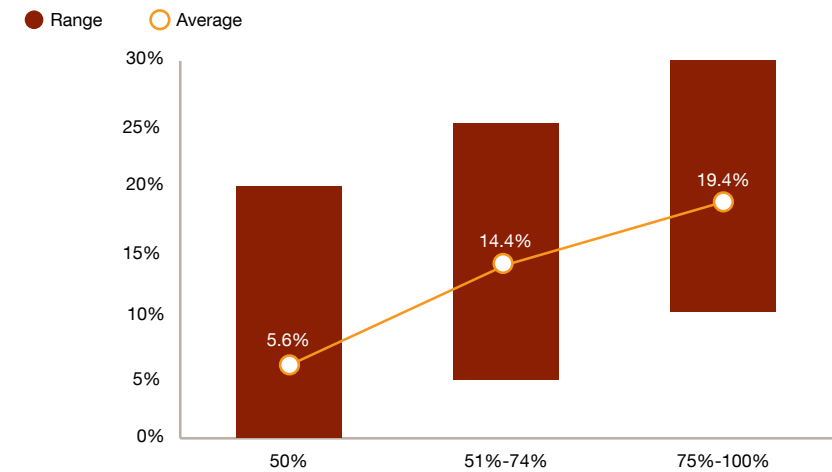
While some respondents apply adjustments to the discount rate or enterprise value, the majority of respondents apply control premiums to the market value of equity.

We then sought to quantify the benchmark control premiums that are typically applied.

Control premiums

Q: Please indicate the benchmark control premium normally applied given the size of the interest being valued.

Figure 5.29 Average control premium: Equity value



Average size of premium applied⁵

Size of interest	50%	51 – 74%	75 – 100%
2014 average	5.6%	14.4%	19.4%

Second and third quartiles

Size of interest	50%	51 – 74%	75 – 100%
2014 2nd quartile	5.0%	15.0%	20.0%
2014 3rd quartile	10.0%	20.0%	25.0%

⁵ In this year's survey, the clear majority of respondents indicated they apply an adjustment to equity, with very few applying an enterprise value adjustment. Given the small sample size, data relating to the adjustments to enterprise value has therefore not been included.



The average control premium applied to the market value of equity for a interest in the range of 51% – 74% is 14% and 19% in the range 75% – 100%. This year we also asked our respondents for their view on what control premium is appropriate where joint control exists. On average, the respondents indicated a control premium of 6%.

Marketability discounts

Marketability can be defined as “the ability to convert the business ownership interest (at whatever ownership level) to cash quickly, with minimum transaction and administrative costs in so doing and with a high degree of certainty of realising the expected amount of net proceeds”.⁶

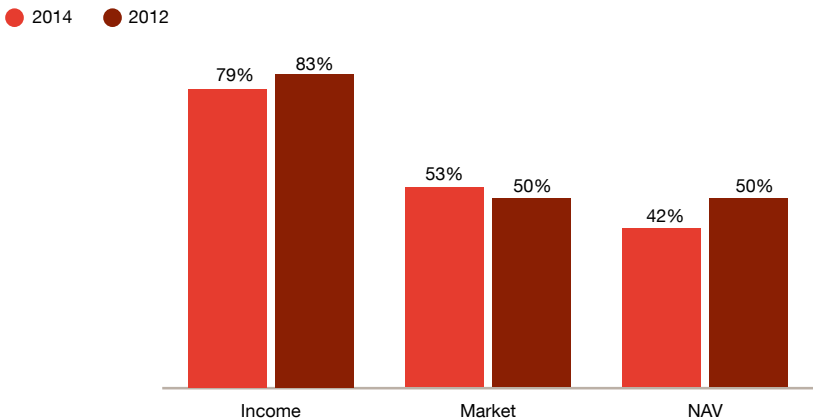
It is important to distinguish the marketability discount from the minority discount. The lack of ownership control captured by the minority discount addresses the limited ownership and lack of operational control, whereas the marketability discount deals with how quickly and certainly the ownership share can be converted to cash.

There is, however, an expected relationship between the marketability and the ownership share. Even after we discount a minority interest for a lack of control, it is usually harder to sell a non-controlling interest than a controlling ownership interest. The marketability discount is therefore expected to decrease with the size of the ownership share.

Q: If the entity is not listed, do you apply a marketability discount to any of the following approaches?

- *Income approach*
- *Market multiple approach*
- *Net asset value*

Figure 5.30 Approaches in which marketability discounts are applied



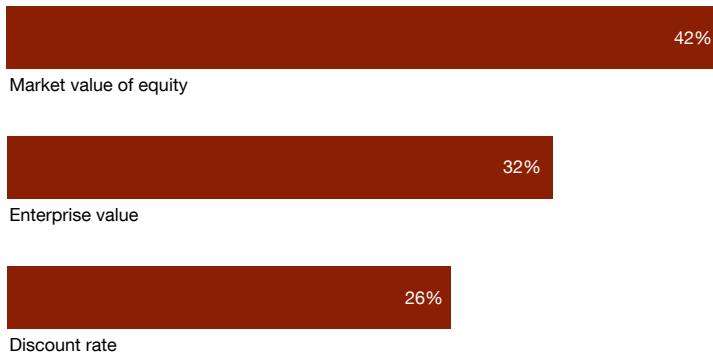
6 Pratt, S, Reilly, R and Schweighs, R. *Valuing a Business*. McGraw-Hill, 2000.

Respondents recognise the need to adjust for marketability in all valuation approaches. The remainder of this section therefore deals with how respondents apply marketability discounts in their valuation analysis.

