International Journal of Applied Economics, Finance and Accounting
ISSN 2577-767X
Vol. 22, No. 2, pp. 1-14
2025
DOI: 10.33094/ijaefa.v22i2.2296

Comparative Analysis of Business Valuation Methods: A Practical Examination Using Discounted Cash-Flow and Economic Value-Added Approaches

Andreas Hadjixenophontos[1]
Christos Christodoulou-Volos[2*]
Julien Friedrich Kurz[3]

[1]*Department of Accounting and Finance, Neapolis University Pafos, Cyprus.*
[1]*Email: a.hadjixenophontos@nup.ac.cy*
[2]*Department of Economics and Business, Neapolis University Pafos, Cyprus.*
[1]*Email: c.volos@nup.ac.cy*
[3]*Novastone Capital Advisors, Cyprus.*
[1]*Email: j.kurz@nup.ac.cy*

Keywords:
Business valuation
Comparative analysis
Discounted cash flow
Economic value-added
Transaction business.

JEL Classification
G32; M21; G11; D81.

Received: *8 March 2025*
Revised: 19 *April 2025*
Accepted: 6 *June 2025*
Published: 16 *June 2025*
(Corresponding Author)*

Abstract

This study responds to inquiries regarding the practicality of valuation methods, focusing particularly on the Discounted Cash Flow (DCF) and Economic Value Added (EVA) approaches, employing a real company as the subject of valuation. The research highlights the DCF method's viability in real-world applications, emphasizing its market standard status and pivotal role in company valuation from an investor's perspective. Despite its complexity, the DCF method is lauded for its ease of use, time efficiency, and forward-looking perspective. Recognizing the subjective nature of valuation procedures, the study acknowledges the ability to influence value as a recognized risk, but it is essential for informed investment decisions. Conversely, while EVA is recognized as an intriguing theoretical approach, a gap between its theoretical promise and practical application is revealed, particularly in the case of small and medium-sized businesses (SMEs). Despite its structural practicality, EVA is underutilized in real-life scenarios. A comparison between DCF and EVA suggests that the former is more time-efficient and commonly used for investment purposes, with existing calculation templates enhancing its appeal. Despite underlying assumptions, the DCF method remains relevant and holds significant weight in company valuations, standing out as the preferred method alongside multiples.

Funding: This study received no specific financial support.
Institutional Review Board Statement: Not Applicable.
Transparency: The authors declare that the manuscript is honest, truthful and transparent, that no important aspects of the study have been omitted and that all deviations from the planned study have been made clear. This study followed all rules of writing ethics.
Data Availability Statement: The corresponding author can provide the supporting data of this study upon a reasonable request.
Competing Interests: The author declares that there are no conflicts of interests regarding the publication of this paper.
Competing Interests: The authors declare that they have no competing interests.
Authors' Contributions: All authors contributed equally to the conception and design of the study. All authors have read and agreed to the published version of the manuscript.

1. Introduction

In today's economic climate, entrepreneurs are forced to increase their productivity levels and to focus the efficiency of their actions on an economic optimum. These persistent tendencies are, among other factors, the result of the investors' return on investment, which a company must accomplish. In this context, the maximization of shareholder value plays a decisive role in strategic corporate management. The shareholders, who mostly have a financial interest, aim to see an ever-increasing company value year by year. The increasing opening of markets in a globalized world economy with rising competitive pressure has led to an "international merger merry-go-round" with restructuring and realignment of the major corporations, which makes their own organic growth increasingly difficult. Portfolio expansion and its streamlining, i.e., the

purchase and sale of companies and shares within them, serve as a strategic management tool for assessing the profitability of a venture. This inorganic growth is increasingly assessed on a value-oriented basis.

Corporate valuation is of crucial importance, both in cases of mergers and acquisitions and in cases of investment selection. The valuation is based on established methods, which are thus gaining importance in today's business world. They serve as a decision-making aid both for the acquisition of companies and for the selection of profitable investments demanded by shareholders during value-oriented corporate management, which promise a risk-adequate return. One relevant problem that arises is the practicality of these theoretical models for an external investor in real-life applications, since the latter possesses only limited information about the target companies. In this paper, a comparative analysis is carried out between the Discounted Cash Flow (DCF) method, based on future cash flows, and the Economic Value-Added (EVA) approach.

The comparative analysis between DCF and EVA methods for business valuation raises several critical questions about the discrepancies between these approaches. Firstly, it prompts an examination into how the theoretical foundations of each method translate into practical application within real-world business valuation scenarios. Secondly, it explores the sensitivity of valuations generated by both methods to the underlying assumptions made, and the consequent impact on the reliability and accuracy of the valuations. Thirdly, it questions which method offers a more straightforward and user-friendly implementation, particularly for individuals with varying levels of expertise, such as investors and financial analysts. Fourthly, it examines the extent to which the results of each method are accepted and trusted by market participants, including investors, lenders, and stakeholders. Fifthly, it considers the time consumption associated with applying each method, and whether significant differences exist in the time required to complete valuations using DCF versus EVA. Lastly, it examines how DCF and EVA integrate with other valuation methods, such as market-based or asset-based approaches, to offer a comprehensive assessment of a company's value.

The methodological approach employed involves several key steps aimed at addressing the critical questions and filling the gaps identified, besides selecting DCF and EVA as the primary methods for comparison. The underlying assumptions of both methods are meticulously analysed to identify key differences and assess their impact on valuation outcomes. Subsequently, real-world data are then utilized to demonstrate the practical application of each method, highlighting any challenges or advantages encountered during the valuation process. A thorough comparative analysis between DCF and EVA is conducted, considering factors such as ease of use, time efficiency, market acceptance, and relevance in different business contexts. Additionally, expert interviews are sought to provide additional insights into the practical applicability and limitations of both methods, validating the study's findings. Finally, the study concludes with practical recommendations regarding the suitability and advantages of using DCF versus EVA for business valuation in various contexts.

This paper contributes to the ongoing debate surrounding fair value accounting practices and their impact on investors' decision-making processes by evaluating the practicality of the selected company valuation methods from the investor's perspective in a real-life application" It focuses on establishing the enterprise value, serving as a key monetary benchmark to aid in determining an appropriate purchase price. The exposition is tailored for strategic and financial investors who leverage company valuation as a tool for profit-driven transactions. The analysis adheres to the German valuation standards outlined in the Institute of Public Auditors Standard 1 (IDW S1), providing a consistent foundation for reference.

The remaining of this paper is structured as follows. Section 2 review some relatively recent literature. Section 3 introduces the multifaceted topic of valuation methods. Section 4 presents data and empirical results. Finally, Section 5 presents a summary of this empirical research and concluding results.

