A Study On Enterprise Valuation Using Discounted Cash Flow Technique With Reference To Aetram Trades Private Limited

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***Abstract*-**This study focuses on enterprise valuation using the Discounted Cash Flow (DCF) method, applying it to selected companies from the automobile sector (Maruti Suzuki and Mahindra & Mahindra) and the IT sector (TCS and Infosys). Enterprise valuation plays a crucial role in strategic decision-making, investment analysis, mergers and acquisitions, and financial planning by estimating the true worth of a business. The aim of the study is to examine how sector-specific factors such as capital intensity, operational risks, and market dynamics influence enterprise valuation outcomes. Scenario analysis is used to assess the impact of optimistic, moderate, and pessimistic market conditions on valuation results. The findings highlight that automobile companies show higher sensitivity to changes in cash flow assumptions, while IT companies display more stable valuation patterns due to consistent service demand. The study concludes that while the DCF method remains a strong tool for valuation, accurate results depend on realistic assumptions, sector-based adjustments, and cross-validation with other valuation approaches.

***Keywords*--** Enterprise Valuation, Discounted Cash Flow (DCF), Scenario Analysis, Automobile Sector, IT Sector.

I. INTRODUCTION

Valuation of enterprises has become a crucial aspect of modern finance, serving as a foundation for key strategic decisions in mergers, acquisitions, investments, and corporate planning. Among various valuation models, the Discounted Cash Flow (DCF) method is recognized for its focus on intrinsic value, offering a systematic and future-oriented approach to understanding a firm's worth. this study integrates scenario analysis within the DCF models for Automobile and IT sector. Rather than relying solely on a single projection, multiple scenarios are developed to explore how different macroeconomic and sector-specific conditions might influence company valuations.

II. NEED FOR THE STUDY

This study is needed because market-based valuation methods often fail to capture the true worth of a company, relying instead on volatile external factors. DCF provides a forward-looking approach, making it crucial for businesses, investors, and analysts. This study aims to delve into the application of the DCF technique, assessing its effectiveness and identifying potential challenges in various business contexts.

III. OBJECTIVES OF THE STUDY

Primary Objective:

To analyze the enterprise valuation through the discounted cash flow (DCF) technique for listed companies.

Secondary Objectives:

1. To evaluate the financial performance of selected companies using key valuation metrics.
2. To assess sector-wise variations in enterprise valuation through financial valuation method.
3. To help investors make informed financial decisions based on enterprise value using discounted cash flow technique.

IV. SCOPE OF THE STUDY

This study focuses on estimating the enterprise value of a company using the discounted cash flow technique. It includes projecting future cash flows based on historical financial data, making assumptions on revenue growth, operating margins, and capital expenditures. The study also incorporates scenario analysis (moderate, optimistic, pessimistic) to evaluate how different assumptions affect the company's valuation, focusing solely on internal financial metrics.

V. LIMITATIONS OF THE STUDY

1) The study considers only four years of historical financial data, which may not be sufficient to capture long-term business performance.
2) Due to time constraints, the analysis may not cover all possible valuation approaches or include extensive industry benchmarking.
3) The financial projections are based on assumptions, which may involve subjectivity or bias, potentially affecting accuracy.
4) This study is limited to two sectors, which narrows the scope of comparison and may not reflect broader market trends or industry.