Q: *Where do you apply the marketability discounts?*

- *Market value of equity*
- *Enterprise value*
- *Discount rate*

Figure 5.31 Application of marketability discounts

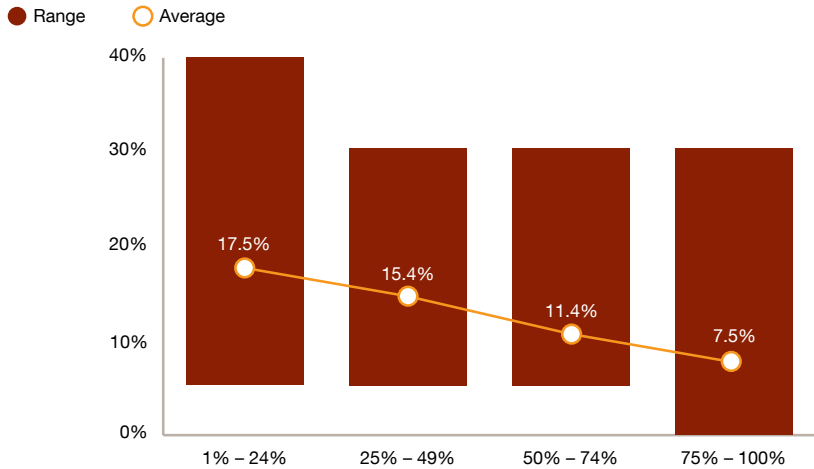


The majority of respondents apply marketability discounts to the market value of equity. We subsequently asked them to quantify the benchmark discounts that are typically applied.

Marketability discounts

Q: Please indicate the benchmark marketability discount normally applied given the size of the interest being valued.

Figure 5.32 Average marketability discount applied: Equity value



Average size of discount applied⁷

Size of interest	1 – 24%	25 – 49%	50 – 74%	75 – 100%
2014 average	17.5%	15.4%	11.4%	7.5%

Second and third quartiles

Size of interest	1 – 24%	25 – 49%	50 – 74%	75 – 100%
2014 2nd quartile	12.5%	12.5%	10.0%	5.0%
2014 3rd quartile	20.0%	20.0%	13.8%	10.0%

The ranges provide an indication of the size of the marketability discounts that are applied by respondents. As shown in the tables above, we considered the ranges falling between the second and third quartiles.

⁷ In this year's survey, the clear majority of respondents indicated they apply an adjustment to equity, with very few applying an enterprise value adjustment. Given the small sample size, data relating to adjustments to enterprise value has therefore not been included.



Section 6:

Infrastructure





A recent global PwC publication, entitled *Capital project and infrastructure spending: Outlook to 2025*, suggests worldwide infrastructure spending will grow from \$4 trillion per year in 2012 to more than \$9 trillion per year by 2025. Overall, close to \$78 trillion is expected to be spent globally between 2014 and 2025.

In tandem with this global trend, governments across Africa have a renewed focus on infrastructure, as they recognise it as an important driver of growth. Infrastructure spending in sub-Saharan Africa is forecast to grow by 10% a year over the next decade, exceeding \$180 billion by 2025, which will maintain the region's 2% share of the global infrastructure market.

With the acceleration in development, funding models are changing. Findings in PwC's recent *Trends challenges and future outlook: Capital projects and infrastructure in East Africa, Southern Africa and West Africa* report suggest that new approaches to funding, such as public-private partnerships, are becoming more common. At least half of the respondents said that they expect infrastructure to be funded by a mix of private and public sector funding, while nearly a third (29%) said that they expect to rely on private-sector debt and equity.

Given the size of and growth prospects for capital projects and infrastructure in Africa, as well as the significant involvement of the private sector in these projects, how the market quantifies the value of these investments is becoming increasingly important.

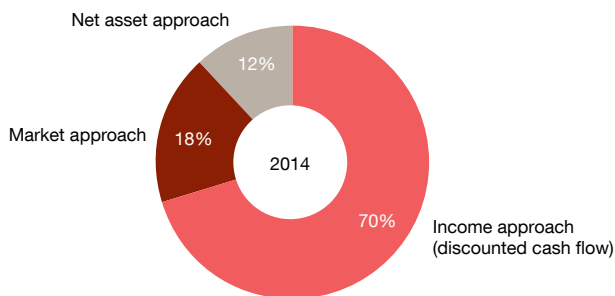
For this reason, in this year's survey we asked respondents questions regarding how they go about valuing interests held in infrastructure projects.

Q: Infrastructure assets represent a unique asset class, having a distinctive set of characteristics that sets them apart from more traditional equity or debt investments. They are generally defined by high development costs, long and/or finite lives, specific financing structures and are often intended to be specific in nature (railways, gas pipelines etc.).

Which of the following valuation approaches do you usually use for valuing infrastructure projects?

- Income approach (discounted cash flow)
- Market approach
- Net asset approach
- Economic valued added (EVA)
- Other

Figure 6.1 Approaches used for valuing infrastructure projects



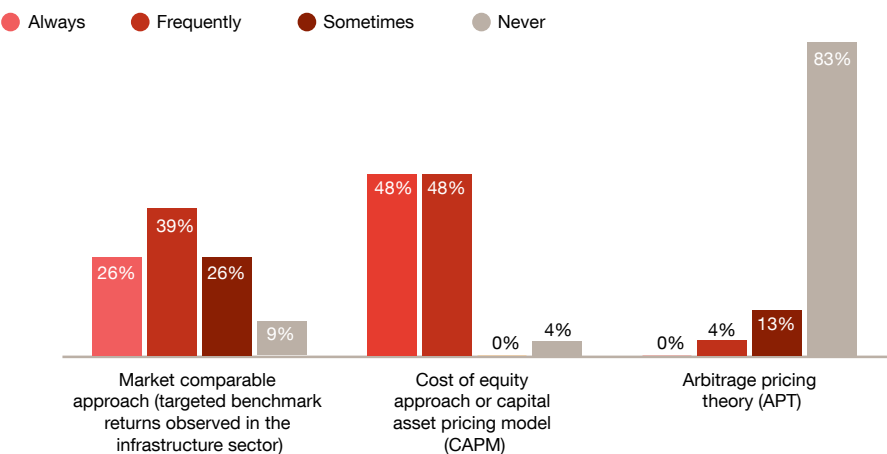
The majority of respondents value infrastructure investments using a discounted cash flow methodology. Given that each infrastructure project has unique characteristics, this is not a surprising result.

Discounted cash flow based methodologies are favoured by the majority of the respondents.

Q. Benchmarking unlisted infrastructure projects is difficult relative to traditional asset classes such as equities and fixed income.

In estimating an appropriate rate of return for infrastructure projects, which of the following methods do you use?