2. Literature Review

Behera (2020) explores the applicability and performance of the EVA model under changing required return conditions compared to constant required return assumptions. He stresses that the conventional approach of using the EVA valuation model relies on the assumption of constant required return and constant return on equity. However, he acknowledges that in practice, the required rate of return is not static and may vary over time. This raises questions about the validity of the EVA under changing required return scenarios. To address this issue, the author proposes modifications to the traditional EVA valuation model to accommodate changing required return conditions. Specifically, he suggests replacing the book value of equity with the present value of required earnings or normal market earnings to make the model applicable under changing required return assumptions. The study conducts empirical analyses to compare the explanatory power of the modified EVA valuation model with changing required return assumptions against the traditional EVA model with constant required return assumptions. This analysis is performed using data from a sample of large-cap, mid-cap, and small-cap companies. The findings indicate that the EVA-based valuation model with changing normal market return outperforms the traditional EVA model with constant required return assumptions. This suggests that the modified EVA model better explains the market value of equity under changing required return conditions. Overall, the paper contributes to the understanding of the applicability and performance of the EVA valuation model in dynamic financial environments. By demonstrating the superiority of the modified EVA model under changing required return assumptions, the

study provides valuable insights for practitioners and researchers involved in equity valuation and financial analysis.

Pruzhansky (2013) compares the EVA with the traditional DCF method of investment appraisal. The study finds that the DCF method is prone to dynamic inconsistency, potentially leading to suboptimal investment decisions. In contrast, the EVA method is better suited for dynamic decision-making and does not suffer from these drawbacks. It highlights the limitations of the DCF method, particularly in recommending investments that may not be dynamically optimal. The DCF method may overlook long-term implications, leading decision-makers to regret their choices in the future. On the other hand, the EVA approach helps identify optimal project termination points and suggests temporary investments to increase economic profits, even if the net present value over the project's lifetime is negative. The practical implications of the findings suggest that relying exclusively on the DCF method may lead to suboptimal commercial strategies, especially in regulated industries. Regulators and firms are advised to consider alternative approaches like EVA-based assessments to ensure more robust investment decisions. This is particularly relevant in industries where significant residual market value exists, as the DCF method may not accurately reflect the opportunity costs of capital. Overall, the paper emphasizes the importance of considering dynamic factors in capital budgeting decisions and advocates for the adoption of more comprehensive valuation methods like EVA to maximize returns on investment and minimize opportunity costs.

3. Methodology

In business administration, the financial instrument of company valuation is used to determine the value of a company. In this process, the value is measured based on the distributable surpluses achieved. In addition, non-financial motives such as the material substance, innovative strength and market position also play a role in showing the projected benefits. Business valuation involves analyzing a company according to objective and subjective criteria, hard and soft factors, to value it in monetary units. The goal of business valuation is to determine the potential price for an entire company or parts of it.

The value determined by business valuation has a normative character and serves as an indicator for a fair price. The company to be valued is defined as an economic and legal entity, with the acquisitive principle being constituent. For evaluation purposes, the economic characteristics of the company to be valued are delimited, while the legal constitution has no influence.[1]

The basis of the company valuation is formed by the financial data, which must be determined and interpreted by the accounting department. In this context, accounting has a considerable influence on the result and the comparability of the values determined. However, the different applications of accounting principles is criticized worldwide, as this can have a significant impact on the economic strength of a company. To counteract this problem, international standardized accounting regulations such as the International Financial Reporting Standards (IFRS) have been introduced to ensure a uniform basis of information. Nevertheless, there are still differences in application, such as in the treatment of assets and liabilities, which is only allowed in exceptional cases in IFRS accounting, while US GAAP has limited application guidance here. In addition, there are various international valuation standards that allow an individualized valuation of a company. In order to ensure comparable and appropriately interpretable values for transaction business, it is important to consider the valuation standards. Therefore, in addition to the application of IDW S1, this study also uses accounting in accordance with the International Standard IFRS.

3.1. Research Design

The research design employed in this study involves a comparative study approach to evaluate the DCF and EVA methods for business valuation. The study utilizes a mixed-methods approach, combining quantitative analysis with qualitative insights derived from expert interviews. This approach allows for a comprehensive examination of the practical application, advantages, and limitations of both valuation methods.

Participants in the study include industry experts with experience in business valuation. Data collection involves gathering financial statements, market data, and other relevant information from a company operating in the "Gaming and Entertainment" industry. The data are then analysed to compare the performance of the DCF and EVA methods.

This study differs from past research by providing a practical examination of DCF and EVA methods through a real-world case study. While previous studies have primarily focused on theoretical comparisons or empirical analyses, this research combines both approaches to offer a more holistic understanding of the strengths and weaknesses of each valuation method. Additionally, the inclusion of qualitative insights from industry practitioners adds depth to the analysis and enhances the relevance of the findings for decision-makers in the field of business valuation.

[1] The term "value" is meaningless if it has no purpose. Only a norm creates a value system and enables its interpretation. This makes the investor reference essential in business valuation.

3.2. Business Valuation Approaches

The chosen valuation methodologies include DCF and EVA. These two approaches are selected to juxtapose a forward-looking valuation method with one rooted more in the past. Additionally, the DCF approach is included due to its prominent standing and practical significance in the M&A context. As a controversial alternative, the EVA approach is introduced, primarily acknowledged in the domain of performance evaluation. This enables the presentation of an alternative method alongside the comprehensive valuation approaches, providing a spectrum of possible interpretations.

3.2.1. Discounted Cash Flow Valuation Method

The DCF method is based on the concept of the net present value (NPV) calculus to evaluate investment decisions by discounting future cash inflows. Discounting serves as the counterpart to interest and enables the comparison of different investments by discounting the value at a certain valuation date. Ultimately, enterprise value represents the present value (PV) of a business. This method is divided into two groups, the gross method, also known as the entity approach, and the net method, also known as the equity approach.

When applying the net method, the value of equity is determined directly by discounting cash flow figures from which interest payments to the provider of debt capital have already been deducted. The resulting cash flows (CF) correspond to the cash inflows generated by the company, which are available solely to the equity providers. They are referred to as flow(s)-to-equity (FTE) or cash flow to owners and are calculated as.

$$FTE = NI + NCE - CWC - Capex + B - LR \quad (1)$$

Where NI = Net Income; NCE = Non−Cash Expenses; CWC = Changes in Working Capital Capex = Capital Expenditures; B = Borrowings; LR = Repayments.

A distinction between flow(s) to equity and free cash flows (FCF) is that, in the case of flow(s) to equity, both future interest on borrowings, including the resulting tax effects, and changes in the level of borrowings are considered when determining the CF discounted. In contrast, FCF only considers future CF without taking into consideration the effects of interest on borrowers and changes in borrowings.

$$FCF - IOD + TSFIOB + \Delta B - LR = FTE \quad (2)$$

Where FCF = Free cash flow; IOD = Interest on debt; TSFIOB = Tax savings from interest on borrowings, ΔB = change (increase) in borrowings; LR = loan repayments = Flows to equity

As the FTE are attributable exclusively to the equity providers of a company - i.e., these are dividends, capital reductions and capital increases - they are discounted only by the return required by the equity providers. Other capital costs, such as interest in borrowings, are not considered in the calculation of flows to equity, as these exclusively represent the returns to the company's equity investors.