VI. REVIEW OF LITERATURE

1. **Marcin Majka (2024)** provides a detailed explanation of the Discounted Cash Flow (DCF) technique as a core method for enterprise valuation. It describes the components of DCF, such as forecasting free cash flows, determining an appropriate discount rate (WACC), and calculating terminal value. The study also discusses common mistakes made during DCF analysis, including optimistic cash flow forecasts and improper risk adjustments. It recommends using sensitivity analysis and scenario modeling to test different valuation outcomes and improve the reliability of DCF estimates.
2. **Muhammad Rois Khanafi, Achmad Kautsar, & R.A. Sista Paramita (2024)** uses the DCF method through the FCFF model to determine the fair value of PT Transkon Jaya Tbk's shares. After projecting free cash flows and applying a discount rate, the results showed that the company's stock was overvalued compared to its intrinsic value, leading to a sell recommendation for investors. The study emphasizes that in addition to quantitative modeling, investors must account for macroeconomic factors, competitive risks, and market volatility when interpreting DCF-based valuations, especially in emerging markets like Indonesia.
3. **Pascal S. Froidevaux (2004, Updated 2024)** explains how DCF analysis serves as the foundation for selecting fundamentally strong stocks. Froidevaux discusses building accurate free cash flow forecasts, adjusting for busines cycles, and discounting future earnings properly. He shows that companies with consistent cash flows and predictable growth are best suited for DCF-based stock selection strategies. The updated version also emphasizes the role of terminal value assumptions and stresses the importance of stress-testing models against multiple market scenarios to prevent valuation errors.
4. **Vlad Bulăui (2022)** analyzes different enterprise valuation techniques, focusing on the Discounted Cash Flow (DCF) method and comparing it with alternative models. The research applies DCF to evaluate investment funds in Romania and discusses the impact of discount rates, market conditions, and financial forecasting on valuation accuracy. The study concludes that while DCF provides a strong theoretical foundation, practical application requires careful adjustment for economic conditions.

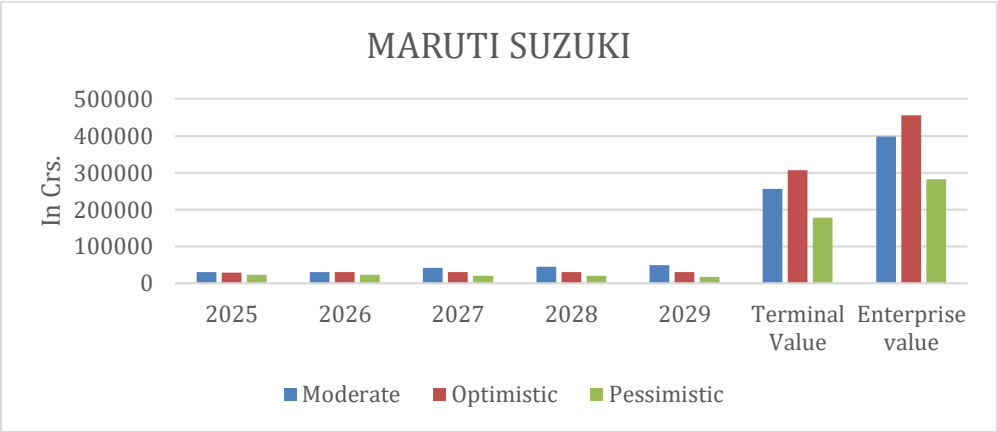
VII. RESEARCH METHODOLOGY

This study follows analytical research design to evaluate enterprise valuation using Discounted Cash Flow (DCF) Technique. The analysis is based on secondary data collected from annual reports, corporate website, stock exchange websites, journals and other online databases. Purposive sampling technique is used in this study as the companies are selected based on market capitalization. This study uses four historical financial data to make future cash flows and enterprise value. Scenario analysis is used to evaluate the projections under different scenarios.