Figure 6.2 Methods used to benchmark rate of return for infrastructure projects



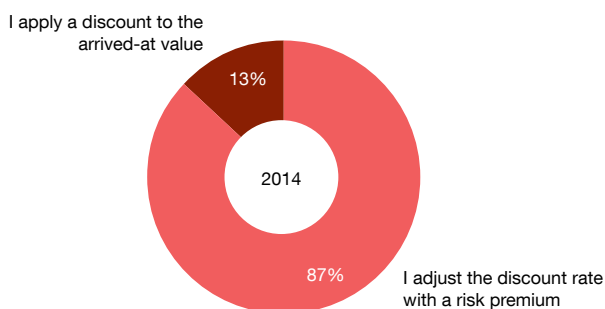
As with business valuations, the CAPM is a methodology that is frequently or always used. However, in the infrastructure sector, analysts look to market returns or benchmarks to use in their discounted cash flow analyses. This is unsurprising given that when considering infrastructure as an asset class, it is more challenging to identify listed comparable companies to use in a traditional CAPM approach. Analysts are therefore inclined to look to alternative methodologies to determine an appropriate rate of return.

While the CAPM is used in determining an appropriate rate of return, given the unique challenges posed in valuing infrastructure projects, it appears that respondents are more open to alternative measures of return.

Q: How do you adjust for your perceived risk associated with an infrastructure project/asset?

- I adjust the discount rate with a risk premium
- I apply a discount to the arrived-at value

Figure 6.3 Adjustments made for perceived risk associated with infrastructure projects



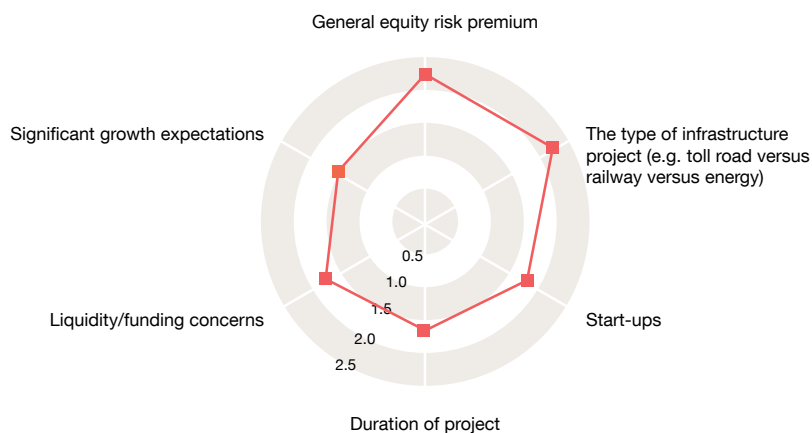
Most respondents incorporate the risk associated with an infrastructure project in the discount rate.

Risks are generally addressed in the determination of the discount rate applicable to the infrastructure project being valued.

Q: What factors do you adjust for when deriving the rate of return for individual infrastructure projects/assets?

- General equity risk premium
- The type of infrastructure project (e.g. toll road versus railway versus energy)
- Start-ups
- Duration of project
- Liquidity/funding concerns
- Significant growth expectations

Figure 6.4 Specific risk factors



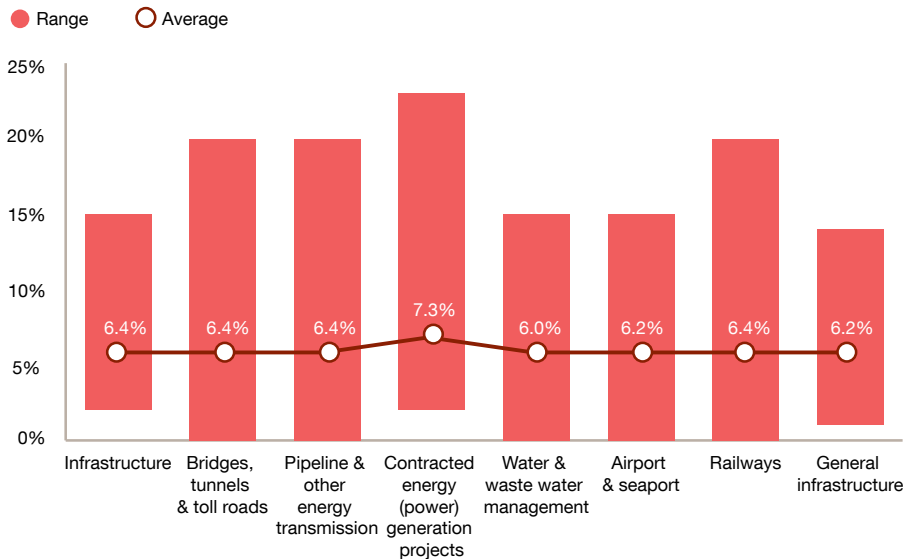
A range of risk factors, project attributes and market factors is frequently considered by respondents. The nature of the project (including stage of development, type and duration) are key considerations, in addition to general market conditions, including the equity risk premium expected by the market.

A very wide range of risk factors is considered, both specific to the project being valued, as well as external measures, such as the equity market risk premium expected by investors.

Q: What is the range of market risk premium/equity risk premium you would typically apply to the following infrastructure asset classes?

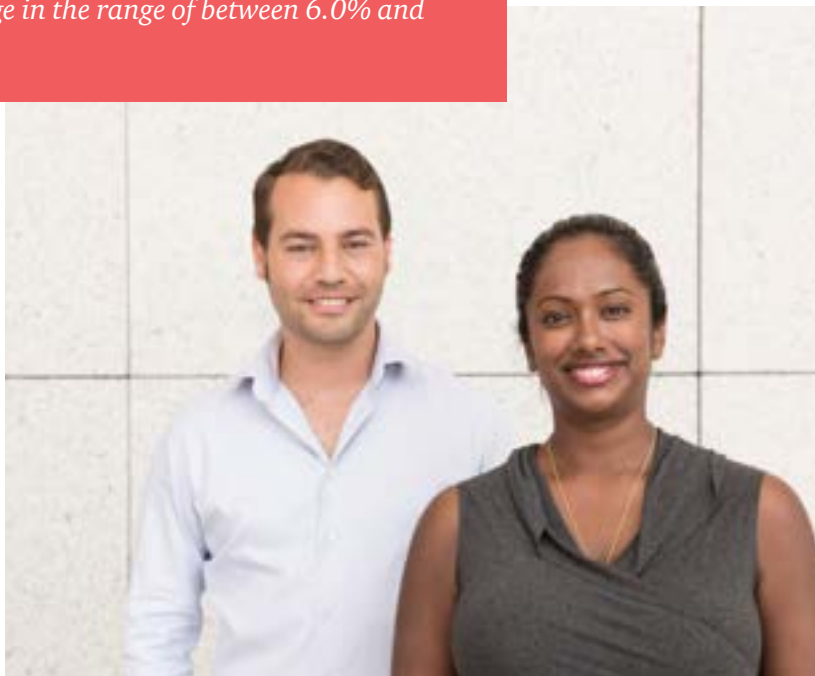
- Infrastructure
- Bridges, tunnels and toll roads
- Pipeline and other energy transmission
- Contracted energy (power) generation projects
- Water and waste water management
- Airport and seaport
- Railways
- General infrastructure