The gross method provides two types for application. One is based on FCF (standard) and the other on total cash flow (TCF). The latter has not been able to establish itself. The gross procedures are divided into two procedural approaches, which differ in their discount factors and tax considerations. In the Adjusted Present Value (APV) approach, the discount factor is determined by a risk-adjusted return requirement of the owners. This factor is used to discount the free cash flows to determine the value of the company. To account for the tax benefit, this is calculated on an accrual basis and discounted before being added to the value of the notionally purely self-financed company. Under the Weighted Average Cost of Capital (WACC) approach, the enterprise value can be determined by calculating the FCF and the TCF. Under the given assumptions, the tax problem in the cash flow forecast is corrected by the FCF by including the cost of debt in the WACC, taking taxes into account. The TCF considers the correct taxes when determining the CF, so that the pre-tax cost of debt can be included in the WACC without the need for correction. In this context, the WACC approach with FCF in the numerator is considered the conventional way in valuation practice and is regarded as the standard variant in literature.

The WACC approach is used to determine the total value of a company. This involves discounting the period specific FCF and adding the value of non-operating assets to the total capital value, if any. The WACC is a ratio that is regarded as a long-term economic lower limit for the return generated by operations. It considers the ratio of debt to equity as a blended rate of return. While the cost of debt is derived from the actual terms of corporate debt, the cost of equity is derived from the Capital Asset Pricing Model (CAPM). The discount rate thus depends on the capital structure of the company.

Particular attention is paid to the debt component, as this has an impact on the tax burden. The interest recognized as borrowing costs is considered an expense and thus reduces earnings before taxes and the tax burden. The financing structure of a company therefore has a significant influence on CF. The value advantage created by this chain of effects is referred to as the tax shield. The cost of capital in business valuation basically represents the opportunity cost of capital and thus indicates the expected return on an alternative, risk-appropriate investment opportunity. FCF describes the financial surpluses available to all providers of capital of the company, considering social distribution limits. It is calculated as the difference between cash flow and budgeted capital expenditure. In this context, budgeted capital expenditures represent the outflows for capital expenditures that are forecast together with the cash flows of the upcoming periods. FCF is used for payments to capital providers as well as for substitutes. In addition to expenses such as dividends and interest payments, it is also used for repayments in connection with capital reductions and redemptions.

To carry out a company valuation, forecasts for future FCF must be estimated. The planning horizon for these forecasts is generally five to ten years. The length of this period depends on the one hand, on the quality and availability of the data needed to model the FCF. On the other hand, the end of the planning period should represent a stable point for the earnings, assets, and financial position of the company in its environment. Since external investors usually have limited information and insight, a planning horizon of five years is assumed to keep the quality of the earnings value at a constant level.

In the WACC approach, the formula for calculating the total enterprise value is broken down into individual components and considered separately. The formula divides the total enterprise value into two parts: (1) In the first part, all FCF of the detailed planning period are discounted to the valuation date using the WACC, and in the second part, the terminal value of the company is determined as a perpetual annuity and added. To obtain the value of equity, i.e., the enterprise value, the value of debt must be subtracted.

$$GW = \sum_{t=1}^{T} \frac{FCF_t}{(1+W)^t} + \frac{FCF_{t+1}}{(W-g)(1+W)^t} \qquad (3)$$

Where GW = Total enterprise value; FCF_t = Free cash flow for the period t; W = WACC; FCT_{t+1} = Perpetual annuity (corresponds to the value of period t in the case of zero growth; t = Duration of the forecast period; g = Growth rate.

FCF is calculated by taking the difference between cash flow and budgeted capital expenditure. In this context, CF can be determined in a direct or indirect way, whereby, according to the Institute of Public Auditors in Germany, the indirect way is derived from budgeted income statements (IDW S1).[2] Equation 4 illustrates the calculation procedure.

$$FCF = CFFOA - IPPEIA \qquad (4)$$

Where CFFOA = cash flow from operating activities; IPPEIA = investments in property, plant, and equipment and intangible assets.

According to Institut der Wirtschaftsprüfer in Deutschland (2008), FCF must be determined as.

$$RY + IBC - TSFIOB + DOCE - NCI - IOLIFD +/- D/INWC = FCF \qquad (5)$$

Where RY = Result for the year; IBC = Interest on borrowed capital; *TSFIOB* = Corporate tax savings due to deductibility of interest on borrowings (tax shield); DOCE = Depreciation and other cash expenses; NCI = non-cash income; IOLIFD = Investment outflows less inflows from divestments (budgeted investments); *D/INWC* = Decrease/increase in net working capital.

Once the numerator of the formula has been determined, the numerator is now divided by the weighted average cost of capital in the denominator.

To compute the WACC, the first step involves determining the WACC discount factor through a distinct secondary calculation. The WACC is made up of the return on equity (ROE) and debt and considers the tax savings in the form of the tax shield. This corrects the error in forecasting the CF of a purely equity-financed company. If the ratio of the fair values of equity to debt changes significantly in the future, the cost of capital must be adjusted accordingly. The same applies to changes in the cost of debt and equity. The following equation is used to calculate the WACC after taxes.

$$WACC = (E/V \; x \; Re) + (D/V \; x \; Rd \; x \; (1 - Tc)) \qquad (6)$$

Where E = Market value of equity; D = Market value of debt; V = Total value of the company (E + D); Re = Required rate of return on equity; Rd = Required rate of return on debt; Tc = Corporate tax rate.

To determine the WACC, the costs of raising equity and debt capital must be set in relation to the total enterprise value. The total enterprise value serves as the divisor for both cost blocks. However, the total enterprise value is made up of the market values of equity and debt capital. Since the goal of any business valuation approach is to accurately determine this value, a problem arises here. This problem is referred to in the literature as a circulation problem and can be solved in different ways. One way is to iteratively approximate the value. Initially, equity and debt are estimated to calculate the WACC and thus the enterprise value. This results in a more accurate market value of equity, which is used to value a more accurate WACC, thus converging to the target value. On the other hand, there is another method to determine the market value of equity in listed companies. Here, the share price is m45ultiplied by the number of shares issued. This method is based on efficient market theory, which states that the market processes all relevant information quickly and reflects it in the prices. Therefore, the share price allows an accurate determination of the market value of equity.

The fair value of debt can be measured using the carrying amount of the debt component in the balance sheet.[3] The return required by the providers of capital debt can be determined by the weighted average cost rate of the interest-bearing non-current liabilities of the company to be valued. This cost rate is included as the cost of debt in the WACC calculation, and to take into account the tax saving in the calculation of the free cash flow, the cost of debt capital is weighted after taxes.[4] In order to determine the cost of equity capital, i.e., the

[2] It should be noted, however, that FCF assumes pure equity financing, which is why the interest payable on borrowed capital must be added back to the annual result while financing neutrality. The tax savings resulting from the tax shield must also be considered accordingly.
[3] This is merely an approximation.
[4] The use of debt capital reduces the company's tax burden.

return required by the providers of equity capital, it is proposed to be calculated by using the CAPM in the sense of the objectified enterprise value. It is assumed that the personal income tax, which is divided, is not considered directly. The CAPM equation for determining the return requirement of the equity providers is

$$r_{EK} = r_f + \left(E(r_m) - r_f\right) \cdot \beta \quad (7)$$

Where r_{EK} = Return required by equity investors; r_f = Risk-free rate; ($E(r_m)$ = Expected value of the return of the market portfolio; ($E(r_m) - r_f$) = Market risk premium; β =beta factor.