VIII. DATA ANALYSIS AND INTERPRETATION

Table 1: Enterprise valuation of Maruti Suzuki

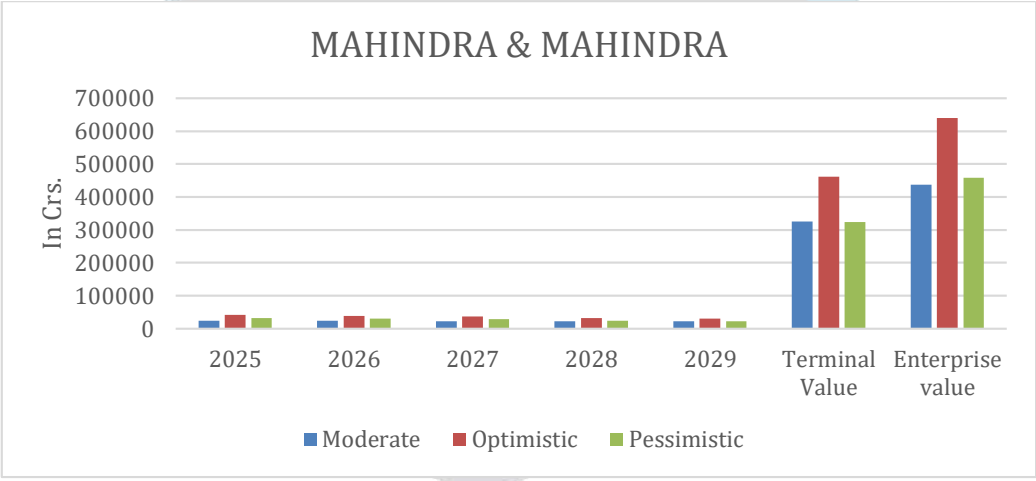
Scenario	2025	2026	2027	2028	2029	Terminal Value	Enterprise value
Moderate	30490	30442	41444	45173	48807	255981	397620
Optimistic	28635	29646	30203	29717	30492	307007	455430
Pessimistic	22951	23070	20493	19517	17704	178252	281986



INFERENCE: The above table outlines the present value of free cash flows and terminal value for Maruti Suzuki across three scenarios- Moderate, Optimistic, and Pessimistic from 2025 to 2029. All values have been discounted to reflect today's terms. Under the Moderate scenario, the enterprise value stands at ₹3,97,620 crore, supported by steady cash flow growth. The Optimistic scenario, driven by a higher terminal value despite relatively lower early cash flows, results in the highest enterprise value of ₹4,55,430 crore. In contrast, the Pessimistic case, with consistently lower cash flows and a weaker terminal value, yields the lowest enterprise value at ₹2,81,986 crore. This comparison highlights how long-term expectations significantly influence valuation outcomes.

Table 2: Enterprise valuation of Mahindra & Mahindra

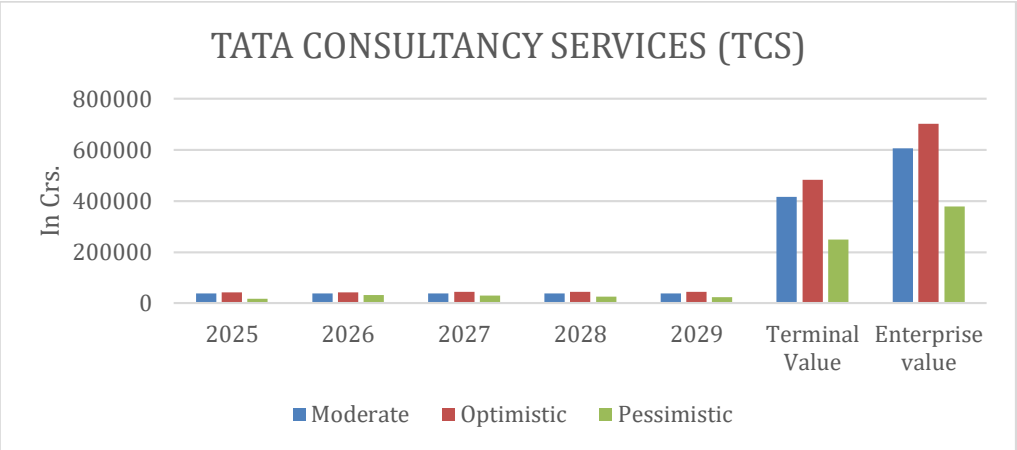
Scenario	2025	2026	2027	2028	2029	Terminal Value	Enterprise value
Moderate	22901	23015	21306	22523	21590	325782	437118
Optimistic	40898	38441	36127	32488	30552	461016	639521
Pessimistic	31559	29388	27965	23556	21455	323741	457664



INFERENCE: The above table shows Mahindra & Mahindra's projected free cash flows and terminal value, all adjusted to present value, across three scenarios -Moderate, Optimistic, and Pessimistic—for the years 2025 to 2029. In the Optimistic scenario, strong cash flow performance and a high terminal value push the enterprise value to ₹6,39,521 crore, the highest among all three cases. The Moderate scenario reflects more conservative expectations, resulting in a lower valuation of ₹4,37,118 crore. Interestingly, the Pessimistic scenario yields an enterprise value of ₹4,57,664 crore slightly higher than the Moderate case due to stronger near-term cash flows despite a cautious long-term outlook. This suggests that both short-term performance and future potential play an important role in determining overall business value.