Figure 6.5 Market risk premium/equity risk premium for infrastructure asset classes



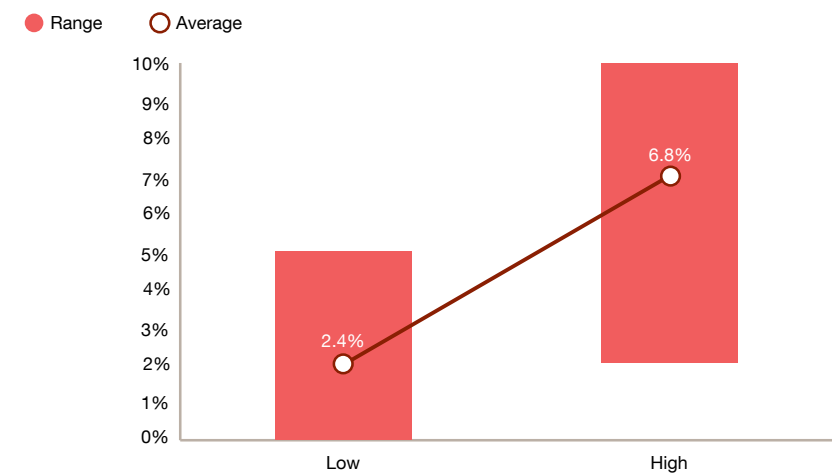
	Infrastructure	Bridges, tunnels and toll roads	Pipeline and other energy transmissions	Contracted energy (power) generation projects	Water and waste water management	Airport and seaport	Railways	General infrastructure
2014 average	6.4%	6.4%	6.4%	7.3%	6.0%	6.2%	6.4%	6.2%
2014 2nd quartile	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%
2014 3rd quartile	7.9%	7.5%	7.9%	8.0%	7.4%	7.4%	7.4%	7.9%

Market risk premiums vary across the various types of projects being considered, but are on average in the range of between 6.0% and 7.3%.



Q: *What is the range of project risk premium you would typically apply to infrastructure projects to account for project-specific risks?*

Figure 6.6 Project risk premiums applied to infrastructure projects



Average size of premium applied

	Low	High
2014 average	2.4%	6.8%

In order to eliminate any outliers in the first and fourth quartiles, the second and third quartiles have been calculated and are shown below. As can be seen, we considered the average range falling between the second and third quartiles. The lower end of the specific risk premium falls between 2% and 5%, and the upper end between 7% and 10%.

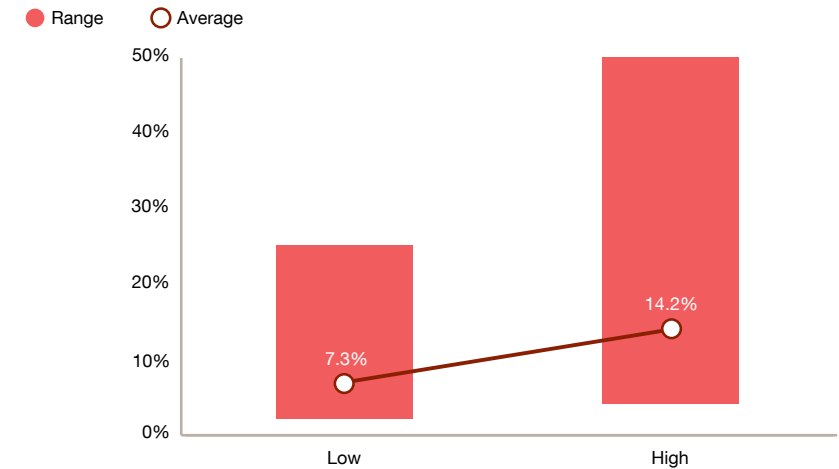
Second and third quartiles

	Low	High
2014 2nd quartile	2.0%	7.3%
2014 3rd quartile	5.0%	10.0%

Project risk premiums range between 2% and 7% on average. A wide range of premiums is observed, which is likely to relate to the diversity of infrastructure projects being valued by the respondents.

Q: What is the range of market risk premium you would typically apply for start-up infrastructure projects that are not yet under construction?

Figure 6.7 Market risk premiums applied to start-up infrastructure projects



Average size of premium applied

	Low	High
2014 average	7.3%	14.2%

In order to eliminate any outliers in the first and fourth quartiles, the second and third quartiles have been calculated and are shown below. As can be seen, we considered the average range falling between the second and third quartiles. The lower end of the specific risk premium falls between 5% and 10%, and the upper end between 10% and 17%.

Second and third quartiles

	Low	High
2014 2nd quartile	5.0%	10.0%
2014 3rd quartile	10.0%	16.5%



A wide range of premiums is applied to start-up projects. On average, they range between 7% and 14%.



Section 7:

Appendices





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Appendix 1

Overview of survey methodology

Research was conducted via an online survey comprising some 60 questions. The following types of questions were asked:

- Frequency-type questions in which respondents were asked to indicate whether they always, frequently, sometimes or seldom used the particular methodology, variable or source;
- Alternative-type questions in which respondents had to indicate whether or not a certain procedure is being followed; and
- Range-type questions in which respondents needed to indicate the value or value range normally used for a particular variable.

The survey ran from 5 September 2014 to 25 November 2014. Valuation practitioners, financial analysts and corporate financiers in East, West (including Francophone countries) and Southern Africa were invited to participate in the survey. We received 77 completed submissions across territories.