When valuing companies and investments, a planning horizon of 5 to 10 years is often chosen. But to calculate a perpetuity, the planning horizon must be infinite (Brigham & Ehrhardt, 2015). This means that the CF must be continued to infinity. Another important factor in the calculation of perpetuity is the growth rate. This indicates how much the CF will grow in the future. There are various methods of estimating the growth rate, for example, using historical growth rates or industry averages (Damodaran, 2016). When all variables are combined, the WACC can thus be calculated.

3.2.2. Economic-Value-Added Valuation Method

EVA is a key figure used to measure the value creation of a company. It is based on balance sheet values from accounting and is therefore directly dependent on their data quality. Since the accounting system allows for considerable freedom in the preparation of the balance sheet, these data do not always reflect the real value of a company. For this reason, the EVA approach makes use of various adjustments (so-called conversions) to represent the real economic return of a company. In contrast to other methods, such as the traditional return on investment (ROI), EVA relates not only to a company's equity costs but also to its borrowing costs through the use of the Weighted Cost of Capital (WACC).

EVA is primarily used in the context of value-based management as a key figure for measuring the value creation of a company. It thus allows statements to be made on operational and strategic corporate planning and orientation and serves as an auxiliary variable in the context of decision-making. In addition, the EVA approach can be used as a measure of internal and external company performance and evaluates the profitability of the cost of capital. In this context, corporate management always acts in accordance with the maximization of shareholder value, which has shifted the perspective from a pure pursuit of profit to a sustainable pursuit of value. However, EVA is criticized that it is based on past-related data and is not future-oriented. In addition, it is criticized that it is difficult to measure the actual cost of capital, and that EVA is often distorted by factors that cannot be influenced operationally, such as currency fluctuations.

The reference basis of the EVA method is the WACC, and its calculation requires an assessment of the risk of a company, and there exist various approaches for this purpose. The most widely used method is the CAPM. According to this method, the required return level for a company is derived from the risk-free interest rate, the market risk premium factor, and the company's beta coefficient, which reflects its specific risk. The choice of the WACC as the benchmark has the consequence that the company management must always generate a higher return than the WACC in order to maximize shareholder value. The EVA method is thus regarded as an instrument of value-oriented corporate management and has become very important in this context. On this basis, Marshall was the first to discuss the size of the expected result, the so-called target profit. This time lapse is illustrated on the formula side using the initial equation of performance via the findings of Marshall's residual income to the specifications of EVA. Equation 8 illustrates the derivation of EVA via the basic performance equation.

Basic equation:	Performance = Actual result	– Expected result	
Residual Income:	Performance = Profit	– Capital x r	
Economic Value Added:	EVA	= NOPAT + Conversions – NOA x WACC	(8)

The EVA result can be interpreted unambiguously: If the value contribution of the period is positive, the company will gain value for the shareholders. Value is created whenever the return requirement, expressed in terms of the WACC, is exceeded. In this way, the EVA approach provides a lot of information in an understandable way. However, it should not be used as the sole performance measure for internal company management.

For the calculation of the EVA, there exists two different variants, which will lead to the same result if applied correctly. The first variant, the Capital Charge formula, is based on the basic idea that an operating surplus only exists when all financing costs of the operating assets (C) are covered. Equation 9 illustrates the derivation of EVA based on the capital charge.

$$EVA = NOPAT + Conversions - NOA \, x \, WACC \quad (9)$$

Where NOPAT Net Operating Profit After Tax; NOA = Net Operating Assets; WACC = Weighted Average Cost of Capital.

According to Stern Stewart & Co. the capital charge is the most important aspect of EVA, because under conventional valuation guidelines many companies appear to be profitable, although they destroy value. The capital charge shows exactly whether the company has generated a return within the period under consideration that is above the cost of capital and has thus created added value for the providers of capital.

The value spread is the difference between the return on assets (r) and the cost of capital (WACC). Only if this value is positive, an actual added value is created. In contrast, a negative value spread results in the

company destroying value, since an alternative investment of the capital would theoretically have achieved the minimum return. The equation for calculating the value spread is

$$EVA = C\ x\ value\ spread \quad (10)$$

Where $r = NOPAT / C$, *value spread* $= r - WACC$ and C = all financing costs of the operating assets.

NOPAT is a metric used in financial analysis to determine a company's operating profit. Calculating NOPAT is important because it allows a company's operating profit to be calculated without taking taxes into account. The equation used to measure NOPAT is

$$NOPAT = EBIT * (1 - tax\ rate) \quad (11)$$

EBIT stands for earnings before interest and taxes, which can be taken from a company's income statement. The tax rate indicates the percentage at which the company is taxed.

Conversions are an important tool for adjusting the accounting basis of EVA to measure the economic success of a company. Conversions allow the adjustment of NOPAT and NOA to measure the actual economic performance of a company. It is further explained that by adjusting NOPAT and the NOA, meaningful key figures can be determined that enable comparability between companies and industries. In this way, influences arising from different tax burdens or accounting methods can be eliminated.

The cost of capital is the most important factor in determining the economic value added. In equation 6, the assembly of the net operating assets is weighted by the average cost of capital. The WACC is determined here in the same way as with the DCF method. At this point, the net operating assets are considered (NOA), which are based on the balance sheet and are formed as the sum of working capital and the book values of property, plant, and equipment. In addition, the same adjustments as when calculating the NOPAT must be applied here to be able to show a consistent result (Ludwig, Prätsch, & Schikorra, 2012). Equation 12 illustrates the calculation of NOA.

$$CA - CNIBD = WC + FA + As = NOA \quad (12)$$

Where CA = Current assets; CNIBD = Current non-interest-bearing debt; WC = working capital; FA = Fixed assets; As = Adjustments (conversions)

The cost of capital is determined transparently by finally multiplying the NOA by the WACC. Once all the variables have been identified, they can be inserted into the basic equation to calculate a company's EVA.

