

Accounting Beta as a Risk-Mapping Criterion: The Casablanca Stock Trade-off as an Example

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Abstract

To the development of organisations, the issue of calculating the cost of equity is essential. It is a crucial tool for figuring out value production. For assessing the cost of equity, a number of models have been presented in the financial literature, such as the capital asset pricing model (CAPM). This paradigm, however, is only applicable to publicly traded businesses; it is inapplicable to privately held businesses. Alternative measurements of the cost of equity have arisen to address this issue, including accounting beta. This study's major goal was to examine the correlation between market beta and accounting beta, which was computed using ROA, ROE, and net income, in order to show how accounting beta may be used to gauge risk for privately held businesses. This study was conducted using information from a Selection of 49 firms that were listed between 2015 and 2019 on the Casablanca Stock Exchange. The research hypotheses were empirically tested using panel data econometrics. The findings demonstrate that calculating accounting beta using ROA and ROE well approximates market beta and provides a workable method for estimating the cost of equity for unlisted companies. The study's findings add to the body of knowledge on the cost of capital by highlighting the importance of accounting beta in calculating the cost of equity and, consequently, the creation of value for the business.

Keywords: Accounting beta • Cost of equity • Unlisted companies • ROA • ROE

Introduction

An organization's risks are inevitably influenced by the environment it operates in. Without considering the risk involved, investing in initiatives might result in failures and financial loss. In the field of finance, the concept of risk is significant; it is a deciding factor in every investment, and its identification and assessment are up for debate among a variety of experts and practitioners. The relevance of the risk element in the decision-making process for investments has made it possible for it to be directly correlated with return. A high-risk business will raise its compensation to entice investors, which will satisfy the business' funding needs. Roque and Caicedo Carrero (2021) and Phuoc et al. therefore claim The overall risk of an asset can be divided into systematic and specific risks.

The latter can be crystallised by an efficient investment, which implies the need for portfolio diversification; systematic risk, on the other hand, cannot be managed by diversifying a portfolio of securities, so investors will want to be compensated for taking on such risk. Systematic risk is regarded as a crucial component in the cost of equity calculation since it establishes the cost associated with using a company's equity in order to demonstrate the true value generation of the business. At this point, a number of financial models enable the assessment of the risk-return relationship, enhancing the effectiveness of financial decision-making. As said by Intrisano The Capital Asset Pricing Model (CAPM), which examines the connection between risk

and anticipated return on equity and represents the cost of equity, is one of the most popular models as of 2017 [1].

Subjective Heading

The many goals of the CAPM estimates allow us to assess the return needed to invest in an organisation while also providing a way to calculate the cost of capital for businesses in order to calculate the value generation (Faiteh and Aasri 2022). The CAPM model, however, can only be used for publicly traded corporations, necessitating the development of alternate methods for estimating risk and, consequently, the cost of capital for unlisted organisations. In this situation, using alternative models to calculate the cost of equity for privately held companies is essential. The subjective evaluation of a company's systematic risk is the foundation of the qualitative approaches used as a method for calculating. These approaches include rating models like the Boston Consulting Group model [2].

This approach has the drawback that many rating agencies, particularly in developing nations, are unable to offer an estimate for all unlisted companies. The analytical approaches employ the accounting beta technique, which is regarded as the best method for calculating the beta and, consequently, the cost of equity capital for unlisted companies (Palliam 2005; Rutkowska-Ziarko 2022). This method makes an effort to link accounting data in order to calculate the cost of capital. The theory behind it is that accounting data are modified by information and events, which would also be the foundation of market values. As an illustration, a business losing its key client will have adverse effects on its performance; this information will likely lead to a decline in the share price on the financial market [3].

Ball and Brown (1969), who were the first authors to concentrate on accounting beta, claimed that accounting income had an explanatory capacity of around 40% of variations in market beta. Almisher and Kish (2000), among others, studied a sample of 701 U.S. corporations between 1990 and 1995 to assess the association between performance and the usage of accounting beta. The empirical work of the researchers showed a clear and significant link between accounting beta and firm performance. Similar to this, Sarmiento-Sabogal and Sadeghi (2015) investigated the efficacy of accounting beta as

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a potent risk indicator and an alternative to traditional market-based metrics using a sample of U.S. listed corporations. The findings demonstrated that market beta is typically 20–50% higher than accounting beta. Applying some corrective measures, like using ROE, can lower this difference to a range of 22–25% when using ROA. However, the findings also implied that, given the uniqueness and characteristics of small firms, the use of accounting beta to measure risk may be biased. This study's primary goal is to determine whether the accounting beta accurately captures the systematic risk as evaluated by market beta at the Casablanca Stock Exchange [4].

In fact, the demonstration of accounting beta's use as a useful indicator of risk and, consequently, of the cost of capital will provide experts and researchers with an alternative when determining the value creation for unlisted companies in developing nations like Morocco, which is distinguished by a dearth of listed firms and the predominance of SMEs in the economy. But unlike other research in the field, ours is unique. Since most research have relied on correlation rather than more pertinent econometric techniques, our study's econometric choice supports the standpoint of accounting beta. Second, because few studies have focused on accounting beta in the context of developing nations, our study offers a crucial foundation for scholars who wish to do so. have concentrated on developed nations. Third, this is the first study to be conducted in Morocco that examines the connection between accounting beta and market beta in order to draw conclusions on the viability of using accounting beta as a risk indicator for unlisted companies.

Discussion

After being adjusted for heteroscedasticity, the findings of the second regression reveal a positive and statistically significant link between market beta and accounting beta as assessed by ROE at a 5% level (beta ROE coef. = 0.2921178, $p = 0.021$). Additionally, at the 1% level, the results for the variable beta ROA show a favourable and substantial correlation (beta ROA coef. = 0.72874, $p = 0.000$). Contrarily, we discover that the correlation between the independent variable market beta and the independent variable accounting beta as evaluated by net income is negative and statistically insignificant (beta net income coef. = 0.045159, $p = 0.616$). These outcomes are consistent with the first projection [5].

The findings of the study demonstrate a favourable and significant link between market beta and accounting beta. To Consequently, accounting beta can be used by unlisted companies as a risk indicator to calculate the cost of equity capital and, consequently, value generation. In fact, the accounting beta gives unlisted company shareholders a picture of the best way to use their money. A high accounting beta suggests a high cost of equity, which has a detrimental effect on the organization's ability to create value.

Conclusion

Choosing an investment requires careful consideration of the issue of

calculating risk. In order to do this, an asset's overall risk can be split into two categories: systematic risk and specific risk. The latter can be managed by an effective investment, which implies the need of portfolio diversity. However, diversity cannot manage systematic risk, forcing issuers to compensate investors for their level of risk tolerance. As a result, risk measurement techniques have taken on utmost significance in the field of finance, and professionals and researchers are still working to accurately determine and calculate risk.

We have been able to identify various models thanks to our analysis of the literature. that can replace the CAPM in order to assess risk for unlisted organizations, such as the analogical model, which bases its beta calculation on a sample of listed companies. However, utilising accounting beta to assess organisational risk has a number of drawbacks. First, the adoption of this method is hampered by the availability and regularity of accounting information because not all unlisted companies are required by law to frequently reveal their data to the general public. The second is the quality of the accounting data published by unlisted companies, as many unlisted companies, particularly SMEs, lack a public accountant who can vouch for the accuracy and trustworthiness of the data. Third, this study's findings are limited to a single market; in order to choose whether to employ accounting beta as an alternative, a comparison with other financial markets in emerging nations should be conducted. help assess the risk of privately held firms.

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Conflict of Interest

None.

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