Table 3: Enterprise valuation of Tata Consultancy Services (TCS)

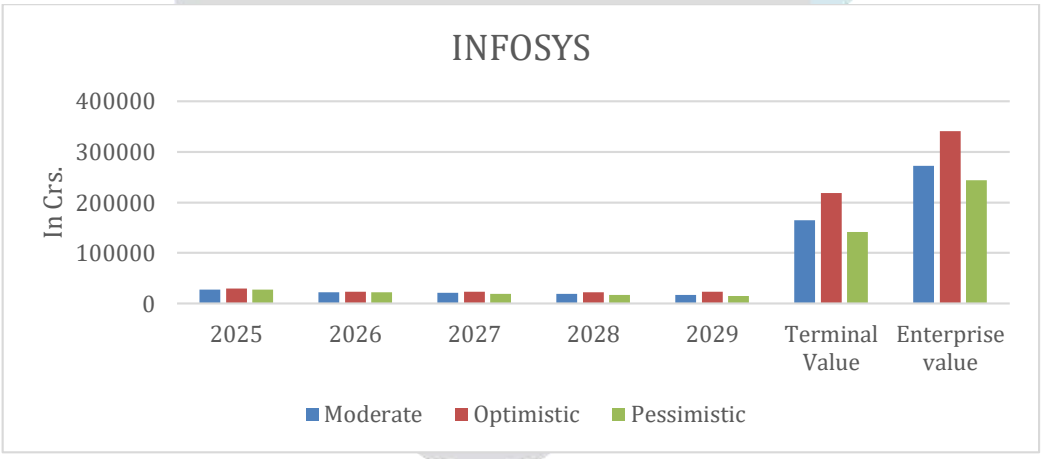
Scenario	2025	2026	2027	2028	2029	Terminal Value	Enterprise value
Moderate	37813	38273	38291	38037	38396	416266	607076
Optimistic	43576	42288	43793	44636	44660	484185	703140
Pessimistic	17433	32485	30075	26780	23035	249736	379554



INFERENCE: The above table presents Tata Consultancy Services' (TCS) enterprise valuation based on discounted free cash flows and terminal value under three different scenarios from 2025 to 2029. In the Optimistic scenario, strong and consistent cash flows along with a high terminal value of ₹4,84,185 crore result in the highest enterprise value of ₹7,03,140 crore. The Moderate scenario projects steady performance, leading to a valuation of ₹6,07,076 crore. In the Pessimistic scenario, weaker cash flows and a significantly lower terminal value bring down the enterprise value to ₹3,79,554 crore. This comparison underlines how shifts in future cash flow expectations can significantly alter a company's overall valuation.

Table 4: Enterprise valuation of Infosys

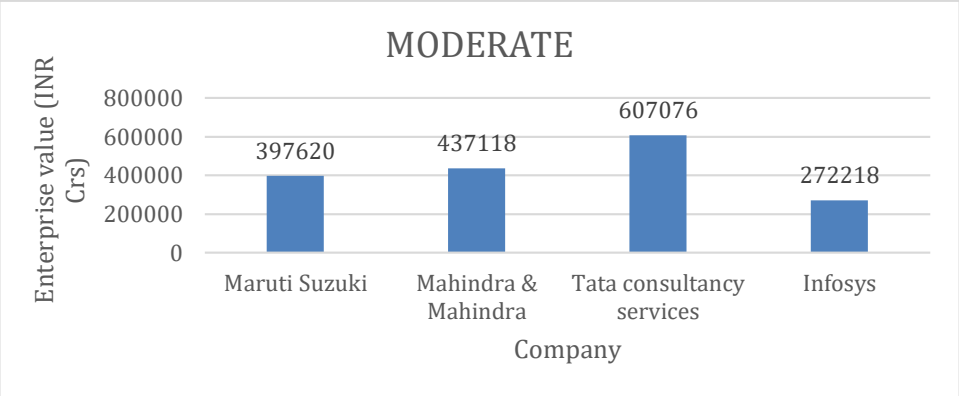
Scenario	2025	2026	2027	2028	2029	Terminal Value	Enterprise value
Moderate	27719	22004	21260	19044	17497	165194	272718
Optimistic	29833	23347	23035	22756	23147	218538	340657
Pessimistic	27677	22603	19458	16646	15038	141954	243374