Since the EVA is only a period-related key figure and is not sufficient to determine the company value alone, it is expanded by the Market Value Added (MVA) as a cross-period key figure. This is supported by studies by Stern Stuart & Co. which found a strong correlation between EVA and MVA, demonstrating a systematic link between EVA and MVA (Pape, 2004). The MVA describes the accumulated cash values of all future EVA. This approach represents the ex-ante calculation route of MVA determination that is used in valuation practice. For this procedure, it is of great importance to evaluate the planning horizon well. The planning period of five to ten years, based on future-oriented assumptions, which are also used in the DCF variant, can prove to be useful. Within this period, the EVAs for the corresponding years must be forecast, and a residual value must be determined for the time beyond that. After discounting these factors, the market value added is determined.[5]

To determine the effective value of a company, the EVA method also takes into account the net asset value (NAV), which corresponds to zero. The company value is therefore made up of the sum of the MVA discounted to zero today, the NAV, and a residual value. The residual value is calculated from the excess operating profits that accrue after the planning horizon. It is important to emphasize that although the percentage of salvage to total enterprise value in the EVA method is relatively small since intrinsic value is included in the calculations, the estimate of salvage value should not be considered incidental. The following equation is for determining a residual value after the forecast horizon is

$$\text{Residual Value} = \frac{\text{NOPAT} - (\text{WACC} \cdot \text{C})}{\text{WACC} \cdot (1+\text{WACC})} \quad (13)$$

4. Data and Empirical Results

The DCF is considered to be a good and complex method, as it requires a long-term forecast and a precise assessment of the cost of capital. It is an important tool for evaluating long-term investment projects and is characterized by a consistent payment orientation. As a decision-oriented valuation method, the DCF method captures the long-term effects of entrepreneurial activities and is, therefore, fundamentally suitable for determining the company value as a target and control variable. Conversely, it can be stated that EVA is considered a clear and understandable method of company valuation. In particular, the value-spread formula clarifies the value increase or value destruction of a company. Compared to the DCF method, the share of the terminal value in the company value is significantly lower, which reduces the risk of forecast deviations. In addition, the plausibility of this value makes it easier to check in the EVA approach. Another advantage of the EVA is that decision making and performance measurement are directly linked by the same output variables

[5] The market value added can also be determined afterwards, i.e., ex-post. In this model, it results from the difference between the current market value of the entire company and its reported assets. This method is mainly used in performance measurement and is not considered further since the ex-ante model is used as the basis for company valuation.

and key figures. This simplifies the analysis and interpretation of the values and makes post-merger control more transparent. Ultimately, management also benefits from this, as they can better assess the effects of their decisions. In practical implementation, the EVA is marginally better than the DCF method, since the forecast of earnings and capital figures is usually easier to predict due to stable time series properties, and relevant data are more easily accessible due to the publicity of financial statements. In addition, the results of the EVA are compatible with a company's existing planning and control systems, provided that it uses the EVA as a control indicator. As a result, the predicted EVA, which was carried out by an investor as part of an acquisition evaluation, can be immediately integrated into his corporate planning to make a direct statement about the profitability of the investment after integration into an existing company.

In principle, practitioners are familiar with the EVA approach, as it defines a performance that is closely based on accounting practice. EVA's proximity to accounting justifies one of its greatest shortcomings: profits can easily be distorted and influenced by balance sheet policies and accounting standards. Since NOPAT is the main variable in the model calculation, the EVA is strongly influenced by accounting. Although the EVA tries to solve this problem through conversions, the impressionable base remains to be considered. Another point of contention in the literature concerns the information required to calculate the models. While many believe that the EVA requires less information than the DCF, it is evident that the EVA requires more information in sheer numbers. This is to be viewed negatively by external investors due to the scarcity of information. From the point of view of the EVA as a performance indicator, its one-period nature is also disadvantageous since it only has a limited cross-period control perspective. In conclusion, it can be stated that EVA is more than just a pure indicator of performance measurement. Since it not only measures the financial performance of a company, but also its inherent value, it is suitable for company valuation.

4.1. Insights from Expert Interviews in Evaluation Practice

Once the characteristics of both methods have been delineated, they establish the foundational framework for subsequent research questions. To address these questions in detail, they are now juxtaposed with insights gleaned from practical experience. The findings presented below are based on interviews conducted with experts from the field of company valuation. The objective is to gain an insight into the actual application of the evaluation methods in this subject area. On this basis, important conclusions can be drawn regarding the practicability of the approaches for external investors in connection with the research question.

The preferred method for interview data collection is qualitative research, chosen for its open and flexible nature. This approach enables a more profound understanding of personally relevant aspects related to the subject matter. In contrast, quantitative methods are seen as more rigid, offering less opportunity for the interviewee's opinions to be accurately expressed. For data collection, experts were intentionally selected through targeted sampling. The top-down method was employed, involving predefined selection criteria. In this instance, practitioners with a direct involvement in company valuations for purchase and sale mandates were selected.

For a better insight into evaluation practice, a sample of four experts within the relevant profession was selected. In this instance, telephone interviews were conducted using a standardized format with predetermined questions for all participants. This approach enhances result comparability and facilitates the formulation of overarching statements. The research questions centered around the time efficiency and feasibility of the procedures, prompting specific alignment of key inquiries. The questionnaire was structured into three broad subject areas and featured model-related queries. Initially, participants were queried about the dissemination and familiarity of the methods. The interview concentrated on the practical application of the procedures, encompassing aspects such as selection, application, time efficiency, and user-friendliness. Moreover, experts were probed about their values concerning the assessment procedures. Model-related questions delved into the merits and drawbacks of the chosen approaches. This targeted approach facilitated precise and detailed insights into the research questions. To gauge the significance of responses, experts were also questioned about their professional experience. The qualitative data evaluation unfolded in three stages: transcription, analysis, and systematization of results.

The evaluation of the first bundle of topics regarding knowledge of the procedures shows that the first important conclusions can be drawn about further response behavior. As expected, it was found that the DCF method, multiples, and net asset value methods for company valuation are well-known and used in practice. In addition, the interviewees were very familiar with the EVA approach, even though it is less frequently used than other methods, especially in the case of SMEs valuation, as was confirmed by most of the participants.

The application of valuation methods in practice is essentially limited to the multiplier method and the DCF approach and, in individual cases, to individual valuation schemes. The decision to use a particular method is based on various factors, such as the effectiveness of the method in terms of effort limitation and ease of use, the practicality in terms of simplicity and data availability, and the acceptance of the method in the industry. In practice, multiples are preferred, followed by the DCF method, while EVA, although considered an interesting approach, is not used. In advanced negotiation processes, several methods are usually used, with multiples and DCF being mostly used. The time efficiency of the methods shows that the multiplier method is

preferred due to the need for one input variable only. DCF and EVA methods are thought to be of equal time efficiency.

It is recognized that valuations can be significantly influenced by assumptions, which can affect the credibility of the results. However, the evaluator is expected to present these assumptions with credibility and only make realistic assumptions to avoid theoretical arbitrariness affecting the results. Nevertheless, the subjective nature of the evaluation methods remains a problem as they can be easily manipulated. Assumptions about risk, beta, planning horizon and growth rate are critical to determining value and can result in significant differences. Therefore, these critical points must be considered when applying the methods.