The responses were analysed and the results of the analysis are presented in the sections of this publication.

Frequency-type questions

The objective of frequency-type questions was to determine the relative importance of each of the items tested. The frequency questions were analysed based on the following matrix:

Value	Description
3	Item tested is always used/considered by respondents
2	Item tested is frequently used/considered by respondents
1	Item tested is sometimes used/considered by respondents
0	Item tested is seldom or never used/considered by respondents

Alternative-type questions

Respondents were required to make a choice between two or more alternative responses. The result of the alternative-type questions is presented in this publication as a **percentage of total respondents**.

Range-type questions

Respondents were required to provide the value(s) for certain variables, for example, the market risk premium. Respondents had the option to include either a single value or a range of values. In cases where a range was provided, the data was analysed utilising the midpoint of the range to calculate, for example, average/median values.

Appendix 2

List of respondents



- African Capital Alliance
- Acorn Private Equity
- Activa
- African Alliance
- African Finance Corporation
- Afrinvest West Africa
- Akuo Energy
- Alexander Forbes
- Alpha Wealth
- Altron TMT
- Alteo Limited
- Anglo American
- Business Connexion
- BDO
- BPCE Group
- Bravura
- Bridge Capital
- Brimstone
- Cadiz
- CardinalStone
- Chapel Hill Denham
- Coast2Coast
- Constance Group
- Deloitte
- Deutsche Bank Group
- DMH Associates Ltd
- Emerging Capital Partners
- Ernst & Young
- FBN Capital
- Fusion Investment Management
- Gamma Civic
- Gap Capital

- Grindrod Bank
- International Finance Corporation
- International Financial Services
- Java Capital
- JP Morgan
- Kagiso Tiso Holdings
- KPMG
- Lafarge Group
- LeadCapital Plc
- MCB Capital Markets
- Nedbank Capital
- Old Mutual Private Equity
- Phoenix Global Capital
- Public Investment Corporation
- Pivot
- PwC Corporate Finance
- PROPARCO
- PSG Capital
- Remgro
- Riscura Consulting
- Rand Merchant Bank
- Rogers & Co
- Sanlam Corporate Finance
- Sasol
- Société Générale
- Standard Bank
- Swicorp
- Transcend Capital
- Valbridge
- UAC Nigeria Plc

Appendix 3

List of abbreviations



Abbreviation	Description
ALSI	JSE All-Share Index
APT	Arbitrage pricing theory
β	Beta or systematic risk
BEE	Black economic empowerment
BRIC	Brazil, Russia, India and China
BVE	Book value of equity
CAGR	Compound annual growth rate
CAPM	Capital asset pricing model
CF	Cash flows (earnings + non-cash charges)
CFO	Cash flow from operations
CPI	Consumer price index
DCF	Discounted cash flow
EBIT	Earnings before interest and tax
EBITDA	Earnings before interest, tax, depreciation and amortisation
E(Re)	Expected rate of return on equity capital
E(Rp)	Expected market risk premium
EVA	Economic value added
FINDI	JSE Financial and Industrial Index
GDP	Gross domestic product
IFRS	International Financial Reporting Standards
JSE	Johannesburg Stock Exchange
Kd	After-tax rate of return on debt capital
Ke	Rate of return on equity capital
m	million
MSCI World Index	Index of 1 500 world stocks
MVIC	Market value of invested capital
NAV	Net asset value
PBT	Price/pre-tax earnings
PE	Price/earnings, also earnings representing net income after tax
R	South African rand
Rf	Risk-free rate of return
RSA	Republic of South Africa
SRP	Specific risk premium
SSP	Small stock premium
WACC	Weighted average cost of capital

Appendix 4

PwC Deals

PwC Deals provides comprehensive commercial, financial, economic and strategic advice to companies taking on significant business growth opportunities. We have developed a reputation for excellent advice, strong relationships and high levels of independence. These attributes, coupled with a vast range of experience, have made PwC Deals a key corporate advisor in the South African market.

Our range of specialist advisory services across critical areas of corporate finance and transaction services includes:

- **Valuation advice**

We provide independent expert valuation advice to businesses and evaluate the financial implications of, among others, acquisitions, investments, mergers and joint ventures.

- **Mergers & acquisitions**

We focus on the deal process from strategy through to post-deal integration, accessing the capital markets and valuing, negotiating and structuring deals. Our specialists also help clients to complete and extract the maximum value from transactions.

- **Debt and equity capital advisory services (DECAS)**

We provide independent and objective advice while working with clients to structure, arrange, negotiate and implement holistic financing solutions across the capital structure in order for them to meet their strategic objectives. Our detailed knowledge and experience across various industry sectors and products (such as transactional banking, bank, debt and equity capital markets, and financial markets) allow us to identify, source and match the best available solution(s)/product(s) to a client's specific needs.

- **Business recovery services (BRS)**

We provide strategic and tactical advice to directors, management, shareholders, lenders and other stakeholders of businesses who are facing challenging circumstances by providing a service that allows them to remain in control and make more informed decisions. We have a dedicated team that works closely with clients to stabilise and fix troubled operations and ensure a long-term solution that results in a viable and sustainable future for the business.

- **Infrastructure, government and utilities (IG&U)**

We advise governments, state-owned enterprises and private sector investors on project financing, public-private partnerships and privatisations. We provide counsel on the deal process from strategy to financial closure, including the raising of debt.

- **Transaction services**

We assist companies involved in acquisitions, divestitures and strategic alliances to access local and global capital markets. Our services include financial and tax due diligence, sell-side due diligence, vendor assistance, no-access due diligence, bid support, carve-out and post-deal services. We help clients maximise the return on their deals and identify and manage associated transaction risks.

- **Forensics**

We combine financial accounting skills with investigative rigour and industry expertise to deliver expert support and solutions in cases of corporate disputes, investigations of corporate crime, as well as fraud consulting. We assist organisations with confronting and dealing with critical issues that tend to have far-reaching financial and legal implications.