INFERENCE: The above table outlines Infosys' enterprise valuation under three different scenarios based on projected cash flows and terminal value from 2025 to 2029. In the Optimistic case, higher projected cash flows and a strong terminal value of ₹2,18,538 crore lead to the highest enterprise value of ₹3,40,657 crore. The Moderate scenario, based on more conservative assumptions, results in a valuation of ₹2,72,718 crore. Meanwhile, the Pessimistic scenario—marked by weaker cash flows and the lowest terminal value of ₹1,41,954 crore—produces the lowest enterprise value at ₹2,43,374 crore. This illustrates how future performance expectations can significantly influence the perceived worth of a company.

Table 5: Sector wise variations in moderate growth

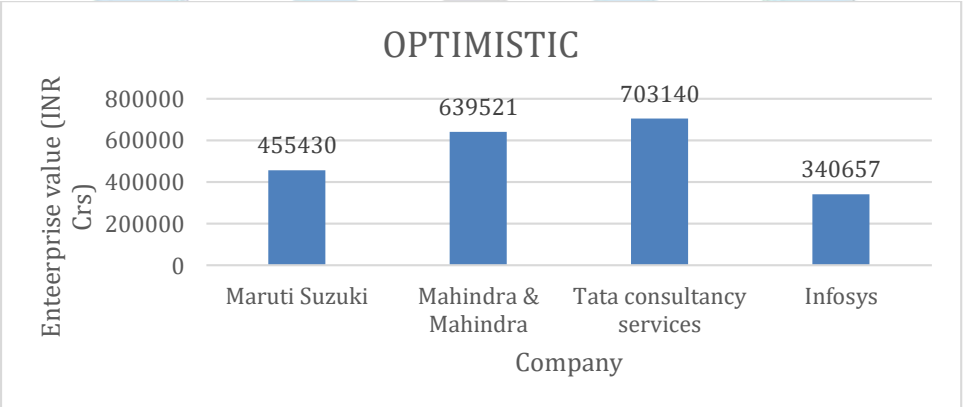
Sector	Company	Enterprise value (In Cr)
Automobile	Maruti Suzuki	3,97,620
	Mahindra & Mahindra	4,37,118
IT	Tata Consultancy Services (TCS)	6,07,076
	Infosys	2,72,218



INFERENCE: From the above table, it is inferred that the IT sector exhibits higher enterprise value under moderate growth compared to automobile sector.

Table 6: Sector wise variations in optimistic growth

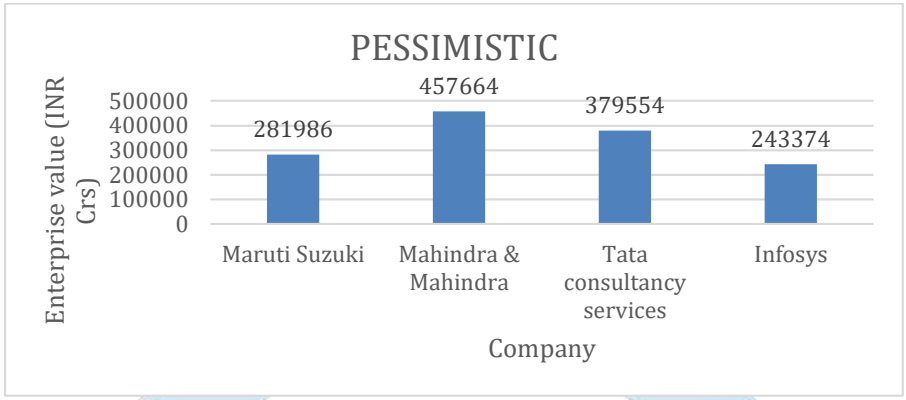
Sector	Company	Enterprise value (In Cr)
Automobile	Maruti Suzuki	4,55,430
	Mahindra & Mahindra	6,39,521
IT	Tata Consultancy Services (TCS)	7,03,140
	Infosys	3,40,657