Respondents are divided on the use of the DCF method, as it requires reliable data and many assumptions. In addition, it often results in very high company values, which makes it less attractive for purchase mandates. In order to determine the final purchase price, other factors must be considered. The experts unanimously confirmed that different evaluation methods do not show the same values. Although the theoretical statement is correct, different methods in real applications led to value differences due to equivalent but not objective assumptions and forecasts.

The interviews revealed that the DCF approach is seen as advantageous because it is future-oriented and involves multiple periods. It is also valued as a differentiated approach, as it shows where the individual value components arise. Through the detailed calculation methodology, the DCF approach creates a kind of education for the evaluator and promotes the identification of operational risks and value drivers. However, the subjectivity and abundance of the assumptions as well as the sensitivity of the value, are disadvantageous. The planning uncertainty inherent in any forecast-based approach is also viewed as a disadvantage.

Compared to DCF, the EVA offers the advantage of easier availability of NOPAT and lower sensitivity. However, it is more susceptible to influences derived from balance sheet movements. For example, revaluation of fixed assets or extra provisions for contingencies has an effect on equity without any actual change in performance. These findings provide answers to the research questions regarding time efficiency and feasibility of the methods, whereby the DCF approach has an advantage here.

4.2. Theory and Practice Differences

From a mathematical perspective, discounting CF in DCF valuation is equivalent to discounting future EVA in the EVA model of company valuation. This means that, applied theoretically, using fictitious numerical examples, both the DCF and the EVA methods led to the same result. The sum of the PV of the FCF thus reflects the same value as the PV of the future EVA in combination with the originally invested capital. This fact is justified by the so-called gap theorem, which means that the PV of future cash flows equals the PV of future earnings minus the cost of capital. Due to this cash value neutrality, it does not matter which earnings variable is selected for the valuation of the company, since identical company values are always determined within the same planning period. In practical application, however, it was found that the models do not give the same values but only provide comparable values that point in the same direction and form a value corridor, as also emerges from the expert interviews. This also becomes clear in the evaluation of Media and Games Invest (MGI) SE, as there are differences in value between the individual procedures. The experts interviewed explain these differences by the fact that the methods use different but equivalent key figures for calculating the company value, such as NOPAT and FCF, for which forecasts must be made about the future that cannot always be determined objectively. This leads to discrepancies in the result. However, only comparable pairs of values can be determined from the available market data and the assumptions made. In addition, even the smallest changes in the accounting guidelines from one year to the next can lead to deviations in the analysis of the past, which can be reflected in value differences in the planning phase. The practical results thus contradict an equivalence of the discounted residual profit series and payment series, as stated by the Lücke theorem (Lücke, 1955).

4.3. Evaluation of the Media and Games Invest SE

The modeling of the DCF in the WACC approach and the EVA using the MGI SE clarifies the value differences between the two methods. MGI SE is a company that specializes in the development and promotion of online games and digital media content. Its establishment dates back to 2016, and it was previously headquartered in Malta before relocating to Stockholm on January 2, 2023. MGI is listed on the Frankfurt Stock Exchange and the Nasdaq Stockholm and has multiple subsidiaries in different countries.

4.3.1. Determination of Company Value with DCF and EVA Methods

Through the subsequent assessment of MGI SE, we aim to demonstrate the practical application of the theoretical knowledge previously acquired. This process not only renders certain interview statements more tangible but also affirms the implied disparity in method values. The valuation is grounded in the company's published annual reports, utilizing the 2021-22 financial year as the reference period.

Given that the calculation of the WACC is essential for both approaches, it is preliminarily addressed and incorporated in Table 1. MGI SE sets the risk-free base interest rate at 1.5% in accordance with the market standard. The r_f is derived from the recommendations of the Technical Committee for Business Valuations and

Business Administration (FAUB) of the IDW, based on current yield curves for risk-free bonds. The basis is the zero bond interest rates published by the Deutsche Bundesbank, with the average yields of the previous three months being used to smooth out short-term market fluctuations. The current value for the r_f is therefore 1.50% (Statista, 2023). According to an analysis of the stock market, the average return on shares is 7.0%. A reasonable expectation of a market premium is set at 5.5% based on historical analysis of stock market returns. The market premium indicates by what percentage the stock market is expected to outperform low-risk government bonds with an interest rate of 1.5%.

Table 1. WACC calculation.

Risk-free return	1.5%
Market risk premium	5.5%
Beta	1.35
Cost of equity	9.00%
Share of equity capital	80.00%
Cost of debt	7.20%
Share of debt capital	20.00%
Tax shield	28.00%
Re	6.90%
WACC	8.24%
Perpetual growth	3.50%

The beta factor, which measures the risk of the MGI SE share in comparison to the market as a whole, is represented as the quotient of the covariance, the expected return on the share, and the market portfolio (gaming companies) to the variance of the market portfolio. The beta factor is 1.35% (Valueinvesting, 2023). The cost of debt before taxes is 7.2% (Finbox, 2023), reflecting 28% taxes, IHK (Industrie- und Handelskammer) (2023), a cost of debt of 5.18% results. The cost of equity, i.e., the cost of equity, is set at 9% based on the assumptions made (Valueinvesting, 2023). Using these values, the calculated cost of equity is 6.9%. Since a sustained weighting of the cost of equity (target weight) of 80.0% is assumed, the WACC is 8.24%.

The following forecast and calculation of the FCF, shown in Table 2, is the core of the DCF approach. The determination is based on the procedure used by Media and Games Invest SE to determine the FCF.

Table 2. Discounted cash flow media and games invest SE (€).

Variable	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**Notes**
Revenue	324.444	356.888	374.733	393.469461	413142934	433800081	10% growth
NOPLAT	19.164	21.464	24.039	26.9240402	30.155	33.774	12% growth
(+) depreciation & amortization	58.135	34.881	34.881	34.881	34.881	34.881	Flat at €34.881
(=) Net operating cash flow	77.3	56.34468	58.920	61.8050402	30.155	68.655	
(-) Investments	-295.792	-34.1	-34.1	-34.1	-34.1	-34.1	-€34.1
(-) Working capital	47.369	-2.5	-2.5	-2.5	-2.5	-2.5	-€2.5
(=) Free cash flow (FCF	-171.124	19.745	22.320	25.2050402	28.436	32.055	€32.055

Table 2 shows the detailed planning horizon of five years and the base year 2023-27 as the basic reference point for the assessment. The corresponding growth rates and sales margins are based on an analysis of the past five years and the company's published guidelines. The values determined in this way were formulated into conclusive assumptions for the forecast, with the business development and the outlook of the company and implemented in the planning. For example, an average organic sales growth of 16% over the last 5 years could be calculated. Due to the tense economic situation, mainly due to the savings in the advertising sector, somewhat conservative assumptions are made at this point, and a sustainable sales growth of 10% is promised. This corresponds to the outlook given in the annual report. NOPLAT growth was estimated at 12%, in line with management's assumptions. The management announced that it would massively reduce its M&A transactions in the following years and concentrate on integration and organic growth.

After the variables are calculated, the DFC company value can be determined. Table 3 highlights the company value as the sum of the present values of the FCF and the PV of the terminal value.