Valuation & Economics

For organisations that need an independent valuation of their business, PwC draws on vast international expertise and research to provide a comprehensive service. We also offer independent advice on a variety of value-related matters, such as advising on the cost of capital and evaluating the financial implications of restructurings, investments, mergers and joint ventures. PwC helps clients to evaluate their options by putting an exact price on their organisation's shares, debt instruments, goodwill, brands and other intangible assets.

Whether a client requires advice on cross-border deals, an expert opinion for the Takeover Regulation Panel or the JSE, advice on or assistance with price negotiations, or in addressing IFRS valuation issues, we understand that complex valuations require specialist resources.

PwC has a dedicated team specialising in performing large, complex and technically challenging valuations. The team is part of an international network of valuation specialists with access to global best practice and top-quality international research. They can assist in:

- Valuation consulting;
- Independent expert opinions;
- Financial reporting valuations; and
- Tax valuations.

Valuation consulting

Our valuation specialists assist businesses to achieve an in-depth understanding of the value of each business or asset in a transaction. Our technical knowledge, combined with our in-depth industry

knowledge, allows us to understand the specific factors driving each deal. We also have extensive experience in valuing businesses for the purpose of BEE transactions and can draw on our vast knowledge to consider specific valuation issues related to BEE transactions.

Examples

- In the event of a merger, acquisition or alliance, it is vital to understand the value likely to be created through the transaction.
- Understanding the value of the business is the first step towards making a black economic empowerment (BEE) transaction, so a detailed valuation is often required from the outset.
- In the event of a dispute, an independent valuation is likely to help resolve issues swiftly.
- Multinational operations make an understanding of the issues driving valuations in different countries essential. Applying a common methodology across all countries generates a more reliable view of an international business's value.
- Achieving a reliable valuation of a business or asset is a critical driver of a successful transaction for buyers and sellers in acquiring or selling a business.

Independent expert opinions

There is a wide range of circumstances in which an independent opinion of value is required and each scenario requires specialist knowledge and the application of specific skills.

Courts, regulators, tax authorities, shareholders and businesses may, at different times, all need an objective specialist to provide a valuation of an asset or business. In the instance of shareholder disputes, an opinion is often required by shareholders. The context and purpose of the valuation determine the approach that needs to be taken to provide an appropriate opinion.

In cases where boards of directors are required by the Takeover Regulation Panel to obtain appropriate external advice on an offer, a fair and reasonable opinion is required. Related-party transactions may also give rise to the need for a fairness opinion in terms of the JSE Limited's Listings Requirements.

Increasingly, non-executive directors and audit committees bear a significant responsibility for corporate governance and this has numerous implications for independent valuations. PwC's Valuation & Economics team has the required experience to provide a robust and credible independent expert valuation.

Financial reporting valuations

International Accounting Standards (IAS) and International Financial Reporting Standards (IFRS) have introduced significant changes to the way in which accounts must be prepared and presented and require a wider range of assets to be valued on an annual basis.

IFRS 3 governs the accounting treatment for business combinations. A fair value exercise for assets and liabilities is

required, whereby all assets (tangible and intangible) from a merger or acquisition have to be included in the balance sheet of the acquirer at their current market value and are depreciated over the term of their useful economic life.

Goodwill is tested for impairment annually and is marked down for any impairments calculated during the annual review process.

These requirements call for specialist valuation services that understand both the specific accounting implications and the wider commercial context in which those financial reporting valuations will apply.

PwC's valuation services draw on considerable technical and financial specialisation provided by our valuation team in combination with the firm's accounting specialists to deliver integrated advice to our clients.

Tax valuations

Valuations often lie at the heart of disputes and negotiations with tax authorities. The specific demands of the tax authorities require specialist advice and detailed knowledge of their working methods and practices.

PwC's Valuation & Economics team is able to assist with tax valuations, including valuations for capital gains tax, stamp duty, estate duty and exchange control purposes.

Mergers & Acquisitions

As a leading corporate adviser in the African market, our dedicated and highly experienced Mergers & Acquisitions (M&A) team can identify opportunities, assist in deal structuring and lead negotiations for mergers & acquisitions, disposals, corporate listings, management buy-ins and management buyouts.

Our position has been reinforced through the completion of key local and cross-border deals and we are also highly experienced in advising companies and black investment groups on BEE transactions and finance raising.

We enjoy high levels of independence in relation to advisory and M&A mandates, since our advice is distinct and independent from financing.

For those pursuing growth opportunities or divestitures, our dedicated and exclusive M&A research resources can identify opportunities locally and internationally through our global network, as well as providing input on global trends to assist clients with their transactions.

For every deal, we can leverage the strength of our international transactions network and we are also able to draw on the full range of PwC services – including due diligence, tax and other specialised advisory services.

Mergers & acquisitions advisory

When organic growth does not satisfy the needs of stakeholders, or when businesses decide to dispose of non-core assets, PwC's Corporate Finance team can assist.

The first challenge for any company seeking to expand is to identify the right business to acquire. At the same time, companies wishing to restructure by disposing of non-core assets at the highest possible prices require similar support. Our highly dedicated and exclusive M&A research resources are able to identify opportunities, locally and internationally and to provide input on trends and global transactions.

Our direct line to both our African and worldwide network immediately extends clients' scope of opportunity. Specialist advice at each critical stage of the transaction – from target identification, investigation, structuring and financing, to facilitating and negotiating the purchase of target companies – ensures that clients gain maximum advantage.

Our integrated worldwide Corporate Finance network, structured in industry groups, facilitates the identification of potential deals in the international arena. Supporting clients through every step of a transaction, we will review and value their business, identify prospective purchasers, and negotiate a transaction most suited to their requirements that will maximise the value to their business.

Black economic empowerment (BEE)

The planning and implementation of a black economic empowerment (BEE) transaction is a unique and complex process that requires a significant investment of time and resources from corporate entities, BEE partners, financiers and advisors. PwC is uniquely placed in having comprehensive experience in advising both entities seeking an appropriate empowerment partner and empowerment groups on strategic issues, and offering support in structuring negotiations with prospective targets or partners.

Our credentials speak for themselves and over the years we have advised numerous leading South African and multinational companies in successfully implementing long-term, sustainable empowerment initiatives. In addition, as corporate advisor to some of the most respected BEE individuals and consortiums in South Africa, we have built up a wide network of potential empowerment partners for corporate South Africa.