INFERENCE: From the above table, it is inferred that the IT sector continues to show higher enterprise value under optimistic growth than the automobile sector, with TCS leading to at ₹7, 03,140 Crore.

Table 7: Sector wise variations in pessimistic growth

Sector	Company	Enterprise value (In Cr)
Automobile	Maruti Suzuki	2,81,986
	Mahindra & Mahindra	4,57,664
IT	Tata Consultancy Services (TCS)	3,79,554
	Infosys	2,43,374



INFERENCE: From the above table, it is inferred that the automobile sector still maintains relatively higher enterprise values compared to the automobile sector.

IX. FINDINGS

It was found that,

- the enterprise value is estimated at ₹3,97,620 Cr for Maruti Suzuki in moderate growth.
- the enterprise value is estimated at ₹4,55,430 Cr for Maruti Suzuki in optimistic growth.
- the enterprise value is estimated at ₹2,81,986 Cr for Maruti Suzuki in pessimistic growth.
- the enterprise value is estimated at ₹4,37,118 Cr for Mahindra & Mahindra in moderate growth.
- the enterprise value is estimated at ₹6,39,521Cr for Mahindra & Mahindra in optimistic growth.
- the enterprise value is estimated at ₹4,57,664 Cr for Mahindra & Mahindra in pessimistic growth.
- the enterprise value is estimated at ₹6,07,076 Cr for Tata Consultancy Services (TCS) in moderate growth.
- the enterprise value is estimated at ₹7,03,140 Cr for Tata Consultancy Services (TCS) in optimistic growth.
- the enterprise value is estimated at ₹3,63,741 Cr for Tata Consultancy Services (TCS) in pessimistic growth.
- the enterprise value is estimated at ₹2,72,718 Cr for Infosys in moderate growth.
- the enterprise value is estimated at ₹3,40,657 Cr for Infosys in optimistic growth.
- the enterprise value is estimated at ₹2,43,374 Cr for Infosys in pessimistic growth.

X. SUGGESTIONS

- Investors may consider Tata Consultancy Services (TCS) as a strong investment option, as it consistently shows the highest enterprise value under all scenarios, indicating that the company is financially strong and well managed.
- Mahindra & Mahindra shows better than Maruti Suzuki under optimistic scenario, makes it a suitable choice for investors who are willing to take slightly higher risks for better returns.
- Maruti Suzuki maintains steady position across all scenarios which makes it a suitable investment for those looking for consistent performance rather than aggressive growth.
- Infosys shows the lower enterprise value in all scenarios, as the company needs to improve its strategy to increase competitiveness and investor interest.

XI. CONCLUSION

The study on enterprise valuation using the Discounted Cash Flow (DCF) method across the automobile and IT sectors shows that DCF remains a strong and widely accepted approach for estimating a company's value. By applying the method to companies like Maruti Suzuki, Mahindra & Mahindra, TCS, and Infosys, it was observed that different sectors react differently to changes in assumptions such as growth rates, cash flows, and market conditions. Automobile companies showed greater sensitivity to capital expenditures and market fluctuations, while IT companies demonstrated more stable cash flow patterns due to steady demand for technology services. Scenario analysis proved essential in highlighting how varying market conditions can significantly impact enterprise values. Overall, it is concluded that while DCF is a powerful tool, it must be supported with realistic assumptions, regular scenario testing, sector specific adjustments, and validation through other valuation techniques for achieving more accurate and reliable results..

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