Table 3. Fair value of media and Games Invest SE company (€).

Cash value FCF	99.469
FCF 2027	32.055
Perpetual value	3.50%
Terminal value	700.397
Present value terminal value	471.487
Net debt	27300000
Net present value (€)	297,956285.90
Share count	159249610
Fair value (€)	1.37

In a first step, the FCF of the respective period is discounted on the valuation date with the WACC. Their sum forms part of the entity value. The terminal value represents the other component of the total enterprise value. Its calculation starts with the last year of the detailed planning horizon. In the present case, a 3.5% growth was assumed. At the same time, the considerable extent of the terminal value, with 80% of the total company value, is once again expressed at this point. After adding these two values, the total enterprise value is determined. By deducting the net debt, the enterprise value of MGI SE, according to DCF, is determined at a value of 297,956,285.90€ or a share price of 1.87€. The net debt of the company results from the difference between the total interest-bearing liabilities of the company and the freely available capital expressed in the liquid funds of the balance sheet. This value is used for both DCF determination and the EVA.

When applying the valuation using the EVA approach, some WACC data from Table 2 are used. The approach to calculating the value of a company is expressed by the excess profit formula. Excess profit is the after-tax operating profit less than the cost of capital. To get the NOPAT, it is only necessary to add the taxes paid on the EBIT as shown in Table 4.

Table 4. Determination of the company value via the EVA approach (€).

Variable	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**Notes**
EBIT	15	18.8	21.7	29.8	36.1	42.2	
NOPAT	13.5	16.6	18.9	25.3	29.6	33	
NOA	221	225.42	229.928	234.527	239.218	244.002	
WACC	8.24%	**???**	**???**	**???**	**???**	**???**	TV
EVA		-1.967	-0.039	5.825	9.896		281.912
Periods		1	2	3	4	5	5
Invested capital		230					
MVA		308.687					
Entity value		538.687					
Net deb		273					
Equity value		265.687	265.687 €				
Share count		159249610					
Fair value (€)		1.67					

The NOA are also determined in a separate calculation. However, this calculation is not shown separately here, but the result is only included in Table 4. In principle, the NOA is derived from the balance sheet and the values are compounded in the planning with the average growth in total assets of 2.00%. The capital costs that must be generated by the operational work can be determined by weighing the average cost of capital rate. This is symbolized by subtracting this result from NOPAT. The result is EVA, which specifically expresses the period in which value was created or destroyed. [6] After adding up the cash values of all EVAs to the MVA and adding the capital invested at the beginning and adjusting for the net debt, an enterprise value of 265,686,941€ or a share price of 1.67€ of MGI SE is finally reported (Media and Games Invest SE, 2023).

[6] Since a "basic EVA" is assumed here, no separate conversions are required.

The application of both valuation methods to MGI SE shows that in practice they can lead to different results, although they are basically suitable for company valuation. This finding confirms the opinions of experts and questions the assumption of an identical proof of value in practice. However, to make the company value comparable with both approaches, identical assumptions would have to be used. In addition, it shows that the DCF method tends to deliver higher company values than the EVA approach. In this case, the DCF approach values the individual company shares by more than 0.2€ higher than the comparative value based on the EVA (see Table 5).

Table 5. Summary of differences in company values.

DCF	Company value	EVA
297,956,285.90 €		265,686,941 €
Difference	32,269,345 €	
Share count	÷159,249,610	
Difference per share	0.202 €	

The differences mentioned in the value calculations result from various factors, as emphasized by the experts. By using different but equivalent key figures and the resulting marginal deviations in the forecast, comparable values can be achieved. However, differences can arise when metrics such as NOPAT and FCF are based on the same basis but calculated differently, leading to unequal developments. The inclusion of the NOA in the EVA approach calculation can also lead to further deviations, as this is not considered in the DCF calculation. Therefore, different evaluation methods can only determine comparable pairs of values.

Regarding MGI SE, a value range in share prices of 1.59€ to 1.87€ was identified by the valuation method. The current stock price of 1.268€ is below this value corridor, which indicates that the market undervalues the company. However, the share value reflects the subjective value of the individual investors and does not have to correspond to the mathematically calculated values. In addition, the industry may be disproportionately burdened by the economic difficulties reported in the media. One way of determining the intrinsic value of a share is to form what is known as "intrinsic value." This is determined as the average of the two value limits and results in a value of 1.72€ per share in this case. However, it should be noted that this is only a valuation range that must be adjusted in the direction of the current stock exchange price. Looking solely at these financials, it reveals that the company is currently undervalued by the market. Therefore, the MGI SE could be interesting as a possible investment opportunity for investors, as undervalued companies are often preferred. However, it is important to emphasize that when evaluating a purchase commitment, the unseen potential and inner values of the company, as well as its general structure, must also be considered. This is the only way to make a well-founded decision.

5. Discussion and Conclusions

The general conclusion that emerged from this study is that the DCF method is viable in real-world applications from an investor's perspective. The method represents a benchmark for company valuations. The approach is modeled in a time-efficient manner and is easy to understand despite its complexity. DCF is extremely relevant to industry practice and can be applied despite the underlying variety of assumptions that influence the resulting value and are recognized as a risk factor by the market. This risk is tolerated because valuation in this way is widely accepted. By determining the intrinsic value of a company, a targeted investment decision can be made using a restrictive DCF. The EVA is also considered an interesting approach in this area. According to the literature, it is certainly presented as a practicable approach for everyday evaluation and placed in direct comparison with the DCF. Expert attitudes show a more differentiated picture. Although the EVA approach is well known, it is not used, at least in the small and medium-sized business market. Although EVA is practical in its basic structure, it is not applied in real-life scenarios. The question of which method is more time-efficient cannot be answered unequivocally. Due to the comparable database and the assumptions to be made, the two approaches are relatively balanced in terms of time. Only the use of the DCF and existing calculation templates favors this approach. Multiples, on the other hand, can provide a first indication much faster.

The comparison of the two methods shows that the application of the DCF method is easier to implement in a direct comparison. In contrast, the EVA is hardly used and sometimes requires different assumptions. Nevertheless, the EVA remains applicable and relevant, but the DCF method is more likely to be used due to its practical feasibility and dissemination and is therefore in focus. Despite the many assumptions, the DCF remains relevant and continues to be given high weight in company valuations. Overall, the company valuation procedures are given a positive meaning both in theory and in practice. They are considered important and indispensable instruments in the transaction business. The multiplier method is favored by many reviewers and enjoys a high status in practical application. Nevertheless, several valuation methods are always used in the purchase or sale process to obtain a plausible range of values. Here, the DCF is perceived as the most important valuation method alongside the multiples.