As an independent advisor, we are able to take our clients through the process of deciding the most appropriate empowerment strategy, designing and structuring the partnership, identifying and negotiating with the best partners fitting the selected strategy, assisting in the design and implementation of a sustainable funding structure, and delivering an appropriate, value enhancing empowered organisation. As we do not

lend money into transactions, we offer independent advice as to the optimum funding appropriate for the transaction.

Corporate lead advisory

PwC Corporate Finance proactively assists, advises and supports the development and implementation of corporate strategies. Many companies and individuals turn to us for help in shaping their businesses and reviewing strategic objectives. We assist with developing financial models, conducting industry research and determining optimal financial structures.

Advice is geared to clients' needs – whether to implement acquisition or rationalisation strategies, to operate effectively within regulatory regimes or to sharpen defences against hostile bids.

In the current economic environment a number of enterprises are discovering that they require advice on restructuring, reorganisation and unbundling as well as attracting strategic equity partners.

We have an experienced team to advise on the strategic, commercial and legal aspects of these issues. Inward and outward investment opportunities are also advised on and we have significant capacity to apply the power of our multidisciplinary international resources, comprising industry and service line experts, to contribute in this regard.

Debt and Equity Capital Advisory Services (DECAS)

We pride ourselves on being product agnostic, allowing the client the freedom to choose the most appropriate products and product supplier. We strive to achieve this by:

- Focusing on the provision of independent advice rather than the sale of funding and hedging solutions;
- Identifying, sourcing and matching the best available solutions and products to the specific needs of our clients; and
- Breaking down the silos that exist between and within the various product suppliers in order to ensure that the best available solutions/products are sourced from the most appropriate suppliers.

Typical services we provide include:

- Raising of new finance as a result of event-driven activities such as:
 - » Capital expansion;
 - » Mergers & acquisitions;
 - » Disposals;
 - » Dividend recapitalisations;
 - » Share buy-backs;
 - » Introduction of a new shareholder; and
 - » Special projects (property development, project and infrastructure finance).
- Refinancing of existing facilities as a result of:
 - » Event-driven activities as detailed above;

- » Positive changes in the market and/or credit migration of the client that should result in more attractive terms;
- » Existing providers of finance having reached their industry/sector and/or single borrower exposure limit, and needing to access additional or new sources of finance; and/or
- » Facilities nearing maturity.
- Restructuring of existing facilities as a result of:
 - » An event of default or potential event of default;
 - » Deterioration in the creditworthiness of the client; and/or
 - » Financial performance not expected to achieve forecast due to a number of reasons (e.g. economic slowdown, labour unrest, deterioration in commodity prices).

Our general advisory offering also addresses treasury needs (including the management of interest rate, currency, credit and liquidity risk); disposal of banking portfolios; buy-back of debt and assistance with ratings advisory.

By acting as a pure client and private-side advisor, we do not negotiate/participate as an actual counterparty to the transaction, allowing us to remain objective and provide an independent check and balance to our clients.

Business Recovery Services (BRS)

The survival of a business can be threatened by any sudden shift in environment or weaknesses in finances and/or operations. There are many factors (such as market changes, strategic challenges, banking facility issues and operational disruptions) that can contribute to a crisis and may be characterised by:

- Severe underperformance;
- Solvency and liquidity issues;
- Declining earnings; and
- Increased borrowings to survive.

Our specialist advisors can identify the problem areas affecting a business and resolve them quickly and efficiently. The solutions offered are sensitive to the business and their employees and provide management and stakeholders with in-depth and dynamic options based on which to make informed decisions.

The range of interventions we offer extends from making firm recommendations to preparing business and restructuring plans, as well as implementation and monitoring support in achieving these plans. In aiming to preserve, enhance and realise value in distressed businesses, we provide:

- Review services, including independent business reviews, cash flow reviews, contingency planning and more;
- Restructuring and turnaround solutions, including advice, development and implementation of plans;
- Business rescue services;
- Optimised exits;
- Cash and working capital management; and
- Crisis stakeholder management.

Our team is here to support you every step of the way with strategic and tactical solutions.

The IGU team provides leading-edge advice, from strategy through to transactions, in the areas of:

- Public-private partnerships;
- Project finance;
- Privatisations; and
- Smart procurement.

We provide independent financial advice, ensuring a balance between conflicting objectives and the best structured and most competitive transactions for our clients.

We focus on providing advice to either government or private sector participants that achieves the objective of getting the transaction completed, while optimising the benefit to our clients.

Our local and international advisory experience covers numerous sectors, including:

- Hospitality;
- Health;
- Education;
- Power;
- Mining;
- Oil & gas;
- Information and communications technology, including telecommunications and convergence;
- Transport (road, rail, ports and public transport); and
- Water and waste.

Public-private partnerships

Governments are under significant pressure to improve public services and develop infrastructure. This places an undue burden on government resources and public sector capital. Increasingly, the private sector is asked to provide capital and resources through public-private partnerships (PPPs), which take on many forms, including concessions and joint ventures.

PPPs allow the public sector to achieve value for money by accessing private sector capital, resources and skills, thereby obtaining the benefits of innovation, risk transfer and improved quality/service levels.

PPPs allow the government sector to develop in ways that are usually only associated with the private sector, while private businesses that enter into PPPs are opening themselves up to new growth opportunities and are increasing their capacity for development.

We help governments undertake feasibility studies by scoping and developing projects and evaluating appropriate procurement methodologies. By managing the procurement process, including negotiations assistance, we ensure a timely financial close in accordance with legal and regulatory requirements. We also advise governments on the principles and implementation of PPPs.

We assist the private sector with PPPs by structuring deals, developing and modelling the commercial and financial structures for transactions, arranging finance and providing advisory assistance from bid submissions and clarification through to financial close. In addition, we provide specialist commercial advice to BEE investors participating in PPPs.

Privatisations

In order to privatise an asset successfully, governments often seek a reliable methodology. This may include:

- Recognising local, cultural and economic conditions;
- Learning from international experience and best practices;
- Developing an appropriate strategy and structure; and
- Ensuring the procurement process is competitive and fair.

PwC reconciles investors' profit motives with the government's requirements for political and financial transparency. For governments, PwC can assist in ensuring that these requirements are met and by offering support and advice on developing the appropriate strategy and structure for the privatisation transaction.