In conclusion, the practical applicability of DCF and EVA methods in real-world business valuation scenarios depends on their ability to translate theoretical concepts into actionable insights effectively. While DCF is widely embraced for its straightforward application and intuitive nature, implementing EVA may necessitate additional considerations and adjustments to accurately reflect economic value creation. The relevance of DCF and EVA methods in various business contexts underscores the importance of understanding their unique characteristics and requirements. While both methods exhibit broad applicability across industries, their suitability may vary based on specific business objectives and circumstances. The reliability and accuracy of valuations hinge on the reasonableness of underlying assumptions, with sensitivity analysis serving as a tool to assess robustness. DCF is generally favored for its user-friendly implementation, whereas EVA's acceptance may vary but could increase over time with growing awareness. Time efficiency varies between the methods, with DCF often more time-consuming due to detailed modeling. However, integration with other valuation approaches enhances the comprehensive understanding of a company's value, allowing analysts to make more informed investment decisions. Ultimately, choosing the most suitable method requires a nuanced understanding of the business context and objectives.

In summary, this study highlights several important gaps between the two approaches. Firstly, while the DCF method emerges as highly viable and widely accepted in real-world applications, EVA is recognized for its theoretical promise but is significantly underutilized, particularly in the small and medium-sized business market. Despite being practical in its basic structure, EVA is found to lack real-life application, contrasting sharply with the widespread adoption of DCF. Another significant gap lies in the ease of implementation and time efficiency. It suggests that while DCF is modelled in a time-efficient manner and is relatively straightforward to understand, EVA sometimes requires different assumptions and is harder to implement, contributing to its limited usage. Furthermore, the comparison indicates that while both methods are balanced in terms of time due to comparable databases and assumptions, the existence of calculation templates favours DCF, making it more appealing to practitioners. Despite these differences, both DCF and EVA methods are deemed relevant and essential in company valuations. However, DCF takes precedence due to its practical feasibility, widespread dissemination, and ease of implementation. Despite the multitude of assumptions inherent in DCF, it continues to be highly weighted in valuations, reflecting its enduring significance in industry practice. Overall, the study underscores the positive perception of company valuation procedures, with both DCF and EVA considered indispensable instruments in the transaction business. While the multiplier method enjoys prominence alongside DCF, the study suggests that a combination of valuation methods is often employed to obtain a comprehensive range of values, with DCF being perceived as the most crucial method in conjunction with multiples. These findings shed light on the critical gaps between DCF and EVA methods and underscore the practical considerations influencing their adoption and application in business valuation contexts.

The main conclusion of this study that the DCF method is widely applicable and accepted in real-world business valuation scenarios, serving as a benchmark for company valuations due to its ease of use and time efficiency, while EVA is recognized as an interesting approach, but is less utilized, particularly in small and medium-sized business markets, and may require different assumptions, aligns with findings from Behera (2020) who explores the applicability of the EVA model under changing required return conditions and suggests modifications to improve its performance. Additionally, Pruzhansky (2013) compares EVA with the traditional DCF method, highlighting DCF's potential for dynamic inconsistency and advocating for the adoption of more comprehensive valuation methods like EVA to maximize returns and minimize opportunity costs, especially in regulated industries. These studies collectively emphasize the importance of considering dynamic factors in valuation decisions and suggest that while DCF remains widely used, EVA may offer advantages in certain contexts, necessitating careful consideration of both methods in practice.

5.1. Limitations and Future Research

The study has several limitations that warrant consideration. Firstly, the findings are drawn from the valuation of a single real company, raising concerns about the generalizability of results across diverse industries or business contexts. Each sector possesses unique characteristics that may significantly impact the applicability of valuation methods, limiting the broader relevance of the study's conclusions. Additionally, while the research acknowledges the inherent assumptions in valuation methods as a recognized risk, the examination of these assumptions may lack comprehensiveness, leaving gaps in understanding their full spectrum and potential impact on valuation outcomes. Furthermore, the study highlights the underutilization of EVA in SMEs, yet the reasons behind this underutilization are not exhaustively explored, suggesting an opportunity for a more in-depth investigation into the factors influencing EVA's practical application in varied business settings. Lastly, the comparison of time efficiency between the DCF and EVA methods lacks explicit criteria and benchmarks, necessitating a more detailed analysis to enhance the clarity of their comparative efficiency assessment.

The study's exploration of time efficiency between the DCF and EVA methods, coupled with the preference for DCF based on existing calculation templates, invites scrutiny into the adaptability and user-friendliness of EVA models. The study raises questions about the practicality of EVA in comparison to DCF,

pointing toward potential areas for improvement in EVA models to enhance their usability. Additionally, the positive perception of various valuation methods, coupled with the acknowledgment of the multiplier method's high status, highlights the complexity of business valuation practices. The study suggests that a more thorough investigation into the synergies and challenges associated with integrating different valuation methods could yield a comprehensive understanding of their collective impact. In conclusion, while the study contributes valuable insights into the practical application of business valuation methods, the identified limitations underscore the need for further research and refinement to address the complexities of valuation practices across diverse business contexts.

References

Behera, S. (2020). Does the EVA valuation model explain the market value of equity better under changing required return than constant required return? *Financial Innovation*, *6*(1), 9. https://doi.org/10.1186/s40854-019-0167-8

Brigham, E. F., & Ehrhardt, M. C. (2015). *Financial management: Theory and practice* (15th ed.). Boston, MA: Cengage Learning.

Damodaran, A. (2016). Damodaran on valuation: Security analysis for investment and corporate finance. In (Vol. 324). Hoboken, NJ: John Wiley & Sons.

Finbox. (2023). *Cost of debt calculation for MGI SE*. New York, USA: Finbox.

IHK (Industrie- und Handelskammer). (2023). *Tax rates and corporate taxation in Germany*. Berlin: IHK Publications.

Institut der Wirtschaftsprüfer in Deutschland, E. V. I. (2008). *IDW S 1 i.d.F. 2008: Grundsätze zur Durchführung von Unternehmensbewertungen*. Wirtschaftsprüfer-Verlag: Institut der Wirtschaftsprüfer.

Ludwig, C., Prätsch, M., & Schikorra, M. (2012). *Valuation, capital structure decisions and the cost of capital*. ERIM Ph.D. Series. Erasmus Research Institute of Management.

Lücke, W. (1955). Investment calculations based on expenditure or costs. *Zeitschrift für handelswissenschaftliche Forschung*, *7*(3), 310-324.

Media and Games Invest SE. (2023). *Annual and sustainability report 2023. Media and Games Invest SE*. Retrieved from https://www.mgi-se.com/

Pape, S. (2004). *Market value added and economic value added: A comprehensive study on their relationship and relevance in corporate valuation*. Doctoral Dissertation.

Pruzhansky, V. (2013). *Decision metric for capital budgeting: EVA vs DCF*. Retrieved from https://ssrn.com/abstract=2321076 or http://dx.doi.org/10.2139/ssrn.2321076

Statista. (2023). *Average risk-free return in Germany from 2012 to 2022*. Retrieved from https://www.statista.com/statistics/885774/average-risk-free-rate-germany/. [Accessed 24 March 2023]

Valueinvesting. (2023). *MGI SE: Risk and return analysis of the share*. New York: Valueinvesting Publications.