Similarly, we advise private sector investors, management and employees on acquiring assets being privatised and assist in developing structures that access international and local funds, allowing for a competitive bid.

Smart procurement

We provide procurement transaction structuring and advice to the public sector for large and complex procurement transactions that are not being procured through PPPs, but which still require value-adding commercial structuring.

We provide advice and assistance during all aspects of the procurement process:

- Process development, including adopting the most appropriate procurement strategy for the relevant transaction. This also includes determining the commercial structure of the transaction and the risk allocation and mitigation strategies;

- Documentation development, including an expression of interest (EOI), request for qualification (RFQ) and request for proposal (RFP) as appropriate for the chosen procurement strategy;
- Development of the evaluation criteria and the contract term sheet;
- Process administration, including managing the bid process in such a manner that the outcomes of the process are able to withstand legal challenge;
- Bid evaluation by assisting with providing evaluation commentary and assessments; and
- Contract negotiations.

Project finance

Project finance relates to the limited recourse financing of public or private infrastructure projects. Increasingly, governments and companies want to shelter their balance sheets and prefer to finance major projects on a stand-alone basis. This is especially true for PPPs, but can be used for all infrastructure projects.

Funding for infrastructure projects is complex and presents specific challenges that require specialist knowledge and understanding to create appropriate finance structures to ensure that risks are dealt with effectively. The increasing need for public sector infrastructure means that funding from the private sector is in high demand. Investors are required to use sophisticated financial engineering to secure PPPs with the public sector, which requires increasing levels of innovation.

We provide independent advice and assistance in developing and modelling commercial and financial structures for transactions, arranging the most appropriate and efficient mix of financing and closing each transaction by supporting the negotiations to financial close.

Delivering Deal Value

This service offering is focused on working with clients to ensure that the value they receive from their transactions is maximised. Services include post-merger integration, divestiture and post-acquisition improvements.

Post-merger integration

The primary aim of our post-merger integration service offering is to ensure that clients achieve a timely and effective business integration.

The post-deal integration process is about how synergies will be attained and how the combined business will be stabilised to preserve current value and ensure that the acquirer achieves the required return from the transaction.

Our services, on a high level, include:

- Planning an integration in order to achieve day-one readiness;
- Drawing up of integration plans (First 100-day plans) applying a holistic multi-work stream approach (including finance and tax structuring, HR and change management, IT, operations and legal);
- Challenging management on their integration plans;
- Project managing the planning and implementation of the plan;
- Coordinating the use of specialist skills such as HR/change management and IT specialists from PwC; and
- Identifying the critical path of an integration process.

Our post-merger integration methodology

can also be adapted and applied to restructuring, disposal assistance, day-one readiness assessments and integration health checks.

Divestiture (carve-out)

The preparation of carve-out financial statements can be challenging as there is limited guidance covering their composition. Moreover, the seller's financial statements and the carve-out financial statements may treat the same item differently. As a result, the preparation of carve-out financial statements requires special attention to ensure that all of the assets and liabilities of the separate business have been properly identified, and that all relevant costs of doing business have been reflected in the carve-out financial statements.

We assist clients in following a structured carve-out approach, giving specific attention to the identification of what is 'in' and what is 'out', the treatment of shared assets and services as well as identifying dependencies on the larger entity or group.

Post-acquisition improvements

Our post-acquisition improvement service offering is aimed at attaining as well as preserving deal value after the transaction process has been concluded by ensuring potential issues identified during the transaction process are timeously and appropriately dealt with.

We assist our clients with the provision of appropriately skilled specialist resources to address potential issues while management focuses on business as usual.

Transaction Services

PwC Transaction Services assists companies with acquisitions, divestitures, strategic alliances and access to local and global capital markets.

We see ourselves as deal process managers that help clients get deals done faster, with less disruption and at a more attractive price. Using cross-functional teams, we bring together all the relevant expertise from across the firm, including tapping into the firm's vast industry sector knowledge, both locally and globally.

We help clients maximise the return on their deals and manage associated risks. Our services add value by:

- Assessing the target business relative to the economic and operational objectives of the client and the assumptions underpinning the deal;
- Assessing the basis of the transaction and providing clients with analyses that support their negotiations. We cover areas such as issues affecting pricing, sustainability and synergies; and

- Assessing risk factors and providing guidance on the way the deal should be structured.

We work with clients to leverage due diligence findings in deal negotiations and help them to maximise the benefits of their deals while managing risk effectively. We can assist with:

- Mergers & acquisitions;
- Divestitures/disposals;
- Carve-outs;
- Strategic alliances; and
- Providing access to local and global capital markets.

Our network of professionals includes forensic accountants, analysts, fraud investigators, forensic technologists and anti-money laundering and legal specialists. Working together, we offer integrated accounting, financial, statistical, and forensic services to legal firms and organisations.

We provide services in four key areas:

- Expert accounting and dispute resolution. Solutions we offer include:
 - » Damages quantification;
 - » Expert accounting;
 - » Expert determination;
 - » Valuation and business disputes; and
 - » Transaction and shareholder disputes.
- Forensic accounting and investigations. We pursue a proven four-pronged strategy:
 - » Minimising business disruptions, financial loss and reputational damage;
 - » Identifying the perpetrators and uncovering actionable evidence;
 - » Tracing and retrieving stolen/missing assets to as great an extent as possible; and
 - » Recommending and/or implementing effective remedial action to prevent future problems.
- Fraud risk consulting. Our proactive solutions focus on:
 - » Control environment;
 - » Fraud risk assessment;
 - » Information and communication; and
 - » Monitoring.
- Forensic technology solutions, including:
 - » Securing electronic evidence;
 - » Investigating discrepancies or allegations involving computerised systems and electronic data;
 - » Data recovery services; and
 - » Data analytics.
- Anti-money laundering. We provide services including:
 - » Customer due diligence and all of its elements (risk rating, EDD, SDD);
 - » Suspicious and unusual activity and transaction monitoring;
 - » Regulatory reporting;
 - » Records management (storage and retrieval);
 - » Governance and oversight (policies, governance reports);
 - » Training tailored to organisational roles (classroom, e-learning); and
 - » Regulatory interaction models (reporting and requests).



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